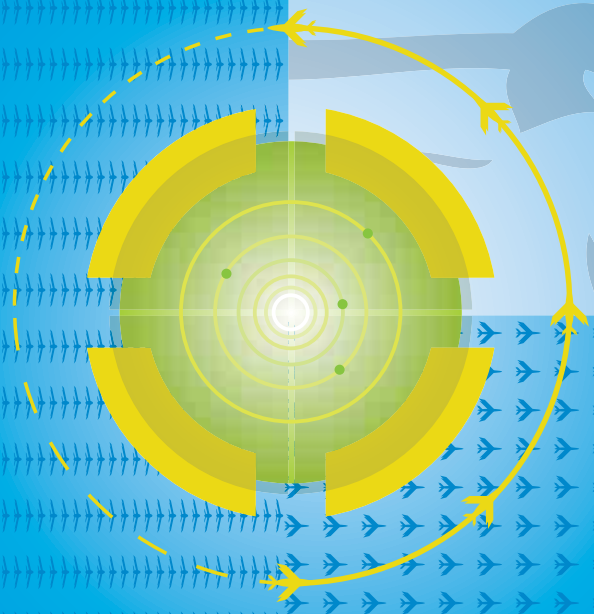
WORLD TRADE ORGANIZATION

AIR TRANSPORT AND THE GATS



DOCUMENTATION FOR THE FIRST AIR TRANSPORT REVIEW UNDER THE GENERAL AGREEMENT ON TRADE IN SERVICES (GATS)

1995-2000 IN REVIEW



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In preparation for the second air transport review mandated by the GATS Annex on Air Transport Services, the Secretariat has gathered in the present booklet the documentation produced in 2000-1 for the first review. It consolidates documents S/C/W/163 and its six Addenda, with a common table of contents and single page numbering. It is intended to facilitate Members' cross-reference to information contained in the documentation produced for the first review.

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DEVELOPMENTS IN THE AIR TRANSPORT SECTOR SINCE THE CONCLUSION OF THE URUGUAY ROUND

GENERAL INTRODUCTION

Note by the Secretariat

This Note has been produced at the request of the Council for Trade in Services in the framework of the review of the Air Transport Annex which stipulates in paragraph 5 that "the Council for Trade in Services shall review periodically, and at least every five years, developments in the air transport sector and the operation of this Annex with a view to considering the possible further application of the Agreement in this sector". The Secretariat has been asked by Council for Trade in Services to update document S/C/W/59, dated 5 November 1998 and document S/C/W/129, dated 15 October 1999.

This Note addresses both the economic and regulatory developments in the sector, in both a historical (1993) and contemporary (1999) framework. Since the Annex provides no definition of the sector, the paper tries to encompass all aspects of air transport and air transport-related services following the model of the former Secretariat document S/C/W/59 on the same subject examined during the exchange of information programme in 1998. It largely draws on this document as well as on ICAO publications and in particular, the annual report *"The World of Civil Aviation"* (first edition, 1992). Additional professional sources such as IATA documents and press sources have also been used.

As indicated during the Council session held in July 2000, the Council requested due to time constraints, that the document be in three parts. The present first part will deal with items (a) to (g) listed in document job n° 2451, dated 19 April 2000.

Due to the extensive subject matter, the paper is not meant to be exhaustive. To the contrary, in spite of the mass of documentation that was compiled and used, and the existence of an even wider literature available, the paper shows a considerable lack of information as compared to what is available in the maritime transport sector or in the telecommunications sector.[1]

This is true both for country-specific information (particularly for developing countries) and for information on specific sectors or issues, such as leasing or ancillary services. This lack of information is felt both on the economic side and on the regulatory side but is particularly compelling on the regulatory side, where apart from OECD countries virtually no information on national regulatory regimes is available.

This Note uses the date of 15 December 1993 as a starting point since this is the date of the finalization of the existing disciplines by the conclusion of the Uruguay Round, rather than the date of the entry into force of those disciplines on 1st January 1995. However, in certain instances such a clear cut date did not make sense and has therefore not been used. Similarly, in certain instances historical data were only available on a wider time span (1991-1999) or on a shorter one (1995-1999) and these have been used when considered relevant.

The structure adopted for this Note is a sectoral one sub-divided when necessary by themes. In each of the subsectors or themes, economic developments are addressed first, followed by regulatory developments.

PART ONE

MAINTENANCE

COMPUTER RESERVATION SYSTEMS

SELLING AND MARKETING

FRANCHISING

FREIGHT FORWARDING AND WAREHOUSING

LEASING

CATERING

1 For a comparison see for maritime documents S/NGMTS/W/2 and S/NGMTS/W/2/Add.1 to 37 and for telecommunications S/NGBT/W/3 and S/NGBT/W/3/Add.1 to 39.

I. AIRCRAFT REPAIR AND MAINTENANCE

1. Economic developments

1. Aircraft repair and maintenance activities are defined in paragraph 6(a) of the Annex as meaning "…such activities when undertaken on an aircraft or a part thereof while it is withdrawn from service and do not include so-called line maintenance". This definition broadly corresponds with what the industry calls "maintenance, repair and overhaul" (MRO).

2. MRO standards and procedures are very detailed due to the requirements that not only must an aircraft be certified, but also every part that goes into an aircraft. In both cases there are predetermined repair and overhaul cycles for aircraft and life-span for parts (the number of times, and/or the number of hours a part can be re-used, re-installed, or re-cycled before it is replaced). The pre-determination of these maintenance requirements for both new and old generation aircraft has been through the cumulative experience of the "Maintenance Steering Group" (MSG). This group dates back to the late 1950s and consists of experts from National Transportation Departments, manufacturers, and airline operators. It is this group which created the standards for old generation aircraft (e.g. DC-8s DC-9s) checks (known as MSG-1) which are denominated by the letters A, B, C, and D, and is a process driven scheduling for maintenance. The directives that apply to the generation of aircraft that include *inter alia* DC-10, B-737 series and B-747 series) are maintained under the directives of MSG-2.

3. However, due to both technological advancements and the continual search for cost reduction, MSG has found that the same safety standards can be met or exceeded and the overall costs reduced by modifying the C check and abolishing the D check for new generation aircraft (A-3 series, B-767 series). These changes are found under MSG-3 whereby the aircraft are certified under the new "Heavy Maintenance Visit" (HMV). These are "task driven" procedures that have a predetermined set of maintenance checks occurring in numerical sequence (e.g. HMV-1, HMV-2…). Each contains a list of required procedures and by HMV-6 the aircraft will have undergone repair and overhaul equivalent to the old D check without being removed from operations for the same amount of time. Anything over HMV-6 will have accomplished more than an standard D check.

4. The Table 1, extracted from the ICAO annual compilation of airline operating revenues and expenses, shows a steady growth over recent years in the proportion of maintenance and overhaul costs among total operating costs.

5. In so far as this growth is significant, it probably has to be attributed to the tightening of safety policies and even more to the tightening of their implementation, as described below in the regulatory developments section. This growth is also a change when compared to the tendency described in paragraph 10 of document S/C/W/59 that was based on a 1987-1995 series and a different methodology. In any case, despite any direct impact on operating expenses, maintenance remains a central preoccupation the airlines because it determines aircraft availability. This in turn affects the revenue-generating ability of an airline.

6. Micro-economic data based on maintenance companies revenues seem to confirm the expansion of this business during the 1993 to 1999 period. Additionally, forecasts by independent professional sources also project high growth rates into the future (2006). In 1998, the turnover of the sector grew as a whole by 8% (engine maintenance by 10% and 15% for other equipment). The MRO turnover of Rolls Royce increased by 50% between 1997 and 1999, and General Electric increased from US$ 2.3 to US$ 5.5 billion between 1996 and 1999. The International Transport Workers Federation (ITF) estimated the sector at US$ 25 billion in 1998 (US$ 22 billion for civilian, US$ 35 billion for military). The consultants Frost and Sullivan estimate a total market of 37 billion in 2006, whereas according to the manager of the MRO division of Rolls Royce the sector had already reached US$ 42 billion in 1999. Within the latter figure US$ 25 billion is attributed to engines, US$ 5.3 billion for line maintenance, US$ 4.2 billion for accessory overhaul, and US$ 7.5 billion for airframe maintenance. The industry journal *Interavia* has forecast a total market of US$ 61 billion by 2005.

TABLE 1
Proportion of maintenance repair and overhaul costs in airlines operating expenses

1993	1994	1995	1996	1997	1998
10,1%	10,0%	10,5%	10,5%	11,0%	11,1%

7. It should be noted also from the various breakdowns above that commercial aviation is not the only customer of the MRO industry. The military market is taking an increasingly important place as air forces faced with budgetary constraints begin to outsource part of their maintenance (recent operations of that kind include contracts awarded by the air forces of the United States, United Kingdom, Italy, South Africa, Belgium, New Zealand, Australia, Indonesia, Colombia and United Arab Emirates).

8. General aviation is also an important client as for instance 500 new planes enter the market every year in the United States. As mechanics and engineers are paid less in the facilities dedicated to general aviation than in the facilities dedicated to commercial air transport, it can be said that general aviation is largely at the source of the labour shortage experienced by the sector in North America (a 4,000 persons deficit a year on a total workforce of 137,000 in the U.S. only) and in Europe at least. Also the growing significance of general aviation as an MRO customer evidenced by the creation of a joint-venture between Lufthansa Technik, Bombardier, and LBAS (Lufthansa Bombardier Air Services) to maintain the business jets. This particular segment of the market is undergoing dramatic growth due to the rapid expansion of fractional ownership programs (discussed in General Aviation section below).

9. One may also note from these figures the economic importance (US$ 5,3 billion in one of the breakdown) of line maintenance, which is currently excluded from the scope of the Agreement.

10. Table 2 lists the top-ten MRO providers of 1997 by sales and by workforces. Please note however, that this table is incomplete because it excludes engine manufacturers. If these manufacturers were included then GE would be number 1, and Pratt and Whitney number 3. Table 2 also shows that there are different types of MRO providers and does not include Original Equipment Manufacturers (OEM), who may be engine makers, aircraft manufacturers (Boeing's BOLD subsidiary for instance), or avionics manufacturers.

11. Over the period 1993-1999, the market has seen a progressive consolidation in favour of OEMs and the autonomous subsidiaries of airlines. This category of global maintenance providers includes: Lufthansa, Swissair, Air France, Singapore Airlines, Cathay Pacific. This consolidation has been to the detriment of independent providers and of in-house maintenance divisions[2] especially in airlines that have chosen to divest and to concentrate on their core transport business

2 The proportion of in-house maintenance world-wide has fallen from 90% in 1970 to 73% in 1998, Source: *Airline Business,* September 1999.

TABLE 2
Leading MROs[a]

Rank	Company	Type of Provider[c]	Sales 97 (US$ m)	Workforce
1	Lufthansa Technik (GER)	i	1,750	10,000
2	Air France Industries (F)	ii	870	5,100
3	Sogerma (F)	iii	685	3,700
4	SR Technics (CH)	i	650	3,000
5	Singapore Technologies, incl Dalfort, ST Mobile (SING)	i	580	4,000
6	BFGoodrich Aerospace (U.S.)	iv	400	3,700
7	Hong Kong Aircraft Engineering (HK,C)	i	312	4,500
8	FLS Aerospace (DK)	iv	177	1,250
9	Aeronavali (IT)		163	1,500
10=	Dee Howard (U.S.)		130	1,200
10=	Precision Standard (Pemco) (U.S.)		130[b]	3,000

a Classified by overall sales figures, where available. Services offered include heavy commercial air transport MRO, and may include military aircraft. Excluded are specialist engine-only and components facilities. Air-line owned MRO facilities are also not included, unless they have been spun off as independent business units, and publish financial data.

b Reflects loss on closing facility in Copenhagen.

c (i) airline subsidiaries; (ii) semi autonomous providers; (iii) providers linked to manufacturers and (iv) independent providers.

(such as BA) and of smaller airlines that have reduced their in-house maintenance to use the facilities of their alliances partners. This latter phenomenon has raised concerns among airline unions, who fear in particular that the concentration of the maintenance of certain types of aircraft in certain dedicated facilities may translate into delocalization of jobs as well as the closure of in-house maintenance divisions or their outsourcing to subsidiaries offering less social benefits. In certain instances unions have been able to impose a ceiling on outsourcing, as for instance in the case of United Airlines, where this ceiling is at 20%. A parallel phenomenon is the tendency of the major remaining actors to develop facilities in countries with relatively low labour costs such as Ireland for Lufthansa and Swissair (which jointly own and manage Shannon Aerospace) or Philippines for Lufthansa, Morocco for Air France Industries, China for Cathay Pacific, Lufthansa Technik and SR Technics. In the case of China however, this can also be explained by the need to be present in a very rapidly expanding market.

12. Recent examples of the consolidation movement include the takeover of TEAM Aer Lingus in 1998 by FLS (Denmark, independent provider), Flight Safety by Boeing, Cade Industries and Sundstrand by United Technologies, National Airmotive by Rolls Royce and Greenwich Air Services, UNC, Aviall and Garrett Aviation Services by General Electric.

13. It is generally agreed that OEM will continue to grow, especially in the engines segment. OEMs may even give or lease engines and draw their revenues from long term maintenance contracts, while independent providers will probably have to concentrate on niche markets. This could occur in diverse areas such as total support for start up (e.g. FLS-EasyJet), aircraft painting, GPS avionics, satellite enabled communications, passenger telephones, in-flight entertainment systems, hush kits and conversion of older passenger planes into freighters. In short, multi-year contracts and total support contracts with flat rates (allowing the planning of maintenance costs) are becoming a common feature of the industry.

14. The various players in the market tend to multiply joint ventures in order to be present in all segments and geographical zones. The following typology of joint-ventures identifies the geographical and sectoral tendencies, and include:

- joint-ventures between airlines which are members of the same alliances, for example Star, Lufthansa Technik and SAS on CFM engines; Lufthansa Technik and United on Boeing 777; and Lufthansa Technik and Air Canada on Bombardier aircraft;

- joint-ventures between airlines of different alliances (Lufthansa Technik and SR Technics in Shannon Aerospace; Lufthansa Technik and Air China in AMECO; Lufthansa Technik and Lan Chile; Air France Industries and Royal Air Maroc; Air France Industries and TAP; Air France Industries and Air Canada);

- joint-ventures between independent maintenance providers and airlines (SOGERMA and Middle East airlines);

- joint-ventures between engine or equipment manufacturers and airlines (General Electric and Asiana; General Electric, All Nippon Airlines and IHI; General Electric and LOT; General Electric and EVA Air; MTU and China Southern; MTU and Canadian, SNECMA and Royal Air Maroc; SNECMA and Sabena; SNECMA and China Southwest; Rolls Royce and Cathay Pacific in HAES; Rolls Royce and Singapore Airways; Pratt and Whitney with GAMCO-Gulf Air; Pratt and Whitney and American Airlines; Pratt and Whitney and Singapore Airlines; Allied signal and Malaysian Air System);

- equipment manufacturers and aircraft manufacturers (Sextant Avionique and Airbus in Beijing);

- airlines and aircraft manufacturers (Lufthansa Technik and Bombardier in LBAS);

- joint-ventures between governments, airlines and aircraft manufacturers (Abu Dhabi Government and Gulf Air in GAMCO; Cathay Pacific, Singapore Airlines, Boeing, Civil Aviation Authority of China, local government of Xiamen in TAECO).

15. The economic developments in the sector also exhibit regional variations. In Europe, the consolidation has been centered around airline subsidiaries (SR Technics, Lufthansa Technik and Air France Industries) which have rapidly developed third party activities (up to 46% in the case of Lufthansa Technik) through rationalizing activities on the basis of alliances, joint ventures and takeovers. The independent providers have consolidated (e.g. FLS-Team) and many airlines have downsized their in-house maintenance or concentrated their third party work on niches (e.g. British Airways).

16. In North America and in the U.S. in particular, airlines have maintained strong in-house maintenance divisions (the in-house proportion of maintenance is 85% in the United States whereas it stands at 73% world wide). The only exceptions being Southwest Airlines and, to a lesser extent America West. U.S. airlines tend to use third party MROs only in the busiest periods. Among the factors explaining this tendency is the tightening of the FAA controls, the legal liability regime, and the reluctance of the unions. In the 1980's, many U.S. airlines tried to develop third party activities and then withdrew from them. Delta and United are now trying again to develop these activities though not on a massive scale. There remains however a strong sector of independent providers. It is worth noting also that largely because of the age of the domestic fleet, maintenance costs of U.S. airlines are on average higher than those of their international competitors: for instance they reach 15% of the total costs at Northwest Airlines.

17. In Asia, until the recent financial crisis, all major airlines were investing heavily in in-house maintenance facilities. Asia, and especially China, appear also to be the "promised land" for joint-ventures as mentioned in paragraph 14. Additionally, certain Asian maintenance companies have begun investing on other continents (e.g. Singapore Technologies Aerospace in the United States with the control of ST Mobile Aerospace Engineering and Dalfort Aerospace).

18. In Oceania, Air New Zealand Engineering Services (ANZES) has invested heavily in modern equipment such as enterprise resources planning software, coordinated its maintenance activities with the Australian parent company Ansett, and invested in China. Apart from the various joint-ventures or contracts mentioned above, it has proved impossible to gather any data in the specialized press or in the studies of international organisations regarding Latin America, the Middle East, CIS countries, the Indian sub-continent and Africa.

19. In terms of modes of delivery, mode 2 and mode 3 are essential for this activity, but technological evolutions have also led to a growing importance of trade conducted electronically under modes 1 and 2, while economic developments have made mode 4 more important than it used to be.

20. Mode 2 is highly relevant because planes are a mobile asset which can be repaired anywhere. Additionally, the advancement of mutual recognition and regulatory convergence in the developed world, but also at universal level under the aegis of ICAO (see regulatory section below) has led to the certification of a growing number of repair stations which serve mainly foreign-based customers. A recent proposal to repatriate all maintenance of national planes to the national territory was not accepted, *inter alia* because it would have conflicted with a mode 2 commitment of the country concerned.

21. As the sector is characterized by heavy investment with only long term return, mode 3 is also essential, especially regarding the conditions attached to joint-ventures, as this is a very frequent form of commercial presence in this sector.

22. Electronic trade has of course had an important impact over the last seven years on this high-tech sector. CD ROM and now online internet based databases have replaced the huge paper documentation required and have allowed a constant updating, searches and in certain instances online dialogue on technical questions with the editors of the documentation. This dialogue can go as far as tele-diagnosis. For instance, Boeing's data base BOLD (Boeing Online Delivery program) registers 20 million transactions a year. Some of these transactions are devoted to the purchase of parts but many are linked to consultation of the documentation and to exchanges of data between the maintenance provider, the airline and the aircraft or engine manufacturer. These transactions help the manufacturer to establish databases on the life span of parts, on trouble-shooting (helped by artificial intelligence) and on predictive maintenance. In a second stage, this facilitates the design of new parts and speeds the regulatory process of approval. Another example of these electronically enabled feedback mechanisms is the CRMS (Collaborative Reliability Management System) put in place by Embraer. The U.S. Federal Aviation Administration and the European Joint Aviation Authorities are now in the process of drafting rules which will mandate reliability feedback from the operators to the manufacturers.

23. One of the most sophisticated electronic maintenance sites is certainly the one put in place by General Electric. This website contains the following functions: data transfer, records management, inventory control, online engine record and configuration management tools, self help support including animated engines disassembly techniques, online training and three-dimensional rotating views of parts and components, "chat room", ordering of parts and verification of shipping status, services bulletins, simulations allowing the calculation of the effects of potential upgrades in terms of shop visits rate, cost of ownership and money saved ("what if?" option), tele-diagnosis including a 24 hour hotline analyzing web photographs of damaged parts, trend analysis (comparing maintenance performances of the fleet to the performance of competitor's fleets),

frequently asked questions, data bases with intelligent search tools and performance measurement in terms of costs and visits. Internally the use of enterprise resource planning (ERP) software such as Baan and SAP is also increasingly common.

24. In addition, business to business (B2B) platforms have also developed in the maintenance sector, especially for the sale of parts. This includes component manufacturers platform as well as "neutral platforms", original parts as well as second hand parts, negotiated price systems as well as reverse auction bids and clearing-house and inventory services. Examples include: Airliance (United Airlines, Lufthansa Technik, Air Canada), Myaircraft.com (United Technologies Honeywell), Aerospace.com (SITA and AAR corp.), Airbus, the association of BAE Systems, Boeing, Lockheed Martin, Raytheon, and Commerce One and tradeAir.com.

25. Finally, in terms of mode 4, the shortage of qualified personnel described above has triggered the development of companies specialized in the recruitment and placement of aviation engineers and mechanics world-wide. Those companies are experiencing double-digit growth at the moment. PARC's aviation technical and maintenance division based in Ireland is a typical example with its 24 clients on four continents and a growth in 1999 of 22% in man-hours provided.

2. Regulatory developments

26. The main regulatory developments that have occurred during the period 1993-2000 are linked to safety considerations, of which maintenance is an essential parameter. However, these safety regulations can have an impact on trade and have sometimes generated trade frictions. In addition, there have been instances where new regulations concerning the provision of maintenance services have been inspired by purely economic reasons.

27. As far as safety and safety-related regulations are concerned, at a universal level, the major development has been the inception of two major safety oversight programmes by ICAO involving very detailed audits of national legislation and practices of Members regarding safety, including maintenance. Following the 1992 Resolution A29-13 on "improvement of safety oversight" which recognized that the ICAO international safety standards required effective government oversight for their implementation, the ICAO Council agreed in 1994 to establish an ICAO safety oversight programme whose objective was to identify deficiencies through assessments decided on a voluntary basis and to provide advice and assistance to enable States to implement the relevant ICAO Standards And Recommended Practices (SARP). A mechanism for the financial and technical contributions to this program was set up in 1995 and the program effectively began operating in March 1996. The voluntary program ended in 1998 after having received 88 requests for audits and processed 67 of them. It was replaced on 6 May 1998 by the ICAO "Universal Safety Oversight Audit Program".

28. This new universal and compulsory program stemmed from the conclusions of the meeting in November 1997 of the Director-General of civil aviation from 147 States. They agreed on a set of five recommendations to reinforce the ICAO safety oversight:

- through regular, mandatory systematic harmonized safety audits;
- through the enhanced transparency of those audits;
- through the expansion of those audits to other areas of civil aviation having an impact on safety such as air traffic services, aerodromes and support facilities and services; and
- through the coordination of the ICAO oversight program with regional and national oversight programs.

These recommendations were endorsed by the ICAO Assembly in September/October 1998 (Resolution A32-11). A safety oversight audit unit was established to this end inside the air navigation bureau of ICAO. This unit conducted 49 audits by the end of 1999 the objective being to have assessed all ICAO Member States by the end of 2001. No data are yet available on the activity of the program in 2000.

29. As an element of support to this program and also as a result of the experience of its International Aviation Safety Assessment program (IASA), the FAA has developed and promoted a set of model civil aviation regulations largely based of the FAA regulations and the European Joint Aviation Authorities[3] regulations. One of the eleven parts of this model regulation (part 6) is devoted to maintenance. The complete text of these model regulations can be found at the following

3 The Membership of the JAA is the following: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Monaco, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the UK. The following countries are candidate Members: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Moldova, Poland, Romania, Slovak Republic, Slovenia, The former Yugoslav Republic of Macedonia, Turkey.

electronic address: http://www.faa.gov/avr/iasa/calr.htm.

30. In the United States, the Federal Aviation Administration put in place in 1992 an International Aviation Safety Assessment program (IASA), which assesses the safety oversight of foreign carriers serving, or willing to serve the United States, and which can translate into limitation of services or prohibition of servicing the United States in cases of non-compliance with ICAO standards. It was decided in 1994 to make the results public.

31. On several occasions, the application of this program has generated tensions with partner countries, especially those having signed a bilateral open skies agreement. In May 2000, the FAA changed its IASA regulations[4] by reducing the number of categories for foreign airlines from three (acceptable, conditional, unacceptable) to two (compliant, non compliant).

32. The regulatory convergence process, first with the European Joint Aviation Authorities but also with Canada, already described in document S/C/W/59, has intensified over the last years. The JAA and the FAA hold annual harmonization conferences and agreed in May 1997 on the Maintenance Implementation Procedures (MIP) that will form the basis of agreements to be signed by the FAA and each national aviation authority of the JAA. From an operational point of view the differences between their respective regulation FAR 145 and JAR 145 have been identified and the FAA has the authority to grant JAR 145 approval of facilities located in the United States territory, and participates to joint JAA-FAA Maintenance International Standardization Teams which audit regularly on a sample basis JAR 145 approved facilities.

33. The U.S. is also pursuing a policy of international cooperation and regulatory convergence on a wider scale than the transatlantic cooperation. Typically this involves the signing of Bilateral Airworthiness Agreements (BAA before 1996) or Bilateral Aviation Safety Agreements (BASA since 1996) on technical cooperation and reciprocal airworthiness certification of civil aeronautical products followed by Implementation Procedures on Airworthiness agreements (IPA) and by Maintenance Implementation Procedures agreements (MIP). BASA, have been concluded with Austria (1997), Denmark (1998), France (1996), Germany (1996), Ireland (1997), Malaysia (1996), Netherlands (1995), Russia (1998), Sweden (1998), Switzerland (1996) and the United Kingdom (1995), and are under negotiations with Brazil, Canada, Italy, Norway, Spain and Thailand. MIP have been signed with France (1999), Germany (1997) and Ireland (1999) and IPA, with Germany (1999), Malaysia (1997) and Russia (1998).[5]

34. In a recent notice of proposed rulemaking[6], the Federal Aviation Administration has opened for comment a proposal for a complete rewriting of FAR 145. As far as foreign repair stations are concerned, the suggestion is to remove in nearly all instances the distinction between national and foreign repair stations and to apply the same regime to them. It is also proposed to create an advisory panel to identify areas where foreign repair stations pose special issues with respect to oversight on safety. Those proposals whose deadline for comment expired in December 1999 are presently debated and face some criticism from independent providers and small businesses on the ground of over-regulation.

35. In Europe, in 1994, the International Air Carrier Association (IACA) appealed to the European authorities to curb, on the grounds of aviation safety, the growing influx of low-cost flag of convenience charter operators flying aircraft registered in countries where the government safety oversight was felt to be less stringent. In 1996 this public opinion campaign found an echo through the adoption by the European Union of the Safety Assessment of Foreign Aircraft program (SAFA) finally endorsed by the Council of Ministers in June 1997 whose philosophy is comparable to the IASA programme.

36. The assessment will be mainly done through ramp spot checks and the enforcement of this program has been delegated jointly to the European Civil Aviation Conference (ECAC)[7] and to the Joint Aviation Authorities, its final institutional shape remains to be determined. The system also includes an exchange of information with the FAA and a recommendation for the Member States of the EU to include in their bilateral agreements a safety clause and the right to audit foreign carriers contracted by European tour operators. The European Civil Aviation Conference has also signed

4 Federal register, May 25, 200 volume 65, number 102, page 33751-33753.

5 Situation as of 17 February 2000. Source: FAA website.

6 Docket n°FAA-199-5836, notice n°99-09, June 1999, part 145 review: repair station, see http://www.faa.gov/avr/arm/n99-09.pdf, for foreign repair station see notably pages 9, 48-49, 59-63 and 76-79.

7 The membership of ECAC is the following: Albania, Armenia, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Moldova, Monaco, the Netherlands, Norway, Poland, Portugal, Romania, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, the former Yugoslav Republic of Macedonia, Turkey, Ukraine, and the United Kingdom.

in May 1999 a Memorandum of Understanding with ICAO on safety oversight issues.

37. The Joint Aviation Authorities adopted in 1991 JAR 145 regulations on the approval of maintenance organizations. The regulations have already been revised once and are again in a process of consultation since the last quarter of 1999. There are now 3,000 maintenance organizations, which have obtained the JAR 145 certification; 1,750 in Europe; 1,100 in North America and 150 in the rest of the world. JAA regulations on maintenance also include the qualification and licensing regulation (JAR 66), training regulation (JAR 147), specific maintenance rules for aircraft not used for commercial transport (JAR-M). The JAA organize multinational Maintenance Standardization Teams (MAST) that jointly conduct audits in JAA Members territories as well as Maintenance International Standardization Teams (MIST) that conduct jointly with FAA and Transport Canada sample audits on JAA approved facilities outside the territories of JAA Members. The JAA countries signed in May 1996 an agreement with Canada.

38. In Latin America, six Central American States concluded in June 1996 the Ilopango Agreement which committed them to the adequate implementation of homogeneous inspection procedures for which the agreement established an Aeronautical Technical and Operational Inspection Service to assist in the task. Also in this region the Andean Committee of Aeronautical Authorities conducted in 1995 consultations with the United States on the implementation of the IASA program. The Latin American Civil Aviation Commission signed in September 1998 a coordination agreement on safety oversight issues with ICAO.

39. In Asia, the transport ministers of the Member States of the Asia Pacific Economic Cooperation (APEC) established in April 1996 a group of experts on aviation safety which issued five recommendations in 1997. Australia undertook in 1997 to harmonize unilaterally its safety rules with those of FAA.

40. As far as regulatory developments based on economic considerations are concerned, one may note the recent directive by the Indian Civil Aviation Ministry requiring that all maintenance up to C-checks (that is to say all except very heavy maintenance: D checks) must henceforth be carried out domestically, a measure that is applicable to more than 150 aircraft and that has been based on balance of payments and industrial considerations.[8]

8 See the electronic newsletter Aerosafety and Maintenance, Mac Graw and Hill Editors, 16 June 2000, issue page 7 on http://www.awgnews.com.

II. COMPUTER RESERVATION SYSTEM (CRS) SERVICES

41. Computer reservation services (CRS) are defined by paragraph 6(c) of the Annex as "services provided by computerised systems that contain information about carriers' schedules, availability, fares and fare rules, through which reservations can be made or tickets may be issued". They are all dealt with in document S/C/W/59 paragraphs 17 to 30 and in document S/C/W/129, paragraph 5, 19C(a), 19D(a), 20(a) and Annex 1, page 11.

42. In 1990-1993 when the Annex was elaborated, there was an absolute identity between CRS services and CRS providers: CRS services were only provided by CRS providers, CRS providers were only providing CRS services. Between 1993 and 2000 this absolute identity has disappeared. On the one hand, CRS providers have begun providing other services, such as non-air transport bookings ("GDS" Global Distribution Services, whose classification remains an open subject) travel agent services, computer services or even telecom services, on the other hand, since the definition of CRS is vague and does not demand for instance that the information contained in the system covers all airlines, the activities of travel agents, airlines, airline alliances and others who have begun to offer online bookings and tickets could possibly be classified as CRS services.

43. This double movement was already partially reflected in document S/C/W/59, where paragraphs 17 to 19 and 24 to 30 were devoted to CRS services provided by CRS providers and paragraphs 19 to 23 were devoted to emerging new forms of CRS services. After nearly two years the situation has evolved and clarified, and figures, data and forecasts are now available on these new forms. In the meantime the world of traditional CRS has undergone notable changes. This section will deal successively with the classical CRS and with the new forms of CRS.

A. CLASSICAL CRS

1. Economic developments concerning the classical CRS

The "classical" CRS can be described by the following table:

FIGURE 1

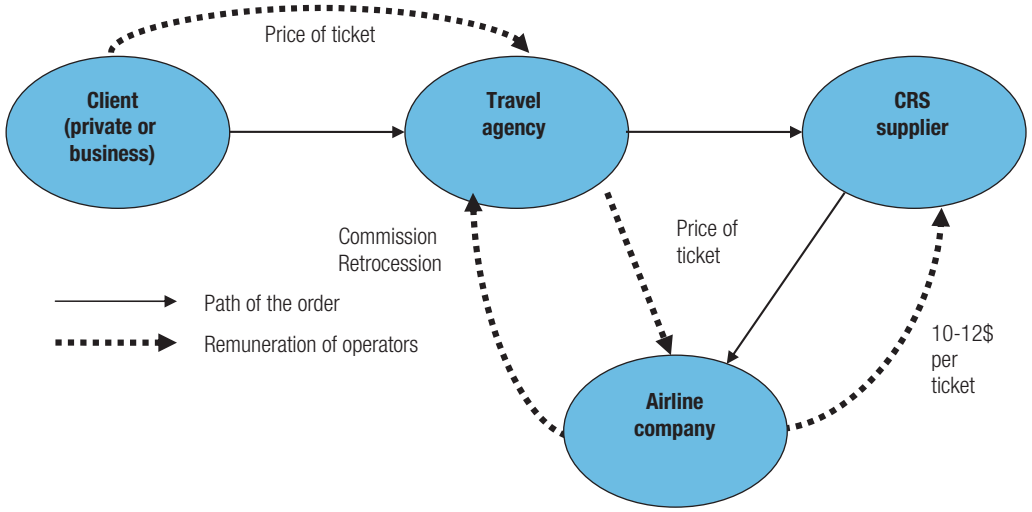


TABLE 3

The information contained in Table 1 page 8-9 of document S/C/W/59 can be updated and completed by the following Table 3:

	SABRE	GALILEO	AMADEUS	WORLDSPAN	ABACUS
Foundation date	1946 - 1959	1971 (United's Apollo) 1987 COVIA 1990 Galileo 1993 General merger in Galileo international	1987	1982 (Delta-DATASII) 1976 (TWA -PARS) 1990 (Merger)	1988
Revenues 1999	US$ 2.435 billion	US$ 1.526 billion	US$ 1.272 billion		
Market share[a]	24%	28%	34%	13%	
Initial share holders	AMR corp. (holding company of American Airlines)	Aer Lingus, Air Canada, Alitalia, Austrian, British Airways, KLM, Olympic, Swissair, TAP, United-Airlines, US Airways	Lufthansa: 29.2% Air France: 29.2% Iberia: 29.2% SAS: 12.4%	Delta Northwest TWA	Cathay Pacific, Singapore Airlines
Share holders as of July 2000	100% public since march 2000 ongoing repurchase plan for US$ 100 million	73,2% public since May 1999 including 6,7% self control (former BA shares) remaining shares: United: 17,6%, Swissair: 7,7% Olympic, Air Canada, Alitalia, Aer Lingus, Austrian: 1,5% - repurchase plan for US$ 500m	40% public 23,3% Air France 18,3% Iberia 18,3% Lufthansa (A shares) since Oct – Dec 1999 voting rights: 35,7% Air France, 27,9% Iberia, 27,9% Lufthansa, 8,4% public	Delta: 40% Northwest: 34% TWA: 26%	All Nippon Airways, Cathay Pacific, China Airlines, EVA Airways, Garuda, Hong Kong Dragon Air, Malaysian Airlines, Philippines Airlines, Royal Brunei, Silkair, Singapore Airlines: 65% Sabre: 35% since February 1998
Intermediary ownership movements	18% sold to the public in 1996	35% sold to the public in 1997	Replacement of SAS by Continental in 1995		China Airlines, Malaysian Airlines, Philippines Airlines, Royal Brunei: 1988-90, Silkair:1990, Dragon Air, ANA 1992, Garuda 1993, EVA Airways 1994
Number of employees	10,000	2,600	2,800 including majority owned National marketing companies (NMC), 1700 without them	3,200	Headquarters: 400 NMC: 450

a Source Amadeus, only four global players taken into account, one may hint at different results from other partial figures presented by the other CRS providers.

	SABRE	GALILEO	AMADEUS	WORLDSPAN	ABACUS
Number of air booking 1999	331.1 million	320.6 million	343.9 million		
Value of bookings	US$71 billion	US$55 billion			
Number of travel agencies connected	47,000	41,000	48,500	18,000	9,300
Number of terminals	210,000	169,700	205,700 (134,300 in travel agencies 71,400 in airlines sales offices of 114 airlines)		23,300
Countries covered	45	107	134 through 67 National marketing companies (NMC)	60	18 (all in Asia) through 38 NMC
Co-operation with other CRS	Share of 35% in Abacus	Absorbed GETS in 1997 with a system conversion staged on two years (97-99)	- absorbed system one in 1993 - joint-venture with Korea airlines (Amadeus: 32%, KAL: 68%) to operate the CRS system TOPAZ in Korea		- System hosted and maintained by Sabre system since 1997 after the termination of an agreement with World span - 40% share in Infini (Japan-60% ANA) also a Sabre operated system - joint-venture with Air India and Indian Airlines (49%) and Tata consulting services(2%)
Numbers of airlines bookable	440	537	505	527	
GDS: non air booking and percentage of total	38.8 million 10,8% of total bookings	29.3 million 9,1% of total bookings	28.8 million 7,7% of total bookings		
GDS: Number of car rental companies bookable and of their location	50 companies	38 companies in 18,000 locations	48 companies in 23,500 locations	44 companies in 17,300 locations	50 companies
GDS: Number of bookable properties and of bookable hotels companies	45,000 properties	45,000 properties 225 companies	51,300 properties 319 companies	39,000 properties 200 companies	50,000 properties
GDS: Other GDS products		350 tour operators	Ferries, rail tour operators, cruises, insurance	27 tour operators, 49 special travel services suppliers	
IT: provision and/or management of airlines websites		Ual.com, Sabena	55	80	

	SABRE	GALILEO	AMADEUS	WORLDSPAN	ABACUS
IT: provision and/or management of travel agency website		GetThere.com Uniglobe.com	3,162	Expedia Priceline.com	
IT: provision and or management of other travel vendors websites			Wal-Mart Expresso Group (e.viaggi.com)		
IT: management of multi-airlines portals			Online Travel Portal (OTP)	Orbitz	
IT: alliance displays		"Preferred Availability" for Star	"Alliance display" for Star	"Worldspan alliance display" for Skyteam and qualiflyer	"Alliance Manager" for OneWorld and Star
IT: mobile commerce cooperations[b]	Oracle Sabre-Vodaphone, Travelocity–BT Cellnet	Motorola	Nokia, Ericcson, Wideroe		
IT: other IT activities	- Sabre E-Market place with Ariba (business to business platform) - Encryptix (ticket home printing systems)	- Stamp.com and encryptix (ticket home printing systems) - Shepherd systems (software for airlines) - Quantitude (telecom services for airlines)	Cooperation with Broadvision (software editor) Hewlett Packard and Bank of America		
IT revenues and percentage of IT in total revenues if available	US$ 1,865 billion 40% of total revenues	US$ 650 million	US$ 200 million		
Travel agent services: directly owned (partially or totally) virtual travel agencies	Travelocity.com Preview.travel[c]	Trip.com[d]	Amadeus.net Vacation.com[e] Terra Networks		
Travel agent services:directly owned business travel dedicated companies	Sabre Business travel solution		Joint-ventures with SAP systems		

Note: A blank in this table does not mean that the CRS provider has no activities in the area concerned, but only that it has proven impossible to gather the relevant data.

b i.e provision of airline information and booking on mobile telephone handset, personal digital assistants and notebooks.

c About to be merged, 1.2 billion revenues, 17 million registered customers, 3rd largest e-commerce site.

d 3.5 millions registered users.

e 9,400 travel agencies in the U.S.

44. Table 3 (p.11-12) and from information drawn from various sources (specialized press, websites of those companies, ICAO) one may consider that five main evolutions have characterized the classical CRS over the period 1993-2000:

(i) concentration;
(ii) an expansion fuelled by geographical extension and by an increasingly challenged price model;
(iii) extension to other leisure and travel areas;
(iv) initial public offerings and severing of the link with parent carriers;
(v) erosion of the predominant role of traditional CRS provider in the issuing of air transport tickets and subsequent diversification into other electronic travel activities.

(i) Concentration

45. In 1994, Amadeus took over System One, a CRS owned by Continental and operated by Electronic Data System. The same year Air Canada and Canadian Airlines dissolved their partnership in Gemini, Canadian joining the SABRE system while Air Canada joined Galileo. In 1997, Galileo took over GETS with a two-year conversion period. The same year SABRE took a 35% participation in Abacus International and replaced Worldspan as the operating system of Abacus. Abacus itself took a 40% share in the Japanese CRS INFINI (the remaining 60% belonging to All Nippon Airways). In 1998, Amadeus took a 32% share in the Korean CRS TOPAZ (the remaining 68% belonging to Korean Airlines) and became its operating system. There had been talk in 1998 of a merger between Amadeus and Worldspan but this seems to have since been abandoned. Arthur Andersen made an attempt to enter this market in 1998-1999 but withdrew. EDS is still managing a proprietary system for Continental but apparently without plans of expansion. This leaves for the moment four global players (Sabre, Galileo, Amadeus and Worldspan), one strong regional actor (ABACUS) and two notable local systems (Infini and Topaz), all regional and local actors being somehow linked to the global players.

(ii) An expansion fuelled by geographical extension and by an increasingly challenged price model

46. CRS services are now available in more than three-quarters of ICAO Members. In individual terms Amadeus is the system covering the greatest number of countries (134) followed by Galileo (107) Worldspan (60), SABRE (45) and Abacus (18). The form of the coverage is also an interesting feature: the CRS provider does not create a national marketing company in each and every country. For instance Amadeus is covering its 134 countries with only 67 national marketing companies. This seems to show that mode 3 is not the only relevant mode for CRS but that mode 1 plays a central role in countries where no national marketing companies has seen set up. Symmetrically in the case of Abacus, as one can see from the table above, 18 countries are covered by 38 national marketing companies, which shows that there can be several national marketing companies in the same country.

47. The size of the respective markets is extremely variable as one can see by Chart 1.

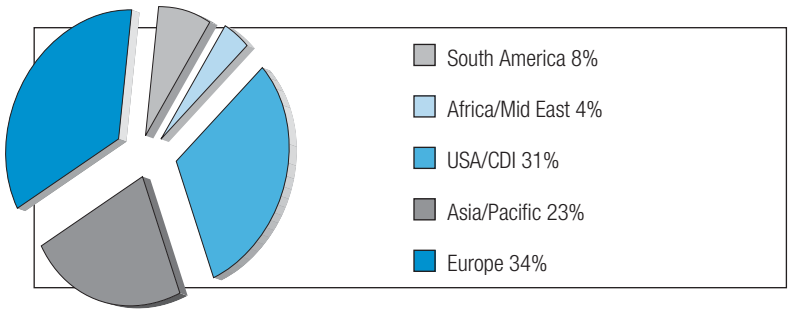
TABLE 4

Table 4 gives an idea of the progressive geographical extension of CRS:

	1994	1995	1998
Countries with no CRS available	56	55	45
Countries with one CRS only	45	49	43
Countries with two or more CRS	82	81	97

Source: ICAO

CHART 1
The International Market of CRS

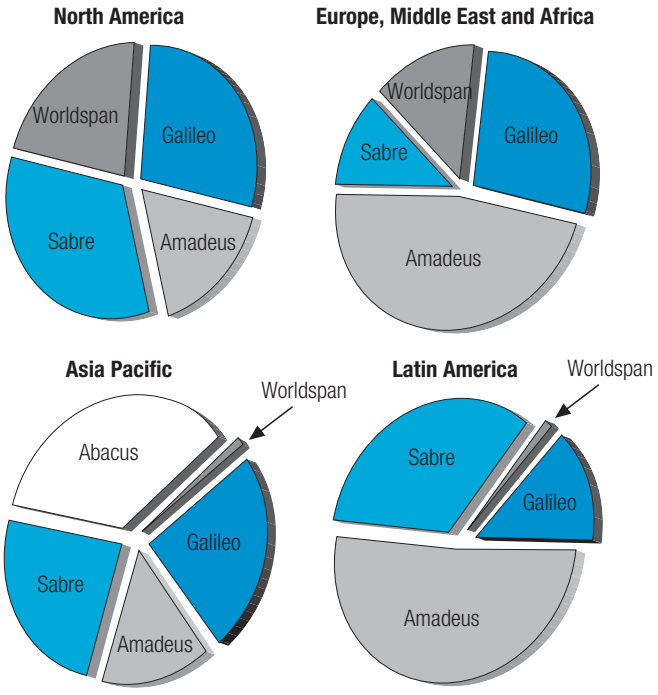


48. The U.S. market alone accounts for more than 30% of a market valued at US$ 5 billion a year. The only global data available on market shares (Amadeus 34 %, Galileo 28%, SABRE 24%, Worldspan 13%) is limited to the four global players. The precise methodological basis of this figure is unknown and partial figures given by other CRS are inconsistent among themselves.[9] Therefore, one must take this figure with certain precautions. The respective strength of the five major players on the regional markets is also extremely variable as shown by the following pie charts.

49. All these companies have reported over the last seven years a regular expansion in their number of bookings and in their revenues. However, a large part of this growth in recent years is linked to the geographical expansion described above, as new markets are growing much quicker than mature ones. Until recently, the pricing system of CRS, a flat fee of about US$ 10-12 per segment booked, guaranteed to CRS an activity indexed on the volume of air traffic that was in any case growing. Even price competition among airlines did not have a negative effect on CRS: since the CRS remuneration was a fixed sum transaction, competition merely contributed to raise the volume of traffic and thereby CRS revenues.

9 The addition of the proportion of the booking claimed by each system is well over 120%.

CHART 2
Global CRS Share of Travel Agency Locations by Market



50. This position may however change relatively rapidly. Under the pressure of their customers and of the regulatory authorities CRS have already progressively stopped charging fees on duplicate and fictitious reservations. Secondly, when acting as booking engines of new channels of distribution (virtual travel agencies, airline websites, etc.) CRS fees are closer to the US$ 1 to 2 range than to US$ 10-12 and the share of those channels is growing. Finally as parent airlines have divested from CRS they do not have the same interest in having CRS charging high fees.

(iii) Extension to other leisure and travel areas

51. Over the last ten years the CRS have transformed themselves into Global Distribution Systems. GDS activities are the extension of the CRS booking system to other types of transport such as rail, ferry tickets or car rental, but also more widely to travel-related activities such as hotels, resorts, cruises, tour operator packages, or leisure activities such as opera, cinemas and theatre tickets, or even to non-travel activities such as insurance.

52. For the three global CRS providers for which data are available this represents already around 10% of bookings (10,8% for SABRE, 9,1% for Galileo, 7,7% for Amadeus). Those bookings are growing three times quicker than air bookings for Galileo, twice as fast for Sabre but only half as fast for Amadeus although the offers of those three CRS are comparable as one can see from the relevant rows of the general chart.

(iv) Initial public offerings and severing of the link with parent carriers

53. The initial share holders, the state of play as 1 July 2000 and the intermediary movements of stocks are described in the fourth, fifth and sixth columns of table 3. The tendency is clearly to go public as two major players are already majority owned by the public (SABRE 100% since March 2000, Galileo 73,2% since March 1999). Amadeus is currently 40% public and intends to open its capital up even more in the future. Out of the major players, only Worldspan remains totally owned by its airline founders, which is also the case for the regional player Abacus. This represents a shift in strategy for the airline founders and especially for SABRE-AMR which was presented as the archetype of the integrated company covering the whole spectrum: airline (American), CRS (SABRE) and virtual travel agency (Travelocity).

54. Several factors have triggered that movement:

- the ownership of a CRS system has become less important as a means of channelling clients with the progressive improvement of codes of conduct (U.S., EU, ECAC, ICAO) that have forbidden certain unfair practices;

- the fashion has switched back to the concentration on the core business of air transport;

- new channels of distribution have emerged that have diminished the weight of CRS and that do need cash injections to be developed and airlines controlled. This is the case of multi-airlines portals (such as Orbitz or Online Travel Portal), of virtual travel agencies (such as priceline.com in which airlines have taken stakes) and of the airline and alliance websites (for more details on these new channels of distribution see paragraphs 65-114). The initial public offerings of CRS have given airlines an opportunity to get the pay-back of their huge investment in the eighties, and to generate the cash needed for these new investments.

55. One may also suspect that the airlines have tried to disengage themselves from a service bound to decline with the emergence of new channels of distribution and the progressive capping of fees. A final reason for spinning off, especially in the case of SABRE, has been the fact that third party clients, for IT software and outsourced systems management including websites were reluctant to give confidential information on bookings trends and profiles to a company owned by a competitor. The spin-off resolves that problem.

56. The consequence of this movement is that "parent carriers of CRS" in the Codes and GATS MFN exemption regulatory sense tend to become the exception. There remains in most instances only "participating carriers", and their obligations have in certain circumstances been lightened (see paragraph 61). It is also worth noting that as far as participating carriers are concerned, significant movements have taken place among CRS such as the recent switch of BA from Galileo to Amadeus.

(v) Erosion of the predominant role of traditional CRS provider in the issuance of air transport tickets and subsequent diversification into other electronic travel activities

57. As one can see from Table 3, CRS providers have diversified massively and recently into other activities. One can attempt to draw a typology of these diversifications by distinguishing downstream and upstream diversification.

58. Downstream diversification is the fact of trying to get into direct contact with the customer, individual or corporate, thereby bypassing the traditional intermediary of travel agencies. All major players have done so to various extents. The most typical case is SABRE who pioneered the concept of the virtual travel agency with Travelocity (1996), the third biggest e-commerce site in the world after its merger with Preview Travel, with 17 million registered users, US$ 1,2 billion revenues and a 32% market share among virtual travel agencies in the U.S. market. SABRE Business travel solution dedicated to corporate business enjoyed the same competitive edge. Since then Amadeus with Amadeus.net, Vacation.com and Terra.networks and Galileo with Trip.com have followed the move. As far as corporate customers are concerned Amadeus has reached an original agreement with SAP, the most used Enterprise Resources Planning software. SAP R 3 software now contains built in travel booking functionalities linked to Amadeus, thereby guaranteeing a constant flow of revenues to Amadeus.

59. Upstream diversifications are more heterogeneous. Their common point is to use the expertise gained by CRS in information technology management to offer materials, software, outsourcing or services to airlines, alliances, multi-airlines portal, travel agencies and distributors such as Wal Mart in the area of travel distribution. This ranges from takeover in hardware companies producing home printing tickets systems (SABRE and Galileo - with Encryptix and Galileo with stamp.com) to the creation of a company dedicated to the provision of telecoms services to travel vendors (Quantitude by Galileo) to the complete outsourcing of the information technologies system (SABRE notably) to the provision and management of website and booking engines to travel agents, airlines, distributors, alliances, and multi airlines portals. This represents already 40% of SABRE revenues and a comparable proportion for Galileo. Amadeus and Worldspan being one step behind in that respect.

2. Regulatory developments concerning classical CRS

60. Regulatory intervention concerning CRS was traditionally governed by market access and non-discrimination preoccupation, that is to say to avoid discrimination among carriers through unfair display on the screens. The various codes of conduct regulating that aspect have been updated and extended to new activities such as rail transport during the period. In addition, competition and transport authorities have also intervened in the area of pricing.

61. As far as the codes of conduct are concerned, ICAO revised its 1991 Code of Conduct for CRS in 1994 - 1996, notably to take into account the results of the Uruguay Round negotiations. This new code took effect on 1 November 1996. The main changes are the expansion to non-scheduled services and, if States deem it necessary, to new information systems such as the internet, stronger measures to safeguard privacy of personal data, the prohibition of fictitious bookings, more specific criteria on flight display order, provisions concerning display and consumer information for code-shared flights, suggested model clauses for bilateral agreements and market access and exemption provisions. Documents S/C/W/59 (page 11, paragraph 27) and S/C/W/129 (Page 11, paragraph 5, Annex 1) describe in more detail the content of this code. At the end of 1999, 31 countries either followed this code or had CRS regulations consistent or compatible with it. It is worth noting that the transitional exemption to the market access obligations required by two of those countries will expire on 31 December 2000.

62. In the European Communities, the code of conduct for CRS was amended by Council Regulation n°323/99 dated 30 April 1999. The main changes are the inclusion of rail services in principal displays for those vendors who wish to do so, and additional rules on the protection of personal data, on the responsibilities of the subscribers, on fees and on billing data. Those changes were designed to be consistent with the revised ICAO CRS code of 1996. In 1999, the Commission fined Lufthansa for not having opened before December 1998 an electronic ticketing function introduced in 1997.

63. The European Civil Aviation Conference also adopted a new code in June 2000 (ECAC/24 dated 29 –30 June 2000) replacing its 1994 code (CEAC/16-1), extending the provisions of the new EU code to the whole European continent and incorporating the 1996 ICAO code provisions.

64. In 1997, the U.S. Department of Transportation, in reviewing its CRS regulations decided that airlines which were not CRS owners need not participate at the same level in all CRS systems in which they choose to participate. In addition the DOT amended its rules to require each CRS vendor to offer one display that lists flights without giving all on-line connections a preference over interline connections. It also prohibited systems from creating displays that neither use elapsed time as a significant factor in selecting flights nor give single plane flights a preference over connecting services. The DOT extended the validity of its rules until 31 March 2000 in order to allow time for completion of its review.

65. Canada adopted a comprehensive set of CRS rules in June 1995. Australia amended in 1996 its code of conduct to require systems vendors to offer CRS access to subscriber groups using a communication system different from that of the system vendor and to include more detailed conciliation procedures for dispute settlement.

66. On pricing, several airlines made complaints in 1994 to their regulatory authorities in the European Communities and in the U.S. regarding the level and nature of booking fees charged by CRS vendors resulting from duplicate and fictitious reservations. In other terms, CRS were charging a flat flee (generally US$ 2) for each segment booked even if it did not materialize in an actual ticketing, as is often the case with precautionary multiple reservations. In 1995, the European Commission issued a study on options for the funding of CRS booking and submitted to public debate. As a consequence of the complaints made by airlines on the charging of fictitious bookings, the CRS vendors began tightening their charging policy by linking the charge to the issuance of the ticket and by reprogramming the systems in order to enhance the airline's ability to refuse bookings which they regarded as unnecessary and to refuse booking for impracticable travel. In 1996, the European Commission drafted a Charging Principles Guidance Note in order to clarify some issues involved in CRS pricing, such as incentives for travel agents, passive and duplicate bookings, unfeasible segments, cancellations and higher functionality charges.

67. From a GATS point of view when acting in second line as a booking engine behind a travel agency website, a distributor website, an airline website, an alliance website or a multi airline portal, CRS providers are still providing CRS services. But the question arises if the "frontline" providers cannot be qualified also as CRS services providers since they provide online bookings and reservations.

B. NEW FORMS OF CRS

68. The present section will firstly attempt to trace back the history of the appearance of these new forms of CRS, secondly try to draw a typology of those main new services providers and thirdly, describe for each type the economic data available and the ongoing regulatory debate.

1. A brief history of online travel distribution

69. In 1993, there were only three ways for customers to buy a plane ticket:

- to go through a travel agent that would use its CRS provider to book and issue the ticket; or
- to call by Phone the reservation Center of an airline; or
- to go to an airline sales office and buy a ticket from that airline. In the latter case, the airline would not use a CRS but access through its internal network to its inventory. It would use a CRS for interlining i.e. for ticketing connection flights on other airlines, which explains why even airlines sales offices use CRS (see for instance the number of terminals for airlines for Amadeus above).

70. Although there are no global figures available, one can estimate from the respective numbers of CRS terminals and from the statistics from various individual airlines that the first mode of ticket emission (i.e. travel agent - CRS - airline) was largely dominant and represented more than 80 to 85% on average of the tickets sold, direct sales by the airlines accounting for the remaining 15-20%.

71. The 1993 Air Transport Annex and more widely CPC-W-120 reflected that state of play by defining three categories of service providers: travel agents, CRS and sales and marketing by the airlines themselves. This simple scheme has now exploded as many more actors and combinations of actors now offer airline bookings.

72. Historically, if one excepts the geographically limited French experience of the Minitel[10] one can trace back the appearance of direct online bookings by the customer, bypassing the travel agency as far as 1993, with the establishment of the ETDN (Electronic Ticket Delivery Network) network by Galileo.

73. In 1995, five major airlines were already offering tickets via CD-ROM and diskettes to be read on personal computers, while more than 100 airlines and the then five major CRS providers had opened websites, like several travel agents groups and numerous individual agents, although most of those sites were initially

10 Degriftours Minitel site dates back 1991 and Degriftours, now n°1 of the virtual travel agencies in Europe with a 15% market share still owes a large though declining part of its revenue to the Minitel (333 million French francs on 454 in 1998, 280 million on 580 in 1999, 150 million on 800 forecasted for 2000, the remaining coming form internet), the same could be said of the Minitel site of Air France which with 4,5 million visitors a year is the third largest Minitel site of France.

limited to informating of the consumer and not yet to online booking.

74. Yield management techniques began to be applied on the internet in 1996 through the auction of a fixed number of seats or the offer of restricted discounts on certain flights and routes where bookings were weak. 1996 is also the year of foundation of the two leading virtual travel agencies, Expedia owned by Microsoft and Travelocity owned by SABRE.

75. In 1997, in view of the growing use of the internet for airline booking (still representing less than 1% of airline revenues but growing very fast), IATA established a special code for electronic reservations service providers which would enable airlines to readily identify such bookings. In 1997 - 1998 further refinements were added to certain of these websites such as accessing frequent flyer accounts, redeeming mileage awards and tracing baggage.

76. In 1998, the first "name your price" service (a reverse auction system) was introduced by the virtual travel agent Priceline.com. The creation of alliance websites followed closely the announcement of the various alliances (Star 1997, Qualiflyer, Oneworld 1998, Skyteam, 1999-2000). The same year, Expedia and Travelocity began extending their activities to the UK. From a GATS point of view this is an interesting element: it shows that electronic commerce is not only, in the case of travel distribution, a question of modes 1 and 2 but that the legal, and probably the financial and marketing peculiarities of each market necessitate some kind of mode 3 presence.

77. In 1999, Alaska Airlines, followed by Continental, began to use the internet for online check in. The creation of multi-airline portal, was announced in 1999 in the United States (Orbitz) and in 2000 in Europe (On Line Travel Portal), in the U.S. again (Hotwire.com) and in Asia (still unnamed). Finally, the same year IATA and IBM announced that they were working on the creation of a global electronic system and common formats and machines allowing the interchange of electronic tickets.

2. Analysis of the main types of online booking providers

78. Assessing the size of the global market for online air travel distribution and the respective shares of the various kinds of operators is a difficult task, like any attempt at describing the new economy: data are essentially available for the U.S. market, scarce for Europe and practically in-existent for the rest of the world. Market shares of individual companies or types of providers vary greatly year after year. Figures do not always distinguish airline bookings from travel bookings nor do they clearly indicate if they refer to the U.S. market, the world-wide market, or distinguish necessarily the channels of distribution. Past figures do not give a sound idea of this exploding market since growth is exponential and since certain types of providers, which are likely to capture in the future an important share of the market, have either just become operational (alliance websites) or are not yet operational (multi-airline portals). In addition, certain types of currently dominant providers like virtual travel agencies not owned by GDS, are economically fragile and may even disappear since they follow the general

TABLE 5

	1998	1999	2000	2001	2002	2003
Phocus Wright: Online travel worldwide		US$7 billon or 3% of total travel of which 73% of airlines bookings	US$20.2 billon or 8% total travel of which 63% of airlines bookings			
Phocus Wright: European online travel market		€200 million	€1.1 billion	€3.1 billion	€5.7 billion	€9 billion
Gartner group: Online travel worldwide		US$5 billon		US$30 billon		
Jupiter communications: Online travel world-wide	US$2.2 billon	US$4.2 billion	US$6.3 billion	US$8.9 billon	US$12.6 billon	US$16.6 billon

TABLE 6

	Travel agent share	Airlines shares	Others[a]
1993 US General Accounting Office (US market only, offline[b])	85%	15%[c]	not taken into consideration
1996 US General Accounting Office (US market only, offline and online)	75%	25%[d]	not taken into consideration
1999 Phocus Wright year book (online market only, world-wide)	52%	33%	15%
December 1999 Jupiter Communications (online market only, world-wide)	54%	46%	not taken into consideration
2005-2006 Arthur Andersen	60 %	40%	not taken into consideration

a Websites of car rental companies, hotel chains and cruises and tour operators.

b GAO/RCED99-221 "Domestic aviation: effects of changes in how airlines tickets are sold", July 1999.

c Tickets offices, call centers.

d Tickets offices, call centers, first websites.

business model of the new economy and have constantly registered losses since their creation. One has therefore to have recourse to forecasts, which are of course divergent in their methodological basis and in their results. With those methodological limitations in mind, the figures available are shown in Table 5.

79. The same sources have tried to trace and foresee the respective shares of airlines and of virtual travel agency in the market of online travel booking. Their results can be summed up by Table 6.

80. To sum up those extremely heterogeneous figures and forecasts, one can say that the online travel market is expected to grow five to six fold in the next five years, Airline bookings will still constitute the majority of this market but with a share declining from three quarters to two thirds.

81. As far as airline booking are concerned, airlines are expected to at least double (from 15-20% to 40-50%) their share in the distribution system, essentially to the detriment of travel agents. This movement has already begun in the United States, where the number of travel agencies has begun to decline, and where although their revenues are still growing, travel agencies have lost, according to the General Accounting Office, US$ 4.5 billion of commission through capping over the last five years. They have consequently begun to charge service fees to their customers as an alternative source of revenues.

(i) Virtual travel agencies

82. Under this denomination, one may regroup three of the cases listed and illustrated in document S/C/W/59:

- case 2(a), page 5 (Virtual travel agency owned by a CRS e.g. Travelocity, Amadeus.net, Galileo.com);
- case 2(b), page 6 improperly named then Electronic Reservation Services Provider (pure virtual travel agency or travel-selling dedicated part of a website owned by anybody else than a CRS or a physical travel agency be it by the public, by airlines [11], by software companies by a distributor, by a bank, etc., e.g. priceline.com, Expedia); and
- case 3(c), page 7 (website of a physical travel agency, e.g. Carlson.com).

83. The only economic difference separating those companies is that the agencies owned by CRS do not have to pay, or do not have to pay to the same extent the bookings to the CRS, which gives them a competitive edge. For the rest, they are all, or nearly all, "powered" by a CRS booking engine and their contractual relationship with airlines is common: being seen as a rival in the conquest of low cost distribution markets, they suffer at least in the United States tougher conditions than their physical counterparts in terms of number of passengers, flight segments, length of time they can hold a reservation and payment. In terms of remuneration their commissions stand at 5% (versus 8% now for their physical counterparts) and are capped at US$ 10 per ticket, compared to US$ 50 on average for a domestic U.S. flight and US$ 190 on average for an international flight.

11 This refers to companies totally or partially owned by airlines such as priceline.com but not to airline websites which are in a different economic and legal situations and are described below.

84. One may note that a movement of consolidation has already taken place. In the United States, the first five virtual travel agencies account for 73% of the gross travel bookings (Travelocity/ Preview: 32%, Expedia: 20%, Priceline.com: 10%, ITN.net (GetThere.com): 7%, Cheaptickets: 4%). The movement is similar, though less advanced, in Europe where the six first account for 53% of the market (Degriftour: 15%, Expedia.co.uk: 14%, Ebookers.com: 10%, Leisure.planet.com: 9%, Lastminute.com 4% and Edreams 1%). However, this movement may be reversible. There may be market exits and in a market growing five fold in a year (from 0.2 billion EUR in 1999 to 1.1 billion forecasted in 2000 in Europe)[12] a new entrant in 2000, Edreams, has managed to achieve a forecasted 1% share.

85. The economic characteristics of the sector are a mix a of CRS economy and new economy. As for CRS, airlines, at least some of them invest heavily in the new businesses (for instance United in Buy.travel.com or United, American, US Airways, Continental, Northwest, TWA, America West and Delta in Priceline.com) in a move parallel to the investment in CRS twenty years ago. As for CRS, airlines plan to divest in the long term and argue that the management of the system will be made by a neutral management team, guaranteeing equality of treatment even to non-equity holding airlines.

86. At the same time, online travel belongs typically to the new economy. Although travel distribution is reputed to be structurally more profitable than e-commerce of physical goods because of the absence of warehousing, shipping and delivery costs, the profitability of the sector for non CRS-owned companies remain to be demonstrated, while stock capitalizations reach heights without comparison to those of the "physical" industry of air transport. For instance, the capitalization of priceline.com had reached at a given point US$ 13 billion, more than the total of the capitalization of United Airlines, Continental and Northwest, while the site has registered only US$ 35 million of effective sales in 1999 and has accumulated losses of US$ 114 million since its foundation.

87. The regulators in the United States have already ruled twice on virtual travel agencies. In September 1996, the DOT refused to intervene against Expedia as requested by the travel agents associations. In April 1999, the DOT also dismissed a 1996 complaint of the Association of Retail Travel Agencies (ARTA) on the sale of internet tickets below rates.[13]

(ii) Airline websites

88. As of January 2000, according to an inquiry by Airline Business International and SITA, only 40% of the IATA airlines offered online booking facilities but 37% more were planning to do so in the next two years. The extent of this movement varies greatly from region to region. It is achieved in the U.S. and nearly achieved in Western Europe and developed Asia Pacific and unequally embryonic in the rest of the world. It is also worth noting that airlines do not rely on one website. They segment it not only by type of business (low cost with auction, leisure, individuals, small businesses, big businesses) but also by countries. For instance, Air France has 36 different sites of which only five allow online bookings. The extent to which a dedicated website entails an effective commercial presence in the country concerned remains unknown.

89. Low cost carriers tend to use internet booking to a much wider extent than traditional carriers. For instance, whereas in 1999 the proportion of online sales by U.S. airlines was between 3 and 5%, Southwest had a 27% rate (but only 8% in 1997 and 19% in 1998) of online booking which in terms of gross bookings led it to compete with US$ 877 million with Travelocity/ Preview (US$ 1,1 billion) and Expedia (US$ 750 millions). In Europe, easyJet is in a similar situation with 50% online bookings in the first quarter of 2000 followed distantly by Ryanair with 20%. At the beginning of 1999, Delta went so far as to impose a systematic surcharge of US$ 2 for each ticket not booked on internet but had to pull back in view of the hostility of travel agents.

90. All major airlines are nowadays announcing ambitious strategies and targets for their online sales. For instance, BA plans to raise the share of online tickets in its global sales from 2% in 1999 to 50% in 2003, or from £45 million in 1999 to £700 million in 2002. Similarly Air France plans to improve this figure from 5% in 1999 (a relatively high figure by international standards that can be explained by the Minitel experience) to 50% in 2005 and Iberia from 1% in 1999 to 30% in 2006. Continental shows even more ambition by planning to triple in one year its e-sales from US$ 300 million in 1999, to US$ 800 to 1000 million in 2000.

12 Source: Phocuswright.com/events/liveurope2000/press/sileo.

13 Source: U.S. general accounting office report GAO /RCED99-221"Domestic aviation: effects of changes in how airlines tickets are sold", July 1999.

91. Although these figures may look excessively optimistic, especially when one recalls that the 8 million visitors to the Swissair website in 1999 only translated into 10,000 bookings[14], they seem corroborated by exponential past growth. For instance the revenues of online booking for American Airlines jumped from US$ 75 million in 1998 to US$ 575 million in 1999.

92. These ambitious targets can be explained by three main reasons. First airlines realized very quickly that internet was by far the cheapest channel of distribution available. For instance a study by Merrill Lynch "E-commerce virtually there" dated April 1999 computed that the cost of processing a ticket for America West was US$ 6 on its own website, US$ 13 with the airlines own reservation services, US$ 20 through an independent travel agent and US$ 23 through a traditional travel agent. Similarly Southwest Airlines, the main U.S. low cost carrier, considers that booking through its website, costs ten time less than a booking through a travel agent and five time less that a booking through in house reservation staff (call center or ticket office) and in any case well under US$ 1 per ticket.

93. Secondly, airlines have used the web as a tool for yield management as a way to sell at marginal prices seats that would have otherwise remained empty. The instantaneity, the possibility of targeting certain customers ("push" technologies) and the possibility of holding auctions, in addition to the very low cost, make the internet a perfect instrument for optimizing the load factor of planes.

94. Thirdly, after this initial discount orientation, airlines have realized that the web was also the ideal instrument to gather data on customers and then to analyze them through "web-mining" techniques in order to identify customer preferences and practice personalised marketing. This has created a complete new branch of yield management techniques known as CRM (Customer Relations Management). The mastering of these instruments is essential for airlines since they constitute a tool, alongside frequent flyer programs and lounges, to develop loyalty from high contribution passengers. That is why, for instance, Delta has decided to apply those personalised marketing techniques first to the 9% of passengers that generate 35% of its revenues. From a regulatory point of view the use of those techniques may conflict in certain instances with regulations on data privacy protection but this is a general problem for e-commerce and not something specific to air transport.

95. One can distinguish three types of airline websites:

(i) those which sell only the tickets of the company concerned;
(ii) those who sell also the tickets of allied companies (e.g. KLM); and
(iii) those who sell tickets from many airlines or even car rental hotels and tour operators (e.g. Lufthansa Infoflyway or united.com) in an attempt to capture a bigger part of the distribution market to the detriment of travel agents, other airlines and even CRS.

96. As far as this third type is concerned a typical example is the Lufthansa website Infoflyway which already offers 500 bookable airlines and sells five per cent of non-Lufthansa tickets a large majority of which are also probably non-Star tickets. Lufthansa has even gone further by spinning off its IT activities in a subsidiary called Lufthansa e-Commerce, applying thereby the strategy already followed for its maintenance and catering activities. This new subsidiary is now actively seeking third party customers. United.com is another airline website offering the whole gamut of world travel: 500 airlines, 45 car rental companies and 30,000 hotels, figures that are comparable to the offer of the main GDS providers (see Table 3).

97. There are no detailed figures allowing a breakdown between the three types of airlines' individual websites (mono-seller, alliance seller or universal seller) and it is also difficult to identify as yet a tendency or a move between those three types.

98. The distinction between them may seem anecdotal but it makes sense in economic terms (since commissions are exchanged in two of the cases) and even more so in regulatory terms and this in a double manner. Firstly, while it is admitted that dedicated sites (selling one airline tickets or alliance tickets) are by essence not required to be neutral, the question of the neutrality of the display and of the implementation of the codes of conduct arises for individual airlines' websites selling tickets from all airlines. The regulators have not yet tackled this issue.

99. Secondly, when an airline is selling its own ticket it seems to qualify in GATS terms both as a CRS provider and as selling and marketing provider since it sells directly it own tickets and thereby falls into the definition of paragraph 6(b) of the Annex "opportunities for the air carrier concerned to sell and market its transport services including all aspects of marketing such as market research, advertising and distribution. These

14 In the United States though, a more mature internet market, this ratio is approximately one to three.

conditions do not include the pricing of air transport services nor the applicable conditions".[15]

100. When an airline is selling its partners tickets, it probably still qualifies as a CRS but the question arises if the tickets of its ally can be considered as its "transport services". A common sense answer would be to say no, but when examining the characteristics of the alliances (which will be done in the second part of the paper), one realizes that they are increasingly integrated, that they create positive gains that are more than the simple addition of the traffic of their members, that there are complex code-share agreements, and a common promotion of a brand and of frequent-flyer programmes and that one can in the end measure precisely the financial benefits of the alliance. Therefore, cross-selling tickets under a common brand may appear as another way of selling its own services. One may argue of course that the sectors of cooperation of the alliances are excluded from the scope of the definition of selling and marketing services since they touch upon pricing and applicable conditions, but the scope of the alliances is wider than pricing and conditions (for instance common marketing of a brand) and therefore the question remains posed.

101. When an airline is selling a ticket from a non partner alliance it probably still qualifies as a CRS but it is difficult to imagine how it could fall under the actual definition of selling and marketing services.

(iii) Alliance websites

102. Alliance websites are relatively heterogeneous. As of 1 July 2000, only one, STAR Alliance's allows direct booking on alliance partners while three others (Qualiflyer, Skyteam and OneWorld) are just portals of entry sending the visitor through a hypertext link to the website of the partner which may or may not comprise booking facilities, though these facilities are tending to become increasingly common. The Wings Alliance constitutes a particular case since it has no websites of its own and has in fact split its online booking facilities into two websites one for the alliance KLM-Northwest and one for the now defunct alliance KLM-Alitalia, each one with common booking facilities. There may be other websites dedicated to "one-to-one" alliances but to our knowledge this has not yet been studied in detail.

103. From a regulatory point of view there is no problem of neutrality. The only legal problem arising from a GATS point of view is to know if the common booking facility of an alliance website can be considered to be covered not only by CRS commitments, but also by selling and marketing commitments, since strictly speaking it is not the carrier itself (here Star instead of Lufthansa or Varig) that sells the ticket. The same line of argument as above in the case of individual website selling tickets from their alliance partner can be developed.

(iv) Multi-airline portals

104. Multi-airline portals could be the next major development in the area of online travel distribution. However, it is difficult to formulate any forecasts in that respect since they have not come yet into operation. This is partly because of internal dissensions among carriers that are hesitant to share confidential customer, pricing and sales information into a common system and partly because of the considerable opposition they face and of the regulatory hurdles this opposition has created.

105. Multi-airline portals are designed by airlines to compete with travel agents, virtual or physical, for the market of customers whose brand loyalty is weak and who look for a wider choice than the one offered by airline or alliance websites. They group airlines belonging to different alliances and are up to now region based although the first one historically and the most important, Orbitz also gather associated airlines from other regions than North America. Their main characteristics can be summarized by Table 7.

106. Orbitz being the oldest project is also the one that has triggered most opposition and hence will be the regulatory test case. The American Society of Travel Agents (ASTA) lodged a complaint with the Antitrust Division of the DOJ in May 2000 while the Association of Retail Travel Agents (ARTA) lodged a similar complaint in June with the DOT.

107. The internal rules of Orbitz stipulates that airline members will have the right to continue having their own website but will be obliged to put their lowest internet tariffs on Orbitz. The main worry of ASTA is the special fares posted by airlines on Orbitz only. Orbitz denies such charges by arguing that it contractually requires the completely neutral display of fares, that it will make its living from commissions like other online and offline travel agent and has therefore no interest in seeking to reduce those commissions, that there will be no collusion on the prices of the tickets thanks to built in electronic firewalls that will prevent

15 This in itself creates a legal problem since the list of countries having commitments in CRS and in selling and marketing are not identical, certain countries having commitments in selling and marketing but none on CRS and vice-versa.

TABLE 7

Grouping	Orbitz (ex "T2")	Hotwire.com	Online travel Portal	Asian "T2" (still unnamed)
Date of announcement	Autumn 1999	June 2000	May 2000	July 2000
Date of planned entry in operation	Intially summer 2000, postponed to end 2000			End 2000
Founding members		United, Northwest, Continental, US Air, America West	BA, Air France, Lufthansa, Alitalia, KLM, Iberia ,SAS, Aer Lingus, Austrian, British Midland, Finnair	Cathay Pacific, Quantas, Singapore Airlines, China Airlines, Malaysia Airlines, Royal Brunei Airlines, Air New Zealand, Ansett Australia and Asiana
Associated airlines	US: American, US Airways, ATA, Airtran, Hawaian, Midwest express, Midway ,Vanguard Non-US: Air Canada, Air Jamaica, Air New Zealand, Alitalia, All Nippon Airlines, Austrian , British Midland, COPA, CSA Czech, Iberia, KLM, Korean Airlines, Mexicana, Singapore, Varig			
Operator	Worldspan		Amadeus	Undecided
Legal action under way	Investigation by the US DOJ antitrust division since May 2000 and by the US DOT since June 2000			
Other characteristics		No auction, carrier hidden	Voluntary commitment of not sharing proprietary information	Travel agent associated

information sharing and finally that it will enjoy no exclusivity on special web fares as companies will be free to offer the same discount tickets to other travel agencies.

108. The European Travel Portal OTP is not yet under formal attack and to avoid it had promised that its members would not share proprietary information.

109. In the case of the still unnamed Asia-Pacific multi-airline portal, the founding airlines, precisely again to avoid theses attacks, have indicated that they would associate travel agencies to the business-to-business aspect of their project by enabling them to implement their customized private label version of the services delivered by the site. The concrete details of this association remain however to be determined. It is also worth noting that the two main Japanese airlines JAL and ANA, which have close relationships with travel agents, are not among the founding members of the portal.

110. On the whole, the regulatory regime of online travel, although probably more advanced than in many areas of e-trade, remains largely embryonic as one can see for instance from the list of nine pending dockets of the U.S. Department of Transport on petition, requests and notice of rule-making contained in the Annex of the General Accounting Office Report "Domestic aviation: effects of changes in how airline tickets are sold" (GAO /RCED99-221, July 1999).

111. However, this situation may change relatively quickly. For instance, the U.S. Department of Transport has just issued on 24 July 2000 a supplement advanced notice of proposed rule-making on Computer Reservation Services regulations (Federal Register, Volume 65, Number 142, Monday, 24 July 2000, proposed rule). By this document, the DOT requires additional comments from interested parties by September 2000 (comments) and October 2000 (reply comments) on the re-examination of its CRS rules to take into account two major recent developments of the CRS industry already outlined in the present paper:

- the reduction of the ties between the CRS systems and airline owners and;

- the development of internet distribution channels.

112. With regard to the reduction of the ties between airlines and CRS providers, the DOT goes as far as questioning, at least academically speaking, the need for any remaining regulation. As far as internet is concerned, this document distinguishes two possible types of regulation: on the one hand, proposals for regulating websites including those operated by online agencies and on the other hand, proposals for regulating the airlines use of the internet, both with respect to airline websites and third party websites.

113. It notes also that no one has yet suggested that the DOT adopt rules governing websites operated by individual airlines although some contend that the DOT should bar airlines from offering fares available only through their own website. As an example of a possible regulation of internet sites, the DOT suggests that certain problems could be alleviated by barring airlines from seeking or obtaining preferential displays or discriminatory fees.

114. The DOT also requires specific comments on multi-airline portals and asks interested third parties to demonstrate why the rules should, or not, treat differently online travel agencies from traditional travel agencies. The DOT also asks interested parties to explain if and how the various reasons for regulating traditional CRS providers remain valid, or not, for internet bookings.

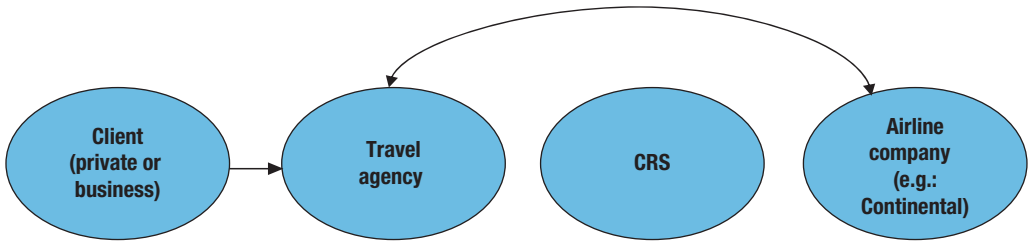
115. On the whole it seems clear that at least for one WTO Member, the various regulatory questions raised by the present paper in respect of new forms of CRS will be addressed soon. This process may however take a certain time since the first notice of proposed rule-making on the question dates back to 1997 and has not yet materialized into an effective regulation.

(v) Other types of providers

116. Document S/C/W/59 distinguished another category of CRS whereby an airline was opening its inventory directly to the travel agent and thereby bypassing the CRS provider. This scheme is illustrated below.

117. It seems that this scheme inaugurated by Continental has had no posterity since no other mention of it appears in the specialized press over the last two years. The likely reason for that is that this scheme offers less productivity gains than internet ones, since it maintains one of the most costly actors of the distribution chain, the travel agent.

FIGURE 2



III. SELLING AND MARKETING

118. To a very large extent the economic and regulatory developments in the sector of selling and marketing have been covered above in the subsections dedicated to the evolution of the respective market share of airlines and travel agencies (paragraph 75 above), to airlines websites (paragraphs 85 to 98), alliances websites (paragraphs 99 to 100) and multi airline portals (paragraphs 101 to 106). They are dealt with in document S/C/W/59 paragraphs 31 to 36 and Annex 2, page 54 and S/C/W/129 paragraphs 19(a) and 20(b).

119. The distribution by the companies themselves of their tickets which can roughly be estimated at 15-20 % of their total sales, continues to be 95% assured by call centers and ticket offices at airports and city centers, except for certain low cost carriers, but as we have seen above this situation is bound to change as airlines plan to at least double their direct sales and to switch to online sales for at least thirty to forty percent of their sales in the next five years.

120. As far as the evolution of the activity is concerned one may note the development of electronic ticketing. Electronic ticketing is different from online sales: it is a simple printable confirmation or a reservation number that will allow check in without the cost of issuing and processing a paper ticket. There again the productivity gains are very notable since the processing cost falls approximately from US$ 7-8 to US$ 1-2. Not all online sales give rise to an e-ticket and not all e-tickets are delivered following an online sale, however they very often go together.

121. Introduced in 1994 by United, e-tickets have become the majority of the tickets delivered by this airline at the beginning of this year. E-ticketing has met greater success in the United States than in Europe partly because the public trust new technologies more in North America (the problem is similar to the use of credit card numbers over the web) and partly because it creates a problem of proof *vis-à-vis* customs and immigration authorities which often demand proof of possession of a return ticket (80% of trips are domestic in the U.S. but 80% are international in Europe).

122. Moreover, they were not exchangeable among airlines, a problem that will soon belong the past since IATA and IBM have been mandated to work on a computer system of inter-linability with common formats and even common reading machines. Naturally, because of its low costs, this technique is widely used by low cost carriers.

123. As the definition of selling and marketing in the sense of the Annex includes also marketing, market research and advertising one may note the development over the period 1993-2000 of personalized marketing techniques such as customer relations management (CRM) and "web-mining" (see above) as well as the growing importance of the promotion of the common brand of alliances. All alliances are now announcing the formation of "central teams". The question of the coverage of the activities of these central teams by the definition of the Annex is now posed.

IV. FRANCHISING

Airline franchising is a commercial practice under which one airline ("the franchisee") purchases the right to assume the public face or brand of another ("the franchisor"), together with the brand's associated services, intellectual property and know-how. Elements of the brand include aircraft livery and interior, crew uniforms, and flight designator code. Services include the sales and reservations operations of the franchisor, access to its frequent-flyer programme, and revenue accounting. The franchisee airline abandons its own public identity for all services operated under the franchise but continues to operate under its own AOC (aircraft operating certificate) and to maintain its operational identity and independence.

In most cases, the franchisee continues to make its own decisions on routes, schedules and pricing, although there is normally an agreement not to compete head-to-head on the same routes as the franchisor. (OWNCO Report on Airline Franchising to ECOSTRAT Chairman page 1).

124. Although franchising is an important and growing sub-sector activity in air transport, the industry participants do not follow a common or legally defined framework. According to professional sources[16], there is no published or standardised framework for franchise agreements: instead each franchise arrangement is defined by the interested parties. In other words, it is a contract between two independent airlines that is often, although not exclusively, created between an international flag carrier (franchisor) and a smaller regional airline (franchisee).

125. Although there appears to be no globally accepted definition for a regional airline, there are four general definitions in use. The first three relate to aircraft size and the fourth to airports. First, in Europe, according to professional sources[17], regional carriers generally operate aircraft having between 19 and 150 seats. Second, airlines with less than 100 seats are considered 'regionals'.[18] The third, includes aircraft with between 19 and 100 seats[19] and the last definition uses airport criteria. A 'regional' airline will operate either between a secondary airport and a major hub centre, or it will connect two secondary airports.[20] It is important to note also, that these definitions apply to all 'regional airlines' whether they are wholly or partially owned airlines, independent regionals or franchise regionals.

126. While a franchise airline operates in the same market as a regional carrier, both types are usually linked with a major airline. Most often, regional franchise carriers operate feeder routes that link smaller communities and secondary airports to the franchisor's international hub airport and do not compete directly with the franchisor. However, the regional franchise airlines may, and often do, operate across international borders (e.g. across European borders). Additionally, a regional franchise airline can be linked to the major carrier in remote locations as the British Airways franchisee Comair does in South Africa. In both cases, the regional carrier (or franchisee) and the major airline (franchisor) have commercial agreements that usually include *inter alia*: a single brand name, aircraft livery, cabin interiors, crew uniforms, dual marketing codes, and CRS displays.

127. However, it is the commercial agreements between the franchisor airlines, the lack of equity investment by the franchisor, and the subsequent independence of the franchisee, that distinguish the latter from a regional subsidiary. They also remain different insofar as equity investments are concerned. Regional airlines are usually partially or wholly owned subsidiaries of the national flag carriers and are therefore under a relatively high level of control by the parent airline. Franchisor airlines however rarely take any equity position in the franchisee. Instead it is the franchisee which pays the franchisor for the right to use the brand logo. This gives the franchisee a significantly higher level of independence than a regional subsidiary.

128. It is therefore necessary to highlight that although in one sense a franchise airline is virtually identical to a regional airline, it is the purpose of the actual franchise that differentiates the two types of corporations. A franchise is ultimately for the dissemination of a brand identity to a broader market and is therefore primarily a marketing tool not unlike other franchises (e.g. Body Shop, McDonalds etc.). A franchise does not alter underlying traffic rights for either corporate partner. Nor does franchising arbitrarily affect or alter established route structures. Moreover, franchising does not change the number of slot allocations for either the franchisee or the franchisor and each must have their own aircraft operating certificate (AOC). In

16 Director of Air Transport Policy at the European Regional Airline Association (ERA).

17 Director of Air Transport Policy for the European Regional Airline Association (ERA).

18 *Airline Business* (May 1998).

19 US Regional Airline Association (RAA).

20 *Airline Business* editor, Kevin O'Toole (July 2000).

short, all the traffic right elements that exist for an independent airline remain intact during the life of the franchise. What a franchise does affect is the ability of either party to penetrate new or otherwise unused markets to sell the brand name service. This is true for both the core and periphery markets. The same argument does not hold true for wholly or partially owned regional airlines.

129. The 'regional subsidiaries' (like many franchisees) act as feeder airlines for national trunk routes or international routes. The aircraft are normally smaller in size (as mentioned above) and the flights are displayed in conjunction with the owner carrier on CRS displays. One of the main differences however pertains to slot allocation. The airport slots that are made available to the regional carrier at hub centres are controlled by the parent airline, and flights are co-ordinated in conjunction with the parent airline in hub-and-spoke networks, whereas franchise airlines control their own slot allocation and any co-ordination needs to be mutually acceptable between the independent partners.

130. The reasons for developing franchises between airlines can be seen from both the franchisor and franchisee perspectives. Franchisor airlines gain economic benefits through increased efficiency on route structures, through improved aircraft utilisation. In other words, aircraft that were previously used on thin or marginal routes can be reallocated to more profitable routes without discontinuing service. The franchisor also benefits from the continuation of feeder traffic that might otherwise be taken over by a competitor airline. The franchisee benefits economically from this arrangement through the use of a well known and established brand name, access to frequent-flyer programs, international passenger and cargo feed, and global distribution systems. It must also be noted that franchise airlines' aircraft livery is not necessarily limited to the franchisor brand. In some cases the franchise airline will maintain its own brand identity or operate aircraft with both their own livery and the franchisor's livery. In the latter cases, the aircraft will operate specific routes under one brand while maintaining their independent brand on others (e.g. Gill Airways, and Jersey European).

131. The recent study conducted by ECAC/CEAC and endorsed by DGCA/108 in December 1999 has examined the franchise airline industry throughout Europe to establish whether current regulations and/or legislation cover adequately the franchise airline sector of the industry and if franchising affects the level of competition on any given route. The conclusions of this study indicate that "the practice of airline franchising" does not contain elements that are not already covered by existing regulations in the EU, and that there appears to be no significant alteration in competition on different routes.

132. Due to the definitional similarities between 'regional' and franchise airlines, there is no available data that addresses each type independently. Nevertheless, in order to show how the industry is structured and provide a typology of the growth of the industry, the tables 8-11 have been compiled from various sources. The largest regional airline industry is found in the U.S. market, followed by Europe and then the rest of the world. However, within the top 100 largest regional airlines around the world there was, and still exists, a broad representation for all geographic locations. Tables 8-11 provide annual comparisons of the regional airline industry between 1994 and 1999 (using the top 20 airlines in this category). Table 12 shows which franchise operations are in the top 100 regional airlines for 1999 and finally, Figure 3 highlights the linkages between 'regional' airlines and the global alliances.

TABLE 8
Geographic representation of all regional airlines including franchise operations

1994	Passenger (000)	Per cent of Global Market	Number of Carriers
North America	57,861	55.9	35
Europe	27,120	26.2	36
Asia-Pacific	11,461	11.1	15
Latin America - Caribbean	5,624	5.4	10
Middle East - Africa	1,353	1.3	4
Total	103,419	100.0	100

TABLE 9
Geographic representation of all regional airlines including franchise operations

1999	Passenger (000)	Per cent of Global Market	Number of Carriers
North America	85,572	49.1	32
Europe	58,669	33.7	44
Latin America	14,504	8.3	8
Asia-Pacific	11,900	6.8	8
Middle East - Africa	3,480	2	8
Total	174,125	100	100

Source: *Airline Business* data bank; and *Airline Business* May 2000.

TABLE 10
Top 20 Regional Airlines by Passenger numbers 1994

Rank 1994	Airline	Country	Passenger Numbers 000's	1 year change %
1	AMR Eagle	U.S.	11,841	13.7
2	USAir Express	U.S.	5,471	3.4
3	Mesa Airlines Group	U.S.	5,170	16.2
4	Merpati Nusantara	Indonesia	4,153	73.4
5	Continental Express Airlines	U.S.	3,933	-5.9
6	Air Canada Connectors	Canada	3,700	42.3
7	Horison Air Industries	U.S.	3,482	26.5
8	Comair	U.S.	3,300	26.9
9	Atlantic Southeast Airlines	U.S.	3,120	17.2
10	TransAsia Airways	Taiwan	3,072	50.7
11	Air UK	UK	2,605	17.7
12	Lufthansa CityLine	Germany	2,260	11.9
13	SkyWest Airlines	U.S.	2,064	26.4
14	Binter Canaarias	Spain	2,000	3.7
15	Crossair	Switzerland	1,970	13.2
16	Business Express	U.S.	1,800	-11.2
17	Deutsche BA	Germany	1,800	63.6
18	Express Airlines I Inc	U.S.	1,800	5.9
19	ACES Colombia	Colombia	1,794	12.4
20	Trans States Airlines	U.S.	1,700	22.5

Source: *Airline Business* data bank.

TABLE 11
Top 20 Regional Airlines by Passenger numbers 1999

Rank 1999	Rank 1998	Airline	Country	Passenger Numbers 000's	1 year change %	Passenger Traffic (RPK) millions	1 year change %
1	1	American Eagle Airlines	U.S.	11,458	0.1	4,375	9.7
2	2	Comair	U.S.	7,032	13.9	4,076	22.2
3	3	Continental Express	U.S.	6,687	18.5	3,462	37.6
4	4	Crossair	Switzerland	5,990	10.9	3,088	21.0
5	11	Mesaba Airlines	U.S.	5,452	32.4	2,338	30.7
6	6	Horizon Air	U.S.	4,984	13.5	2,219	20.7
7	13	Atlantic Southeast Airlines	U.S.	4,960	23.2	2,277	36.0
8	17	SkyWest Airlines	U.S.	4,901	64.0	1,635	36.4
9	5	Luftansa CityLine	Germany	4,900	11.4	3,043	9.8
10	14	TAM Regionais	Brazil	4,900	24.4		
11	9	UNI Airways Corp	Taiwan	4,540	7.3	1,416	18.8
12	7	Mesa Airlines	U.S.	4,530	4.7	2,317	23.4
13	8	KLM uk	UK	4,113	-4.3	2,129	1.1
14	12	Air Canada Connector	Canada	4,000	-0.9		
15	10	Canadian Regional Airlines	Canada	3,992	-4.6	1,850	-4.9
16	15	Rio-Sul Regionais	Brazil	3,570	13.8	2,155	12.5
17	19	Air Wisconsin	U.S.	3,372	18.4	1,838	30.3
18	21	Atlantic Coast Airlines	U.S.	3,234	27.7	1,664	30.4
19	16	Piedmont Airlines	U.S.	3,162	2.0		
20	20	Delta Air Transport	Belgium	3,137	22.6		

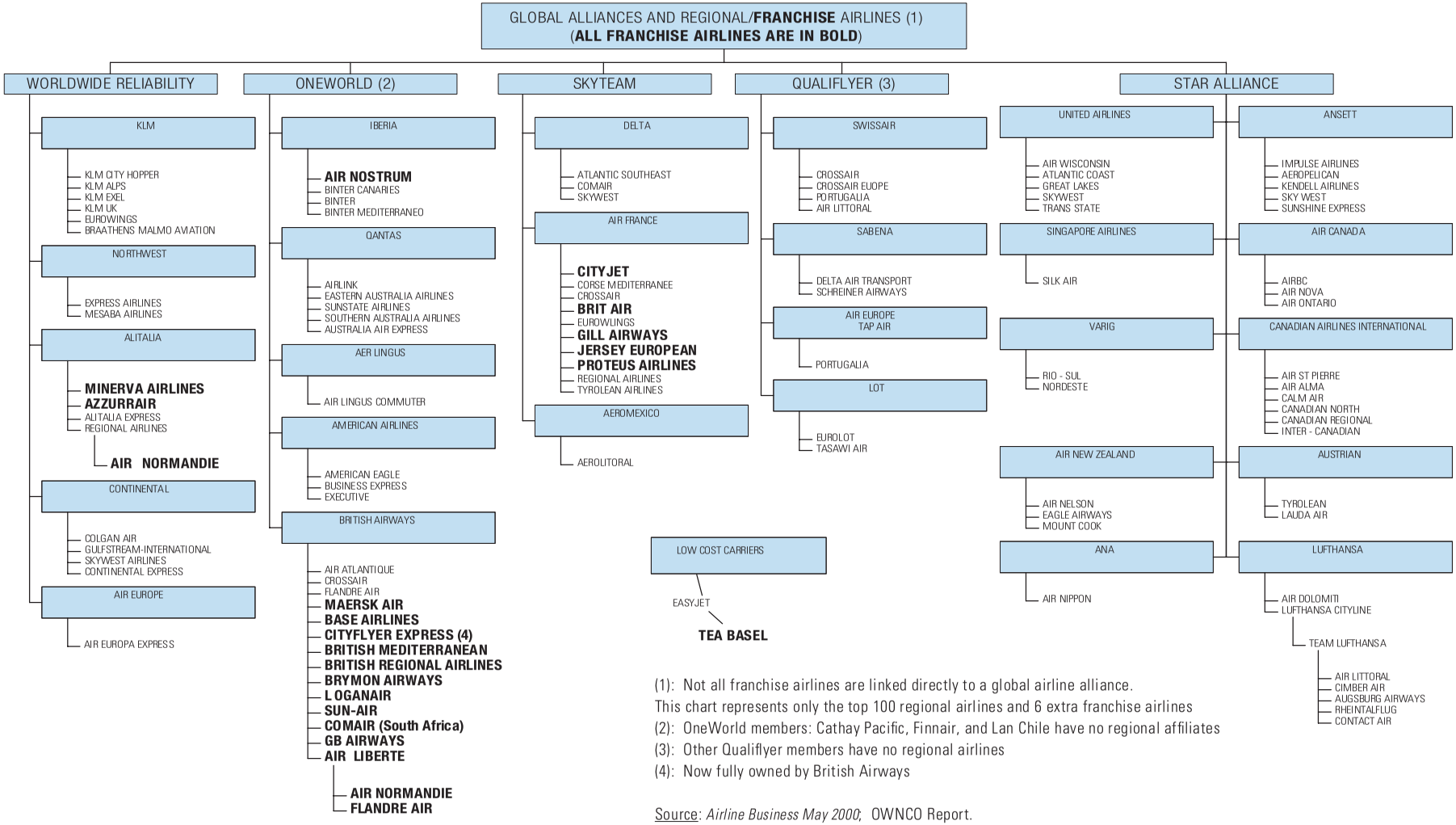
Source: *Airline Business* data bank.

TABLE 12
Franchise airlines in the top 100 Regional Airline count

Rank 1999	Airline	Country	Passenger Numbers 000's	1 year change %	Passenger Traffic (RPK) millions	1 year change %
22	Jersey European Airways	UK	2,832	33	870	5.1
26	British Regional Airlines	UK	2,300	-0.4	843	-0.5
27	Brit Air	France	2,300	52.7	1,415	133.9
34	Air Nostrum	Spain	1,848	18.5		
52	AZZURRAair	Italy	960	92		
54	Brymon Airways	UK	922	20.7	384	14.3
62	Maersk Air	UK	688	11.7	529	15.3
71	Proteus Airlines	France	500			
82	Gill Airways	UK	322	-19.5	174	-20.2

ORGANIZATION CHARTS

Global Alliances and Regional/Franchise Airlines



(1): Not all franchise airlines are linked directly to a global airline alliance.
This chart represents only the top 100 regional airlines and 6 extra franchise airlines
(2): OneWorld members: Cathay Pacific, Finnair, and Lan Chile have no regional affiliates
(3): Other Qualiflyer members have no regional airlines
(4): Now fully owned by British Airways

Source: *Airline Business May 2000*; OWNCO Report.

133. Members may wish to consider the possible relevance of existing commitments with regard to the question of airline franchising in view of three factors:

- the absence of any link between the franchising contract and the hard rights, as explained above;
- the absence of any sectoral qualification in the CPC definition of franchising;
- the role played by airline franchising for the selling and marketing of air transport services both from the franchisor and the franchisee.

134. Franchising is a special case in Section 4 "Distribution" of document MTN/GNS/W/120 because it is the only item that is not linked specifically to the distribution of goods. Unlike the first three items (commission agent, wholesale or retail) it is not subdivided by type of goods sold but referred through a correspondence with CPC 89290 to "royalties for the right to use similar exclusive rights as above, not elsewhere classified owned by economic agents". The items above themselves refer clearly to goods and services (see notably the definition of trade mark in CPC 89220).

135. In other terms, whereas the distribution of services is not covered by CPC in general, the franchising of services (for instance a dry cleaning chain or a restaurant chain such as MacDonald's) is clearly covered by both provisional CPC and MTN.GNS/W/120. This definition focuses on the payments rather than on the contract between the franchisor and the franchisee but is clearly and uniquely linked to this type of contract (see discussion of this point in S/C/W/37 "Distribution services, background note by the Secretariat" dated 10 June 1998, paragraph 7). The following question therefore arises: does the practice of franchising in air transport fall within the definition of franchising in general?

136. Franchising in air transport is a way for the franchisee to better sell its own services to customers by attracting them through a famous brand and for the franchisor to sell its brand to customers more widely. It could therefore be deemed to fall within the definition of selling and marketing by the Annex ("opportunities for the air carrier concerned to sell and market freely its air transport services including all aspects of marketing such as market research, advertising and distribution"). There are already 36 commitments on the selling and marketing of air transport services.

137. Such a "selling and marketing" qualification could be alternative or cumulative with the preceding one (franchising). The legal problems raised by cumulative qualifications and classifications of services are not unknown to the sector of air transport services as one can see by the development above the new online channels of distribution which could probably be qualified both as CRS and as selling and marketing services. In addition, the question of the overlaps between CPC (in this case franchising) and the transport Annex in particular is discussed in some detail paragraphs 37-40 of document S/C/W/59.

138. Finally, Members may also wish to envisage the possibility of considering airline franchising as a still unidentified, unclassified and uncommitted sector of services not directly related to traffic rights and therefore covered by the scope of the GATS.

V. SERVICIES AUXILIARY TO ALL MODES OF TRANSPORT WHEN DELIVERED IN AN AIR TRANSPORT CONTEXT (freight forwarding and warehousing)

139. Freight forwarding and warehousing were dealt with in S/C/W/59, paragraphs 62 and 63, because they are services auxiliary to all modes of transport, including air transport. On reflection, it appears that it was a mistake to include these services in a paper devoted to air transport services. It is certainly true that freight forwarders and warehousing companies provide services to the air transport industry, as parts of the supply chain linking the manufacturer and shipper of goods with their final destination, but they are not air transport services in themselves. They are not cargo carriers and their activities are not covered by air services agreements. Each is a part of a larger transportation industry network which includes trucking, shipping and rail transport as well as air transport. Other industries which provide essential auxiliary services to air transport include insurance and tourist agencies, for example, but they certainly could not be considered part of the air transport industry on that account. Moreover, it would be systemically damaging if, by including freight forwarding and warehousing in a survey of air transport services, we were to create any doubt as to their coverage by the GATS: such doubt might arise, if any service having an interface with air transport were alleged to be an air transport service and therefore potentially covered by the exclusion in the Annex - even though it could hardly be maintained that freight forwarding and warehousing are "directly related to the exercise of traffic rights".

140. However, there are companies providing full logistical services, sometimes called Logistics Corporations, which provide freight forwarding and warehouse services as part of a total package which may include the carriage of goods by air. These situations occur frequently in what is referred to as multi-modal transport. It should be made clear that some of these activities may well qualify as air transport services, whether or not they are "directly related to the exercise of traffic rights", but that this would not remove freight forwarding and warehousing, and many other services performed by such companies from the scope of the Agreement.

141. In the provisional CPC, freight forwarding and warehousing are classified in Division 74 "Supporting and Auxiliary Transport Services" not in Division 73 "Air Transport Services". "Storage and warehousing services", sub-sections (7421), 74210 are described as "Storage services of frozen or refrigerated goods", 74220 – "Bulk storage services of liquids and gases", and 74290 – "Other storage or warehousing services". Each sub-section and the explanatory notes apply to the type of goods being stored and the facility required to properly store the goods. For any type of goods stored, it would be feasible (if in some cases not very economical) to transport them by air. The differences between the storage facilities is directly related to the type of goods that would be stored in them. 74210 requires specialised refrigeration capabilities, 74220 requires special handling and storage for potentially "dangerous goods", and 74290 is a general goods warehouse. No distinction is made according to the mode of transport by which goods arrive at the warehouse. The contracting of such services by the shipper (manufacturer, producer, etc.) is commonly done through a freight forwarder.

142. "Freight transport agency services" (CPC 7480, 74800) are described as "Freight Brokerage services, freight forwarding services (primarily transport organisation or arrangement services on behalf of the shipper or consignee), ship and aircraft space brokerage services, and freight consolidation and break-bulk services." The description of services does not include the actual shipping or movement of goods by air (or any other means) for any of these service providers.

143. The logistics corporation also operates freight forwarding and warehousing services in the traditional sense, but is likely to have extensive international affiliates and is often (although not always) linked to cargo carriers by way of independent subsidiaries or long term contract agreements with cargo carriers. Conversely, cargo carriers, integrators, and postal operators may establish independent freight forwarding subsidiaries, long-term contractual agreements with independent forwarders, or make equity investments in freight forwarding companies.

144. Freight forwarders contract with air carriers for the physical carriage of goods from authorised operators (this is the same for shipping companies) and normally do not affect any carriage by air themselves. Thus the traditional forwarder is ultimately an agent for shippers and the airlines, and is therefore treated by regulators separately from air carriers. Global operators or logistics corporations go beyond pure freight forwarding and offer seamless services from point of origin to destination. Freight forwarding is often only one element in the corporate structure. They may be allied with, or form part of a group which includes, an air carrier. The U.S. provides an example of the

regulatory differences between cargo operators (under bilateral jurisdiction) and those who are separate but linked to air carriers: "in order to conduct indirect air transportation activities (air cargo forwarding and other charter activities other than as actual operators of aircraft) must obtain authority from the DOT" (OECD - DSTI/DOT(99)1).

145. In the Table 13 we have constructed a matrix that highlights the extent to which the traditional freight forwarders have expanded the scope of their operations. The table is not to be read in a strictly comparative sense due to the lack of base commonality in some of the figures. Where possible we have identified the specific freight forwarding numbers. However, most corporations consolidate their figures. One might also argue that corporations like Nippon Express should be classified with global integrators rather that freight forwarders, although a significant element of the global operations do involve freight forwarding directly.

TABLE 13
Global freight forwarders/Logistics Corporations - 1999

	Number of Countries	Number of Locations	Warehousing & distribu-tion centres	Employees	Total Revenue $US billions except where noted	Headquarters
Danzas[a]	135	711 (312 owned and operated)	451 (every Continent)	4,976	2.2 (1.96 freight forwarding)[b]	Germany
Nippon Express Worldwide (includes all corporate sectors)	33	213		+64,000	16.1 (1.78 freight forwarding)	Japan
Panalpina[d]	65	312		11,000	5.2 sfr billion ($1.73 freight forwarding)	Switzerland
Schenker[c]	100 (freight forwarding only)	1,000 (340 freight forwarding only)		28,500 (6,600 freight forwarding only)	5.2 (1.8 freight forwarding)	Germany
MSAS (the main component of Ocean PLC)[e]	112	675 (freight forwarding +460)		+15,000	1.11 (freight forwarding)	UK
Kuehne & Nagel	80	500	1.25 million square metres (5% of operations)	13,000	6.6 sfr billions ($1.06 freight forwarding)	Switzerland
BAX	121	500		+7,600	1.8	U.S.
KWE		203	123	+5,100		Japan
Circle	100	300		4,900	814.1 million	
Exel Walsh Western	28			35,000	2.4	Dublin Ireland

a Danzas has been involved in a number of mergers and acquisitions over the past year and a half. 1) Danzas was acquired by Deutsche Post in March 1999 becoming part the Deutsche Post World Net Group (Deutsche Post Group had already acquired interests in DHL and various parcel delivery and logistics firms in Europe). 2) In February 2000 Danzas acquired Air Express International (AEI), the largest U.S. freight forwarder.

b The freight forwarding section of the entire group is called Intercontinental and has also made a number of acquisitions since the beginning of 1999: Hammond International Ltd in New Zealand, and the French project forwarder Start S.A.

c November 2, 1999 it was announced that the Stinnes subsidiary Schenker AG, Essen/Germany, and the Japanese Seino Transportation Co. Ltd., Ogaki agreed to form a strategic alliance for integrated logistics and freight forwarding (Joint press release).

d In July 1999 SRAir Logistics purchased 10% of Panalpina and together the two companies co-founded SwissGlobalCargo.

e Ocean Group plc and Exel plc (formerly NFC plc) have merged. The merger brings together Ocean, MSAS and Exel. The new company is called Exel plc.

VI. RENTAL AND LEASING SERVICES

A. DEFINITION AND ASSESSMENT

146. In addition to the information contained in S/C/W/59, paragraph 65 and in S/C/W/129, paragraphs 6-7, 15(a), 19C(b), Annex 2 on pages 12-13, and Annex 6 on pages 25–27, Members might wish to consider the following elements.

147. This activity is already the object of commitments (CPC 83104 rental and leasing of aircraft without crew: 19 commitments; CPC 734 rental and leading with crew: 4 commitments; CPC 81120 financial leasing services: 67 commitments). However, partly due to uncertainties of terminology, it could be argued that certain aspects are covered by the carve out of the Annex (see S/C/W/59, paragraph 65). That is why, as a preliminary to the description of the economic and regulatory developments in this sector, it is useful to offer some definitions, mostly drawn from the ICAO study on aircraft leasing (document EC2/82, LE 4/55-99-54, dated 14 May 1999).

148. The ICAO manual on regulations of international transport (document 9626) describes a **leased aircraft** as an aircraft used under a contractual leasing arrangement. **To charter** an aircraft means that the entire capacity is hired or purchased by one or more entities who may resell it to the public (this occurs most frequently in non-scheduled passenger operations, which is why they are popularly known as "charter flights"). A **blocked space agreement** is the contract by which an operator leases only a part of an aircraft operating in a scheduled air service on a continuing basis (for example, 15 seats on a specific flight during a season).

149. From an economic perspective the main division is between **financial, capital leases** and **operating leases**. The aim of financial leases is to avoid the substantial capital outlays and debts required for the purchasing of an aircraft and to reduce taxation and other costs. It has the appearance of ownership by the lessee (lessee's logo, registration in the flag state of the lessee). The lessor can be a bank, an export credit agency, a manufacturer or a long term lessor such as IFLC or GE. Operating leases are designed to meet an air carrier's need for additional aircraft, often on a seasonal or a short-term basis.

150. From a regulatory point of view one can also distinguish the **dry lease** i.e. the lease without a crew and the **wet lease** i.e. the lease with crew, and even the **damp lease** i.e. the lease with partial crew. These definitions do not, however, have a universal acceptance. The European Civil Aviation Commission (ECAC),

TABLE 14

	1993	1994	1995	1996	1997	1998
Number of major leasing companies	40	40	36	34	40	
Fleet owned by these companies	1,900 jets	1,820 jets	1,740 jets	1,760 jets	2,140 jets	2,200 jets
Value of this fleet	US$ 33 bn	US$ 36 bn	US$ 36 bn	US$ 41 bn		
Part of the fleet owned by GE and IFLC	57%	61%	60%	61%	60%	54.4%
Proportion of aircraft owned or managed by operating leasing companies in the total number of commercial Jet aircraft	17%(*)	16%(*)	14.2%	13,5%	16%	
Proportion of western built fleet directly owned by airlines	no data	no data	55.7%	55.7%	54%	50%
among which aircraft leased to other carriers	no data	no data	no data	4.6%	no data	no data
Other types of leases	no data	no data	not computable	35.4%	not computable	not computable

(*) excluding China and CIS.

a pan-European organization, defines dry lease as the lease of an aircraft when the aircraft is operated under the Aircraft Operating Certificate (AOC) of the lessee, whereas wet lease is defined as the lease of an aircraft operated under the AOC of the lessor. In turn, this definition partially rejoins the distinction between financial and operating leases insofar as the lessor in case of a financial lease never has an operating certificate.

151. These overlapping and divergent economic and regulatory definitions make the gathering and the reading of statistics on these activities difficult. For instance, ICAO has collected in its annual publication "The World of Civil Aviation" the figures shown on Table 14.

152. One can see from this table that there are three main types of lessors: "major leasing companies", "carriers" (inter carrier market) and "others" meaning banks, export credit agencies and manufacturers. Complete figures are lacking for those categories and have even stopped being collected for 1999. The only complete year giving an idea of the total breakdown between these three types of actors is 1996, where the major leasing companies accounted for 13.5% of the value of the world western-built fleet, the inter-carrier market for 4.6% and the other financial lessors for 35.4%, the rest of the fleet (51.1%) being owned by the airlines themselves.

153. The major leasing companies such as IFLC and GE are operating on the two markets of financial leases and operating leases but the distribution of their activities between the two respective markets remains unknown.

154. A second Table compiled on the basis of the ICAO leasing study figures gives a regional breakdown and an idea of the evolution of the global leasing market between 1989 and 1998.

155. This Table shows that in 1989 leasing was already a common practice as companies with leased aircraft outnumbered companies in four out of the six regions. In 1998, this was the case for all regions and in some cases by substantial margins. As far as the respective shares of the different types of lessors are concerned, one can note an important decline in the inter-carrier markets (from 33% in 1989 to 8% in 1998), a growth of the share of leasing companies (from 35% to 49%) and a quasi-stability of the "other" lessors (1989: 41%, 1998: 43%). In terms of regional breakdown, one may note a substantial growth of the share of Europe where 41% of the leases were found in 1998 (1989: 26%), a decline of North America (23% in 1998, 46% in 1989), a growth of the Asia Pacific region (from 10% to 16%) a quasi stability of Latin America (from 15% to 16%) and an absolute stability of the Middle East and Africa (4% altogether).

TABLE 15

Jet aircraft leased by airlines offering international scheduled services 1989 and 1998

ICAO Statistical Region	Number of						Number of aircraft leased from							
	aircraft in service		airlines without leased aircraft		airlines with leased aircraft		other airlines		leasing companies		others (manufac-turer, banks, etc…)		Total	
	89	98	89	98	89	98	89	98	89	98	89	98	89	98
Africa	309	359	26	14	12	35	8	24	4	17	7	39	19	80
Asia/ Pacific	1,012	1,971	19	15	20	55	13	58	32	209	36	255	81	522
Europe	2,791	3,589	23	46	36	113	49	115	52	536	108	684	209	1,335
Middle East	294	324	9	5	5	9	5	6	3	18	8	13	16	37
North America	4,014	4,945	9	6	26	38	104	30	155	504	125	199	384	733
Latin America/ Caribbean	495	765	14	9	26	44	15	27	48	299	58	186	121	512
TOTAL	8,915	11,953	100	95	125	294	194	260	294	1,583	342	1,376	830	3,219

Source: ICAO, jp online-fleet international.

TABLE 16
Developing country airlines with leased aircraft offering international scheduled services 1989 and 1998

Period	Number of			Number of aircraft leased from			
	aircraft in service	airlines without leased aircraft	airlines with leased aircraft	other airlines	leasing companies	others (banks, etc…)	Total
1989	1,789	62	58	32	108	68	208
1998	2,080	40	132	89	539	347	975
Change	+291	-22	+74	+57	+431	+279	+767

Source: ICAO, jp online-fleet international.

156. The following table shows that developments in developing countries have followed the same pace as the global trend in respect of the number of airlines with leased aircraft, total aircraft leased and aircraft leased from leasing companies. In terms of aircraft in service the increase for developing countries was however half the global increase.

157. In terms of planes leased, the market has grown fourfold in nine years. One may note however that the North American figures are probably underestimated because of the difficulties in identifying financial leases by "other" lessors.

158. Among the factors that have led to an increase in the use of leased aircraft in international transport, the ICAO lists the following: the high cost of new aircraft has encouraged the leasing alternative for smaller as well as newly established air carriers; established air carriers see leasing aircraft as a means of reducing costs and gaining tax benefits; in certain circumstances the sale and lease back of its own aircraft by an air carrier can reduce its debt level; air carriers can meet seasonal demand for additional capacity through leasing without incurring large capital outlays or debt from purchasing aircraft; leasing can permit air carriers, particularly smaller ones from developing countries to operate unused traffic rights; air carriers with excess or under-utilized aircraft and/or crews can employ them through leasing to other carriers and leased aircraft can be used to serve routes for which the air carrier does not own the appropriate equipment.

159. Table 17 gives an approximate idea of the impact of leasing on airlines' accounts:

160. This shows that for airlines using leasing, spending on leasing has grown about two and half times as fast as operating costs across the period. However, this Table reflects only the impact of operating leases; the impact of financial leases appears in the long-term debt item of the balance sheet of air carriers along with many other items and cannot be isolated as such.

161. The regulatory and economic context of financial leases and operational leases are extremely different and should be treated separately.

TABLE 17

	Number of airlines concerned	Spending on flight rental equipment (US$ million)	Spending on flight rental equipment for the 42 airlines concerned in 1989 & 1997	Total operating costs for the 42 airlines concerned in 1989 & 1997 (US$ million)
1989	97 airlines from 47 countries	7,043	3,915	101,778
1997	106 airlines from 41 countries	10,679	9,310	159,402
changes 1989-1997		+52%	+138%	+57%

Source: ICAO leasing study.

B. FINANCIAL LEASING

162. Financial leasing seems, from an economic and regulatory point of view, to belong more to the world of financial services than to the world of air transport.[21] The main actors in this market, the public export credit agencies (U.S. Exim bank, Germany's Hermes, UK's ECGD, France's Coface, etc.), the banks, the manufacturers and the major leasing companies work together on complex financial schemes frequently involving the creation of specific structures. The regulatory oversight of these activities is largely in the hands of national fiscal administrations and at multilateral level is ensured by the Large Aircraft Sector Understanding concluded under the aegis of the OECD, which limits the duration of the credit and the participation of export credit agencies. Certain WTO agreements such as the GATT, the Subsidies and Countervailing Measures Agreement and the Agreement on Trade in Civil Aircraft contain rules relevant for those activities as three recent dispute settlement cases have shown.

163. During the 1993-1999 period, the economic and regulatory developments of the sector have been closely intertwined: under the pressure of the markets, States have created or allowed new schemes that have been more or less successful and have been followed by similar schemes abroad. Key elements of those schemes are the depreciation rules, the residual value of the assets, the distrubution of the risks and the bankruptcy rules.

164. One of the most popular schemes, the Japanese Leveraged Lease (JLL), ceased to exist in 1998 after a ruling from the Japanese national tax authority and was replaced in the second half of 1999 by the Japanese Operating Lease (JOL). Users of these Japanese schemes include airlines such as Iberia, SAS, Korean, Aer Lingus and Austrian. Another classical scheme is the Enhanced Equipment Trust Certificate (EETC) based on the securitisation of the assets, which is frequently used in the U.S. The value of the contracts using this structure has amounted between 1994-1999 in the U.S. to US$ 16 billion. America West, Atlas Air Continental Airlines, Fedex, Northwest Airlines, US Airways and United Airlines were among the clients. This form is beginning to extend in Europe where for instance Iberia concluded a US$ 190 million deal for six A320 at the beginning of the year 2000. Quantas and Ansett have also recently used similar schemes. Other "tax based" leases include ownership-FSC (of which British Airways and Cargolux have been clients) and "grand-fathered deals" in France and Germany. Another major development is the growing involvement of aircraft manufacturers, who in order to attract orders have begun giving Asset Values Guarantees (AVG's). The net exposure of the two main aircraft manufacturers is valued at US$ 25 billion.

165. In terms of volume the financial leasing activity is cyclical and linked largely to orders and deliveries of aircraft. In GATS terms, this is trade conducted essentially under mode 1 and mode 2 as aeroplanes are mobile assets whose lease does not demand a commercial presence.

166. With regard to the leasing companies strictly speaking the Table 18 gives the ranking of the main companies by fleet value for 1999.

167. These 40 lessors account for a fleet of 3,800 aircraft worth US$ 74,5 billion, the bulk of that fleet - 2800 planes - being passenger jet airliners which represent around a quarter of the world fleet of western-built commercial jets. Two U.S. companies, General Electric Capital Aviation (GECAS), which absorbed Guinness Peat Aviation in 1993, and International Lease and Finance Company (IFLC) have consistently dominated the market over the period. Both groups have a fleet estimated at around US$ 20 billion although GECAS owns twice as many planes. A dozen companies have portfolios valued over US$ 1 billion and are controlled by much more geographically diversified interests including Japanese, Australian, Singaporean, Dutch, French, UK, German, Spanish and the United Arab Emirates interests to take a few examples.

C. OPERATIONAL LEASING

168. There are no specific statistics on operational leases. The only statistical element available is Table 19 compiled by ICAO on the use of wet-leased aircraft in international scheduled services in 1997.

21 It is worth noting that the CPC makes distinctions that apparently reflect perfectly the economic and regulatory categories of financial leasing and operational leasing (dry and wet):

- CPC 81120 "financial leasing services" is defined as "leasing services where the term approximately covers the expected life of the asset and the lessee acquires substantially all the benefits of its use and takes all the risk associated with its ownership. Exclusion: operational leasing services are classified in Division 83 according to the goods leased ";
- CPC 83104 "leasing or rental services aircraft without operator" is defined as "renting, hiring or leasing services concerning aircraft (e.g. helicopters, aeroplanes) without operator";
- CPC 73400 "rental services of aircraft with operator: rental and leasing services of freight or passenger-carrying aircraft (including helicopters) or of spacecraft of any type and for any purpose with operator. These services are generally supplied on a time basis and several different destinations are frequently involved".

TABLE 18
Top 40 lessors – by fleet value 1999

Rank	Leasing Company	US$ million	Rank	Leasing Company	US$ million
1.	ILFC	19,133	21.	Itochu AirLease	704
2.	GECAS	18,410	22.	BAe Asset Mgt – T/props	615
3.	Flightlease	3,322	23.	Triton Aviation Services	598
4.	Ansett Worldwide	3,162	24.	Sunrock Aircraft	589
5.	Babcock & Brown	2,741	25.	Bavaria Fluggesellschaft	567
6.	debis AirFinance	2,329	26.	Deutsche Structured Finance	520
7.	ORIX Aircraft Corp	1,744	27.	Aviation Capital Group	519
8.	Pegasus Capital Corp	1,730	28.	CIT Leasing	485
9.	BAe Asset Management	1,701	29.	C-S Aviation Services	402
10.	GATX Capital	1,688	30.	First Chicago Leasing	395
11.	Airbus Asset Management	1,670	31.	SAAB Aircraft Leasing	359
12.	SALE	1,344	32.	ATR Leasing	259
13.	Boullioun Aviation	1,228	33.	ING Lease	253
14.	The CIT Group	1,163	34.	Raytheon Aircraft Credit	218
15.	Saab Aircraft Leasing	1,098	35.	Potomac Capital Leasing Group	204
16.	Tombo Aviation	969	36.	Aircraft Financing and Trading	196
17.	Finova Capital	968	37.	Arkia Leasing	147
18.	UniCapital Air Group	862	38.	Dornier Aviation	126
19.	Indigo Aviation AB	764	39.	International Air Leases	118
20.	Pembroke Group	724	40.	US Airways Leasing & Sales	117

Source: *Airline Business*, February 2000.

TABLE 19
Use of wet-leased aircraft, international scheduled services, 1997

Wet leases	Less than 25 departures/ year		25 through 50 departures/ year		More than 50 departures/year	
	Number of wet leases	Total km flown (thou-sands)	Number of wet leases	Total km flown (thou-sands)	Number of wet leases	Total km flown (thou-sands)
Airlines of the same State	2	14	3	297	29	33,005
Airlines of different States	15	317	7	720	60	55,751

Source: ICAO Leasing Study.

169. Of some 3,000 bilateral air services agreements only 41, involving 38 states, were found by ICAO in 1997 to contain provisions on leased aircraft, three of which contained leasing clauses dealing with safety aspects. This means that in most instances leasing is regulated not at a bilateral but at a national level. However, there has recently been a renewed interest in multilateral rules on leasing, be it in a plurilateral European context (ECAC resolution No. 21-1, dated 3 July 1997 on leasing, and Joint Aviation Authorities JAR-OPS 1.165 on leasing dated 1 March 1998) or at universal level in ICAO through the amendment of Article 83 *bis* of the Chicago Convention. It is also worth noting that common rules on leasing are one of the elements of the draft Transatlantic Common Aviation Agreement (TCAA) which the European airlines and the European Commission would like to create in the future with the United States.[22]

170. The regulation of leasing is justified by two types of preoccupation: the first is safety, as leasing from abroad creates a risk of introduction in a given market of aeroplanes whose safety oversight is not up to the standard followed by the receiving state. The second preoccupation is economics, as leasing could be a way for a third party lessor from country C to bypass a cabotage monopoly or the limitations of the bilateral agreement between A and B.

171. Those regulations are relatively complex in their functioning and cover policies that range from complete protectionism to relative liberalism. For instance one may distinguish three types of clauses related to leasing in bilateral agreements:

- the first requires simple notification of the lease to the competent authorities;
- the second authorizes the lease from a third party only on the condition that this third party does not derive any economic benefit from the bilateral agreement;
- the third demands, in addition to the preceding conditions, "appropriate authority" (i.e the underlying traffic rights) and reciprocity from the state of the lessor.

172. At national or plurilateral levels the main regulatory developments that have occurred during the period 1993-2000 concern the European region, where two bodies with wider membership, but working in close coordination with the EU, the European Civil Aviation Commission (ECAC) and the Joint Aviation Authorities (JAA), have adopted detailed regulations on the subject, respectively ECAC recommendation on leasing of aircraft 21-1, dated 3 July 1997 and JAR-OPS 1.165-leasing, dated 1 March 1998.

173. With respect to aircraft leasing in the European Union, Council Regulation (EEC) No. 2407/92 of 23 July 1992 on the licensing of air carriers, recognizes that leased aircraft may be used to meet the requirement that an air carrier have one or more aircraft at its disposal, and allows a Member State to waive the requirement to register an aircraft used by an air carrier on its national register in the case of short-term lease agreements to meet temporary needs of the air carrier or otherwise in exceptional circumstances. The regulation requires prior approval for such agreements and prohibits a Member State from approving agreements leasing aircraft with crew unless safety standards equivalent to those for the issuance of national Air Operator Certificates are met.

174. In addition, by a European Council Resolution dated 19 June 1995, the Council called on the Commission to analyse *inter alia* the current practice of Community air carriers as well as national regulations and administrative procedures concerning the use of non-community resources, and if necessary to draw up guidelines enabling the leasing provisions of regulation No. 2407/92 to be uniformly applied. This work is still underway but it can be reasonably said that work in ECAC and JAA has partially fulfilled this mandate.

175. ECAC's Recommendation on Aircraft Leasing (ECAC No. 21-1, 2-3 July 1997) calls for prior approval of all leasing arrangements, lists information to be submitted for such approval, and states that Article 83 *bis* should normally be used for dry leases. The Recommendation sets out a number of specific conditions on wet leases (such as that they be time-limited and that consumers be informed of their use prior to boarding) and conditions approval on the aeronautical authority's satisfaction that the lessor of a wet-leased aircraft meets safety standards equivalent to those which its own airlines are required to meet under their Aircraft Operating Certificate. The text of this Recommendation and a more detailed analysis of it can be found in document S/C/W/129, pages 7 and 25-27.

176. Finally, the Joint Aviation Authority Regulation No. 1.165 regarding leasing adopted on 1 March 1998 distinguishes leases to or from other JAA States and leases to or from third countries. For leases to or from

22 See "Towards a Transatlantic Common Aviation Area", Association of European Airlines policy statement, September 1999, point 32-35 and a speech by Mrs. de Palacio, European Commissioner for Transport at the "Beyond Open Skies" conference held in Chicago on 6 December 1999 on the website http.\\www.eurunion/org/news/speeches/991206ldp.htm.

another JAA State, the Regulation prior approval of the lease, except in the case of wet lease out where the lessor remains the operator and therefore no authorization is needed. For the leases to or from a third country the approval of lease is conditioned on compliance with safety, maintenance and operational JAR regulations and standards and by the transfer of responsibility to the receiving state in the case of dry lease out. The complete text of this provision can be found in Annex as an update of S/C/W/129.

177. The U.S. market is one of the major markets for leasing. For wet leasing only, for instance, it is estimated to amount to 40% of a US$ 4 billion market according to certain commercial sources.[23] Its legislation did not undergo major changes during the 1993-2000 period.

178. The wet lease out of a U.S. plane to a non-U.S. operator remains subject to approval by the Department of Transportation, which in order to disclaim jurisdiction requires the demonstration that the lessee will exercise the true operational control and safety responsibility, failing which the agreement is considered to be a charter agreement (part 218 of 14 CFR). In addition, long-term leases are subject to a specific prior authorization procedure following three criteria (conformity to any bilateral agreement, existence of substantial reciprocity, absence of violation of these rules by the lessor in the past (part 207.10 of 14 CFR). Finally, a specific authorization by the FAA is required to ensure for all leases that the safety operational and airworthiness requirements of the United States will be respected and in particular that each aircraft shall be maintained according to a programme approved by the FAA (FAR part 129).

179. For safety reasons, the United States does not approve the wet lease of aircraft registered in another State to its national carriers.[24]

180. Unfortunately, there are no similar regulatory data available for other countries and especially for developing countries, even at ICAO level. Members might wish to consider the usefulness of the Review of the Air Transport Annex of gathering such data on a country by country basis.

181. Finally at a universal level, in 1990 the ICAO Legal Committee undertook to resolve some of the ambiguities related to the safety responsibilities arising out of certain situations involving leased aircraft through an amendment to the Chicago Convention. Article 83 *bis* on the transfer of certain functions and duties. This provision sets out a means of transferring, by agreement, all or part of the duties and functions of safety supervision to the state of the operator (the lessee air carrier) under the supervision of which the aircraft will be operated. This provision entered into force on 23 June 1997 – that is to say in the middle of our period of reference 1993-2000 – through a protocol and will be binding among the Members of the protocol. The text of this provision as well as a more detailed analysis can be found in document S/C/W/129, pages 2 and 12-13. These pages also contain a list of the States having ratified the protocol as of 31 March 1999. Since that date, the following countries have also ratified the protocol: Albania, Armenia, Kyrgyzstan, Mongolia, Slovenia. This brings the number of ratifying countries to 119.

23 Source: British cargo alliance.

24 Quote from paragraph 4.2 page 13 of the ICAO study on aircraft leasing EC2/82, LE 4/55-99/54, dated 14 May 1999. See also OECD "principles for the liberalization of air cargo" DSTI/DOT(2000)1, dated 2-6 June 2000, point 16 to 22 and footnote 3 and Airline Business International, June 2000, page 13.

ANNEX

Regulation JAR-OPS 1.165 on Leasing

Date: March 1, 1998

(a) ***Terminology***

Terms used in this paragraph have the following meaning:

(1) *Dry lease* - Is when the aeroplane is operated under the AOC of the lessee.

(2) *Wet lease* - Is when the aeroplane is operated under the AOC of the lessor.

(3) *JAA operator* - An operator certificated under JAR-OPS Part 1 by one of the JAA Member States.

(b) ***Leasing of aeroplanes between JAA operators***

(1) *Wet lease-out.*
A JAA operator providing an aeroplane and complete crew to another JAA operator, and retaining all the functions and responsibilities prescribed in Subpart C, shall remain the operator of the aeroplane.

(2) *All leases except wet lease-out*

(i) Except as provided by subparagraph (b)(1) above, a JAA operator utilising an aeroplane from, or providing it to, another JAA operator, must obtain prior approval for the operation from his respective Authority. Any conditions which are part of this approval must be included in the lease agreement.

(ii) Those elements of lease agreements which are approved by the Authority, other than lease agreements in which an aeroplane and complete crew are involved and no transfer of functions and responsibilities is intended, are all to be regarded, with respect to the leased aeroplane, as variations of the AOC under which the flights will be operated.

(c) ***Leasing of aeroplanes between a JAA operator and any entity other than a JAA operator***

(1) *Dry lease-in*

(i) A JAA operator shall not dry lease-in an aeroplane from an entity other than a JAA operator, unless approved by the Authority. Any conditions which are part of this approval must be included in the lease agreement.

(ii) A JAA operator shall ensure that, with regard to aeroplanes that are dry leased-in, any differences from the requirements prescribed in Subparts K, L, and/or JAR-26, are notified to and are acceptable to the Authority.

(2) *Wet lease-in*

(i) A JAA operator shall not wet lease-in an aeroplane from an entity other than a JAA operator without the approval of the Authority.

(ii) A JAA operator shall ensure that, with regard to aeroplanes that are wet leased-in:

(A) The safety standards of the lessor with respect to maintenance and operation are equivalent to JARs;

(B) The lessor is an operator holding an AOC issued by a State which is a signatory to the Chicago Convention;

(C) The aeroplane has a standard Certificate of Airworthiness issued in accordance with ICAO Annex 8. Standard Certificates of Airworthiness issued by a JAA Member State other than the State responsible for issuing the AOC, will be accepted without further showing when issued in accordance withJAR-21; and

(D) Any JAA requirement made applicable by the lessee's Authority is complied with.

(3) *Dry lease-out*
A JAA operator may dry lease-out an aeroplane for the purpose of commercial air transportation to any operator of a State which is signatory to the Chicago Convention provided that the following conditions are met:

(A) The Authority has exempted the JAA operator from the relevant provisions of JAR-OPS Part 1 and, after the foreign regulatory authority has accepted responsibility in writing for surveillance of the maintenance and operation of the aeroplane(s), has removed the aeroplane from its AOC; and

(B) The aeroplane is maintained according to an approved maintenance programme.

(4) *Wet lease-out.*
A JAA operator providing an aeroplane and complete crew to another entity and retaining all the functions and responsibilities prescribed in Subpart C, shall remain the operator of the aeroplane.

(d) ***Leasing of aeroplanes at short notice.***

In circumstances where a JAA operator is faced with an immediate, urgent and unforeseen need for a replacement aeroplane, the approval required by sub-paragraph (c)(2)(i) above may be deemed to have been given, provided that:

(1) The lessor is an operator holding an AOC issued by a State which is a signatory to the Chicago Convention; and

(2) The lease-in period does not exceed 5 consecutive days; and

(3) The Authority is immediately notified of the use of this provision.

VII. CATERING

182. There is no specific CPC classification for airline catering services. Sub-divisions 6421 and 6431 of the provisional CPC refer to the service of meals and beverages as "in transport facilities", instancing trains and ships. They also cover airline catering. They fall under Division 64, "Hotel and Restaurant Services". As stated in S/C/W/59 paragraph 67, it is questionable whether catering services can be regarded as "directly related to the exercise of traffic rights".

1. Economic Developments

183. The catering services industry is an important sector in economic terms. During 1999 the global industry produced over 670 million meals for airline around the world, employed more than 78,000 people and generated approximately US$ 12 billion in gross revenue. Airline catering is the primary industry, although substantial earnings are generated through retail food outlets, catering services (other than airlines) and logistics.

184. Until the early 1990s in-flight catering was usually an internal department of an airline, with most airlines providing their own catering requirements. However, independent and international airline catering corporations also existed.

185. Since 1992, there has been both significant revenue growth and consolidation of service suppliers in the global market (see Table 20 below). In 1992, the industry was valued at approximately US$ 9 billion, and was dominated by 10 corporations (both airline and non-airline operators). Although the number of suppliers increased by 2 in 1993, from 1994 until 2000 the absolute number of operators has decreased while the percentage of market share controlled by each has increased significantly. In 1993, 12 corporations controlled 60% of the world market and by 1996, 5 corporations controlled 60% of the market. Based on early 2000 figures for 1999, the global market has 2 dominant corporations controlling 56% of the market in a US$ 12 billion industry.

186. Table 2 (below) provides an overview of the global market distribution for the largest seven catering corporations around the world.

2. Regulatory developments

187. In all the sources that have been located to date, there are no references or information about regulatory standards in any geographical region or country. Pending verification, in-flight catering appears to be regulated in the same manner as all food service providers.

TABLE 20
Global Market Consolidation

Year	% of Global Market	Number of Corporations	Value of Industry US$
1992	56	10	9
1993	60	12	
1994			
1995			
1996	60	5	
1997			
1998	60	4	
1999	56 74	2[a] 12	12

a The two largest inflight catering corporations are both independent subsidiaries of airline holding companies. LSG-Sky Chefs is part of the Lufthansa Holding AG corporate group and controls 34% of the global market. Gate Gourmet is an independent subsidiary of the Swissair Group (SAirGroup AG) and controls 22% of the global market.

TABLE 21
Global Industry Leaders – Employment – Geographical spread

	LSG Sky Chefs	Gate Gourmet	Alpha Catering Services	Servair	JAL Tokyo	CPCS	SATS SIA	Eurest	Other
Market Share	34%	22%	4%	4%	4%	2%	2%	2%	26%
Turnover (US$ millions)	3,000	2,084	484	394					
Country Locations	35+	27	5						
Production Kitchens	200	132	31	22					
Airlines Clients	260	200+	100+			33			
Meals per year (millions)	390	255	21	29		15			
Employees	40,000	26,000	5,750	5,200					
Ownership	LH/ Onex	Sair Group	Alpha Airports	Air France[a]	Japan Airlines	Cathay Pacific		General Food Service	
Headquarters	Ger/ U.S.	CH	UK	France	Japan	Hong Kong	Sing-apore	Sweden[b]	

a Servair is 78% owned by Air France.

b Eurest is a subsidiary of COMPASS Group PLC (UK) which operate in over 70 countries world-wide.

Sources:

Inflight Asia - May 2000.
Airline Business -January 2000.
Les Echos - 31 January 2000.
Interavia - July/August 1999.
Airline Business - April 1999.
ITF News - no. 1/1999.
Inflight Caterers - 1998.

International Inflight Food Services Association (http://www.ifsanet.com).

Annual Report 1999 - SairGroup.
Facilities 2000: The Global Network of LSG Sky Chefs. - (http://www.lsg-skychefs.com).
Annual Report 1999 - Cathay Pacific.
COMPASS GROUP PLC. - (http://www.compass-group.com/foodservice/global.html).
Provisional Central Product Classification. United Nations. Series M N. 77 (ST/ESA/STAT/SER.M/77).

DEVELOPMENTS IN THE AIR TRANSPORT SECTOR SINCE THE CONCLUSION OF THE URUGUAY ROUND

PART TWO

Background Note by the Secretariat

Addendum

This background note brings additional information on the developments in the air transport sector since the conclusion of the Uruguay Round, covering sectors on fuelling, ground handling and airport services.

PART TWO

FUELLING

GROUND HANDLING

AIRPORT SERVICES

ANY OTHER SUPPORTING SERVICES

I. FUELLING

1. This section will review the elements of fuelling in air transport and will include the following: 1) the industry structure; 2) storage and distribution; 3) types of fuel and fuelling; and 4) the possible linkages to the UN provisional CPC. Although fuelling is being treated as a separate sector in this review, it is usually considered to be a sub-sector of ground handling and should therefore be read in conjunction with the following section on ground handling.

2. Fuelling is part of the oil industry's 'down-stream' supply chain and the service providers are specialised in this particular sector. The operators include oil companies or their aviation subsidiaries, and ground handlers that specialise in aircraft and airport equipment fuelling. Due to the specialised aspects of aircraft fuelling, technical expertise and strict adherence to safety standards is required. The companies providing fuelling services bid for fuelling contracts (usually three to four years in duration) from the airport authorities, and compete for fuelling contracts with airport users when there is more than one provider at an airport.

3. The bulk storage of aircraft fuel is usually in fuel farms at remote locations and brought into the airport via pipeline or by truck. There are two types of fuelling procedures in use today: 1) tanker fuelling; and 2) hydrant fuelling. Which one is used depends on the airport, although newer airports tend to use hydrant fuelling, while older airports retain tanker fuelling. In some cases both systems are being used in combination.

4. The possible linkages between fuelling and the UN CPC provisional is similar to the list in the ground handling sector of this review. The categories that are identified in Table 1 highlight both the distribution (services) and the corresponding goods categories.

5. The types of fuel that are available at an airport include: motor vehicle gasoline (ground equipment); aviation gas (for piston engine aircraft); kerosene for jets (Jet A-1, Jet A[1], and Jet B[2]); and fuel additives for lubrication.

1 Jet A is normally only available in the US. The difference between this and Jet A-1 is the higher freezing point maximum (-40°C).

2 Jet B can be used as an alternative to Jet A-1 but due to handling difficulties there is only a significant demand in very cold climates where its better cold weather performance is important.

TABLE 1
Possible Relationship between Fuelling and the UN CPC Provisional

Management and operation of fuel tankers for aircraft and airport motor vehicles	74220 – Bulk storage and warehousing services of liquids and gases In addition there are three possible classifications: 74610 – Airport operation services (excl. cargo handling); or 74690 – Other supporting services for air transport; or 74900 – Other supporting and auxiliary transport services
Management and operation of fuelling hydrants for aircraft and airport motor vehicles	Same as above
Distribution of fuelling products	61300 – Retailing services of petroleum refineries products, such as gasoline and other motor fuels for internal combustion engines, kerosene, lubricating oil and grease, fuel oil, liquefied petroleum gas put up for retail sale and other products of petroleum refineries 62113 – (Commission agents' services) Sales on fee or contract basis of fuels… 62271 – Wholesale trade services of solid, liquid and gaseous fuels and related products

II. GROUND HANDLING

1. Introduction

6. The ground handling sector encompasses a multitude of services that are required for airlines to operate in a safe and timely manner, and is subject to a range of regulatory structures at the local and national level of government authority. To provide a comprehensive review of developments in this sector since 1993, the following presentation is divided into four sections: 1) the definition and the scope of ground handling; 2) ground handling and its relationship with non-air transport sectors that are within the framework of the GATS; 3) the regulatory history between 1993 and 1999; and 4) the economic evolution of the sector. This should provide an indication of the diversity and complexity of the sector, and the impact of liberalising regulations on competition in different geographical and economic regions of the world.

7. Ground handling has undergone substantial consolidation at the international level over the past 5 years, thereby becoming a competitive sector of air transport where both airline and non-airline operators compete for market-share. The world market for ground handling is estimated at US$ 11.5 billion[3] and while this sector is expected to be dominated by a handful of independent global operators within the next couple of years, today there are approximately 300 ground handlers world-wide. This is due in large part to the absence of foreign ownership restrictions and liberal third-party[4] regulatory regimes in the two largest markets in the world (US and EU).

8. There has also been a significant movement away from the traditional airline dominance of service providers in this sector. In some cases the airlines have sold off their ground handling operations (e.g. American Airlines), while others have set up independent subsidiaries (e.g. Lufthansa created GlobeGround, and Swissair founded Swissport). Moreover, there has been a significant increase in the number of truly independent global operators (e.g. Ogden[5], US; Penauille, France).

9. Airlines are now able to choose between at least two competing ground handling service providers at most international airports (Table 8). It appears that while ground handling was a service generally provided by airlines on a reciprocal basis, and was included in bilateral agreements, the situation has changed drastically in recent years. According to ICAO"…slightly less than 10 per cent of the bilateral air service agreements registered with ICAO contain provisions concerning ground handling".[6] ICAO also reports that as of 31 December 1999 there were 194 bilateral agreements containing ground handling provisions, of which 85 are between WTO Members. No such provisions have been included in 'open skies' agreements signed since 1992 (ICAO: *Agreements registered with ICAO including ground handling provisions as of 31 December 1999*). However, it has not been possible to ascertain at which airports self-handling (airlines providing their own services) is prohibited, or when permitted, not attainable due to existing contracts or a non-transparent tender process.

10. The ground handling provisions that are usually included in bilaterals tend to be divided into two categories: 1) reciprocal provisions; and 2) recognition of the right to perform self-handling or the possibility of contracting with a third-party. Each is usually subject to conditions established by the State in which the services are provided. Notwithstanding market access restrictions contained in the bilaterals, market presence can be obtained through the outright purchase of domestic companies, joint ventures, or partner relationships.

11. In this context, discussion of the definition is an important point due to the present trend of international consolidation and the emergence of independent global operators. Moreover, lack of specificity over what the present ground handling sector includes (see below for the ICAO description) and the scope of operations indicates that ground handling, or parts thereof, may not be directly related to traffic rights.

12. The substantial institutional changes that have taken place throughout the ground handling sector may be summarized as follows: 1) market access for third-party service providers is well established and competitive; 2) there are few geographic regions where monopolies still exist (see Tables 8 and 9 for details); 3) market access can be obtained through mergers, acquisitions, or partnerships (see Table 11 for a recent list); 4) the two largest markets have liberal regulatory regimes; and 5) the global market is now dominated

3 *Airline Business*, Jan 2000, p. 47.

4 Third-party handlers acquire operating licences from the airport authority and then independently contract with airlines to provide ground handling services.

5 Ogden, one of the largest independent ground handling companies has recently been acquired by Menzies plc.

6 Note: This percentage is calculated on the number of bilaterals that have been registered with ICAO and not the actual number in existence since many are not registered. *Manual on Regulations*, doc 9626, 1996.

primarily by independent global handlers and not airlines (see Table 7). In combination, these points highlight a process of dramatic industrial change that have led to an internationally competitive sector.

2. Definition

13. At all airports throughout the world, ground services are required to enable provision of air transport services and to facilitate the safe and economical movement of aircraft, passengers, and goods while they are on the tarmac[7] away from the active runway and taxiways. Ground handling therefore includes a multitude of services within a complex operational network. Adding to the operational complexity of this sector, there are also market structures that range from being very competitive, to highly protected monopolies.

14. Despite there being a general understanding of what ground handling includes, there appears to be no internationally agreed definition. ICAO, and the OECD have developed general descriptions of what ground handling is, while the International Ground Handling Council (IGHC) of IATA provides a list of all the sub-sector activities (14 in total) that are part of ground handling, and a detailed description of what activities occur within each sub-sector.

OECD

"Ground handling is generally understood to include services necessary for an aircraft's arrival and departure from an airport, but excludes those provided by air traffic control." (*OECD DSTI/DOT (2000)*, p. 15).

ICAO

The ground-handling function is separated into terminal handling (passenger check-in, baggage and freight handling) and ramp handling (aircraft handling, cleaning and servicing) (*ICAO Airport Economics Manual*, Document 9562). ICAO also notes that ground handling generally excludes maintenance and repair of aircraft, although in some instances, so-called line maintenance may be considered as part of ground-handling services. Services related to ground handling may be provided at an airport by one or more airlines, by one or more concessionaires, by the airport itself, or by any combination of these.

IGHC–IATA

Ground handling services are divided into numerous sub-sectors which are either operational, thereby requiring operating licences, or administrative. The operating licences, include all areas within the airport perimeter (excluding taxi-ways, and active runways) and activities that facilitate the movement and safety of passengers (pax), goods and aircraft (including commercial, cargo and general aviation). Administrative functions are usually contractual arrangements between airport users (e.g. commercial airlines, general aviation aircraft, cargo carriers) and ground handling service providers.

15. Although the OECD and ICAO definitions are adequate for a general understanding of ground handling and who the service providers might be, neither describe or define how the sector is structured in operational terms or explain market access. In fact there are several ways to divide ground handling services depending on whether one is examining this sector from an operational or a market access perspective.

16. While ground handling service providers operate under different regulatory regimes in different countries (see Table 3 for an outline of the regulatory regime), the majority of ground handlers belong to the IGHC. These service providers usually adhere to the IGHC's General Ground Handling Standards and it is through this trade association that general operational standards are defined and organised. The IGHC (*Standard Ground Handling Agreement Annex A - Description of Services*[8]) specifies in detail what each individual job function entails, providing a working understanding of how the licences are allocated throughout the sector. For the purposes of this review, ICAO and the OECD definitions are considered to be a general framework under which the entire sector gains meaning, while the IGHC will be used for operational and market definitions.

(a) Market Sectors

17. Although airlines traditionally provided their own ground handling services at their home airport on a reciprocal basis with foreign flag carriers, today these services, and the licences that go with them, are contracted out to independent service providers (airline and non-airline). Thus, ground handling service providers now bid for the various operating licences from the respective airport authorities in most countries.

7 Tarmac and 'apron' can be used interchangeably.

8 Upon request, copies will be made available at the Secretariat.

Where monopoly markets do exist, the ground handler is usually the national flag carrier, an independent global operator, or the airport authority itself. In these cases it has not been possible to identify where self-handling is restricted, or prohibited.

18. The IGHC breaks down the overall ground handling sector into 14 categories, or sub-sectors (*Annex A – Description of Services*). It can be seen that the types of services and the corresponding licences that are allocated to service providers fall into three general categories and are divided by technical and locational descriptions. The first are services that operate primarily (but not exclusively) in the land-side[9], or public areas, and include *inter alia* passenger and baggage check-in. The second could be considered as administrative/technical and the third air-side.[10] In each case the descriptions generally correspond to the ICAO and OECD definitions of ground handling as mentioned above.

19. Within the range of service providers, there are also three categories of ground handling operations: 1) self-handling; 2) monopoly providers; and 3) third-party handling. Self-handling is often permitted through bilateral arrangements between States, although in some regions (e.g. the EU) regulations specify the number of self-handling arrangements permitted at a given airport. In this instance the airline (or airport user) is permitted to provide ground handling services for its own aircraft, passengers, and cargo. Monopolies do not permit any choice of ground handlers by airport users.[11] In either situation, there is little or no competition within the market place. Third-party handling means that a service provider at an airport is permitted to offer services to other airport users on a competitive basis. However, where there is only one third-party handler at an airport, the operator is considered to be a monopoly provider. Where there are two or more providers at an airport, competition is considered to exist. In all three categories there appear to be few countries which do not have a foreign-based handler providing a number of services.

(b) Operational Sectors

20. In operational terms, ground handling service providers can be divided into two broad categories: 1) full service, and 2) specialised services. In the first category, the providers offer the full range of ground services at an airport, while the latter will provide only a certain number of specified services (e.g. aircraft fuelling, aircraft cleaning, cargo handling, special-needs passengers). A number of situations can occur at any airport: monopoly providers or third-party handlers can offer the full range of services; a handler can specialise in a particular service (e.g. fuelling, surface transport cargo, or security); or full service handlers may only acquire operational licences due to competition at the airport between third-party handlers.

(c) Sub-sector Categories[12]

21. All the operational and administrative categories the exist within the term ground handling can be found in the IGHC (*Annex A - Description of Services*). In total there are fourteen sub-sectors that include: representation and accommodation; load control; unit load device (ULD) control; passenger and baggage; cargo and post office mail; ramp; aircraft servicing; fuel and oil; aircraft (A/C) maintenance; flight operations and crew administration; surface transport; catering services; supervision and administration; and security. Providers of these services will either obtain licences for the full range of categories from the airport authority concerned, or will acquire only specific licences.

22. Due to the individual licencing procedures at any given airport it is not possible to state definitively what categories are included in each type of licence that will be issued, nor whether self-handling is permitted for specific carriers, all or none. Nevertheless, all ground handlers must acquire one or more licence(s) and/or permission to self-handle or to provide third-party services to others.

23. While domestic third-party handlers are dominant at most airports around the world, it appears that foreign-based operators are permitted to compete on an equal basis. To facilitate competition in the third-party market, the IGHC has developed an interactive directory that is located at http//:www.iata.org/ighc. On this site third-party handlers are able to advertise services at each airport where they are located, and the sub-sector services they are able to provide (see Table 8, page 18, in section 5 for a detailed list of third-party handlers).

24. The definitions, as laid out above will be used in combination to examine and analyse the levels of competition in a cross-section of airports and service

9 Areas in and around an airport terminal that are publicly accessible.

10 Areas in and around an airport terminal that require security passes or checks before entry.

11 The term 'airport user' includes *inter alia*, commercial and cargo carriers, and general aviation companies. It does not include passengers (pax).

12 Members should note that in keeping with the Informal Note by the Secretariat, Job Number 2451, catering and fuelling are dealt with separately.

providers around the world. This approach will also highlight competitive levels in each of the sub-sectors, thereby determining where monopolies or competitive markets exist from macro (ground handling), and micro (sub-sectors) perspectives.

3. Scope – linkages with the UN Provisional CPC

25. While ground handling in the broad sense (all operational and administrative activities) is directly related to airline operations, some sub-sectors have numerous elements paralleling activities in non-air transport sectors (see Table 2). This review might be used to clarify whether these apparent classification linkages might be already covered under the GATS. The categories of services provided by ground handling is drawn from the IGHC listings on the interactive third-party handler database.

26. Included in this list are fuelling and catering, and although both are considered to be elements of ground handling services, they have been categorised separately for this review. Details of catering can be found in S/C/W/163, and fuelling in the previous section of this Secretariat Note. This separation was not intended by the Secretariat to suggest that fuelling or catering are separate from ground handling: it merely resulted from following the earlier format laid out in S/C/W/59, S/C/W/129, and Job Number 2451. However, by treating two of the 14 ground handling subsections as separate sectors, Members may wish to consider separating other sub-categories into those which are directly related to traffic rights, and those which are not.

TABLE 2
Possible Classification Linkages Between Ground Handling Services and the UN CPC

Services Provided (functions)	Possible Corresponding CPC Classifications
Representation and Accommodation (Administration on behalf of airline clients)	74610 – Airport operation Services (excl. cargo handling) 82102 – Renting or leasing services involving own or leased non-residential property 82202 – Non-residential property management services on a fee or contract basis
Load Control, DCS, and Communications (Aircraft Load control, Departure Control Systems)	74610 – Airport operation services (excl. cargo handling) 74900 – Other supporting and auxiliary transport services 7522 – Business network services …Dedicated networks services… 7523 – Data and message transmission services
ULD (unit load devise) Control (Administration/Storage)	74110 – Container handling services
Passengers (Pax) and Baggage (General, Departure, Arrival, Baggage Handling, Remote/Off Airport Services, Intermodal Transportation)	74690 – Other supporting services for air transport 74190 – Other cargo handling services 74900 – Other supporting and auxiliary transport services
Cargo and Mail (Cargo Handling (general); Outbound/ Inbound Cargo, Transfer/transit Cargo, Post Office Mail)	74110 – Intermediary transportation between the aircraft and the terminal building 74210 – Storage services of frozen or refrigerated goods 74290 – Other storage or warehousing services 74900 – Other supporting and auxiliary transport services
Ramp (Marshalling, Parking, Ramp to Flight Deck Communication, Loading/Embarking, Unloading/Disembarking, Starting, Safety, Moving Aircraft)	741 – Cargo handling services 74190 – Other cargo handling services 74610 – Airport operation services (excl. cargo handling) 74690 – Other supporting services for air transport. Aircraft towing services are also included 74900 – Other supporting and auxiliary transport services 71130 – Pushing or towing services
Aircraft (A/C) Servicing (Exterior/Interior Cleaning, Toilet/Water Service, Cooling/Heating Aircraft, De-Icing/ anti-icing and snow and ice removal, Cabin Equipment/Material storage)	74900 – Other supporting and auxiliary transport services 74690 – Other supporting services for air transport. Aircraft cleaning and disinfecting services 35430 – anti-freezing preparations and prepared de-icing fluids

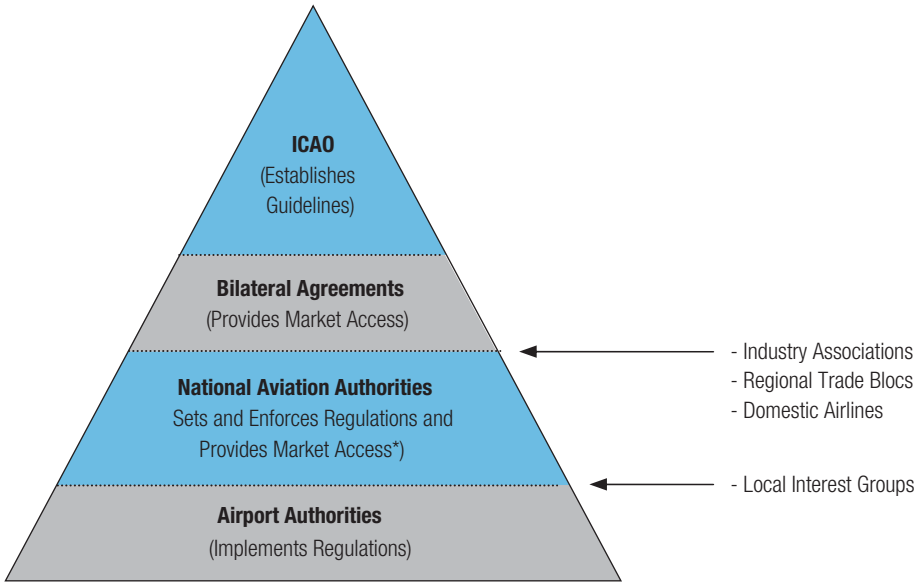
Services Provided (functions)	Possible Corresponding CPC Classifications
Fuel, Oil or De-icing	62113 – Sales on a fee or contract basis of fuels… 74220 – Bulk storage services of liquids or gases 62271 – Wholesale trade services of solid, liquid and gaseous fuels and related products (Goods classified in CPC 11-13, 33) (see section I on page 3 for further information)
Aircraft (A/C) Maintenance (Routine/non-routine services, Material handling, Parking and Hangar space)	74690 – Other supporting services for air transport
Flight Operations (Flt Ops) and Crew Administration (Preparation of arrival and departure documents, Inflight assistance, Inflight dispatch)	74690 – Other supporting services for air transport
Surface Transport (General and special road transportation at the airport and interurban)	71214 – Interurban special transportation 71233 – Transportation of containerised freight 71235 – Mail transportation 71239 – Transportation of other freight
Catering Services	74690 – Other supporting services for air transport (see document S/C/W/163, page 52, on catering for further details)
Supervision and Administration	74610 – Airport operation services (excl. cargo handling) 74690 – Other supporting services for air transport
Security (Passenger and Baggage screening reconciliation, Cargo and Post Office Mail, Catering and Aircraft Security)	74610 – Airport operation services (excl. cargo handling) 87305 – Guard services 87309 – Other security services

Source: IATA Council of Ground Handling (CGH) interactive directory. www.iata.org/ighc. *Provisional Central Product Classification.* Series M No. 77. United Nations.

4. Regulation and liberalization

27. Ground handling has operated in substantially the same institutional form for many years and incorporates all levels of institutional structures from the multilateral to the local. Both prior to and since 1993 the basic framework has remained fundamentally the same. Ground handling guidelines are established by ICAO, bilateral agreements provide market access, national aviation authorities set and enforce regulations, and airport authorities implement regulatory standards (see Table 3 below). "This regulatory activity [took] into account provisions on ground handling contained in bilateral air services agreements, and where applicable, measures of regional multilateral regulatory authorities, such as the European Commission" (*ICAO Manual on Regulations*, p. 4.7-1). Most frequently, ground handling has operated on the basis of national monopolies and/or duopolies. In many countries throughout the world, monopoly service providers were the airport authority or the national flag carrier, and self-handling at international airports by the airlines was the exception rather than the standard. In short, the international market primarily consisted of mutual handling between airlines, and was based on the bilateral agreement between two States.

TABLE 3
Traditional Institutional Framework for Airport Regulations



Source: World Bank Technical Paper Number 313 (Market access at the National level in addition to the bilateral level has been added by the WTO secretariat).

28. Throughout most airports in the world, national policies toward the ground handling sector have been marked by nationally based restrictive policies (the US being a long-standing exception). In these cases, the ground handlers were either the airport authorities or the national flag carriers, and access to self-handling by airlines was usually attained through bilateral air services agreements.

29. The cumulative effect was very few independent operators[13], no global operators[14], (independent or airline affiliated), and limited self-handling at foreign airports. The independent corporations were few in number and were primarily US-based corporations. Thus, the emergence of independent third-party ground handlers in the US was due to the large market and the US policy favouring a competitive air transport sector, including infrastructure sectors like ground handling.

30. Over the past 5 years there has not been a fundamental shift in the institutional framework found in Table 3, but rather a liberalization of market access at the national level in many States. States appear to have adopted the principles set out by ICAO in a special 'model clause for bilaterals', agreement.[15]

> "Each Party shall authorize air carrier(s) of the other Party/Parties, at each carrier's choice to:
>
> (a) perform its own ground handling services;
> (b) handle another or other air carrier(s);
> (c) join with others in forming a service providing entity; and/or
> (d) select among competing service providers."

This clause was intended to assist regulatory authorities in removing restrictions and moving to a competitive environment.

13 Independent ground handlers during the early 1990s of note were US-based DynAir, and Hudson General or Ogden.

14 Global ground handlers include *inter alia* fully independent airline subsidiaries like GlobeGround and Swissport or non-airline independents like WFS or Ogden Aviation.

15 See S/C/W/59 Annex 2 p. 53-54 for the text. Panel recommendations are found in the same Annex on pages: 51-53.

United States

31. The US is the largest ground handling market in the world, and has had an open, competitive, and reasonably priced market throughout the period under review. The competitive market place has fostered the development and growth of independent (non-airline) ground handling corporations, a competitive third-party market and liberal access to self-handling by airport users. The US maintains a policy of promoting competition in the third-party market (see Table 8, page 18 for details), sanctions and inward investment. The regulatory standards are set at the national level, and are implemented by the locally controlled airport authorities.

> "The Airport and Airway Improvement Act of 1982 (AAIA) as amended, provides that as a condition for approval of an airport development project contained in a project grant application, the Secretary of Transportation shall receive certain assurances. One of these assurances is that "each carrier using the airport shall have the right to service itself or to use any fixed-base operator (FBO) that is authorized by the airport or permitted by the airport to service any carrier at such airport." All commercial airports in the US have accepted federal funds under the AAIA and therefore have signed agreements that include these binding grant assurances. The AAIA also state that "there will be no exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public." (United States, WT/TPR/S/56)."

32. However, until recently, and through corporate acquisitions, entry by foreign corporations into the US third-party market has never penetrated widely, particularly in the ramp or airside operations. Nevertheless, most international airlines use third-party handlers in the US rather than utilising self-handling options because of economic factors attributed to lack of frequency into an airport and the associated cost structures of setting up ground handling operations.

TABLE 4
Organization of European Ground Handling 1993

Where ↓ What	Self-Handling Allowed			Third-Party Handling Allowed			At Least Two Handlers to Choose		
	Pax	Cargo	Ramp	Pax	Cargo	Ramp	Pax	Cargo	Ramp
AMS	√	√			///////		√	√	√
BRU	√	√	///////				√	√	√
PAR*	√	√					√	√	√
LON*	√	√	√	√	√	√	√	√	√
CPH		///////			///////				
DUB	√	√	√	///////	√	///////		√	
MAD	√	√	√				****	****	****
LIS	√	√	√						
MIL*									
ROM*									
ATH	√	√	√						
STO	√	√	///////				√	√	√
ZRH	///////						√	√	√
VIE	///////	///////							
FRA	√	√		///////	√		√	√	
MUC	√	√	√	√	√		√	√	

√ Permitted **** 2ND HANDLER TO BE APPOINTED

☐ Not Permitted /////// PERMITTED WITH CONDITIONS

* Note: These abbreviations are not airport designator codes since there is more than one airport in each city.

Source: *AEA Position Paper on Handling Services.* Le Thi Mai Co-ordinator Regulatory Affairs (0.08.93)

TABLE 5
Organization of European Ground Handling 2000

Where ↓ What	Self-Handling Allowed			Third - Party Handling Allowed			At Least Two Handlers to Choose		
	Pax	Cargo	Ramp	Pax	Cargo	Ramp	Pax	Cargo	Ramp
AMS	√	√		√	√	√	√	√	√
BRU	√	√					√	√	√
PAR*	√	√			√	√	√	√	√
LON*	√	√	√	√	√	√	√	√	√
CPH							√	√	√
DUB	√	√	√	√	√	√	√	√	√
MAD	√	√	√	√	√	√	√	√	√
LIS	√	√	√						
MIL*	√	√		√	√		√	√	
ROM*					√			√	
ATH	√	√	√	√			√		
STO	√	√					√	√	√
ZRH*	√			√	√	√	√	√	√
VIE							√	√	
FRA	√	√	√**	√	√	√**	√	√	√**
MUC	√	√	√	√	√	√	√	√	

* Third-party handler is Swissport

** FAG is the only ramp handler

Source: IGHC, Interactive Directory. http//:www.iata.org/ighc.

European Liberalization

33. In the second largest ground handling market, the European Union, ground handling remained dominated by monopoly suppliers and was the preserve of the nationally controlled airport authorities and/or the national flag carriers. Most often, the national flag carrier established reciprocal handling arrangements with other flag carriers, sometimes under the auspices of State negotiated bilateral agreements. Where bilaterals provided for self-handling or third-party handling, the foreign-designated airlines need not be handled by the host-country flag carrier.

34. In 1993, the establishment of the European single market began the first and very limited opening of the ground handling market. However, as indicated in Tables 4 and 5, change did not occur immediately, and in some instances not at all. However, as highlighted in these same Tables, the 1996 Council Directive had a significant effect on the European market that eventually led to the expansion of global operators. This occurred primarily through mergers and acquisitions both within Europe and beyond (this will be discussed in section 5 below), and the creation by the SairGroup of Swissport and Globeground[16] by Lufthansa.

35. Figures for 1993 representing various regions or a broad spectrum of countries have not been located beyond the 16 major city centres within the European Union (Table 4 above). However, due to the size of the European ground handling market both tables are representative of the entire European market for the period in question.

36. Tables 4 and 5 are intended to represent the overall ground handling structure, and not to describe arrangements in individual sub-sectors. It is therefore not possible to identify any monopolies in sub-sectors, or the extent to which the global corporations have acquired individual operating licences. For example, at London Heathrow there are three aircraft cleaning companies, two of which have been purchased by Swissport (for a detailed breakdown of the number of foreign operators in any given sub-sector category see Table 8).

16 GlobeGround was previously named Lufthansa Airport & Ground Services (LAGS).

37. In 1996, the EU Commission issued a Directive on ground handling that was intended to promote liberalization of ground handling in the same manner as the airline sector had been liberalized.[17] It acknowledged that smaller airports or those with physical constraints (e.g. Düsseldorf reconstruction due to a fire) may be unable, in the short-term, to open all airports to unrestricted competition. The basic purpose of the Directive was to open-up the third-party market to handling companies, and to give airlines freedom to self-handle. The liberalising standards are based on the number of passengers and/or the volume of freight that passes through a given airport in a one-year period, providing a phasing-in period for airports to adapt to the new regulations. Moreover, it also gives the authorities some powers to prevent a free-for-all. The number of third-party suppliers may be restricted but there must be a choice of at least two suppliers in each main category of handling operations (baggage, ramp, fuel, and cargo). (http//:www.gsetoday.com/back-is/past-ar.htm).

38. After 1 January 2001, at least one of the two suppliers must be entirely independent of both the airport operator and any airline that has more than 25% of the traffic at a particular airport (there is a one year delay in the deadline under certain circumstances). The Directive also provides for transparent accounting by handling suppliers, and forbids cross-subsidization by other activities.

39. In cases where specific constraints such as lack of space or capacity make it impossible to open the market and/or implement self-handling, the Member State may:

a) limit the number of suppliers;
b) reserve to a single supplier one or more categories of handling;
c) reserve self-handling to a limited number of airport users (provided that those users are chosen on the basis of relevant, objective, transparent and non-discriminatory criteria; or
d) ban self-handling.

40. The airports concerned must: a) specify the category or categories of ground handling services for which the exemption is granted and the specific constraints of available space or capacity justify it; and b) provide a plan of appropriate measures to overcome the constraints. The Directive lists 11 separate categories or sub-sectors of ground handling (see Annex) which that generally correspond to the IGHC list in its Annex A.

41. One of the important aspects of the Directive pertains to the definition of self-handling since it gives clarity to whether or not wholly independent airline subsidiaries can be considered as third-party operators. The Directive opted for a strict definition of self-handling in order to avoid agreements which could allow handlers to supply services without going through the public tender procedures and so distort competition.[18]

> Article 2 Definitions:
>
> "(f) 'self-handling' means a situation in which an airport user directly provides for himself one or more categories of ground handling services and concludes no contract of any description with a third-party for the provision of such services; for the purposes of this definition, among themselves airport users shall not be deemed to be third parties where:
>
> - one holds a majority holding in the other, or
> - a single body has a majority holding in each."
>
> Source: Council Directive 96/97/EC

42. The impact of the Council Directive became immediately apparent in the third-party handling sector, where a competitive market began to develop. This in turn spawned the substantial growth of independent third-party operators and the growth of global ground handling companies.

43. The issue of reciprocity is also dealt with by the Directive in paragraph 26:

> "Whereas it is justified that the rights recognized by this Directive should only apply to third-country suppliers of ground-handling services and third-country airport users subject to strict reciprocity; whereas where there is no such reciprocity the Member State should be able to suspend these rights with regard to those suppliers and users;"
>
> Source: Council Directive 96/97/EC

17 *Official Journal of the European Communities* L 374 Vol. 30, 31 December 1987. Council Regulation (EEC) No 3975/87 of 14 December 1987 laying down the procedure for the application of the rules on competition to undertakings in the air transport sector.

18 *Airline Alliances & Smaller Independent Handlers in Europe.* Bob Schmitz, EU Regulatory Affairs Consultant.

India

44. International market access to the Indian ground handling sector has been structured in the same manner as many other States. The Airports Authority of India, created in 1967, is the regulatory body overseeing and enforcing national legislation, and the majority of ground handling services were controlled by Air India, and Indian Airlines. Privately owned Cambata Aviation was never able to acquire more than 20 to 25% of the market share. However, the Indian Government has begun taking steps toward privatisation of their air transport sector (including ground handling).

45. Broad features of the new policy include permitting up to 74% foreign direct investment (FDI) in airport development, encouraging public and private partnerships, and permitting ground handling and special services to be offered by the private and public sector (http//:www.gsetoday.com/back-is/1/99/India.htm).

Japan

46. Although Japan has taken initial steps toward deregulating the domestic air transport sector, there have been only limited market access increases through bilateral arrangements. This includes the ground handling market. Presently the two major international airports (New Tokyo - Narita and Kansai) are mainly government owned, and any person who intends to provide auxiliary services such as ground handling must submit an application for approval by the Director of the Regional Civil Aviation Bureau. (WT/TPR/S/76).

APEC[19]

47. APEC Members are developing a plurilateral framework that encompasses ground handling as 'doing business' matters within the framework of a broad policy on air services. This project envisages liberalising air transport traffic rights, and through this process increasing the competition in the ground handling sector, in addition to permitting self-handling by participants. However, unlike the Council Directive (1996) that legislated liberalising grounds handling specifically, the APEC States have not detailed the specific sub-sectors of ground handling. However, when looking at the number of third-party operators at airports in this region (Table 8 below) it is clear that there are few, if any, monopoly operators. Nevertheless, it has not been possible to identify where self-handling is permitted or prohibited.

5. Economic evolution – third-party competition – industry consolidation

48. The ground handling sector can be evaluated from two distinct perspectives. First, it is both an essential infrastructure activity, and part of the 'doing business' chain for air transport, and second, it is a sector that has been undergoing significant consolidation over the past five years (particularly the last two). Unlike airline ownership, ground handling corporations are not limited to foreign ownership restrictions in many parts of the world, and foreign operators are able, in many instances, to compete with national airlines or airport service providers at their airports.

19 *Steering Committee on More Competitive Transportation Industry (including infrastructure).* http//:iot.gov.tw/apec_tptwg/TPT/tp.

TABLE 6
Independent Ground Handlers 1993

Ground Handling Corporations	Airports	Employees	Headquarters	Turnover (US$ Million)
DynAir	519 (US)	5600	US	519 (US)
Jet Aviation	14 (12 worldwide)	331	Switzerland	233
Belgavia (Aviapartner Grp)	4 (Europe)	1350	Belgium	119
Ogden	85 (worldwide)	14000	US	28.5
Servisair	55 (worldwide)		UK	
GroundAir Services	8 (Germany)	350	Germany	4.9

Source: "Handling Focus", *Airport Support,* September 1993

TABLE 7
Independent Global Ground Handlers 2000[20]

Ground Handling Corporations	Airports	Employees	Countries	Client Airlines	Head-quarters	Owner-ship	Turnover 1998 (millions)
Swissport (purchased DynAir in 1999)[a]	119	+13,000	23 (5 conti-nents)	+320	Switzerland	SAairGroup	625
Frankfurt Airport		12,573	8		Germany	Frankfurt Airport	486
Ogden Aviation[b] (Provisional purchase agreement by Menzies PLC, August 2000)	145	5,500 (2000 more in joint ventures)	20 (5 conti-nents)	500	USA (UK)	Ogden Corp	310
Servisair	101	10,000	11	375	UK/France	Penauille	305
GlobeGround (purchased Hudson General in 1999)	85	17,000	23 4 conti-nents		Germany	Lufthansa Group	260
AviaPartner	27 (1996-8)	+4000 (1996-3,425)	6 (Europe only)		Belgium	Verougstaete family (75%)	243
Worldwide Flight Services (WFS) (acquired by Castle Harlan III March 1999 and purchased Miami Aircraft Support and Aerolink International in 1999)	98	10,000	14	+300	USA	Castle Harlan Partners III	220
ASIG	41	3,900	5		USA	Ranger Aerospace	170

a Ogden is also a partner of ADR Handling. This is a joint venture between Ogden and Aeroporti di Roma.

b *Inter alia*, Swissport affiliates or partner companies as of May 2000 include: Aerogate Munich, Air Littoral Assistance, DAHACO, Dutchport, Havas, Miascor, NFS, Q.A.S and Serlipsa.

Note: Swissport turnover includes DynAir and GlobeGround figures include Hudson General, both of which were acquired in 1999.

Note: Cargo Service Center Holding B.B, is not listed as a supplier since they only provide ground services for cargo.

Sources: *Airline Business* January 2000. http://www.asig.com; http://www.servisair.co.uk; http://www.swissport.com; http://www.frankfurt-airport.com; http://www.globeground.com, *A New Age of Global Ground Handling? Going it alone in vastly different markets.* Ogden Aviation. Bob Kievits, Managing Director. 30 November 1999. *Regulatory Affairs Review* Volume 28 No. 3 IATA 1999. *The Swissport Profile*. Swissport. May 2000.

20 Only Swissport and GlobeGround are airline subsidiaries.

49. It is estimated that today there are approximately 300 ground handling service providers (*Airportworld*, June/July 2000), of which only eight operate in more than two countries. Among this group, two are owned by airport operators (Frankfurt Airport's Aviation Ground Service, and Singapore Air Terminal Services), two are fully independent subsidiaries of airlines (Swissport and GlobeGround) and four are non-airline independent corporations (WFS, Servisair, AviaPartner, and Ogden). Tables 6 and 7 provide a comparative overview of the independent global handlers between 1993 and 2000.

50. The evolution of the international market structure between 1993 and 2000 is noteworthy for two reasons. First, the number of international airport locations where third-party handling exists has expanded, and second, the turnover per annum of each of the corporations has increased substantially. The single most important development is the liberalization brought about by the EU Directive in 1996. Once it became effective, monopolies for the most part were replaced by competition between third-party handlers.

51. Despite the dynamic activity in both regulatory and economic terms, the discussion has focused on ground handling in broad terms. At this level, it is not possible to identify clearly where monopoly situations continue to exist, or how the competitive markets are restricted in some areas and not in others. Table 8 below has been constructed from the IGHC interactive database in order to provide a detailed view of all the geographic regions of international airports, and to examine the degree of competition between third-party operators. It is a detailed list of third-party handlers at 65 airports in the major geographic regions of the world and it should be noted that all third-party handlers are included. There is no separation between those who provide only specialised services, full airport services, general aviation, commercial carriers (passenger, cargo, or combi). The only exception is where there is a third-party handler providing cargo-only handling.

52. It is significant to note also that Table 8 highlights the presence of foreign market access, and competition in a substantial percentage of airports in many geographical regions. Outside of Africa and the Middle East, the dominant trend appears to be that: a) competition exists; b) foreign investment through acquisitions, mergers, or joint ventures is widespread; and c) the number of domestic handlers usually exceeds foreign handlers.

53. This exercise was undertaken to provide Members with a detailed breakdown of third-party ground handling service providers to show that while discussion of ground handling is usually in the context of the combined services, there are in fact varying levels of competition at the sub-sector level. In order to give meaning to the numbers in Table 8, two further tables (Tables 9 and 10) provide three types of information. First, the average percentages showing where ground handling monopolies (in the broad sense) exist. Second, the competitive levels of international third-party competition, and third, there is a comparison between airports at the sub-sector levels.

54. The selection of airports is based primarily, although not exclusively, on IGHCs 'airport connectivity monitor'. This provides the basis for a list of airports that handle international traffic. In some instances, the airports are the major international hubs for a given country, while in geographically large countries like the US or Canada, the airports with the highest connectivity factors have been included. In particular, the table highlights the level of foreign-based competitors throughout the world for the sub-sector areas in the ground handling market. It also provides an overview of the amount of international competition between national and foreign based third-party handlers that presently exist, highlighting the sharp contrast between 1993 and 1999.

TABLE 8: THIRD-PARTY GROUND HANDLING SERVICE PROVIDERS 2000

(For a brief description of each sub-sector service, see the bottom of this table. The letter 'T' denotes Total and the letter 'F' denotes Foreign Operators)

Where / What	TOTAL	Ramp		Cargo/ Mail		Pax/ Baggage		A/C Servicing		A/C Main-tenance		Load Control/ Comms		ULD Control		Surface Transport		Security		Flt Ops		Admin/ Super-vision		Represent-ation/ Accom-modation		Foreign Operators
		T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	
North America																										
LAX Los Angeles	31	16	3	19	5	19	3	17	2	12	3	18	4	15	4	10	1	9	2	13	3	23	7	19	5	9 (Fiji, NL, UK, CH, Taiwan, Belgium, Australia, Japan, Germany)
SFO San Francisco	26	13	3	16	4	19	3	14	3	11	3	18	4	16	4	7	1	9	3	13	3	13	4	18	4	4 (NL, Japan 2, CH)
JFK New York	25	9	2	16	6	17	6	9	3	9	2	17	7	14	6	4	0	7	1 cargo only	12	6	16	6	17	7	9 (Ireland, NL 2, Taiwan, Iceland, Nigeria, Japan, CH, Germany)
ORD Orlando	20	8	1	11	2	11	2	6	1	6	2	12	2	11	2	7	0	6	1 cargo only	8	2	13	3	13	3	5 (NL, UK, Japan, CH, Germany)
IAH Houston	15	7	1	11	2	7	1	7	1	5	0	8	2	7	2	5	0	5	1 cargo only	3	0	8	1	8	1 cargo only	3 (NL, CH, Germany)
ATL Atlanta	15	6	0	11	2	8	0	7	0	4	0	8	1 cargo only	7	1 cargo only	6	0	5	1 cargo only	4	0	9	2	10	2	2 (NL, UK)

Where / What	TOTAL	Ramp		Cargo/ Mail		Pax/ Baggage		A/C Servicing		A/C Main-tenance		Load Control/ Comms		ULD Control		Surface Transport		Security		Flt Ops		Admin/ Super-vision		Represent-ation/ Accom-modation		Foreign Operators
		T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	
DFW Dallas	14	9	1	10	1	11	2	8	1	4	1	7	0	6	0	6	0	1	0	5	0	8	1	7	0	3 (CH, Germany, UK/France)
MSP Minnea-polis	7	7	0	6	0	7	0	7	0	2	0	5	0	4	0	3	0	2	0	4	0	6	0	5	0	0
Canada																										
YYZ Toronto	14	8	4	11	5	9	4	7	3	6	2	9	4	10	4	4	1	3	2	6	1	10	4	11	5	8 (US 6, NL, Germany)
YVR Vancouver	12	5	3	7	3	7	4	5	3	4	1	7	3	7	2	1	0	1	1 cargo only	4	2	9	5	10	5	7 (US 5, NL, Germany)
Asia Pacific and India																										
DEL New Dehli	6	2	1	4	2	2	1	2	1	2	1	4	2	3	2	2	1	3	2	2	1	5	3	3	1 cargo only	4 (US 3, NL)
BOM Bombay	4	2	1	3	2	3	2	2	1	1	0	3	2	3	2	2	1	2	1	1	1 cargo only	0	1 cargo only	2	1 cargo only	2 (US, NL)
SEL Seoul	6	3	0	3	0	3	0	3	0	5	3	3	0	3	0	3	0	1	0	3	1	3	0	2	0	3 (US 2, Australia)
NRT Narita	5	4	1	4	1	4	1	4	1	4	2	4	1	4	1	2	0	2	0	3	1	3	1	4	1	2 (US 2)
KIX Haneda	6	5	1	5	1	5	1	5	1	6	2	5	1	5	1	3	0	4	0	5	1	5	1	5	1	2 (US 2)
CGK Jakarta	5	3	0	4	0	3	0	3	0	4	1	3	0	3	0	3	0	3	0	3	0	3	0	3	0	1 (Australia)
BKK Bangkok	6	2	0	3	1	2	0	2	0	4	3	2	0	2	0	1	0	0	0	3	1	2	0	3	0	4 (US 2, KLM, Sweden)

Where / What	TOTAL	Ramp		Cargo/ Mail		Pax/ Baggage		A/C Servicing		A/C Main-tenance		Load Control/ Comms		ULD Control		Surface Transport		Security		Flt Ops		Admin/ Super-vision		Represent-ation/ Accom-modation		Foreign Operators
		T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	
HKG Hong Kong	17	10	1	8	2	9	5	4	0	4	1	7	1	7	0	2	0	0	0	6	1	7	2	8	2	7 (US 4, Japan, Singapore, France)
SIN Singapore	6	4	1	3	0	3	1	2	0	4	2	3	0	3	0	4	1	3	0	5	2	4	1	4	1	3 (US 3)
SYD Sydney	8	5	2	6	2	5	2	4	1	4	2	6	3	6	2	3	1	4	1	4	1	5	2	5	2	4 (US 2, NL, UK)
MEL Melbourne	7	4	1	6	2	4	1	4	1	3	1	5	2	6	2	2	0	3	0	5	1	5	2	4	1	3 (US, Fiji, UK)
AKL Auckland	4	2	1	3	2	3	2	2	1	3	1	2	1	3	2	1	0	0	0	2	1	3	2	2	1	3 (US 2, Fiji)
Latin America																										
MEX Mexico City	12	7	4	6	3	8	4	5	3	4	3	8	3	6	2	3	2	4	2	7	3	10	6	7	4	7 (US 5, NL, Belgium)
BOG Bogota	6	4	1	3	1	4	1	3	1	1	1	3	0	2	1	1	0	0	0	2	0	5	2	5	2	3 (US 3)
EZE Buenos Aires	3	1	1	0	0	1	1	1	1	2	2	0	0	0	0	0	0	0	0	1	1	3	3	1	1	3 (US 3)
SCL Santiago	5	3	3	3	2	5	4	3	2	4	3	3	2	2	1	1	0	1	1	3	2	4	3	4	3	3 (US 2, Germany)
GRU Sao Paulo	7	4	2	2	0	6	4	4	2	2	1	3	2	2	1	1	0	2	0	3	2	4	3	4	3	4 (US 3, CH)

Where / What	TOTAL	Ramp		Cargo/ Mail		Pax/ Baggage		A/C Servicing		A/C Main-tenance		Load Control/ Comms		ULD Control		Surface Transport		Security		Flt Ops		Admin/ Super-vision		Represent-ation/ Accom-modation		Foreign Operators
		T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	
European Union																										
LHR London Heathrow	23	11	6	16	9	9	5	8	5	7	5	10	5	10	5	9	3	4	0	7	4	14	7	13	7	12 (France, US 5, Sweden, NL, KLM, Canada, Ireland, Germany)
MAN Manches -ter	12	5	0	8	1 Cargo Only	6	1	4	0	1	1	7	1 Cargo Only	7	1 Cargo Only	4	0	5	1 Cargo Only	4	0	7	2	6	2	3 (US, NL, Sweden)
DUB Dublin	3	2	1	2	1	2	1	2	1	1	0	2	1	2	1	1	1	1	1	3	2	3	2	3	2	2 (UK 2)
FRA Frankfurt	18	1	0	7	6	7	5	3	1	4	2	7	5	7	4	4	3	4	3	5	3	7	5	8	5	13 (US 5, Belgium, Ireland, NL, CH, UK Sweden 2, Italy)
MUC Munich	13	3	2	4	1 Cargo Only	7	3	4	2	4	2	6	2	7	2	1	0	1	1 Cargo Only	4	1	7	3	7	3	7 (CH, UK, US 2, NL, Sweden, Belgium)
CDG Charles de Gaulle	16	6	0	9	2	5	0	5	1	3	2	8	4	8	2	5	1	7	3	6	3	10	5	7	4	8 (UK 2, NL, US 2, Sweden 2,)
ORY Orly	10	4	0	5	2	4	1	4	0	1	1	4	1	5	0	4	2	4	1	2	1	6	4	5	3	4 (US 3, UK)
MAD Madrid	11	6	3	7	4	6	3	5	2	2	0	5	3	7	4	3	1	2	2	5	2	9	7	10	7	8 (US 5, UK 2, NL)

Where / What	TOTAL	Ramp		Cargo/ Mail		Pax/ Baggage		A/C Servicing		A/C Main-tenance		Load Control/ Comms		ULD Control		Surface Transport		Security		Flt Ops		Admin/ Super-vision		Represent-ation/ Accom-modation		Foreign Operators
		T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	
AMS Amster-dam	8	2	2	3	3	4	2	2	2	2	2	3	3	2	2	2	2	1	1	2	2	4	3	3	2	6 (UK 2, Italy, US 2, CH)
ZRH Zurich	7	2	0	3	0	4	1	3	1	1	0	2	0	2	0	3	1	3	0	3	0	4	1	5	2	4 (US, Italy, UK Sweden,)
MXP Malpensa	6	1	0	3	2	3	2	1	0	0	0	1	0	1	0	3	1	1	0	1	1	4	3	4	3	4 (US 3, UK)
FCO Rome-Fumicino	3	0	0	2	1 Cargo Only	0	0	0	0	0	0	1	1 Cargo Only	2	1 Cargo Only	1	1	1	1 Cargo Only	0	0	2	2	3	2	2 (NL, UK)
ATH Athens	5	2	0	2	0	3	0	0	0	1	0	3	0	2	0	1	0	1	0	2	0	3	0	3	0	0
VIE Vienna	4	1	0	3	0	3	0	1	1	2	0	1	0	1	0	0	0	0	0	2	0	3	0	3	0	1 (Sweden)
LIS Lisbon	3	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2	3	2	2 (UK 2)
Africa and the Middle East																										
JNB Johannes-burg	7	5	2	5	2	4	1	5	1	4	1	4	2	4	2	4	2	3	0	3	1	5	2	4	2	2 (NL, CH)
CPT Cape Town	7	5	1	5	2	4	1	5	1	4	1	4	2	4	2	4	1	3	1 cargo only	3	1	5	2	4	2	2 (NL, CH)
NBO Kenya	5	4	1	5	2	4	1	4	1	2	0	5	2	5	2	4	1	5	2	4	1	5	2	4	2	2 (NL, CH)
ACC Ghana	2	2	1	0	1	1	0	1	0	0	0	1	0	2	1	0	0	1	0	0	0	1	0	0	0	1 (UK)
LOS Nigeria	2	2	0	2	0	2	0	1	0	1	0	2	0	2	0	1	0	0	0	1	0	1	0	1	0	0

Where / What	TOTAL	Ramp		Cargo/ Mail		Pax/ Baggage		A/C Servicing		A/C Main-tenance		Load Control/ Comms		ULD Control		Surface Transport		Security		Flt Ops		Admin/ Super-vision		Represent-ation/ Accom-modation		Foreign Operators
		T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	
WDH Namibia	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
DAR Tanzania	2	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	1	0	0
ABJ Cote D'Ivoire	2	1	0	1	0	1	0	1	0	2	1	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0
BGF Central African Republic	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	1 (Air Afrique)
BZV Congo	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	1 (Air Afrique)
NKC Mauritania	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	1 (Air Afrique)
DKR Senegal	2	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	1	0	2	1	1	0	2 (Air Afrique, France)
BJL Gambia	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
LAD Angola	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
LLW Malawi	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0	0
RBA Morocco	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0
TUN Tunisia	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
BAH Bahrain	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0

Where / What	TOTAL	Ramp		Cargo/ Mail		Pax/ Baggage		A/C Servicing		A/C Main-tenance		Load Control/ Comms		ULD Control		Surface Transport		Security		Flt Ops		Admin/ Super-vision		Represent-ation/ Accom-modation		Foreign Operators
		T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	
KWI Kuwait	2	2	0	1	0	2	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
DXB United Arab Emirates	3	1	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	2	0	3	1	3	1	1 (UK)
TLV Tel Aviv	4	2	1	4	1	4	1	1	1	3	1	4	1	4	1	3	0	1	0	4	1	4	1	4	1	1 (CH)
CAI Cairo	8	7	0	7	0	8	0	5	0	3	0	7	0	7	0	7	0	8	0	8	0	8	0	8	0	0
IST Istanbul	9	3	1	5	2	3	1	4	2	1	0	5	1	3	1	5	1	2	0	6	1	6	1	7	1	1 (CH)

Note: This chart includes general aviation ground handlers since they also contract services with commercial airlines and have a wide international presence (e.g. Jet Aviation, and Universal Weather).

Ramp: Marshalling, Parking, Ramp to Flight Deck Communication, Loading/Embarking, Unloading/disembarking, Starting, Safety, Moving Aircraft.

Cargo/Mail: Cargo Handling (general), Outbound/Inbound Cargo, Transfer/transit Cargo, Post Office Mail.

Pax/Baggage: General, Departure, Arrival, Baggage Handling, Remote/Off Airport Services, Intermodal Transportation.

A/C Servicing: Exterior/Interior Cleaning, Toilet/Water Service, Cooling/Heating Aircraft, De-Icing/anti-icing and snow and ice removal, Cabin Equipment/Material storage.

A/C Maintenance: Routine/non-routine services, Material Handling, Parking and Hangar space.

Load Control/Comms: Load Control, Communications, Departure Control System

ULD Control: Unit Load Device - Handling and administration

Surface Transport: General and special road transportation at the airport and interurban.

Security: Passenger and Baggage screening reconciliation, Cargo and Post Office Mail, Catering, and Aircraft Security.

Flt. Ops: Flight operations and crew administration, Preparation of arrival and departure documents, Inflight assistance, Inflight dispatch.

Admin/ Supervision: Administrative and supervisory functions on behalf of airline clients

Representation/Accommodation: Administration on behalf of airline clients.

Source: http//:www.iata.org/ighc

55. In order to give further meaning to the above table, comparative tables have been constructed to provide members with an overview of the competitive relationships across countries and between regions in the overall ground handling market, and in the individual sectors. Africa and the Middle East have not been included in this analysis due to the high percentage of monopolies that exist. In Table 9 below, the values from Table 8 have been correlated to show the percentage of world-wide monopolies and the extent to which ground handling is an internationally competitive market. The combined averages indicate that ground handling is not dominated by restrictive regulations. Instead the numbers show that international competition exists in more than 50% of the world market.

56. Canada and the US have been separated due to the significant differences in the average percentage of foreign-based operators between the two countries. It will also be noted in Tables 9 and 10 that the European Union region has been treated in two different ways due to the differences in regulatory jurisdictions for international bilaterals over traffic rights and international ground handling. Negotiating authority for bilateral air transport agreements remains at the national level of competence and jurisdiction while ground handling regulatory jurisdiction has been established at the Community level. It is therefore arguable that the European Union based ground handlers should be classified as domestic operators. However, since traffic rights remain at the national level, and it is not definitive whether or not ground handling is directly related to traffic rights, the European handlers have been treated in two ways. First they are calculated as domestic operators, and second they are treated as foreign based operators.

57. The advantage gained through this exercise of separation appears when the averages found in the US are compared with those in the European Union at the sub-sector level of operations (Table 10) this process removes any apparent bias in favour of the EU and against the US. Additionally, Switzerland has been separated from the European Union since the air transport bilaterals have yet to come into effect between Switzerland and the EU. In the case of Africa and the Middle East, average percentages have not been calculated due to the relatively high percentage of third-party handlers that retain monopoly rights.

TABLE 9
Monopolies and Foreign Based Independent Foreign Operators 2000

Regions	Monopolies (% of all services)	Foreign Based 3rd Party Providers (average %)
North America	0	27.5
US	0	20
Canada	0	57.7
Europe – Member States as Domestic Providers	0	51.2
Europe – Member States as Foreign Providers	0	18.9
Asia Pacific/India	0	48.7
Latin America	0	65
Africa/Middle East	43.5%	11.5
Global Average	16.1%	N/A

Note: Switzerland is not included in these calculations due to the small size of the country.

TABLE 10

Average percentage of Foreign Based 3rd Party Service Providers 2000

	Ramp	Cargo Mail	Pax Baggage	A/C Servicing	A/C Maintenance	Load Control	ULD Control	Surface Transport	Security	Flt. Ops	Admin Supervision	Representation Accommodation
North America	21.1	24.1	19.4	21.2	19.1	22.6	22.3	4	29.2	18.7	26.4	24
US	12.7	19.1	11.5	13.7	16.5	17.4	19.4	1.9	15.8	15.1	21.1	18.1
Canada	55	44.1	50.7	51.4	29.1	43.6	34.2	12.5	83.3	33.3	47.7	47.7
Europe (Member States as Foreign Providers)	22.9	40.3	30.5	60.3	38.4	39.5	30.8	38.9	47.3	39.1	57.4	51.4
Europe (Member States as Domestic Providers)	15.6	22.5	22.3	12.6	15.5	11.3	15.5	18.6	8.1	23.3	20.6	19.3
Switzerland	0	0	25	33.3	0	0	0	33.3	0	0	25	40
Asia Pacific India	26.3	24.9	31.8	20.4	40.4	26.3	25.9	13.1	11.8	35.1	34.4	24.4
Latin America	66.6	29.9	64.3	61.9	80	34.1	36.6	13.3	30	55.2	70	69.4
Africa Middle East												

Note: Due to the number of monopoly operations within the Africa/Middle East regions the percentages have not been calculated.

Industry Consolidation

58. Based on the top eight global ground handling corporations, the economic value of the whole sector (including fuelling, but not catering) amounts to approximately US$ 2.6 billion, and employs more than 76,000 persons (see S/C/W/163 for details on catering). While these figures do not include all ground handling service providers, they do indicate that this sector represents a significant economic element of air transport in broad terms. Two trends appear to be emerging: 1) there is a competitive bidding process for the various operational licences awarded by airport authorities; and 2) independent global operators are emerging at primary hub airports in all geographic and economic regions.

59. Over the past two years, the global market has begun to consolidate rapidly. What is of particular interest in this process is the emergence of global service providers that are non-US-based multinational corporations. This is in strong contrast to the pre-1996 period, during which US based independent handlers (DynAir, Hudson General, and Ogden) were among the largest providers due to the large US market and restrictive policies that prohibited self-handling or a competitive third-party market.

60. Table 11 is presented to highlight the number of mergers and acquisitions that have occurred over the past two years. It must also be noted that while Swissport appears to be the most aggressive in this area, GlobeGround has also been very active. However it was not possible to verify the precise acquisitions and mergers beyond the recent purchase of Hudson General.

TABLE 11
The World Market Concentration since 1999

Buyer →			**Acquisition/Joint Ventures**
Go – Ahead	1999	UK	GHI Ltd.
Castle Harlan	1999	US	AMR-Services (later WFS)
WFS	1999	US	Miami Aircraft Support Inc.
WFS	1999	US	Aerolink International Inc.
WFS	2000	US	Oxford Airport Technical Services
ASIG	1999	US	GAH Aviation
ASIG	1999	US	Elsinore Aviation LP
GlobeGround	1999	Germany	Hudson General Corp.
Pernauille	1999	France/UK	Serviceair
Serviceair	2000	UK	Global Group (US)
		UK	Tri-Star Airline Services (US)
Menzies	2000	UK	Ogden (August 2000)
Swissport	1999	Switzerland	70% Air Littoral Assistance
Swissport	1999	Switzerland	Commercial agreement with Aer Lingus (LHR)
Swissport	1999	Switzerland	40% of MIASCOR (Manila)
Swissport	1999	Switzerland	DynAir
Swissport	2000	Switzerland	50% Dares Salaam Airport Handling Company (block sales agreement).
Swissport Venture	2000	Switzerland	Dutchport – Joint venture with CSC (NL[21])
Capital Group	2000	UK	Northeast Aviation (UK)
			Northwest Aviation (UK)
	2000	UK	Capital Aviation (UK)

Sources: *Going Global*. Peter Bluth President and CEO. GlobeGround 30 November 1999. http//:www.menzies.com. gsetoday.com, Jan 2000, May 2000 and June 2000. *The Swissport Profile*, May 2000. *AirportWorld*, June/July 2000. *Ground Handling International*, May/June, 2000. *Airline Business*, September 2000.

21 CSC is the Dutch international cargo handling company found in Table 8 as 'NL'. This is one of the largest independent cargo handling corporations in the world.

61. To summarise the information contained in this section, it can be said that since 1993 there has been a substantial movement away from monopoly services at airports around the world, to an increasingly competitive third-party market. The two largest ground handling markets (the US and the EU) have become very competitive as a result of liberal policies by the regulatory authorities in both locations. Other markets around the world that have pursued liberal policies have also become competitive marketplaces. This trend applies to both passenger and cargo markets.

62. Due to the extent of competition between service providers and the distinctly different sub-sectors which are part of ground handling, Members may wish to discuss the aspects of ground handling that when not directly related to traffic rights, could possibly be covered by the GATS already, or might be included in the future. The question becomes relevant in light of the degree of existing competition (sectoral and sub-sector levels), foreign ownership investments, international consolidation, and the number of States having liberal and competitive policies in the ground handling market.

ANNEX

List of Ground Handling Services in the European Union Council Directive (96/97/EC)

1. Ground administration and supervision
2. Passenger handling
3. Baggage handling
4. Freight and mail handling
5. Ramp handling
6. Aircraft services
7. Fuel and oil handling
8. Aircraft maintenance
9. Flight operations and crew administration
10. Surface transportation
11. Catering services

Source: Official Journal of the European Communities No L 272/36. Council Directive 96/97/EC, October 1996, Annex.

III. AIRPORT SERVICES

63. Airport services are dealt with in paragraphs 64, 126 to 134 and Annex 4 of S/C/W/59 and S/C/W/129.

64. Airport services are among the sectors of air transport which have changed most radically over the last ten to fifteen years. During this period the traditional model of an airport system, owned and managed by a public monopoly has given way in many countries to privatization and competition. Although the first significant privatization, that of British Airport Authorities, took place only in 1987, private airports have become relatively common, and are increasingly exporting their brand names and marketing skills.

65. Corporatization and administrative autonomy have also become common, even in systems which have not moved as far as pure privatization. Many functions are outsourced or subcontracted and private employees have become the norm. For example, San Diego Airport Authority has only twenty employees, while Frankfurt Airport Authority has 15,000 for traffic that is only three times that of San Diego. This reflects the fact that in San Diego almost all airport services have been outsourced, while in Frankfurt the airport authorities not only provide all airport services but also other services such as ground handling. The greater part of airport revenues are now derived from non-aeronautical services. New actors such as airlines, construction companies, property management companies and even bus companies have begun managing airports and financing their investment while traditional airport services providers have extended their range of activities to management, engineering, distribution and property management services. Landing fees are now becoming more effectively cost-based and private financing is becoming the major source of investment.

66. This movement is general and is affecting the developing as well as the developed world. Indeed, some developing countries, probably because of their compelling need for private investment, are further advanced in privatization and commercialization than certain developed countries.

67. This section consists of two parts:

- first, a description of economic and regulatory developments affecting airport services and airport services providers over the last ten years (1989-1999); and
- second, a description of the internationally agreed rules of the charging system, which entails non-discrimination and cost-based obligations, and the tensions that the progressive movement of commercialization has created for these intergovernmental rules.

68. Airport services and air navigation services are two of the rare areas of air transport which are well documented. This is due to the fact that ICAO has held two major conferences on the subject, in 1989 and 2000, and for this purpose has launched a major questionnaire, the answers to which, although incomplete, are statistically representative (over 75% of the traffic) and offer a very detailed picture both for 1989 and 1999. This information includes the situation of developing countries, where traditionally economic and regulatory data are extremely scarce. Furthermore, over one hundred working papers were produced for this conference and the World Bank has also produced a notable amount of literature on this subject. Much of this data is available on the web-site http://www.icao.int/icao/en/atb/ansconf2000/index.html, to which references are made where appropriate. Document ANSConf WP/18/Add.1 is also extremely useful since it contains the individual breakdowns, country by country and airport by airport, of the answers to the ICAO questionnaire.

A. AIRPORT SERVICES AND AIRPORT SERVICE PROVIDERS

1. Introduction: definitional and classification issues

69. One of the difficulties in studying airports is to define airport services. The CPC provisional provides a definition of airports services: "74610 Airport operation services (excl. cargo handling): Passenger air terminal services and ground services on air fields, including runway operating services, on a fee or contract basis. Exclusions: Air terminal cargo-handling services are classified in subclass 74110 (Container handling services), if for containerised freight, and in 74190 (Other cargo handling services), if for non-containerised freight or for passenger baggage". CPC/Rev.1 replicates this definition under a different number (r67710).

70. However, this definition does not seem to give a complete and disaggregated view of the industry as it is described for instance in the ICAO Airport Economics Manual (AEM). It may therefore be helpful to consider the industry concepts for possible future classification purposes.

71. Unfortunately, unlike ground handling, there is no universally accepted breakdown of airport services. However, IATA and ACI experts concur in considering that the various breakdowns contained in the ICAO "Airport Economics Manual" could form the basis of a meaningful classification for the industry. This document allows for two approaches to the classification of airport activities: an analytical accounting-based approach and a facility-based approach. Tables 12 and 13 list and define airport services according to the respective approaches and put in correspondence with them the relevant items of the CPC.

72. It seems to emerge clearly from the two tables that many of the activities undertaken in airports are also performed in many other contexts and are covered by CPC items which have no direct relation to air transport. They would therefore be expected to fall within the existing scope of the GATS. This is true of course for non-aeronautical activities of the airports, which account on average for 50% of their revenues, but it is also true of some aeronautical activities.

73. It is also worth noting that none of the correspondences belongs to the air transport division (CPC 73). Some activities have an air transport-related correspondence (i.e. either group 743 "supporting services for air transport" or group 741 "cargo handling services", both belonging to division 74 "supporting and auxiliary services"). For those activities, one may therefore question whether there is a direct relationship with traffic rights. Finally, there are some items for which a satisfactory correspondence could not be found and for which the question of the relationship with traffic rights remains open.

74. As far as the first table, based on analytical accounting, is concerned, the various items have been constructed by ICAO from the viewpoint of the airport only - hence the reference to the cost of facilities "owned by the airport itself". However, in many instances these activities are subcontracted. The nature of the corresponding service delivered (third column) remains the same whether the service is delivered by the airport as a direct operator or by a subcontractor. Similarly, the first columns refer in some instances to costs and revenues attributable to "aircraft operators". The evolution of the market, especially in ground handling, where independent operators have appeared alongside airlines, would imply to read this "aircraft operators" category as covering "airport users".

TABLE 12
Classification of Airport Services by Revenues and Costs

Revenues	Costs	Possible relevant CPC items
Aeronautical revenues (AEM 4.43 to 4.55)	**Aeronautical costs (AEM4.43 to 4.55)**	
Landing fees: this includes charges and fees collected for the use of runways, taxiways and apron areas, including associated lighting as well as for the provision of approach and aerodrome control. AEM 3.34	Aircraft movement areas (e.g. runways, taxiways, aircrafts parking areas): all operation and maintenance costs, and administrative costs attributable to these areas and their associated vehicles and equipment, including the expense of all labour maintenance materials power and fuels. AEM 3.66	74610 "airport operations services:…ground services on airfield including runways operating services…"
Passenger charges: this includes passenger services charges and other charges collected for the use of passenger terminal and other passenger processing facilities (e.g. for passengers embarked or disembarked). AEM 3.36	Passenger terminal facilities (owned by the airport) all operation and maintenance costs, and administrative costs attributable to passenger terminal facilities, including, where applicable, such expenses as relate to any airport-operated shops and services located in the terminals (e.g. personnel costs, costs of stock sold and any spoilage and the cost of utilities and general upkeep provided in such cases). AEM 3.67	74610 "airport operation services:… passenger terminal services"
Security charges: this includes charges and fees collected for the provision by the airport of security services for the protection of passengers and other persons at the airport, aircraft and other property. AEM 3.39	Security services: all operation and maintenance costs, and administrative costs solely borne by the airport and attributable to the provision of all aspects of airport security including regular police services. This includes personnel costs and the costs of operating and maintaining the associated premises, vehicles and equipment. Also included are any payments made to others for the provision of security services. AEM 3.72	74610 "airport operation services excluding cargo handling" 87301*"investigation services: … shoplifting protection services" 87302 "alarm monitoring services" 87303 "armoured cars services" 87305 "guards services" 87309 "other security services" 91260* "police and fire protection services: … administrative and operational services for regular and auxiliary police forces supported by public authorities and port, border and coast guards and other special police forces. Police services are related to…alien registration…"
Noise charges: charges collected related to the noise produced by aircraft when using the airport. AEM 3.40		CPC 94050 "noise abatement services: noise pollution monitoring, control and abatement services, e.g. traffic related noise abatement services in urban areas"
Other charges on air traffic operations includes all other charges and fees collected from aircraft operators for other types of facilities and services provided at the airport for the operation of the aircraft. AEM 3.41		? possibly 74690 "other supporting services for air transport"

Revenues	Costs	Possible relevant CPC items
Non-Aeronautical revenues (AEM 4.56 to 4.63)	**Non-Aeronautical costs (AEM 4.56 to 4.63)**	
Ground handling charges: charges and fees collected from aircraft operators for the use of facilities and services provided by the airport for the handling of aircraft. AEM 3.42	Ground handling services provided by the airport: all maintenance: all operation and maintenance costs and administrative costs attributable to these services provided by the airport, including personnel costs and the expense of operating and maintaining the associated premises vehicles and equipment. AEM 3.70	See section on ground handling for CPC references
	Ground access facilities and services: all operations and maintenance costs and administrative costs including personnel costs and the costs of operating and maintaining the associated premises, vehicles and equipment attributable to the provision by the airport of access roads, rails, ramps, bridges and tunnels as well as intra-airport transfer buses or other form of transport used for such purposes. AEM 3.75	51310 "construction work for highways (except elevated highways) streets, roads, railways and airfield runways" 51320 "construction work for bridges elevated highways, tunnels and subways" (Note: those construction items only refer to the maintenance work as maintenance is covered by construction: see headnote of item 51 page 174 of the CPC provisional) 74420 "highways, bridges and tunnels operations services" 71212 "urban and suburban special transportation"
	Fire fighting and ambulance services: all operation and maintenance costs, and administrative costs attributable to these services, including personnel costs and the expense of operating and maintaining the associated premises, vehicles and equipment. AEM 3.71	74690 "other supporting services for air transport: fire fighting and fire prevention services…" 93192 "ambulance services: general and specialized medical services delivered in the ambulances"
	Air traffic control (including communications): all related operation and maintenance costs, and administrative costs including in particular personnel costs, the expense of power and any spares consumed by radars and other equipment employed. Also any payments made to any other entity for providing such services at the airport. AEM 3.73	See future paper on air navigation services
	Meteorological services: all operation and maintenance costs, and administrative costs of any meteorological services provided by the airport itself, or payments made to others for providing theses services. AEM 3.74	91138 "general administrative, economic, commercial and labour affairs related services: …administrative services concerning …weather forecasting institutions" see also future paper on air navigation services.

Revenues	Costs	Possible relevant CPC items
Non-Aeronautical revenues (AEM 4.56 to 4.63)	**Non-Aeronautical costs (AEM 4.56 to 4.63)**	
Aviation fuel and oil concessions (including throughput charges): all concessions fees, including any throughput charges, payable by oil companies or any other entities for the right to sell or distribute aviation fuel and lubricants at the airport. AEM 3.43		See fuelling section above paragraphs ..to.. 82102 "renting or leasing services involving own or leased non residential property" 82202 "non residential property management services on a fee or contract basis"
Restaurants, bars, cafeterias, and catering services: fees and charges payable by commercial enterprises or other entities for the right to operate restaurants, bars, cafeterias and catering services at the airport, including aircraft catering included also are any revenues derived from any such activities when operated by the airport AEM 3.44		64210 "meal serving services with full restaurant services" 64220 "meal serving services in self-service facilities" 64230 "caterer services providing meals to the outside" 64290 "other food services" 643 "beverage serving services for consumption in the premises" 82102 "renting or leasing services involving own or leased non residential property" 82202 "non residential property management services on a fee or contract basis"
Duty-free shops: fees and charges payable by a commercial enterprise or any other entity for the right to operate duty-free shop(s) at the airports, and for off-airport duty free shop to deliver goods sold at the airport. Also includes any revenues derived from duty-free shops operated by the airports itself. AEM 3.45		631 "food retailing services" 632 "non food retailing services" 82102 "renting or leasing services involving own or leased non residential property" 82202 "non residential property management services on a fee or contract basis"
Automobile parking: fees and charges payable by a commercial enterprise (…) to operate automobile parking facilities at the airport. Also includes any revenue derived from such facilities when operated by the airport itself. AEM 3.46		74430 "parking services" 82102 "renting or leasing services involving own or leased non residential property" 82202 "non residential property management services on a fee or contract basis"

Revenues	Costs	Possible relevant CPC items
Non-Aeronautical revenues (AEM 4.56 to 4.63)	**Non-Aeronautical costs (AEM 4.56 to 4.63)**	
Other concessions and commercial activities operated by the airport: any concession fees or charges, other than those mentioned above, payable by commercial enterprises or other entities for the right to sell goods and services (such as automobile rentals and banking and exchange bureaux concessions) at the airport. Also included are any revenues derived from commercial activities (shops or services) operated by the airport itself and not mentioned above, as well as any public admission fees charged for entry to areas of special interest (e.g. terminal observation areas) or of guided tours within the airport area. AEM 3.47		631 "food retailing services" 632 "non food retailing services" 71222 "rental services of passengers cars with operators" 83101 "leasing or rental services concerning private cars without operators" 8111-8119 "acceptance of deposits and other repayable funds" (W120 7Ba) 81333 "foreign exchange" (W120 7Bf(ii)) 74720 “tourist guide services” 96199 “other entertainment services n.e.c.” 82102 “renting or leasing services involving own or leased non residential property” 82202 “non residential property management services on a fee or contract basis”
Rental: rentals payable by commercial enterprises and other entities for the use of the airport-owned building space, land or equipment. Such rentals should include those payable by aircraft operators for the airport-owned premises and facilities (e.g. check-in and sales counters and administrative offices) other than those already covered under "Air traffic operations" above. AEM 3.48	(Partial correspondence): Industrial development: all operation and maintenance costs, and administrative costs attributable to the development and provision by the airport land and/or buildings and other infastructure solely for industrial/commercial activities such as manufacturing, processing, warehousing and other such commercial activities that are not associated with the operation of air services. AEM 3.76	82102 "renting or leasing services involving own or leased non residential property" 82202 "non residential property management services on a fee or contract basis"
Other revenues from ancillary activities: all other revenues derived from non-aeronautical activities. Also includes payments received by the airport for such services as heating, air conditioning, lighting, water, cleaning and telephone use provided they are not included in the rental or concessions fees, and for any services provided to non-aviation entities outside the airport. AEM 3.49		8740 "building cleaning services" 7521 "public telephone services" 88700 "service incidental to energy distribution"
	All operation and maintenance costs, and administrative costs, including personnel costs and the costs of operating and maintaining the associated premises, vehicles, and equipment, incurred by the airport with respect to other areas of services e.g. noise monitoring and abatement measures. AEM 3.77 Note: partial correspondence with the noise charges item (above) of the first column.	94050 "noise abatement services: noise pollution monitoring, control and abatement services e.g. traffic related noise abatement services in urban areas"

TABLE 13
Airport Services Classified by Facilities

Facilities and Services to be taken into Account in Computing Air Transport Costs	Possible CPC Correspondences
Basic approach, landing and take-off facilities & services	
Landing area with cleared approaches and taxiways with necessary drainage, fencing, etc.	51310 "construction work highways (except elevated highways) streets, roads, railways and airfield runways"
Approach and aerodrome control: air traffic control for approach, landing, taxiing and take-off with necessary communications (sometimes partly or wholly provided by other than the airport operators)	74620 "air traffic control services: …including approach, landing and take off control services" see also future paper on air navigation services
Meteorological services (see Appendix 2 as to when an allocation of the costs of these services, proportional to their utilisation for airport operations, should be considered)	91138 "general administrative economic commercial and labour affairs related services:…administrative services concerning …weather forecasting institutions"
Passenger and public waiting rooms and concourse with necessary heating, lighting, janitor service, police service, approach roads, etc.	87301* "investigation services:... shoplifting protection services.." 87302 "alarm monitoring services" 87303 "armoured cars services" 87305 "guards services" 87309 "other security services" 91260* "police and fire protection services: …administrative and operational services for regular and auxiliary police forces supported by public authorities and port, border and cost guards and other special police forces. Police services are related to…alien registration…" 51310 "construction work highways (except elevated highways) streets, roads, railways and airfield runways" 51320 "construction work for bridges elevated highways, tunnels and subways" (Note: those construction items only refer to the maintenance work as maintenance is covered by construction: see headnote of item 51 page 174 of the CPC provisional) 74420 "highways, bridges and tunnels operations services"
Fire and ambulance service in attendance	74690 "other supporting services for air transport :.fire fighting and fire prevention services…" 93192 "ambulance services: general and specialized medical services delivered in the ambulances "
Special approach, landing and takeoff facilities & services	
At night and during bad visibility by day: lights for approach, landing, taxiing and take-off, radio and other special aids for approach, landing and take-off (sometimes provided by other than the airport operator)	74620 "air traffic control services:…including approach, landing and take off control services" see also future paper on air navigation services
Other facilities and services provided for aircraft operators	
Hangar, workshop, stores, garage and other technical accommodation	74690 "other supporting services for air transport: …hangar services…"
Space for parking and long-term storage of aircraft	74690 "other supporting services for air transport:…hangar services…"
Land leased to aircraft operators for various purposes	82102 "renting or leasing services involving own or leased non residential property" 82202 "non residential property management services on a fee or contract basis"
Assistance in handling passengers and cargo, and necessary equipment	See ground handling services section
Towing and other handling of aircraft	74690 "other supporting services for air transport:"…aircraft towing services…"
Special servicing of aircraft (air conditioning, cleaning, etc.)	74690 "other supporting services for air transport: …aircraft cleaning and disinfecting services…"

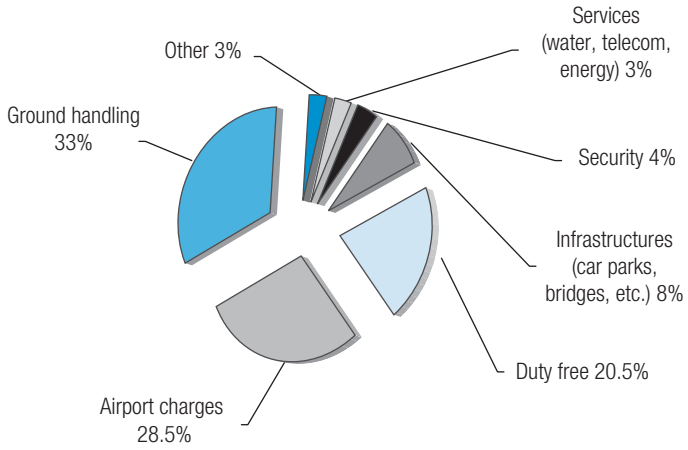
Facilities and Services to be taken into Account in Computing Air Transport Costs	Possible CPC Correspondences
Accommodation for airline offices, traffic counters and air crews, and for the handling of passengers and cargo	82102 "renting or leasing services involving own or leased non residential property" 82202 "non residential property management services on a fee or contract basis"
Communication facilities (aircraft operating agency messages – Class B)	Possibly 75222 "dedicated networks services" and/or 7523 "data and message transmission services"
Provision of aircraft fuel and other technical supplies, and also of maintenance and repairs for aircraft (usually via concessions)	See fuelling section see maintenance section of S/C/W/163
Common services such as the provision of light, heat, power and heating fuel	88700 "service incidental to energy distribution"
Security measures, equipment, facilities and personnel for the following functions:	74610 "airport operation services (excluding cargo handling)" 87302 "alarm monitoring services" 87305 "guards services" 87309 "other security services" 91260* "police and fire protection services: …administrative and operational services for regular and auxiliary police forces supported by public authorities and port, border and cost guards and other special police forces. Police services are related to… alien registration …"
Inspection/screening of passengers and cabin baggage	74610, 87302, 87305, 87309, 91260*
Security in departure/arrival lounges, including transfer/transit lounges	74610, 87302, 87305, 87309, 91260*
Security of airside areas	74610, 87302, 87305, 87309, 91260*
Security of landside areas	74610, 87302, 87305, 87309, 91260*
Accommodation for other than aircraft operators	74610, 87302, 87305, 87309, 91260*
Accommodation for shops, hotels, restaurants, parcel checking rooms, motor transport organization, telegraph office, post office, banks, etc.	82102 "renting or leasing services involving own or leased non residential property" 82202 "non residential property management services on a fee or contract basis"
Facilities paid for directly by the public (sight-seeing, car parking, etc.)	74720 "tourist guide services" 96199 "other entertainment services n.e.c" 74430 "parking services"
Accommodation for necessary government activities, customs, immigration, public health, agricultural quarantine, etc.	82102 "renting or leasing services involving own or leased non residential property" 82202 "non residential property management services on a fee or contract basis"
Land rented to other than aircraft operators (including grazing rights, etc.)	82102 "renting or leasing services involving own or leased non residential property" 82202 "non residential property management services on a fee or contract basis"
Noise alleviation and prevention	
Noise monitoring systems, noise suppressing equipment and noise barriers	94050 "noise abatement services, noise pollution monitoring, control and abatement services e.g. traffic related noise abatement services in urban areas"
Land or property acquired around airports	-
Soundproofing of buildings near airports and other noise alleviation measures arising from legal or governmental requirements	51650 "insulation work" 94050 "noise abatement services: noise pollution monitoring, control and abatement services e.g. traffic related noise abatement services in urban areas"

75. The accounts of the airports confirm the large share in their revenues of activities which are not classified in the CPC as being related to air transport. This is illustrated in the following chart.

CHART 1

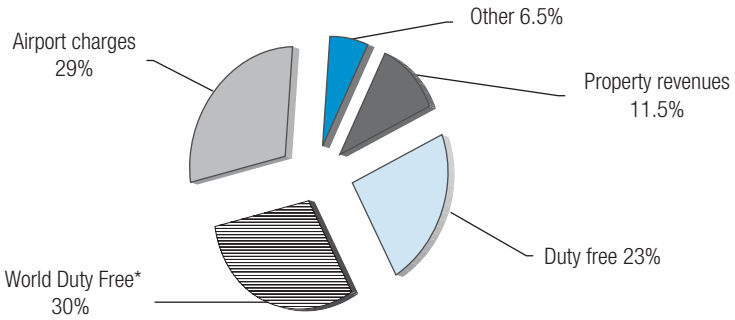
Contribution of Different Activities to the Revenues of Three Airport Systems

Flughafen Frankfurt

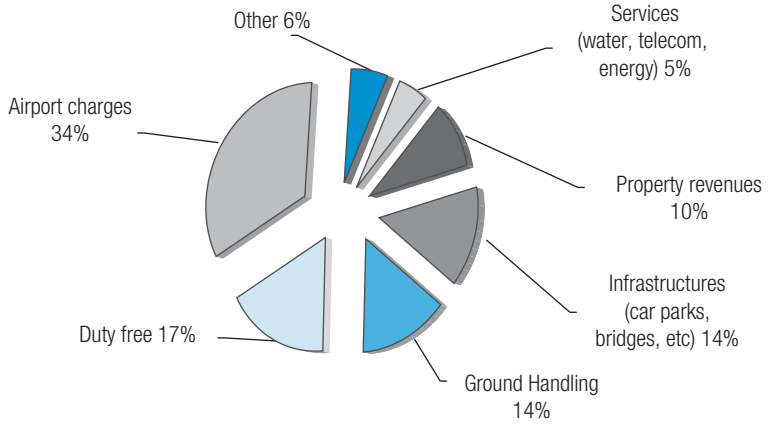


BAA

(*recently acquired duty free US subsidiary of BAA)



ADP



76. Global figures shown in Table 14 on the respective shares of aeronautical and non-aeronautical revenues confirm the importance of the latter. It is notable that the share of non-aeronautical activities is much larger in the more highly developed markets.

77. Table 15 gives an interesting breakdown of those non-aeronautical revenues in Europe and North America.

78. "Airport management services", which constitute the core activities of airport services providers, are not identified as a specific item in the CPC provisional. However, CPC provisional has an item p86609 "other management services not elsewhere classified", without definition, which could possibly encompass airport management services.

79. CPC Rev.1 puts this item in partial correspondence with a new item, r83190 "other management services, except construction management services" which also includes the former p86601 "project management other than for construction". The definition of this "other management services" item notably includes the following element,"… these services include management and office management services with or without the provision of their own staff".

80. Members may wish to consider whether airport management services are to be considered as directly related to traffic rights, and if not, whether they fall under the definition of CPC provisional CPC 86609. Alternatively, they might require the elaboration of a specific, *sui generis*, definition in order to facilitate commitments in this area.

TABLE 14
Airport Revenues by Source in 1997

Region	Aeronautical Revenue (US$ bn)	Non-aeronautical Revenue (US$ bn)
Africa	0.51	0.20
Asia Pacific	3.85	5.03
Europe	8.15	8.23
Latin America/ Caribbean	1.27	0.55
Middle East	0.45	0.35
North America	4.50	5.99
Total	**18.73**	**20.35**

Source: ACI 1999 Airport Economics Survey

TABLE 15
Non-aeronautical Revenues by Source

Region	Parking	Retail	Real Estate	Rental Cars	Other	Total
Europe	12.8%	44.4%	20.7%	2.7%	19.4%	100%
North America	37.4%	13.3%	7.8%	19.8%	21.7%	100%

Source: ACI Airport Economics Survey 1998 (33 airports in North America, 54 airports in Europe: 1997 data)

81. It is also worth noting that important aspects of the activities of major airports or airport service providers are not shown in Tables 12 and 13. That is the case of architectural and engineering services, which constitute an important activity. These services are covered by CPC group 867 "architectural, engineering and other technical services" and arguably fall within the existing scope of the GATS. While all the items of architectural services (CPC 8671) could be potentially concerned, only certain of the sub-items of engineering services and integrated engineering services seem to be concerned (87621, 87624, 86729, 86731).

2. Economic and regulatory developments

82. In the case of airport services regulatory and economic developments are closely inter-related and cannot really be dealt with separately. This subsection will deal with developments in the following areas: traffic, financial situation, ownership rules and situation, the emerging impact of competition policy in the context of the hub and spoke system, the growing impact of environmental constraints in the context of global congestion, and other new commercial trends and technological evolutions.

(a) Traffic

83. Tables 16-17 compiled from the ICAO "World of Civil Aviation" show the number of international airports in the period 1993 - 1999, with their traffic and ranking.

TABLE 16
Traffic by aggregated elements

	1993	1994	1995	1996	1997	1998	1999
Number of international airports	1050	1073	1118	1119	1140	1178	1192
Share of airport charges in airline operating expenses	4.3%	4.4%	4.5%	4.3%	4.2%	3.9%	no data available
Scheduled and non-scheduled traffic at the top 25 airports ranked by **total** passengers							
- millions of passengers	784.8	834	877.4	932.6	968.2	997.2	1045
- growth rate	+3.9%	+7.5%	+5%	+6.7%	+4.5%	+2.7%	+4.8%
- percentage of total world passengers	30%	30%	31%	32%	32%	32%	32%
Scheduled and non-scheduled traffic at the top 25 airports ranked by **international** passengers							
- millions of passengers	367.7	401	422.7	454.5	481.4	497.6	532
- growth rate	+5.7%	+8.9%	+6.2%	+8%	+6.5%	+3.4%	+6.9%
- percentage of total world passengers	44%	50%	51%	46%	49%	49%	50%

Source: ICAO, World of Civil Aviation.

TABLE 17

Scheduled and non-scheduled traffic at the world's major airports, 1993 & 1999

Top 25 Airports: ranked by INTERNATIONAL passengers				Top 25 Airports: ranked by TOTAL passengers, 1993			
Airport (ranking by international commercial aircraft movements given in brackets)	1993 thousands	Airport (ranking by international commercial aircraft movements given in brackets)[a]	1999 thousands	Airport (ranking by total commercial aircraft movements given in brackets)	1993 thousands	Airport (ranking by total commercial aircraft movements given in brackets)	1999 thousands
1. London-Heathrow (1)	40,848	1. London-Heathrow (3)	54,826	1. Chicago (1)	65,078	1. Atlanta (1)	77,940
2. Frankfurt (3)	25,290	2. Paris-Charles de Gaulle (1)	38,877	2. Dallas/Ft. Worth (2)	49,970	2. Chicago (2)	72,568
3. Hong Kong (11)	24,420	3. Frankfurt (4)	37,197	3. Los Angeles (4)	47,845	3. Los Angeles (4)	63,877
4. Paris-Charles de Gaulle (2)	23,338	4. Amsterdam-Schipol (2)	36,271	4. London-Heathrow (12)	47,601	4. London-Heathrow (11)	62,264
5. Amsterdam-Schipol (4)	20,658	5. Hong Kong (11)	29,090	5. Atlanta (3)	47,088	5. Dallas/Ft. Worth (3)	60,000
6. Tokyo-Narita (13)	18,947	6. London-Gatwick (8)	27,628	6. Tokyo-Haneda (48)	41,562	6. Tokyo-Haneda (46)	54,338
7. London-Gatwick (8)	18,656	7. Singapore (13)	24,490	7. San Francisco (13)	32,737	7. Frankfurt (18)	45,858
8. Singapore (9)	18,513	8. Tokyo-Narita (17)	22,503	8. Denver (5)	32,623	8. Paris-Charles de Gaulle (7)	43,597
9. New York-Kennedy (20)	14,821	9. Brussels (5)	19,981	9. Frankfurt (18)	32,536	9. San Francisco (22)	40,387
10. Bangkok (17)	12,754	10. Zurich (6)	19,410	10. Miami (7)	28,660	10. Denver (8)	38,034
11. Miami (10)	12,373	11. Bangkok (20)	18,856	11. New York-Kennedy (22)	26,790	11. Amsterdam (24)	36,781
12. Zurich (6)	12,186	12. New York-Kennedy (22)	17,856	12. Paris-Charles de Gaulle (24)	26,115	12. Minneapolis (20)	34,216
13. Los Angeles (26)	11,945	13. Miami (12)	15,757	13. New York-Newark (8)	25,613	13. Detroit (6)	34,038
14. Toronto (12)	11,077	14. Seoul (31)	15,474	14. Paris-Orly (38)	25,638	14. Miami (12)	33,899
15. Manchester (21)	10,791	15. Toronto (9)	15,422	15. Hong Kong (62)	25,156	15. New York-Newark (14)	33,814
16. Seoul (30)	10,327	16. Copenhagen (7)	15,208	16. Boston (6)	24,215	16. Las Vegas (26)	33,669
17. Rome-Fiumicino (18)	10,263	17. Los Angeles (33)	15,035	17. Detroit (9)	24,171	17. Phoenix (10)	33,533

Top 25 Airports: ranked by INTERNATIONAL passengers				Top 25 Airports: ranked by TOTAL passengers, 1993			
18. Paris-Orly (24)	10,075	18. Taipei (21)	15,015	18. Phoenix (14)	23,609	18. Seoul (49)	33,371
19. Copenhagen (7)	9,610	19. Manchester (19)	14,826	19. Minneapolis (15)	23,402	19. Houston (16)	33,089
20. Düsseldorf (15)	9,596	20. Palma de Mallorca (30)	14,679	20. Osaka (67)	23,361	20. New York-Kennedy (31)	32,003
21. Brussels (5)	9,309	21. Madrid (14)	13,537	21. Seoul (75)	22,634	21. London-Gatwick (44)	30,559
22. Palma de Mallorca (32)	9,175	22. Munich (10)	13,479	22. Honolulu (31)	22,618	22. St Louis (5)	30,189
23. Madrid (16)	8,621	23. Rome-Fiumicino (16)	12,150	23. Las Vegas (21)	22,491	23. Hong Kong (56)	29,733
24. Munich (14)	7,879	24. Düsseldorf (18)	12,095	24. Tokyo-Narita (65)	22,141	24. Orlando (34)	29,173
25. Stockholm (19)	6,270	25. Dublin (15)	12,046	25. Orlando (26)	21,466	25. Toronto (28)	27,771
TOTAL	**367,742**	**TOTAL**	**531,708**	**TOTAL**	**784,850**	**TOTAL**	**1,044,701**

a Estimated values in this column. 1999 data are still preliminary; actual ranking and percentage change may differ when final data become available.

Source: *ICAO Air Transport Reporting Form I* and Airports Council International.

84. Several trends seem to emerge from Tables 16 and 17:

- first, the continued growth of passenger numbers at a rate higher than the growth of world GDP;
- second, the continuing rise in the number of international airports; and
- third, the high concentration of traffic.

  The top 25 airports represent between 2 and 2.5 per cent of the total number of airports (a slightly declining proportion as the total number of airports is expanding), but handle between 30 and 32% of passengers and between 44 and 50% of international passengers. This is largely linked to the structure of traffic but has been accentuated by the hub and spoke system and the emergence of airline alliances.

(b) Financial situation

85. Table 18 describes the financial situation of the 35 biggest airport groups in the world for the last two years.

TABLE 18
Financial Ranking of Airports Groups
Airport Financial Results 1998/99

Rank	Airport	Country	Main airports Codes	Revenue		Net result (US$ million)		Period End	Notes
				US$ million	change %	1998	1999		
1.	BAA	UK	LHR/ LGW/STN	3,241.3	19.9	658.2	454.6	Mar-99	
2.	Flughafen Frankfurt Main	Germany	FRA	1,398.8	3.6	59.1	51.6	Dec-98	
3.	Aeroports de Paris	France	CDG/ORY	1,345.4	8.4	89.0	71.1	Dec-98	
4.	Aena	Spain	MAD	1,250.0		119.1		Dec-98	Includes ATC
5.	Port Authority of NY and NJ	USA	EWR/ JFK/LGA	1,230.5	7.0	257.1	228.4	Dec-98	
6.	New Tokyo Int'l Airport Authority	Japan	NRT	1,097.4	6.1	-9.4		Mar-99	
7.	Kansai Int'l Airport	Japan	KIX	923.8	-1.9	-183.4	-198.5	Mar-99	
8.	Aeroporti di Roma	Italy	FCO/CIA	632.4	-6.5	63.2	52.6	Dec-98	
9.	Schipol Group	Netherlands	AMS	614.7	9.8	150.0	126.6	Dec-98	
10.	Luftartsverket	Sweden	ARN	562.7	3.5	99.2	77.8	Dec-98	
11.	Flughafen Muenchen	Germany	MUC	506.4	-0.6	35.3	17.3	Dec-98	
12.	Chicago Department of Aviation	USA	ORD/ MDW	496.9	11.9	-169.7		Dec-98	FAA
13.	Airport Authority Hong Kong	Hong Kong	HKG	487.0		-50.1		Mar-99	Nine months only
14.	Civil Aviation Authority – Singapore	Singapore	SIN	462.3	52.2	247.3	244.6	Mar-99	
15.	Miami-Dade Aviation Department	USA	MIA	453.0	4.3	3.4	-33.0	Sep-98	FAA

Rank	Airport	Country	Main airports Codes	Revenue		Net result (US$ million)		Period End	Notes
				US$ million	change %	1998	1999		
16.	Los Angeles World Airports	USA	LAX	431.3	10.8	160.9	100.2	Jun-98	
17.	SEA-Societa Esercizi Aeroportuali	Italy	LIN/MXP	422.5	6.4	35.1	39.8	Dec-98	
18.	City and County of Denver	USA	DEN	417.4	0.7	-48.5	-68.5	Dec-98	
19.	Aer Rianta	Ireland	DUB	381.9	2.1	68.9	63.8	Dec-98	
20.	Manchester Airport	UK	MAN	372.9	-1.4	70.1	35.0	Mar-99	Pre-tax profit
21.	Vienna Airport	Austria	VIE	351.8	6.9	57.4		Dec-98	
22.	San Francisco Airports Commission	USA	SFO	348.6		118.3	136.3	Jun-98	Budget figures
23.	Flughafen Dusseldorf	Germany	DUS	316.6	1.8	-56.3	57.1	Dec-98	
24.	Metro Washington Airports Authority	USA	IAD/DCA	287.5	23.9	29.7	29.1	Dec-98	
25.	Brussels International Airport	Belgium	BRU	267.1	58.9	19.6	22.0	Dec-98	
26.	Greater Toronto Airports Authority	Canada	YYZ	251.1	35.6	20.6	14.0	Dec-98	
27.	Massachusetts Port Authority	USA	BOS	247.7	9.3	88.6	-0.5	Jun-98	
28.	Copenhagen Airports	Denmark	CPH	247.2	8.1	58.0	48.9	Dec-98	
29.	Zurich Airport Authority	Switzerland	ZRH	245.9	-1.9	31.1	30.0	Dec-98	
30.	City of Atlanta Dept of Aviation	USA	ATL	236.3	16.4	47.7	62.6	Dec-98	FAA
31.	Dallas-Fort Worth Int'l Airport	USA	DFW	228.6	4.6	-38.0	59.8	Sep-98	
32.	Greater Orlando Aviation Authority	USA	MCO	227.3	9.1	257.4	-8.0	Sep-98	
33.	Airports Authority of Thailand	Thailand	BKK	209.5	10.6	86.7	123.2	Sep-98	
34.	Flughafen Hamburg	Germany	HAM	207.6	7.0	26.3	22.4	Dec-98	
35.	CAA-Finland	Finland	HEL	203.2	11.3	17.9	14.1	Dec-98	FAA

Note: All figures translated into US$ at the average exchange rate for period. Revenue change is in local currency terms.

Source: *Airline Business International*, December 1999.

86. ICAO document ANS/Conf WP/3 "Financial situation of airports and air navigation services" [22] shows that airports are in general profitable. Moreover, airport profitability is increasing. In 1990 only 30% of airports showed an operating profit whereas in 1998 it was 75%. In some cases however, the figures may be misleading since some airports covered by the study were unable to identify their expenses and were counted as profitable by default.

87. ICAO cautiously identifies any relationship between size and profitability. ACI for its part[23] describes a slightly more complex situation summed up by the expression "small can be beautiful". They note that in 1997 airports serving between 4 and 10 million passengers had a higher percentage of operating losses (20.7%) than those serving 1 to 4 million (16.9%); but the financial performances of airports serving less than one million passengers showed operating losses in the majority of cases. However, the aggregated surpluses (EBITDA - earnings before interest, taxes, depreciation and amortization as a proportion of revenue) are higher for airports over 4 million passengers (21.6%) than for airports under 4 million passengers (11.8%).

88. Operating margins measured by the EBITDA remain in all instances important; 31% in 1997 and 34% in 1998. ACI insists that retained profits are much smaller (2.7% in 1997 and 3.2% in 1998) and that capital expenditure by airports (US$ 5.91/passenger) is higher than their operating surpluses (US$ 4.40/passenger), showing that internally generated sources of funding are insufficient to cover current levels of capital expenditure. This implies recourse to borrowing and/or subsidies, and 19 states in the ICAO Study[24] reported providing subsidies for 61 airports and groups of airports. These include States in Europe and North America with major aviation activities. In the 1989 Survey, subsidies were reported by 11 States for 121 airports or groups of airports.

89. The regional breakdown in Table 19 confirms these tendencies:

22 Covers 69 States in 1991, 88 States in 1998; 297 airports covering 71% of the total number of scheduled passengers in 1991 and 271 airports covering 91% of the total number of scheduled passengers in 1998.

23 http://www.airports.org/media/mr_19980904.html and *ACI, Airport Economics Survey* – 1998.

24 ANSConf WP/3 para 2.2.4.

TABLE 19
Financial Results of airports by Region 1997/1998

Region	Total revenue 1997	Total revenue 1998	EBITDA 1997	EBIDTA 1998	Retained profit (loss) 1997	Retained profit (loss) 1998
Africa	658	710	254	320	96	120
Asia-Pacific	10,277	8,880	3,996	2,720	90	-600
Europe	16,158	16,380	4,331	5,400	57	570
Latin America/ Caribbean	1,917	1,820	375	400	-376	-900
North America	8,950	10,490	3,013	4,290	414	180
Middle East	-	80	-	200	-	0
Total	**37,960**	**39,080**	**11,970**	**13,320**	**281**	**180**

Source: ACI, *Airport Economics Survey*, 1998

(c) A significant evolution regarding the ownership of airports

90. Table 20 shows the growth in passenger numbers, by region, over the period 1997 - 2000, together with forecast growth rates up to 2005 and 2010.

TABLE 20
Growth of Total Passenger Traffic (Annual Rates) as forecast by ACI - 1997

Region	1997-2000 Growth rate (%)	1997-2005 Growth rate (%)	1997-2010 Growth rate (%)
Africa	5.41	4.52	4.29
Asia/Pacific	3.11	4.36	4.70
Europe	7.19	5.25	4.78
Latin America/Caribbean	6.23	5.24	4.42
Middle East	6.41	5.47	5.24
North America	2.78	2.96	2.88
World average	**4.72**	**4.14**	**3.95**

Source: ACI *World-wide and Regional Forecasts*, August 1998.

TABLE 21
Air Cargo: Forecast of Annual Rates of Growth in Tonnage by Region (1997-2010)

Region	Annual growth rate (%)
Africa	3.37
Asia/Pacific	7.77
Europe	6.35
Latin America/Caribbean	8.70
Middle East	6.51
North America	5.82
World average	**6.43**

Source: ACI *World-wide and Regional Forecasts*, August 1998

91. An annual 5 per cent increase means a doubling of traffic in fourteen years and implies a need for regular and heavy investment. ICAO evaluates the need for investment in airports and air navigation infrastructure as between US$250 and 350 billion between 1999 and 2005. For many countries the commercialization of airport services is a way to finance these investments and create revenue through airport sales, taxes, or concession fees. This is probably the main explanation of the steady change in the ownership of airports.

(i) Global tendencies regarding the ownership of airports

92. Table 22, compiled by ICAO, shows the pattern of airport ownership in different regions. It shows in particular that the most common organisational form for the 82 States responding to the questionnaire (covering 303 airports) is still the government-owned autonomous airport (47 States). The second most common was ownership by the Department of Civil Aviation (22 States), followed by other government departments (17 States), regional or municipal governments (11 States), and private interests operating under a concession or leasing arrangement (9 States). The least common form was the privately-owned airport entity (7 States).[25] The survey also indicated, however, that in the future the organisational forms that were expected to grow most were private interests operating the airport under a concession or leasing arrangement and privately-owned airport entities.

25 The total number of States quoted exceeds 82 because of different responses for different airports in some States.

93. Compared to the 1991 Survey (Doc. 9579) conducted by ICAO, the number of States where airports are organised as government-owned autonomous authorities has increased notably, as has the number of States where airports are managed by privately-owned entities.

94. Regarding ownership of airports, 57 States reported their current situation, and 32 their future plans. From the survey it appears that 21 major airports in the world (in seven States located in Europe and Asia/Pacific) are currently owned by private interests either completely (11 airports) or in part (three airports where private interests have a majority holding and seven where private interests have a minority holding). The large majority of airports remain under government or public ownership either wholly or through a majority holding.

ICAO considers "tentative indications are that private involvement in ownership will increase most in Europe, similar plans are also under active consideration in the Caribbean, Central and South America and the Asia/Pacific region." (ANSConf W/18)

95. The 1999 ICAO survey also sought to establish where the differences are located between: private domestic and/or foreign interest own and/or operate major airport areas or services. Table 23 shows the number of states in each region in which the relevant services are privately owned or operated.

TABLE 22
Ownership and Operation of Airports - 1999

Region	Gov't owned autono-mous entity	Directorate of Civil Aviation	Ministry or other gov't department	Regional or municipal govern-ment	Concession or leasing arrange-ment	Privately owned air-port entity	Other
Asia/Pacific (14 States)							
Current	10	5	3	2	1	3	2
Planned	3	2	1	0	2	3	3
Middle East (8 States)							
Current	2	5	1	0	0	0	0
Planned	3	0	1	0	0	0	0
Africa (20 States)							
Current	13	5	3	0	2	1	2
Planned	3	0	0	0	2	1	0
Europe (30 States)							
Current	19	5	8	7	3	3	2
Planned	5	1	5	3	9	6	2
North America (2 States)							
Current	0	0	0	1	1	0	0
Planned	0	0	0	1	0	0	0
Caribbean/Central/South America (8 States)							
Current	3	2	2	1	2	0	0
Planned	1	1	0	0	3	1	0
Total (82 States)							
Current	47	22	17	11	9	7	6
Planned	15	4	7	4	16	11	5

Source: ICAO, ANS Conf WP/18

TABLE 23

Major Areas or Services Owned or Operated by Private Interests - 1999

Region	Passenger Terminal	Cargo Terminal	Ground Handling	Air Traffic Control	Security Services	Other
Asia/Pacific (14 States)						
Domestic	8	11	8	8	11	1
Foreign		1				
Mixed	2	2	4			
Middle East (8 States)						
Domestic	4	6	7	3	3	1
Foreign						
Mixed						
Africa (20 States)						
Domestic	7	9	10	5	6	2
Foreign		1				1
Mixed	1	3	3	2	1	
Europe (30 States)						
Domestic	13	13	10	11	11	2
Foreign			1			
Mixed		6	12	1	2	2
North America (2 States)						
Domestic	1	1	2	1	1	
Foreign						
Mixed						
Caribbean/Central/South America (8 States)						
Domestic	3	3	5	3	3	1
Foreign	1	1	1		1	
Mixed	1	1	1		1	
Total (82 States)						
Domestic	36	43	42	31	35	7
Foreign	1	4	2		1	1

Source: ICAO

96. This Table shows that while the number of privately-owned airport authorities remains limited, private interests were heavily involved in ownership and/or operation of ground handling (64 States) and cargo terminals (59 States). This pattern of distribution also broadly applies to the regional level. Private involvement has also become increasingly important in the ownership/operation of passenger terminals (41 States) and security services (40 States). Where private interests were involved they were principally domestic, although in the cases of ground handling and cargo terminals mixed domestic and foreign interests were also involved, primarily in Europe. Involvement by foreign interests alone was rare or non-existent.

97. In Europe, privatization is expanding rapidly. Most major airport groups, with the notable exception of Aéroports de Paris, are privatized in whole or in part, or are scheduled for privatization. In the United States, almost all airports remain publicly-owned, generally by municipalities or counties, although outsourcing and management contracts are common. The FAA launched in 1996 [26] an airport privatization pilot program of five airports. Only one of these, Stewart Airport near New York, has completed the various stages of the procedure and is about to be handed over for a

26 *Federal Aviation Authorization Act 1996*, section 149. See Department of Transportation docket No. 28895 dated 9 September 1997 for the applications procedures.

99 year lease to the British airport operator National Express in association with local interests, (the real estate developer First Columbia). The most recent position of the United States government on airport privatization has been expressed in an ANSConf working paper WP/41, dated 14 March 2000, "Privatization of airports", presented by the United States. It is worth noting that the United States has numerous airport services providers exporting their management skills (Annex I).

98. Finally, Japan seems to have stayed aside of this movement as one can see by the same Annex.

(ii) Developmental aspects of the commercialization of airport services

99. According to the World Bank[27] during the 1990s private sponsors have participated in projects involving 29 airports in 23 developing and transition countries, with investment totalling US$ 5.4 billion. This private participation in the airport sector is still in the early stages and has attracted less investment than privately sponsored projects in other transport segments. Still, initial patterns have emerged:

- Operations and management contracts with major capital investment have been the main vehicle for private participation;
- projects involving both terminals and runways have been more common than those involving unbundled facilities;
- transferring airport networks to private sponsors has become a common alternative to awarding single airports or stand-alone facilities; and
- Latin America and the Caribbean have led developing regions in private participation in the airport sector.

100. Outright privatization of airports often meets political resistance, since airport assets tend to be seen as strategic for national security. Thus, operations and management contracts with major capital expenditure have been the most common way to involve the private sector, accounting for about 70% of the investment in airport projects with private participation, as shown in Table 24.

27 World Bank document "Public Policy for the Private Sector", No. 202, November 1999, "Private Participation in the Airport Sector, Recent Trends".

TABLE 24
Total Investment in Airport Projects with Private Participation in Developing Countries by Type of Project, 1990-98

Type	Total investment (1998 US$ millions)	Share of total investment in sector (per cent)
Divestiture	1,102.5	20.3
Greenfield	540.4	9.9
Operations and management with major capital expenditure	3,801.9	69.8
Operations and management	0.0	0.0
Total	**5,444.8**	**100.0**

Source: PPI Project Database.

101. Operations and management contracts without major capital investment have been scarce. The paucity of these schemes may result from governments' interest in private sector engagement primarily as a way to raise funds for infrastructure rather than as a preferred approach to management.

102. Most projects have involved terminal and runway facilities or terminal facilities alone, as shown by the Table 25. Projects involving terminals are attractive to private sponsors because they offer potentially large "non-aeronautical" revenues.

103. Except for projects implemented in Africa in the early 1990s, all airport projects involving terminals have granted private sponsors the right to raise revenue by selling concessions for commercial activities (such as restaurants, parking facilities, and duty-free shops). On average, these projects derive about half their revenue from non-aeronautical services.

TABLE 25

Total Investment In Airport Projects With Private Participation In Developing Countries By Segment, 1990-98

Segment	Total investment (1998 US$ million)	Share of total investment in sector (per cent)
Terminals and runways	3,997.3	73.4
Terminals alone	995.2	18.3
Runways alone	452.3	8.3
Total	**5,444.8**	**100.0**

Source: PPI Project Database.

104. Awarding airport networks to single private operators has become more common in recent years. Of the 89 airports with private participation, 55 in four countries were awarded as network projects, accounting for about two-fifths of the investment in airport projects with private participation. Other network projects are expected in the near future, notably in Latin America and the Caribbean. The Dominican Republic and Mexico transferred sections of their airport networks to private sponsors in 1999, and Guatemala and Honduras are expected to do the same in coming years.

105. In Cameroon private sponsors made commitments to finance both profitable airports and secondary facilities that have traffic flows too small to break even but are essential for integrating areas inaccessible by other transport modes. By contrast, in the Argentinian and Bolivian networks, only financially sustainable airports have been awarded to private sponsors; unprofitable airports have been financed through concession fees from the profitable ones.

106. The geographical breakdown of these investments is shown in Table 26.

TABLE 26

Total Investment in Airport Projects with Private Participation in Developing Countries by Region, 1990-98

Region	Total investment (1998) (US$ million)	Share of total investment in sector (per cent)
East Asia and the Pacific	1,243.1	22.8
Europe and Central Asia	1,153.6	21.2
Latin America and the Caribbean	2,450.3	45.0
Middle East and North Africa	197.7	3.6
South Asia	137.6	2.5
Sub-Saharan Africa	262.5	4.8
Total	**5,444.8**	**100.0**

Source: PPI Project Database.

107. Private participation in airports has been concentrated in three regions: Latin America and the Caribbean; East Asia and the Pacific; and Europe and Central Asia. Latin America has dominated in investment. Within Latin America, Argentina has dominated, with the transfer of its airport system to private sponsors in 1998 accounting for four-fifths of the investment commitment in the region. Private participation has also occurred in Bolivia, Chile, Colombia, Peru, Uruguay, and Venezuela. Latin America's experience with private participation in other infrastructure sectors, and the regulatory framework and implementation expertise that resulted, have facilitated private involvement in airport projects.

108. Private airport projects in East Asian countries - China, Cambodia, and Thailand - have attracted about a quarter of the investment in the sector. In Europe and Central Asia investment in private airport projects has been concentrated in the Czech Republic, Hungary, and Turkey.

109. In conclusion, as far as developmental aspects of airport ownership is concerned, the World Bank considers that although public provision of airport facilities and services remains dominant, the prospects are strong for growth in private participation in airports. The steady expansion in air transport combined with the revenue security and limited competition in the sector can be expected to continue to attract private participation in airport projects. Several countries, notably in Latin America, have announced plans to carry out projects in the near future.

(iii) The growing importance of the activities of commercial airport services providers

110. ICAO notes that "signs of globalisation in airport management are emerging, with transnational ownership and/or operation becoming more widespread, as a greater number of States are seeking to transfer their airports from direct government management and control to autonomous entities or private enterprise. With the expanding number of privatised airports and the increased prospects of their profitability, interest is mounting and competition increasing within private industry to assume the leading role in airport operations globally. As a consequence major airport management companies, most of them associated with prominent airports in developed regions, are applying for, and in many cases, obtaining management contracts for individual airports or groups of airports in States that are located in other regions."

111. Annex I, which is reproduced, courtesy of the consultant Momberger Airport information[28], contains probably the most exhaustive and updated information on airport management contracts and operations available. It contains most, if not all, of the operations which have occurred in the sector between 1993 and May 2000. It allows an examination both from the perspective of the airport services providers (first column) and from that of the countries having recourse to such providers (second column). However, some important and imminent operations for which the provider has not yet been selected, do not appear in this Annex. This includes for instance the partial privatization of the new Kuala Lumpur airport and the Indian government project to lease on a long term basis the terminals of the four main international airports of the country: Delhi, Bombay, Madras and Calcutta.

112. It is clear from the Annex that airport services providers are extremely diverse. They can be airport operators but may also be property investment groups, construction companies, financial services companies, airlines or *ad hoc consortia*.

113. In terms of operations, many variations are possible, but all have certain common characteristics: the capping of aeronautical charges (at least for a defined period), a very detailed and heavy investment obligation for the provider, and of course a concession fee.

(d) The growing impact of competition policy in the context of the hub and spoke system and alliances

114. Slot allocation has become one of the main parameters through which competition authorities enforce their decisions on airline alliances and abuse of dominant positions, and it will be dealt with in a future section of this paper. However, the question of the allocation of terminals to the national carrier and to its allies at the expense of other alliances is becoming an increasingly important question. There are a number of controversies on this point now current in Europe.

115. Another area in which competition policy tends to intervene increasingly is that of charging policy and abuse of dominant position in that context. For example, in January 2000 the U.S. Supreme Court in "Air Transport Association versus City of Los Angeles", found against the airport authorities of Los Angeles on the grounds of abuse of monopoly power. In this case, the airport had valued its land properties as if they were to be sold at market value for construction

28 http//www.momberger.com

instead of valuing them as dedicated for landing and had charged fees to airlines on this basis. Another example is the European Commission decisions 99/198/CEE and 99/199/CEE dated 10 February 1999 [29] which disallowed a quantity rebate system in Finnish and Portuguese airports on the grounds that it provided a *de facto* benefit to national carriers over foreign carriers.

(e) The growing impact of environmental constraints in a context of global congestion

116. Airlines and aircraft designers have made great efforts in recent years to reduce aircraft emissions and noise pollution. The world fleet is now 65% more fuel efficient than in 1970. There has been a 17% improvement since 1990 and a further reduction of 10% is planned for the next 10 years. In terms of gas emission, new engine technologies have almost eliminated emissions of carbon monoxide and hydro carbons for new aircraft, and major reductions in emissions of other gases will follow the accelerated introduction of satellite-based systems for communication, navigation, surveillance and air traffic management (CNS-ATM) and other operational improvements.

117. Similar improvements have taken place in relation to noise pollution. IATA[30] and ACI [31] estimate a 75 per cent reduction of noise levels in the last 30 years. A new aircraft entering the fleet is typically 20 decibels quieter than the aircraft it replaces and its "noise footprint" is less than 15% of its predecessor.

118. However, it takes at least a minimum 15 to 20 years for new technologies to be translated into system-wide efficiency gains, and the substantial progress which has been made in modernising the fleet has been offset and perhaps outweighed by the growth of the traffic over the last thirty years.[32] Aircraft are quieter and cleaner but there are far more flights. Aggregate figures on noise are lacking, but it is clear that sensitivity to aircraft noise has become a serious political issue, and one which substantially affects airport development. It has taken for instance thirty years to complete the Munich airport project and more than ten years to build Narita's first runway, and the second runway is still vigorously contested. The public enquiry for Heathrow's new terminal has been the longest in the UK administrative history, and airport planners are now thinking with a twenty to thirty years horizon not only because of financing constraints but also because of political and environmental constraints. Many airports in Europe or in Japan for instance have instituted curfew rules, limitations on aircraft movements, limitations on the total volume of noise, noise charges whereby a night flight is valued as several day flights or where one flight by a noisy aircraft is worth several flights by a more silent aircraft. In Europe, airports are effectively measuring the noise of aircraft to implement these measures. In the United States, those questions are of a federal nature and the FAA allocates important subsidies to airports in order to buy land and to insulate neighbouring houses.

119. These environmental constraints have with other factors (such as airspace congestion and the multiplication of frequencies with smaller planes) contributed to a real congestion of airports in Europe, Japan the two coasts of the United States, and, to a lesser extent other regions. In Europe for instance among the major hubs only Roissy-Charles De Gaulle has effective expansion capabilities. This has been a key element in the choice of Air France as an ally by Delta or the choice by Fedex of Paris as its hub for its European operations. This also explains the investments of Lufthansa in Munich airport, a secondary hub, or the interest of British Airways in KLM because of Schipol airport. However if Schipol airport is less constrained than Heathrow, it still operates under limitations on noises and its future runway may well be built on an artificial island as is already the case of Kansai airport in Japan.

(f) Other significant commercial developments

(i) Airport groupings and alliances

120. Another new trend is the emergence of airport networks, spurred on not only by the globalisation trend but also by cooperative accords between airports. The development of airport alliances may follow. Examples of such alliances include the shares held by Aéroport de Paris in Liège airports and its partnership with the cargo airport of Chateauroux, or the links between Aéroport de Montreal-Mirabel (ADM) and the French cargo airport of Vatry, and the will of ADM to establish a network of 11 platforms world-wide.

121. The main benefit of such alliances is the established reputation the leader of the alliance has with the financial community (rating agencies and banks). The existence of operational synergies among allied

29 Cases No. IV/35.703 and IV/35.767 Official Journal, dated 16.3.1999, No. 69 page 31, two other similar proceedings are underway for Spain and Italy (EC ruling IP/00/874, dated 27 July 2000).

30 Source: IATA Press Statements: "Aviation fuel use and CO^2, a message from the world airlines" and "Aviation and the Environment", May 2000.

31 Source: ACI Magazine "Airport World", July 2000.

32 This progress per unit has, however, allowed in certain instances the replacement of limitation based on the number of movements of aircrafts by limitation on the aggregate level of noise allowing more movements for the same level of noise.

airports, claimed by some, is still a disputed subject and such synergies may be more apparent in the area of non-aeronautical activities, such as the successful management by BAA of the retail facilities of Pittsburgh airport. The exportation of know-how and the creation of value for shareholders also motivate alliances.

(ii) Generalization of the hub and spoke system and emergence of secondary hubs

122. The hub and spoke system was the great commercial evolution of the seventies and eighties. The phenomenon has spread worldwide and has been fostered by a series of new commercial developments.

- Alliances, by connecting at least two main hubs, greatly increase the number of city pairs available but place new constraints on flights (because of the need for sufficient slots) and on airport organization (because of the need to locate alliance partners in the same or neighbouring terminals).

- Code sharing permits the maintenance of routes which do not generate sufficient traffic to maintain two competing airlines, and which in the absence of code sharing might disappear, but which may generate significant business for hub airports.

- The development of franchising and/or of regional aviation resembles code sharing in that it can facilitate traffic between the hub and poorly served locations.

- Liberalization in the United States in the seventies and eighties and in the EU in the nineties has led to the multiplication of flights with smaller planes in a shuttle type organization, as between New York and Washington.

123. The generalization of the hub and spoke system has increased the proportion of connecting passengers as compared to point-to-point passengers. This has introduced competition between airports formerly considered and regulated as natural monopolies: thus, passengers flying from Geneva to Kuala Lumpur may choose to connect in Zurich, Frankfurt, Paris or even London. Consequently, airports have begun to monitor closely the charges of their competitors and have sometimes engaged in price wars. They also compete with other airports to attract airline alliances.

124. All these developments have contributed to the growing congestion of airports and help to explain the development of "secondary hubs" and low cost airports. Secondary hubs are hubs located relatively close to the main hub to which important airlines channel part of their traffic, principally connecting traffic, or used to serve a regional market. Manchester (17,7 million passengers), Munich (21,2 million), Lyon (5,5 million), Marseille (6 million), Nice (8,6 million) and Basel (3,6 million) are examples of such secondary hubs.

(iii) Emergence of low-cost airports

125. Another new interesting commercial tendency is the emergence of "low-cost airports" which often host low-cost carriers such as Beauvais for Ryanair. These can be downtown airports or smaller regional airports. Stansted and Luton in the UK, Shannon in Ireland, Torp in Norway, Charleroi in Belgium and Scanda in Sweden are examples.

(iv) New constraints and opportunities in the design of airports

126. Airports are preparing for the arrival on the market of very large aircraft such as the A3XX or the stretched version of the Boeing 747. ICAO has defined a "code F standard" for a maximum dimension of 80 metres in length and wingspan. Although manufacturers have tried to the maximum extent possible to minimize additional investments for airports, dealing efficiently with the arrival of larger groups of passengers often entails significant investments in terminal facilities. It implies also new administrative arrangements with customs and immigration services for instance. An ACI study considers that retrofitting a facility for that purpose will cost between US$ 100 million and US$ 600 million.

127. Automated check-in procedures have not yet become generally available or wholly effective, but various experiments with "Smart Cards" and "Smart Tags" for luggage, and other electronic systems, are underway. IATA began work in February 2000 on industry standards through its "Simplifying Passenger Travel (SPT) Interest Group". The schema drawn up by this Group and set out below gives an idea of probable future developments in the automatization of passenger and baggage handling.

TABLE 27
Simplified Passenger Travel Process Schema

Reservation • The passenger will make the airline reservation using a personal travel smart card through his own PC, providing personal information, which can also be used for initial controls such as the need for a visa. • The card will also contain an option area for service preferences, frequent flier memberships and travel information. Seat selection, check-in location and itinerary will be provided on screen. • Payment is by credit card or direct bank transfer.
Check-in terminal • Passenger inserts travel smart card into reader at airport and enters flight number on an interactive screen. A biometric scan verifies identity match with travel card. • Reservation record accessed and boarding details (seats, gate, etc.) confirmed. • System prints a boarding card/baggage receipt and the passenger passes through the security check to the departure area.
Baggage checks • Baggage is placed on an automated device which registers the number of pieces/weight and produces a tag containing a radio frequency (RF) chip used to track the bag to destination. • The system will assess any excess baggage charge, which would be paid automatically by credit card. • Baggage may be checked before leaving for the airport at a dedicated secure baggage check-in facility. Again this uses the travel smart card, which checks flight number and name against the reservation.
Departure control checks • Passenger identity checking can be integrated into the one-stop check, with the details passed automatically to the exit control authority's system for review. • If more extensive information is required, the passenger will be moved into a separate area for further examination. But his would be the exception rather than the norm. • Check-in will also provide passenger and flight details to the control authorities at destination. The passenger may have to respond to a series of simple on-screen questions.
Airport shopping • Passengers wishing to shop would check-in at normal positions at least 45 minutes before departure, while fast-track passengers would check in at special counters 30 minutes or even less before departure, but might pay a premium for this service.
Aircraft boarding • The passenger will enter the gate lounge or board the aircraft by inserting his travel smart card and completing a biometric scan. • Simultaneously, this confirms to the automated baggage reconciliation system that the passenger is abroad and checked baggage is authorised to travel.
Arrival at destination • The passenger picks up luggage in the baggage hall and proceeds to an electronic exit gage which, unless there is some discrepancy or security issue, will be the only barrier to exiting the airport. • Again, the smart card and a biometric scan are used to confirm identity, while the RF baggage chip will be matched to ensure that correct bags have been collected. • Unless the control authorities wish to interview the passenger, the screen will tell the passenger to proceed and the gate will open into the arrivals hall. • If the passenger himself wishes to make a customs declaration or similar, this can be requested on the interactive screen. • The interactive screen can also be used to provide any further information, such as ground transport arrangements and meeting details.

Source: IATA quoted by Airline Business International, August 2000.

128. Finally, ICAO has now begun work on the establishment of a worldwide safety framework for airport including safety and design regulations. Details on this are not yet available.

B. THE INTERNATIONAL CHARGING SYSTEM UNDER GROWING STRAIN

129. This section will describe the internationally agreed charging system and the tensions it has been experiencing in recent years. The charging system is an essential feature of the operating conditions of airlines, determining how landing charges are established and levied. Table 28 shows charges levied in 1993-1998.

TABLE 28
Landing and associated charges, 1993-1998

	1993	1994	1995	1996	1997	1998
Amount (US$ million)	9260	10480	11440	11600	11210	11000
Proportion of operating charges (%)	4.1	4.4	4.5	4.3	4.1	3.9

130. The information will be drawn primarily from ICAO documents: 9582 "Airports Economic Manual"(1991); 9082/5 "Statements by the Council to contracting states on charges for airports and route air navigation facilities" (1997); and the relevant ANS/Conf documents.

1. The internationally agreed charging system

131. The ICAO charging principles are contained in two documents. The first is Article 15 of the Chicago Convention which is legally binding on ICAO members and therefore subject to the seldom used ICAO dispute settlement system. The second is constituted by the non-binding, but very detailed, Statement by the Council to contracting States on charges for airports, whose fifth and last edition is dated 1997 and which is about to be revised following the ANS/Conf conference.

(a) Article 15 of the Convention on International Civil Aviation

132. The basic policy established by ICAO in the area of airport (and air navigation facility) charges is expressed in Article 15 of the Chicago Convention as follows:

> "Every airport in a contracting State which is open to public use by its national aircraft shall likewise, subject to the provisions of Article 68, be open under uniform conditions to the aircraft of all the other contracting States. The like uniform conditions shall apply to the use, by aircraft of every contracting State, of all air navigation facilities, including radio and meteorological services, which may be provided for public use for the safety and expedition of air navigation.
>
> Any charges that may be imposed or permitted to be imposed by a contracting State for the use of such airports and air navigation facilities by the aircraft of any other contracting State shall not be higher,
>
> (i) As to aircraft not engaged in scheduled international air services, than those that would be paid by its national aircraft of the same class engaged in similar operations, and
>
> (ii) As to aircraft engaged in scheduled international air services, than those that would be paid by its national aircraft engaged in similar international air services.
>
> All such charges shall be published and communicated to the International Civil Aviation Organization: provided that, upon representation by an interested contracting State, the charges imposed for the use of airports and other facilities shall be subject to review by the Council, which shall report and make recommendations thereon for the consideration of the State or States concerned."

In other words, Article 15 sets out the following two basic principles, which are very comparable to those of the GATT on transit, and those of GATS access to and use of harbour services or telecommunications networks.

- Uniform conditions shall apply to the use of airport and air navigation facilities in a Contracting State by aircraft of all other Contracting States; (MFN)

- The charges imposed by a Contracting State for the use of such airports or air navigation facilities shall not be higher for aircraft of other Contracting States than those paid by its national aircraft engaged in similar international operations; (national treatment for foreign air carriers operating international flights as compared with national carriers operating international flights). A similar national treatment principle applies to aircraft not engaged in international scheduled traffic.

133. Two other aspects are also addressed in Article 15. The first is that States shall publish their airport (and route air navigation facility) charges, and also communicate them to ICAO, obligations which are comparable to the provisions of Article III:1, II:4 of the GATS, to paragraph 4 of the telecommunication annex

and to point 2.3 of the telecommunication reference paper. This information is collected and published annually by ICAO in the *Manual of Airport and Air Navigation Facility Tariffs* (Doc 7100).

134. Article 15 also provides for ICAO, upon representation by an interested Contracting State, to review charges imposed and make recommendations thereon to the State or States concerned. It should be observed that the Article specifically refers to representation by an interested Contracting State, not by an aircraft operator. However, as stated by ICAO itself, "Article 15 has never been used perhaps partly due to lack of awareness of its existence".[33] In another document ICAO even adds that this mechanism should preferably continue to be pre-empted".[34]

135. At the multilateral level respect for Article 15 itself should be ensured by the ICAO dispute settlement system contained in Articles 84 to 88 of the Chicago Convention, but this has been used only 4 times since 1944, and never in cases involving Article 15.

136. Finally, at bilateral level the majority of bilateral air service agreements include a clause related to user charges reflecting the basic principles of Article 15. However, the bilateral air services dispute resolution mechanism is also rarely used in the context of airport and air navigation charges, probably because they call for representation at the contracting State level rather than at the level of the users and providers concerned and can therefore be costly and lengthy.[35]

137. In practice however, according to the airlines, the provisions of Article 15 are frequently violated by States.[36] Examples include the non-publication of charges, together with a rebate or failure to apply the charges to the national airline while foreign airlines pay an arbitrary tariff. Other examples involve hidden rebates or gratuities to national airlines. A more sophisticated practice is to grant quantity rebates which *de facto* give an advantage to national airlines since they necessarily have more flights to and from the hub. Peak hour charging having a *de facto* national treatment discriminatory effect is another example. This practice has been condemned by an arbitral tribunal in 1989, on the basis of Article 15 of the Chicago Convention and of the Bermuda II Agreement in a case involving the UK and the USA on peak charges at Heathrow.

138. There are thus a number of difficulties in ensuring respect of the MFN, national treatment, publication, notification and consultation obligations contained in Article 15 of the Chicago Convention. This is even more apparent for the detailed charging principles of the Statement by the Council to Contracting States on charges for airports and route air navigation facilities, since this Statement is not binding.

(b) Statement by the Council to contracting states on airport charges (Doc. 9082)

139. Additional and more detailed policy guidance in the area of airport charges is provided in the Statement by the Council to Contracting States on Airport Charges, which is reproduced in Annex II. The Council Statement has been revised periodically by the Council following major international conferences on airport economics, with amendments published when required. However, the basic philosophy and principles expressed in the Council Statement have remained unchanged over the years.

140. It is worth noting, from a WTO perspective, that the prevention of discrimination between airlines is not the only purpose of this statement, which is in fact largely focused on the establishment of a finely tuned and very detailed economic balance between airlines and airports. It is closer in essence to the Telecom Annex and reference paper than to the provisions of the model maritime schedule on "access to and use of" harbour services.

141. As ICAO puts it, "the Council Statement differs in status from the Chicago Convention in that an ICAO Contracting State is not bound to adhere to the Statement's provisions and recommendations, unlike the articles of the Chicago Convention. However, since the recommendations in the Council Statement have been developed by major international conferences, there is a *strong moral obligation* for States to ensure that their airport cost recovery practices conform to the policies and philosophy set out in the Council Statement. This appears to be the *general practice* amongst ICAO Contracting States."

142. The only mention of an attempt to go further than the moral obligation mentioned by ICAO and to make these principles legally binding is to be found in a 1997 draft Directive adopted by the European Commission but

33 ANSConf WP/12 "prior consultations and handling of complaints" paragraph 4.6.

34 ANSConf WP/9 "economic regulation" paragraph 4.4.

35 See ANSConf WP/12 "prior consultations and handling of complaints" paragraphs 4.5 and 4.6.

36 For instance IATA's Director-General indicated in his speech at the recent ICAO ANSConf preparatory seminar (Montreal, 20 June 2000) that "we also know that agreeing on principles or even enforcing them is one thing but it is quite another for States to implement agreed policies: there is a poor record on the part of some States in relation to Article 15 of the Chicago Convention…".

still pending before the Council of Ministers[37] Airport operators are in favour of this transposition into EU hard law since this document is more "airport oriented" than the ICAO statement and recognizes the possibility of pre-financing the investment, peak hour charging, and of cross-subsidization of airports through the constitution of networks. These are the same reasons why the airlines do not favour such a transposition. In any case, the text of the draft Directive as it stands may have to be redrafted in the light of the new version of document 9082, following the work of ANSConf. This new version is not expected to be final before the next ICAO General Assembly in autumn 2001.

143. The principles contained in the Council Statement address such subjects as the cost basis for airport charges, airport charging systems, passenger-service charges, security charges, noise-related charges, consultation with users regarding charges and airport planning, and the development of revenues from concessions and rental of premises.

144. Among the basic principles included in the Council Statement is that it is desirable:

- where an airport is provided for international use, that the users ultimately bear their full and fair share of the cost of providing the airport; and

- also that in determining the cost basis for airport charges, the cost to be shared be the full economic cost, including depreciation and interest, to the community of providing the airport and its ancillary services, but allowing for all revenues, aeronautical or non-aeronautical, accruing from the operation of the airport (Doc 9082, paragraphs 11 and 12 (i)).

145. The Council Statement (Doc 9082, paragraphs 20 and 21) also actively encourages the full development of revenues from non-aeronautical activities in general.

146. Other principles and recommendations of particular relevance in the context of the cost basis for airport charges and charging systems are:

- that airports should maintain accounts that provide a satisfactory basis for determining and allocating the costs to be recovered, and should provide adequate financial information to the users (Doc 9082, paragraph 11);

- that the proportion of costs allocable to the various categories of airport users should be determined on an equitable basis, so that no users shall be burdened with costs not properly allocable to them according to sound principles (Doc 9082, paragraph 12 (v));

- that charges should not be imposed in such a way as to discourage the use of facilities and services necessary for safety (Doc 9082, paragraph 13 (ii)); and

- that landing charges should be based on aircraft maximum permissible take-off weight (Doc 9082, paragraph 14 (i)).

147. Special attention is invited to the principles established in the Council Statement concerning security charges (Doc 9082, paragraph 16), and in particular to the principle that any charges or transfers of security costs should be directly related to the costs of providing the security services concerned and should be designed to recover no more than the relevant costs involved (paragraph 16 (iii)).

148. This is an exception from the general principle (Doc 9082, paragraph 12 (vii)) that airports may produce sufficient revenues to exceed by a reasonable margin all direct and indirect costs. (The only other exception from this general principle applies to noise-related charges, which similarly should be designed to recover no more than the costs applied to the alleviation or prevention of noise problems at airports where such problems are being experienced (Doc 9082, paragraph 17 (i)).

149. Trying to ensure respect of the charging principles of document 9082 and therefore challenging the level and structure of airport charges is a traditional function of IATA. IATA sets up, coordinates and advises negotiating teams of airlines to discuss those items with airport authorities or civil aviation authorities if the airport is not autonomous. IATA is even able to quantify the savings for airlines produced by this activity.

150. Airlines consider therefore that the enforcement of the charging principles requires constant vigilance. It should also be borne in mind that, in spite of its length, the Statement is often ambiguous and has led to diverging interpretations between airlines and airports.

37 Com(97) 154 final, OJ C 257, 22.8.1997, p.2.

2. A system under strain

151. The privatization or commercialization of airports has added a new dimension to this picture. For instance, airlines have engaged in lengthy discussions with the consortium operating the Argentinian airport system on the risk of escalation of charges and the alleged absence of a cost-related budget justifying the charges.[38] (Aeronautical charges have been capped for five years but non-aeronautical charges have not and airlines consider that non-aeronautical services provided in a monopoly situation, such as accommodation for airlines - offices, check-in counters, lounges - should also be somehow capped).

152. More widely, as the Latin American region has been a test case for the movement of commercialization, IATA has taken the initiative of a "Santiago Statement" dated 28 March 2000 (see ANSConf WP/104) listing a series of considerations that States should take into account in the privatization process. These include: *inter alia* the definition of the responsibilities that the State should retain to guarantee user rights (point 1); the application of fair and reasonable charges and rates established in all transparency in relation with related operational costs and the investment actually made by the private concessionaire (point 4); the need for regulatory mechanisms in order to control the operations of the contract and the application of fair prices (point 7); and finally (point 8) compliance with the Chicago Convention (Article 15) and adherence to the charging policies stated in document 9082 (the Council Statement).

153. The Latin American Civil Aviation Commission (LACAC) had also issued a recommendation on airport privatization (LACAC A13–4 see ANS Conf WP/89) which according to its own terms largely coincides with the Santiago Statement.

154. More generally the position of IATA, favourable in principle to the commercialization movement but demanding a strong regulatory oversight and showing extreme caution on its commercial consequences such as peak hours charging, pre-financing of investment and marginal tariffication, has been expressed in detail in various ANS Conf documents (WP/26, 80, 81, 82, 83, 85). Airports Council International, the international association of airports, has of course a different point of view on these issues (see ANS Conf WP/48, 50, 51, 52, 53, 54 and 55) and has in particular insisted on the need to abolish the single till - i.e. the obligation to use non-aeronautical revenues to reduce aeronautical charges).

155. For its part, ICAO acknowledges the problem of growing disregard for the charging principles. For instance, in its presentation to the ANS Conf conference it indicates that the monopolistic characteristics and capacity limitations of airports and air navigation services, together with the liberalization of air transport services, have in certain circumstances given rise to questions regarding the application of basic non-discrimination principles and equitable cost recovery practices.

156. The result of the ICAO questionnaire seems to confirm those concerns, since out of the 75 responding countries only 38 confirmed that they follow the ICAO cost recovery policy in setting charges for airports.[39] ICAO lists the consequences: overcharging for services provided and charges not being properly cost-based; lack of transparency in particular with regard to revenues and expenses; lack of efficiency in airport operations; inconsistent standards of service; delay by airports in investing in new infrastructures to allow for traffic growth; and denial of access (ANS-Conf WP/9, paragraph 3.3).

157. In considering possible solutions ICAO first recalls that the State has responsibilities under the Chicago Convention which it cannot delegate. This is the case for the enforcement of the non-discrimination principles of Article 15 of the Chicago Convention but also in Article 28, which makes the State responsible for the standards of the facilities and services provided.

158. The following developments will describe the solutions suggested by ICAO each proposal made, the discussion that took place in Montreal, and the decision that was taken.

159. The first ICAO proposal was to insert a paragraph in the Council Statement recommending that States consider either individually or in cooperation with other States, the establishment of an independent economic regulatory authority to oversee the financial practices of the airports and/or air navigation services providers. This regulatory body should be empowered to intervene when necessary. Its functions would include: preventing over-charging and other monopolistic practices; ensuring transparency and assessing efficiency in the operation of the providers; reviewing standards and quality of services providers; and monitoring invest-

38 See among others *Airline Business International*, September 1998.

39 (ANS-Conf WP/9, paragraph 2.2.2, see appendix B, page 9 for the individual and regional breakdown of the answers).

ments planned in relation to traffic forecasts (WP/9, paragraph 3.3 to 3.8 and 4.2).

160. The debate on this proposal led first to the conclusion that such an autonomous regulatory body may not be necessary since generic competition law was already applied to the providers. It was also felt that the purpose of regulatory oversight should be wider than financial practices alone. It was agreed that the objectives listed in WP/9 as well as others discussed in the Conference could serve as a basis for an illustrative set of principles that could be incorporated in ICAO guidance materials. While agreeing to this additional guidance, the Conference nevertheless recognized that States would choose their own regulatory regimes and mechanisms according to their particular needs and circumstances and that therefore, before establishing an independent authority, they may wish to give consideration to the costs of regulation and the need for regulatory simplicity. (WP/115 points 4.6.1 to 4.6.4 and recommendation 4/4).

161. The second ICAO proposal was to strengthen its policy regarding consultations with an emphasis on guidance aimed at pre-empting disputes rather than on dispute resolution. This would imply the inclusion in document 9082 of a Statement to the effect that where an autonomous body or entity is established, whether by a government or private interests, to operate an airport(s) and/or air navigation services, the State should stipulate as a condition for the approval of the new body or entity that it observes all relevant ICAO policies and practices, notably those specified in the Chicago Convention, its annexes and document 9082 (WP/12, point 5.2.1) .

162. During the discussion, some delegates considered that this condition was too strong and that it should be formulated with a more permissive tone. The Conference agreed that the text be amended to reflect the mandatory nature of the obligations that States retain under the Chicago Convention but the less mandatory nature of the ICAO-recommended policies and practices (WP/115 point 4.2.1 and recommendation 4/1).

163. The third ICAO proposal is the establishment of a "first resort mechanism", that is to say a neutral party at local level to pre-empt and resolve disputes before they enter the international arena. This function could be assumed either by the general supervisory body suggested above or separately by an ad hoc body (WP/12 point 3.1 and 3.2).

164. During the discussion, the Conference agreed that the concept of such a first resort mechanism for dealing with complaints should be included in the Council Statement and as guidance in the Airports Economics Manual (document ICAO No. 9582), (WP/115 point 4.2.2 and recommendation 4/2).

165. The conference also endorsed a proposition made by the European Conference of Civil Aviation (ECAC) in document WP/69 to include in document 9082 guidance on the principles of best commercial practices for airport and air navigation systems which could cover *inter alia* quality and timeliness of service, assessment of investment proposals, consultation processes, accounting practices, subsidization, development plans and treatment of users (ANSConf WP115, recommendation 4/5).

166. It will be possible to have an overview of the new disciplines when ICAO is finished redrafting the Council declaration and had it approved. This is expected to take place at the spring 2001 meeting of the ICAO Council or the autumn meeting of the General Assembly.

167. The question of making Statement 9082 compulsory at worldwide level has never really been discussed. As a preliminary reaction, airlines could live with a compulsory Statement if it remained as it stands (including the "single till" but excluding the prefinancing and the modulation according to economic principles) and airports could not. Airports place their hope in the redrafting of the statement and hope that the study they managed to obtain on the "single till" will lead finally to the disappearance of this concept.

168. In total, it appears clearly that the airport charging system is based on principles in essence similar to those of GATS, although much more sophisticated and detailed. In spite of this degree of detail and of its ability to take into account, through periodical redrafting, the new economic and regulatory developments, the system seems to lack the necessary enforcement and dispute settlement mechanisms to produce its full effects. In that respect it is in a situation similar to the WIPO intellectual property conventions before the creation of the TRIPS Agreement or of interconnection rules in telecommunication before the creation of the reference paper.

ANNEX I

Airport Management Contracts and Operations, 1993 -2000

Company	Activities
ADC (Airport Development Corporation), Canada	Holds a 34% stake in the project company for Terminal 2/B at Budapest-Ferihegy Airport (Hungary)
ACSA, South Africa <27> (11) 453 9354	Manages Pietersburg's Gateway International Airport and Pilanesberg Airport, Sun City (South Africa) in addition to its own nine airports
ACV (Airport Consulting Vienna) & **Vienna International Airport**, Austria Fax: <43> (1) 700 72 636	Vienna Airport runs Voslau/Austria and part-owns Budaörs/Hungary; joint-venture partner in the BOT contract for a new international terminal at Istanbul's Atatürk International Airport (Turkey), holding a 5% stake in TEPE Akfen-VIE Investment, Construction & Operation Inc.; interested in operating airports in Germany (e.g. Eberswalde-Finow near Berlin and Berlin-Schönefeld), Greece (Eastern Crete), Italy (Trieste), South Africa and Argentina;
ADM Capital Inc., Canada (owned by ADM – Aéroports de Montréal) Fax: <I> (514) 394-7356	Member of a consortium that oversees the financing, construction and operation of the new terminal at Budapest Airport (Hungary); won the concession for the Vatry cargo airport in France as a member of the SEVE consortium formed with SNC-Lavallin of Canada, Via GTI, Sogarls, Pingat, Iénair, and the CCIs of Reims/Epernay, Chalons-en-Champagne and Troyes of France; holds 23.3% of SEVE. Interested in managing airports in Latin America and South Africa
ADP Management, France (airport management holding company owned by Aéroports de Paris (59%), Groupe GTM (34%), banks (remainder) Fax: <33> (1) 4335 7443	ADP owns and operates 14 airports and airfields in the Paris region; ADP Management has a 35% stake in Aéroports du Cameroun (ADC), which manages three international and four provincial airports; 34% stake in Aéroports de Madagascar (ADEMA), which manages twelve airports; operates Phnom Penh Airport in Cambodia as a majority partner (60%) of CAMS, which also provides ground-handling services at the airport; partner in SOGEAC which runs Conakry Airport in Guinea under a five-year concession and Kan Kan Airport; acquired a 25% stake in SAB S.A., the operating company of Liège Airport in Belgium, specializing in air freight and charter flights. Together with GTM, a subsidiary of Suez Lyonnaise des Eaux, preferred joint bidder for up to 49% of the shares of a yet-to-be privatized Sukamo-Hatta International Airport, Jakarta/Indonesia. Will manage and operate Mersa Alam Airport in Egypt when completed in 2001. Interested in U.S. airports (Boston-Logan Terminal 1) and Latin American airports (together with Groupe GTM), in Portuguese and Italian airports, Sofia Airport/Bulgaria, Shanghai-Pudong/China, and in St. Petersburg/Russia (together with U.S. investors).
AENA, Spain Fax: <34> (91) 321 3001	Owns 38% of Aeropuertos del Caribe which manages Barranquilla Airport in Colombia; handles the former Schiphol involvement in Cartagena Airport/Colombia; owns 25.5% of the Mexican-Spanish consortium which acquired a 15% stake in Grupo Aeroportuario del Pacifico (GAP) package of Pacific airports in Mexico, the other partners being Unión Fenosa, Dragados, and the Angeles Group; involved in building a new airport at Samaná/Dominican Republic; interested in managing other airports in Colombia as well as Montevideo/Uruguay
Aeroporti di Roma SpA, Italy Fax: <39> (6) 6595 3776 (owned 54.2% by the State holding corporation IRI through Cofiri and Fintecria; listed on the Milan stock exchange since 1997)	Owns and operates the Rome airports Flumicino and Clampino (Italy); acquired the Alitalia stake (15 %) in Aeroporto di Genova SpA (Genoa Airport) and a 9% stake in SACAL (Lamezia Terme Airport); won the tender for South African airports and now holds 20% of ACSA, with an option to acquire another 10%; interested in managing airports elsewhere in Italy and in Latin America
Aer Rianta, Ireland Fax: <353> (1) 844 5113	Owns and operates three Irish airports (Dublin, Shannon, Cork); holds a 40% stake in Birmingham International Airport Ltd/U.K. together with NatWest Ventures (ARI/NWV Ltd) and 40% in the Air Partners GmbH joint venture with Hochtief at Düsseldorf Airport (Germany); interested in other European airports; Aer Rianta International (ARI), (Ireland) has duty-free operating and management contracts at airports in Bahrain, Canada/Montreal-Dorval + Mirabel, Cyprus/Lamaca + Paphos, Kuwait, Lebanon/Beirut, Pakistan/Karachi, Russia/Moscow + St Petersburg, Syria/Damascus, and Ukraine/Kiev, plus consultancy contracts
Air-India, India	Holds a 5% stake in Cochin International Airport Ltd in India

Company	Activities
Airis Corp., USA Fax: <I> (404) 874-6545 (third-party developer)	Operates a USD 100 million two-building cargo facility at New York's JFK International Airport for the Port Authority of New York & New Jersey, a mixed-use facility (offices/ cargo) for LanChile at Miami International Airport, and the International Air Cargo Center (IACC) at Newark International Airport for six major airlines, (USA)
Airport Group International, **Inc. (AGI)**, USA Fax: <I> (818) 409 7979 AGI was jointly owned by Lockheed Martin (38.7%) and Soros Capital (28.4%). Strategic investors in AGI include GE Capital Services (9.4%), the DFS Group (3.5%), SunAmerica and United Infrastructure, a joint venture of Bechtel and Kiewit (4.7%); TBI plc in the U.K. acquired AGI on 20 Sept. 1999 by paying USD 45.4 million in cash and USD 98 million in new TBI shares	Manages 29 airports, including Burbank-Glendale-Pasadena Airport, CA (since 1978), Albany County Airport, NY; Rickenbacher Int. Airport; Columbus/OH; Stewart International, Newburgh/NY; the International Terminal (Concourse E) at Atlanta-Hartsfield, GA; and under a five-year contract the Trillium Terminal at Pearson International Airport, Toronto/Canada (which AGI had owned and sold back to the Government in early 1997); Haikou-Mellan Int. Airport in Hainan/China; Perth/Australia (through Airstralia Development Group, of which AGI owns 16%); Darwin, Alice Springs, Tennant Creek/Australia through Airport Development Group (of which AGI owns 49%); Hobart International, Tasmania/Australia through HIAPL; member with a 25% share in a consortium that won a 30-year concession for London Luton Airport (U.K) and also includes Bechtel Enterprises (10%), Barclays Private Equity (32.5%), Barclays UK Infrastructure Fund (32.5%); 20-year concession to manage San José International Airport in Costa Rica together with local partners; preferred bidder for the new Ciudad Real Airport near Madrid/Spain; interested in other Latin American and European air-ports
Alpar AG, Switzerland Fax: <4l> (31) 960 2201	Owns and operates Bern Airport, (Switzerland) since 1985
Angels Group, Mexico (Grupo Angeles, 100% Mexican-owned)	Leading partner of the consortium which won a concession for the Grupo Aeroportuario del Pacifico (GAP) package of Pacific airports in Mexico, the other partners being A-ENA, Unión Fenosa, and Dragados
APAC (Australia Pacific Airports Consortium), Australia	Operates Melbourne-Tullamarine International Airport and Launceston Airport (Australia); AMP, Australia's largest insurance and financial services company, owns 49.9% of APAC, BAA 25.1 %, and Axiom Funds Management 25%
Arkia Israeli Airlines, Israel	Owns and operates the civil part of Ovda Airport, 40 km north of Ellat, (Israel)
ATCO Airports Ltd, Canada (50:50 Joint venture of ATCO Frontec Corp. and Winnipeg Airport Services Corp.)	Operates Edmonton City Center Airport (since January 2000) and the airports at Castlegar, B.C.; North Bay, Ont.; Iqaluit; Moose Jaw, Sas.; and St. Andrews, Man., all in Canada; also provides security services at Winnipeg Int. Airport
BAA International (wholly owned by BAA plc, U.K.) Fax: <44> (171) 932 6699 BAA USA, Inc. Fax: <I> (703) 708-7991 (BAA plc has been a private company since 1987)	Owns and operates seven U.K. airports; manages the entire airport system at Indianapolis/IN and the Harrisburg/PA International Airport and the Capital City/PA reliever airport in the USA (10-year contracts) and the concessions at Pittsburgh Airport/USA and in Newark's Terminals A & B (15-year contracts); 65% stake in GESAC, the Naples/Italy airport company; owns 15.1 % in APAC (Australia Pacific Airports Corporation) which runs Melbourne International Airport and Launceston Airport/ Australia under a 50-year lease; interested in Indonesian, Latin American, and other Italian airports; signed a contract with the CIR holding of Italy's De Benedetti group for the acquisition and development of Italian airports, including ADR (Rome) and entered a joint venture in China to manage airports
Baden-Airpark AG, Germany Fax: <49> (7229) 662 109 (owned by Schmider-Kleiser Holding, now bankrupt)	Owns Baden-Airport GmbH, the operator of Baden Airport Karlsruhe/ Baden-Baden, (Germany), an ex-Canadian air base in the upper Rhine valley
Bangkok Airways, Thailand	Operates Samui International Airport, (Thailand) under a 20-year lease agreement
Barclays Capital, U.K. (investment division of the Barclays Group)	The Barclays Group has a 65% stake in the consortium which acquired a 30-year concession to operate London-Luton Airport from the Luton Borough Council (U.K.). Barclays Private Equity holds 32.5%, Barclays UK Infrastructure Fund 32.5%; other consortium members are AGI and Bechtel Enterprises
Bechtel Enterprises & **Bechtel Civil**, USA AGI which manages San José Airport in Costa Rica	Holds a minority stakes in the London-Luton consortium (U.K.), in Consorcio
Bharat Petroleum, India	Holds a minority stake in Cochin International Airport Ltd in India
Bologna Airport (SAB), Italy	Owns about 60% of SEAF, the operator of Forli Airport, (Italy)
Bordeaux CCU Airport, France Fax: <33> (5) 5634 2301	Partner in SALT (Société Aéroportuaire de Lomé-Tokoin), the operator of Lomé-Tokoin Airport in Togo

Company	Activities
British Aerospace plc, U.K. Fax: <44> (1252) 383 000	Owns the Filton airfield near Bristol, U.K.
British Airways, U.K.	Owned the Plymouth and Newquay airports through Brymon Airways, (U.K.); now sold to Sutton Harbour Holdings
CAAS, Singapore <65> 545 6222	Owns and operates the Singapore airports; interested in managing foreign airports via Singapore Changi Airport Enterprise (SCAE)
Capital Airport Group, Australia	Owns and operates Canberra International Airport in Australia
Catullo SpA, Italy	Operates the Verona-and Brescia airports in northern Italy
Cintra, Spain (Concesiones Infraestructuras de Transporte, S.A.; subsidiary of the Madrid-based Grupo Ferrovial, S.A.) Fax: <34> (91) 555 1241	Owns 24.5%of the Tribasa consortium which won the concession for Mexico's nine south-eastern airports – Aeropuertos Sureste ASUR (Cancún, Cozumel, Huatulco, Mérida, Minatitlán, Oaxaca, Tapachula, Veracruz, and Villahermosa), the three other partners are Copenhagen Airports A/S, (Denmark), Grupo Tribasa (Mexican contractors), and GTM of France; winner of the Antofagasta Airport/Chile and Niagara Falls Airport/USA concessions
Comarco Services, USA Fax: <I> (714) 796-1802	Manages twelve small-carrier and general-aviation airports in the United States
Connaught Airport Development Co. Ltd, Ireland Fax: <353> (94) 67 994	Operates Knock International Airport in Co. Mayo/Ireland which was privately financed and built
Copenhagen Airports A/S, (through Copenhagen Airport Development International A/S- CADI), Denmark Fax: <45> (32) 313 100 (Copenhagen Airports A/S has been a private company since 1994)	Operates the Copenhagen-Kastrup and Roskilde airports, (Denmark); through its 25.5% equity stake in ITA S.A., partner in the Tribasa consortium which won the 50-year concession contract for nine airports in Mexico's south-eastern region - Aeropuertos Sureste (ASUR); bought a 33.3% share in Rygge Sivile Lufthavn A/S in Norway and plans to convert the Rygge military airfield into a civil airport; was interested in the Berlin (BBI) airport project, (Germany) and still is in Latin American airports
Corporación Aeropuertuaria, Dominican Republic	Operates Punta Cana International Airport (PUJ) del Este, (Dominican Republic)
Diversified Asset Management Group, USA	Will own and develop Brown Field near San Diego, California, (USA)
Dragados y Construcciones, Spain Fax: <34> (91) 279 2168	Owns 29% of the Mexican-Spanish consortium which acquired a 15% stake in Grupo Aeroportuario del Pacifico (GAP) package of Pacific airports in Mexico, the other partners being AENA, Unión Fenosa, and the Angeles Group; member of the consortium which operates the international terminal at Santiago de Chile's Arturo Benitez International Airport; participates in the management of Bogotá's Eldorado Airport in Colombia
Diisseldorf Airport – FDG, Germany Düsseldorf Express Airport Fax: <49> (211) 4212205	Majority-shareholder (70%) in Mönchengladbach Airport, which it runs as Düsseldorf Express Airport, (Germany)
FAA, USA	Owns Atlantic City Airport (USA), which is managed by Johnson Controls
FAC – Federal Airports Corporation, Australia Fax: <6I> (2) 9667 9962	Has operated 21 Australian airports, of which all except Sydney and four smaller ones have been sold; has provided management assistance at SSR International Airport, Mauritius through AMS – Airport Management Services Ltd.
FirstBus, U.K.	Owns 51 % of Bristol International Airport, (U.K.); plans to acquire more airports
Frankfurt Airport – FAG Airconsult, Germany Fax: <49> (69) 690 55441	Acquired a 20% stake in Flughafen Hannover GmbH, with Nord/LB holding 10% and the remaining 70% continue to be owned equally by the State of Lower Saxony and the City of Hannover; acquired a 64.9% stake in Flughafen Halin GmbH, the operator of the Hahn/Germany cargo airport, and 74.9% of the Hahn Holding company; holds a 51% stake in the Saarbrticken Airport operating company; holds a minority stake in the FAL cargo handling company at Leipzig/Halle Airport; has been providing management assistance at Sharjah International Airport since the 1970s; provides advisory services for Athens International Airport S.A. at the new Athens airport (through FASP – Flughafen Athen-Spata Projektgesellschaft mbH); handling contracts at seven Spanish airports through Ineuropa Handling U.T.E., in which FAG has a 20% stake; holds a stake in Goldair Aviation Handling in Athens/Greece; holds a 10% stake in African Cargo Handling Ltd of Nairobi/ Kenya; holds a 25% stake in the Philippine International Air Terminals, Co. (PIATCO) consortium for building and operating Terminal 3 at Ninoy Aquino International Airport, Manila; interested in managing other airports throughout Europe and Latin America

Company	Activities
Gautschi Group, Switzerland	Owns and operates St. Gallen/Altenrhein Airport in Switzerland through Airport Altenrhein AG
GlobeGround Berlin GmbH (ex-B.L.A.S. GmbH), Germany in Latvia Fax: <49> (30) 3816517	Will build, operate and own a cargo terminal at Riga International Airport
Groupe GTM, France (GTM Concessions) Fax: <33> (1) 4695 7570 (subsidiary of Suez Lyonnaise des Eaux)	Partner in ADP Management (34%), the airport management subsidiary of Aéroports de Paris. Holder of the concession to operate Phnom Penh Airport in Cambodia. Minority shareholder in the Tribasa consortium which won the concession for Mexico's nine south-eastern airports (Cancún, Cozumel, Huatulco, Mérida, Minatitlán, Oaxaca, Tapachula, Veracruz, and Villahermosa), the three other partners are Copenhagen Airports A/S, (Denmark), Grupo Tribasa (Mexican contractors), and Cintra of Spain; Together with ADP, preferred joint bidder for up to 49% of the shares of a yet-to-be privatized Sukarno-Hatta International Airport, Jakarta/Indonesia.
Hainan Airlines, China	Owns 25% of Haikou-Mellan International Airport (China); George Soros has a 21.2% stake
Hochtief AirPort GmbH, Germany Fax: <49> (201) 824 2777	Owns 36.1 % of Athens International Airport S.A. (Greece), the operator of the new Athens airport at Spata, (Greece); purchased a 50% stake in the Düsseldorf Airport company together with Aer Rianta of Ireland. Their joint-venture company Airport Partners GmbH is owned 60% by Hochtief and 40% by Aer Rianta; was leader of the preferred consortium bidding for the new BBI–Berlin Brandenburg International Airport, (Germany) and the management of the three existing Berlin airports, which are to be replaced ultimately by a 100% privatized BBI; in the consortium, Hochtief has a share of 56.4%, with Flughafen Frankfurt Main AG holding 28.6%, Bankgesellschaft Berlin 10% and ABB Airport Technologies 5% (retendering planned)
Hutchison Port Holdings, Hong Kong Authority and has management control	Owns Grand Bahama Airport jointly with the Grand Bahama Airport Authority and has management control (Bahamas)
IIU, Ireland Fax: <353> (1) 670 0925 (International Investment & Underwriting Ltd, owned by Dermot Desmond)	Owns and operates London City Airport, U.K.
Infrastructure Management Group & Rothschild, USA	Manages Allegheny County Airport, PA/USA
Infratil International Ltd, Australia **Infratil NZ Ltd**, New Zealand <64> (4) 473 2388 (subsidiaries of H.R.L. Morrison & Co., Brisbane, owned 25% by Lendlease Corp.)	Through Infratil Australia Ltd holds a 49.5% stake in Airstralia Development Group, which manages Perth Airport, and 51 % in Airport Development Group (ADG) which manages Alice Springs, Darwin and Tennant Creek in Australia; partnered with AGI in these projects; interested in a stake in Hamburg Airport/Germany Infratil NZ owned 1% of Auckland Int. Airport Ltd before AIAL went public in July 1998 and holds a 66% stake in Wellington Int. Airport Ltd (WIAL), (New Zealand) through the NZ Airports consortium, in which Infratil NZ has a 40% stake
Inter-Consult, Tanzania	Owns 2% of Kilimanjaro Airports Development Company (KADCO), (Tanzania), operated under a 25-year concession together with Mott MacDonald of the U.K. (75%) and the Tanzania Government (1%)
Inverness Air Terminal Ltd, U.K. (partners in the company are the M.J. Gleeson Group, Canmore Partnership, Noble & Company, and MPM Adams)	Has privately financed a GBP 9 million terminal refurbishment project at Inverness Airport in Scotland, U.K. under the Private Finance Initiative (PFI)
Johnson Controls Worldwide Services, Inc., Airport Management Services Division (owned by American Port Services), USA Fax: <I> (201) 288-5143	Manages and develops Teterboro Airport under contract to PANY&NJ and manages Atlantic City International Airport in New Jersey; Westchester County Airport and the 60th Street Metroport heliport in New York City; the FBO AvCenter at the Greater Pittsburgh International Airport; and Johnson Controls AvCenter at Sandiford Field, Louisville/Kentucky, (USA)
Kallax Cargo AB, Sweden	Has acquired the Luleå-Kallax air base in northern Sweden for development into a cargo centre
Kato Investment Group, Egypt	Developing the new El Alamein Airport in Egypt on a BOT basis
John Laing Investments, U.K. Fax: <44> (18 1) 906 5577	Equity holder in Birmingham International Airport – BIA Ltd (4%) in the U.K. and in the Adelaide Airport Ltd consortium which owns the Adelaide and Parafield airports in Australia

Company	Activities
London Supply, Argentina Fax: <54> (1) 111443	Owns and operates Ushuhaia Airport/Tierra del Fuego and five airports in Neuquén province in Argentina; member of the Consorclo Aeropuertos Internacionales which owns and operates the new terminal at Punta del Este Airport in Uruguay; partners are Impregilo SpA/Italy, NAPA/Canada, and Carlos Ott & Associates/Argentina; builds and manages a new duty-free zone at Puerto Iguazúl on the border with Brazil
Lufthansa Cargo, Germany Fax: <49> (69) 6969 1185	Has a 29% stake in a consortium building and operating a cargo terminal at Shanghai's new Pudong International Airport(China)
Lyon CCI/Airport, France Fax: <33> (4)	Manages Grenoble-St. Geoirs Airport in addition to the two Lyon airports, Satolas (international) and Bron (general aviation)
Malaysia Airports Bhd, Malaysia Fax: <60> (3) 755 2379	Operates 21 airports in Malaysia; holds a 40% stake in CAMS which operates Phnom Penh-Pochentong Airport in Cambodia; interested in South African airports
Manchester Airport plc, U.K. Fax: <44> (161) 489 3647	Manages the Adelaide and Parafield airports in Australia owned by the Adelaide Airport Ltd consortium, together with Serco Asia Pacific; acquired an 82.7% stake in the former municipally-owned Humberside Airport, (U.K.), interested in Mexican airports
Marseille CCI/Airport, France Fax: <33> (4) 4214 2724	Partner in SEGA.P, a manager of airports in Africa (see there)
Mott MacDonald Group, U.K. Fax: <44> (181) 681 5706	Majority stakeholder (75%) of Kilimanjaro Airports Development Company (KADCO), (Tanzania), operated under a 25-year concession together with Inter-Consult of Tanzania and the Tanzania Government
National Car Parks, U.K.	Equity holder in Birmingham International Airport – BIA Ltd (4.25%) in the U.K.
National Express Group Plc, U.K. (Airports Division) Fax: <44> (1332) 263 791	Owns the East Midlands & Bournemouth airports in the U.K.; provided management consultancy at Subic Bay/Philippines for a 12-month period; signed a lease agreement to operate Stewart International, NY/USA; interested in Australian, Latin American and other U.K. airports
Ogden Aviation, USA Fax: <I> (212) 868-5895	Managing partner (29%) in the MASC-Ogden ground-handling joint venture, Macau International Airport, (Macau); partner in the Aeropuertos Argentina 2000 S.A. consortium, (Argentina) that purchased 33 Argentinian airports; BOT partner in runway consortium at Bogotá Airport/Colombia; Managing partner in the 'Aeropuertos Dominicanos Siglo XXI, S.A.' consortium that manages four airports in the Dominican Republic: Santo Domingo ('Las Americas'), Puerto Plata ('Gregorio Luperón'), Samaná ('Arroyo Barril'), and Barahona ('Maria Montez'); Partner in ADR Handling at the Rome airports, (Italy); manages the fuel facilities at Tocumen International/Panama and San Juan-Luiz Muñoz Marin/Puerto Rico; operates cargo terminals, e.g. in Amsterdam (The Netherlands), Barcelona, Madrid (Spain), Prague (Czech Republic), and other airport facilities. Altogether, Ogden is present at 121 airports in 25 countries.
Peel Airports Ltd, U.K. (subsidiary of Peel Holdings, the owners of the Manchester Ship Canal) Fax: <44> (161) 629 8332	Owns 76% of Liverpool Airport, U.K. after having acquired British Aero space (Liverpool Airport) Ltd; acquired the Doncaster-Finningly RAF station in South Yorkshire which is to be transformed into a regional airport (Doncaster International)
The Perot family, USA	Owns Alliance Airport in Texas, (USA) where American Airlines has built a USD 480 million maintenance base
Piaggio Aero Industries, Italy Fax:<39>(010)65 0160	Owns 13% of SAT, the operator of Pisa Airport, Italy
Regional Airports Ltd, U.K. Fax: <44> (125 6) 862 115	Owns and operates Southend Airport (London Express Airport), Exeter Airport, and London Biggin Hill Airport, U.K.
San Francisco Int. Airport, USA Fax: <I> (415) 794-5383	Leads the "Inter Airport consortium which has won a 20-year concession to operate the four international airports in Honduras (Tegucigalpa-Toncontín, San Pedro Sula-La Mesa/'Ramón Villeda Morales', La Celba/Bay Islands-Golosón, and Roatán/Bay Islands 'Juan Manuel Gálvez')
SATS, Singapore (Singapore Airport Terminal Services (Pte) Ltd) Fax: <65> 542 1197	Has a 24.5% stake in Asia Airfreight Terminal Co Ltd (AAT), Hong Kong International Airport, (Hong Kong, China) and a 30% stake in Tan Son Nhat Cargo Services Ltd(TCS), Ho Chi Minh City/Vietnam; has a joint venture in Beijing/China since 1995, Beijing Aviation Ground Services (BGS)
SCAE, Singapore (Singapore Changi Airport Enterprise Pte Ltd) Fax: <65> 545 5369	Acquired a 7.14% stake in Auckland International Airport in New Zealand, previously held by North Shore City Council

Company	Activities
Schiphol Group, The Netherlands (N.V. Luchthaven Schiphol, the parent, is owned 75.8% by the State of the Netherlands, 21.8% by the City of Amsterdam, and 2.4% by the City of Rotterdam) Fax: <3l> (20) 6014602	Schiphol Group owns and operates the Amsterdam-Schiphol and Lelystad airports, operates Rotterdam Airport, and acquired a 51% stake in Eindhoven Airport, all in The Netherlands; Schiphol Group may take a stake in the new Brussels International Airport Company (BIAC) with whom it has a co-operative IT and communications alliance; through its Schiphol International division, it is a partner in the management companies of Brisbane Airport in Australia (15.38% stake in BACL, which has a 50-year lease) and of Cartagena Airport/Colombia (now handled by AENA of Spain); management contract with Angkasa Pura II/Indonesia (nine airports), Banjul-Yundurn Int./The Gambia, and Kilimandjaro Int./Tanzania; through Schiphol USA LLC manager of the future International Air Terminal at JFK International, New York with partners LCOR Inc. and Leliman Brothers; holds a 1% stake in Vienna International Airport plc, (Austria); formed an alliance with Flughafen Frankfurt AG, (Germany); interested in managing other European, U.S., Latin American and Australasian airports
SEA SpA - Milan Airports, Italy Fax: <39> (2) 7485 2054	Owns and operates the two Milan airports, Linate and Malpensa, as well as Bergamo-Orio Airport (49.98% share of Sacbo), (Italy); acquired 33 airports in Argentina as a member of the Aeropuertos Argentinas 2000 S.A. consortium (28%); acquired a 12.5% stake in Rimini Airport – Aeradria from Alitalia, raising its stake to 30%; owns 5% of GESAC, the operator of Naples Airport, and 0.96% of SAGAT, the operator of Turin Airport; interested in managing airports elsewhere in Italy (e.g. Trieste, Palermo) and Latin America; provides consultancy in Italy and abroad
SEGAP, France (owned 50% by Sofréavia-Service and Marseille Int. Airport) Fax: <33> (1) 4638 2678	Holds a 35% stake in AERIA (Aéroport International d'Abidjan S.A.) which operates Abidjan Airport/Ivory Coast and a 34.7% stake in ADL S.A. (Aéroport de Libreville) which operates Libreville Airport/Gabon
Serco, U.K.	through Serco Asia Pacific partner in the Adelaide Airport Ltd consortium, together with Manchester Airport plc, (U.K.)
Short Brothers plc, U.K. (owned by Bombardier Aerospace Airport Ltd of Canada) Fax: <44> (232) 454 406	Owns and operates Belfast City Airport (STOLport) through Belfast City, (U.K.)
Stagecoach Aviation Group, U.K. (subsidiary of Stagecoach Holdings Plc) Fax: <44> (173 8) 4422 111	Owns Glasgow Prestwick International Airport, (U.K.), operated by PIK Ltd; interested in developing other airports
Sutton Harbour Holdings plc, U.K. Fax: <44> (1752) 205 403	Purchased Plymouth City Airport Ltd in the U.K., together with the management contract for Newquay Cornwall Airport from British Airways in April 2000
Sverdrup Aviation, USA Fax: <l> (314) 552-8086.	Operates the new MidAtlantic Airport, the second-largest privatized airport in the USA
TAG Aviation SA, Switzerland (subsidiary of TAG-Heuer watch makers and aviation sponsors of Switzerland and the Geneva/Switzerland Saudi family Aziz Ojeh) Fax: <4l> (22) 717 0007	Manages and plans to develop the former Ministry of Defence aerodrome at Farnborough, U.K. into a business aviation centre under a conditional leasing agreement; operates the Prangins/V1) general aviation airfield near Geneva/Switzerland
TBI Airport Holdings Ltd, U.K. (now owns AGI) Fax: <44> (1222) 361 555	Owns and operates Cardiff-Wales & Belfast International/U.K.; owns Central Florida Terminals, the owner and operator of Orlando Sanford International Airport, (USA); acquired 90.1 % of Skavsta Airport in Sweden; by acquiring AGI, gained access to airports in Australia, Bolivia, Costa Rica, North America and to Luton/U.K., i.e. a total of 33 airports; interested in other airports worldwide
TradePort International Corp., Canada Fax: <l> (905) 679 2100	Manages Hamilton/Mount Hope Airport in Ontario/Canada under a 40-year concession
Tribasa, Mexico (construction company owned by the Pefialoza family)	The Tribasa consortium had won the 50-year concession contract for nine airports in Mexico's south-eastern region – Aeropuertos Sureste (ASUR), together with three other partners: Copenhagen Airports A/S, (Denmark), Cintra of Spain and GTM of France
Unión Fenosa, Spain & Mexico	Member of Grupo Aeroportuario del Pacifico (GAP) with operates the Pacific airports in Mexico, the other partners being AENA, Dragados, and the Angeles Group;
Via GTI (Paribas Group), France Fax: <33> (1) 4129 7220	Partner in the consortium which manages Europort Vatry, the multi-modal airport in France; manages the new Angers-Marcé Airport in France and ground transport services at a number of French airports

Company	Activities
Vienna International Airport, Austria (see: **ACV**)	(Vienna International Airport plc, (Austria) has been a private company since 1992)
Warsaw Airport – Polish Airports State Enterprise, Poland Fax: <48> (22) 846 6824	Operates Mazury Airport at Szymany in Poland through Port Lotinczy Mazury S.A.
Wayss & Freytag, Germany Fax: <49> (69) 792 9491	Sold to FAG (Frankfurt Airport) its 74.9% stake of the Halin Airport holding company, Holding Unternelmien Halm GmbH & Co. KG, which in turn holds 10% of the Halin Airport company, Flughafen Hahn GmbH; the Rhineland-Palatinate government holds 25. 1 % of the two companies, (Germany)
Westralia Airports Corp., Australia National Airport and Cocos (Keeling) Island Airport	Operates Perth International Airport; manages Christmas Island International Airport and Cocos (Keeling) Island Airport, (Australia)
Wiggins Group plc, U.K. Fax: <44> (171) 493 0189	Owns Kent International Airport, Manston/U.K. and will develop it as London-Manston Airport in partnership with MEPC; acquired a 50-year lease of Sinyma Airport, Nashville, IN/USA, through its PlaneStation U.S. subsidiary; plans to acquire long leaseholds at the airports in Germany, the Czech Republic (Ostrava-Mošnov & Plzen-Lin) and Italy
World Investment Group, Egypt	Will develop the Farafira Oasis and Al Bahria Oasis airports in Egypt under BOT projects
YVR Airport Services Ltd –**YVRAS**, Canada (100% owned by the Vancouver International Airport Authority; set up in 1994 as a for-profit company) Fax: <I> (604) 276-6070	Manages Bermuda International Airport and six local Canadian airports (Cranbrook, BC; Fort St. John, BC; Hamilton, ON; Grande Prairie, AL; Kamloops, BC; Moncton, NB) via incentive contracts and a management fee. Won the 15-year Santiago/Chile passenger terminal concession as a member of the SCL Terminal Aéreo Santiago consortium, formed together with Agencias Universales S.A. (Agunsa; 47%) and Sabco Adinfflistrador de Fondos de Inversión S.A. of Chile (13%), contractors FCC and Dragados of Spain (30%), with YVRAS holding 10%. Won a 15-year contract to manage the new terminal and carpark of Providenciales International Airport in the Turks & Calcos Islands. Partner in the 'Aeropuertos Dominicanos Siglo YXI, S.A.' consortium that manages four airports in the Dominican Republic: Santo Domingo ('Las Americas'), Puerto Plata ('Gregorio Luperón'), SamanS ('Arroyo Bamil'), and Barahona ('Maria Montez'). Partner in the consortium for a 25-year concession to manage and develop Montevideo's Carrasco Int. Airport. Adviser to Wellington Airport/New Zealand on commercial and retailing matters; bidding for airports in Latin America and Canada; providing consultancy in China, Norway, Oman, Russia, Thailand; parent company owns and operates Vancouver International Airport, (Canada)

ANNEX II

Statement by the ICAO Council on Airport Charges

Introduction

1. Since the last review in 1981 of the Council's recommendations on charges for aeronautical facilities provided for international civil aviation, the financial position of the scheduled airlines as a whole has fluctuated, although it has remained positive for most of these years. Landing and associated airport charges expressed as a percentage of total airline operating expenses have remained fairly stable at just over 3.5 per cent.

2. The number of airports where revenues exceed expenses has continued to grow, principally where high traffic volumes and high levels of facility utilization are being experienced, and where strong emphasis has been placed on the development of airport revenues from non-aeronautical sources (mainly concessions and rentals). However, the large majority of international airports still operate at a loss, a prevalent reason being under-utilization of capacity.

3. Experience gained worldwide indicates that where airports (and air navigation services) have been operated by autonomous authorities, almost all of which have been established by governments, their over-all financial situation and managerial efficiency have generally tended to improve. Governments may therefore wish to explore the possibility of establishing autonomous authorities to operate their airports where this is in the best interest of providers and users.

4. Guidance on the organizational structures of airports is contained in the ICAO *Airport Economics Manual* (Doc 9562), Chapter 2. In this context, the Council also wishes to stress the importance of observing all relevant ICAO practices and principles, notably those specified in the Convention on International Civil Aviation, its Annexes and in these Council Statements.

5. The financial situation of airports is expected to continue to be affected by other developments. These include the liberalization of air services, airline concentration including mergers, changes in approaches to financing with airports being expected to assume increasing responsibility for financing investments in new airports and airport expansion projects, capacity management, airport and airspace congestion, and environmental concerns.

6. Under these circumstances many airport authorities may find it necessary to increase their charges and place greater emphasis on further developing revenues from non-aeronautical sources. However, recognizing that users face restrictions with regard to their choice of particular airports, the Council recommends that caution be exercised when attempting to compensate for shortfalls in revenue and that account be taken of the effects of increased charges on air carriers which may need to adjust their tariffs to deal with increases in cost arising from higher charges. The Council also considers that there should be a balance between the respective interests of airports and airlines in view of the importance of the air transport system to States and its influence in fostering economic, cultural and social interchanges between States. This applies particularly during periods of economic difficulty. The Council therefore recommends that States should encourage increased co-operation between airports and air carriers to ensure that economic difficulties facing both of them are shared in a reasonable manner.

7. The financial situation of most airports in less advanced economies remains particularly challenging. Although traffic is increasing, the majority of these airports are still greatly under-utilized and revenues frequently fall short of covering even the cost of maintenance and operation. The provision of capital for development constitutes a further problem, and difficulties are also experienced in recruiting sufficient numbers of qualified personnel. The Council will therefore continue to take appropriate action for obtaining more assistance for the States facing these challenges in planning and financing airport facilities as well as with regard to the provision of adequate human resources.

8. The broader economic impact of international airports is a particular aspect of their operation which continues to deserve close attention. Airports by virtue of their function and location have effects extending beyond the users they directly serve, and the Council considers that, in contemplating the establishment and development of such facilities, States should carefully weigh their advantages and disadvantages from a cost-benefit standpoint: for example, adverse environmental effects such as airport noise may be considered a disadvantage while, on the other hand, industrial development, tourism, transportation and communication may be considered as advantages. Specific note should also be taken of the direct and indirect economic benefits to the public and the community arising from an airport. National policies in the matter of reducing or eliminating disadvantages will vary, but governments, when contemplating action in any particular situation, should however recognize that the responsibility for remedies does not necessarily fall solely on any one of the parties involved.

9. The Council also expresses concern over the proliferation of charges on air traffic and the retaliatory effects this could lead to and recommends that States should:

i) Impose charges only for services and functions which are required for international civil aviation.

ii) Refrain from imposing charges which discriminate against international civil aviation in relation to other modes of international transport.

The cost basis for airport charges

10. As a general principle it is desirable, where an airport is provided for international use, that the users shall ultimately bear their full and fair share of the cost of providing the airport. It is therefore important that airports maintain accounts which provide information which is adequate for the needs of both airports and users and that the facilities and services related to airport charges be identified as precisely as possible. In determining and allocating the total cost to be met by charges on international air services, the list in Appendix 1 may serve as a general guide to the facilities and services (including satellite services) to be taken into account. Airports should maintain accounts that provide a satisfactory basis for determining and allocating the costs to be recovered, should publish their financial statements on a regular basis and should provide adequate financial information to users in consultations. The guidance on accounting contained in the ICAO Airport Economics Manual, Chapters 3 and 4, may be found useful in this general context although there are other approaches to this problem.

11. In determining the cost basis for airport charges the following principles should be applied:

i) The cost to be shared is the full cost of providing the airport and its essential ancillary services, including appropriate amounts for cost of capital and depreciation of assets, as well as the cost of maintenance and operation and management and administration expenses, but allowing for all revenues, aeronautical or non-aeronautical, accruing from the operation of the airport to its operators.

ii) In general aircraft operators and other airport users should not be charged for facilities and services they do not use, other than those provided for and implemented under the Regional Plan.

iii) Only the cost of those facilities and services in general use by international air services should be included and the cost of facilities or premises exclusively leased or occupied and charged for separately should be excluded.

iv) An allocation of costs should be considered in respect of space or facilities utilized by government authorities.

v) The proportion of costs allocable to various categories of users, including State aircraft, should be determined on an equitable basis, so that no users shall be burdened with costs not properly allocable to them according to sound accounting principles.

vi) Costs related to the provision of approach and aerodrome control should be separately identified. (Principles applicable to the recovery of such costs are addressed more fully in the Statement on Charges for Air Navigation Services.)

vii) Airports may produce sufficient revenues to exceed all direct and indirect operating costs (including general administration, etc.) and so provide for a reasonable return on assets (before tax and cost of capital) to contribute towards necessary capital improvements.

viii) The users' capacity to pay should not be taken into account until all costs are fully assessed and distributed on an objective basis. At that stage the contributing capability of States and communities concerned should be taken into consideration, it being understood that any State or charging authority may recover less than its full costs in recognition of local, regional or national benefits received.

Airport charging systems

12. Charging systems at international airports should be chosen in accordance with the following principles:

i) Any charging system should, so far as possible, be simple and suitable for general application at international airports.

ii) Charges should not be imposed in such a way as to discourage the use of facilities and services necessary for safety.

iii) The charges must be non-discriminatory both between foreign users and those having the nationality of the State of the airport and engaged in similar international operations, and between two or more foreign users.

iv) Where any preferential charges, special rebates or other kinds of reduction in the charges normally payable in respect of airport facilities are extended to particular categories of users, governments should ensure, so far as practicable, that any resultant under-recovery of costs properly allocable to the users concerned is not shouldered onto other users.

v) To avoid undue disruption to users, increases in charges should be introduced on a gradual basis. However, it is recognized that in some circumstances a departure from this approach may be necessary.

vi) Where charges are levied by different authorities at an airport, they should, so far as possible, be consolidated into a single charge or a very small number of different charges, the combined revenues being distributed among the authorities concerned in a suitable way.

vii) Maximum flexibility should be maintained in the application of all charging methods to permit introduction of improved techniques as they are developed.

viii) Airport charges levied on international general aviation should be assessed in a reasonable manner, having regard to the cost of the facilities needed and used and the goal of promoting the sound development of international civil aviation as a whole.

13. The Council recommends:

i) That under normal circumstances, user charges should be expressed and payable in the local currency of the State concerned.

ii) That under special circumstances, for example where economic conditions are not stable, when a State proposes, or allows, denomination of user charges in other than local currency, airlines could apply the same currency of denomination, using the same exchange rate, for their local ticket sales.

iii) That remittance problems be resolved.

Landing charges

14. The Council recommends that the following principles be taken into account when landing charges are established:

i) Landing charges should be based on the weight formula, using the maximum permissible take-off weight as indicated in the certificate of airworthiness (or other prescribed document) as the basis for assessment. However, allowance should be made for the use of a fixed charge per aircraft or a combination of a fixed charge with a weight-related element, in certain circumstances such as at congested airports and during peak periods.

ii) The landing charge scale should be based on a constant rate per 1,000 kilograms or pounds in weight, but the rate may be varied at a certain level or levels of weight if considered necessary.

iii) Where charges for approach and aerodrome control are levied as part of the landing charge or separately, they could take aircraft weight into account but less than in direct proportion. (Principles applicable to such charges are addressed more fully in the Statement on Charges for Air Navigation Services.)

iv) No differentiation in rates should be applied for international flights because of the stage length flown.

v) A single charge should be applied for costs of as many as possible of airport-provided facilities and services for normal landing and take-off of aircraft (generally excluding hangars and certain terminal-building and other facilities as are normally handled by leases or other usual commercial practices).

vi) Where restrictions on aircraft payload are imposed by airport limitations, consideration should be given locally to adjusting the landing charge indicated by the weight scale in cases where the restrictions are of a severe and long-lasting nature.

vii) The ordinary landing charge should cover the use of lights and special radio aids for landing where these are required, since it is in the interest of safety that aircraft operators should not be discouraged from utilizing aids by the imposition of separate charges for their use. If separate charges are made for facilities of this kind, they should not he levied on the basis of optional use but should be uniformly imposed on all landings occurring during periods established by the airport operators.

Parking and hangar charges

15. It is recommended that the following principles he applied in establishing parking and hangar charges:

i) For the determination of charges associated with use of parking, hangar and long-term storage of aircraft, maximum permissible take-off weight and/or aircraft dimensions (area occupied) and length of stay should be used so far as possible as the basis.

ii) The period of free parking time for aircraft immediately following landing should be determined locally by considering aircraft scheduling, space availability and other pertinent factors.

Passenger-service charges

16. The Council reaffirms that passenger-service charges are not objectionable in principle and recognizes that the revenue accrued from such charges is essential to the economy of a significant number of airports. There are however practical objections to the collection of passenger-service charges directly from the passenger, especially at large airports, and the difficulties associated with that mode of collection will become more and more acute with the continuing growth of passenger traffic and the increasing number of high-capacity aircraft operated, especially at busy terminal buildings during peak hours. Methods to alleviate these difficulties have been found and are implemented at a number of airports, and the Council considers that these could serve as useful guides to other airports experiencing similar difficulties. The Council also emphasizes the need for consultations between

airport authorities and airlines at the local level, with a view to alleviating collection problems. More specifically, the Council considers that where the collection of a passenger-service charge directly from passengers at an airport gives rise to facilitation problems, this charge should be levied on the airlines where practicable.

Security charges

17. The Council notes that States are responsible for ensuring the implementation of adequate security measures at airports pursuant to the provisions of Annex 17 and that they may delegate the task of providing individual security functions to such agencies as airport authorities, airlines and local police. The Council also notes that States may determine in which circumstances and the extent to which the costs involved in providing security facilities and services should be borne by the State, the airport authorities or other responsible agencies. With reference to the recovery of security costs from the users, the Council recommends that the following general principles be applied:

i) Consultations should take place before any security costs are to be assumed by airports, airlines or other entities.

ii) The authorities concerned may recover the costs of security measures at airports from the users in a fair and equitable manner, subject to consultation.

iii) Any charges or transfers of security costs should be directly related to the costs of providing the security services concerned and should be designed to recover no more than the relevant costs involved.

iv) No discrimination should be exercised between the various categories of users when charging for the level of security provided. Additional costs incurred for extra levels of security provided regularly on request to certain users may also be charged to these users.

v) When the costs of security at airports are recovered through charges, the method used should be discretionary, but such charges should be based either on the number of passengers or on aircraft weight, or a combination of both factors. Security costs allocable to airport tenants may be recovered through rentals or other charges.

vi) Charges may be levied either as additions to other existing charges or in the form of separate charges but should be subject to separate identification of costs and appropriate explanation.

Noise-related charges

18. The Council recognizes that although reductions are being achieved in aircraft noise at source, many airports will need to continue the application of noise alleviation or prevention measures. The Council considers that the costs incurred in implementing such measures may, at the discretion of States, be attributed to airports and recovered from the users and that States have the flexibility to decide on the method of cost recovery and charging to be used in the light of local circumstances. In the event that noise-related charges are to be levied, the Council recommends that consultations should take place on any items of expenditure to be recovered from users and that the following principles be applied:

i) Noise-related charges should be levied only at airports experiencing noise problems and should be designed to recover no more than the costs applied to their alleviation or prevention.

ii) Any noise-related charges should be associated with the landing fee, possibly by means of surcharges or rebates, and should take into account the noise certification provisions of Annex 16 in respect of aircraft noise levels.

iii) Noise-related charges should be non-discriminatory between users and not be established at such levels as to be prohibitively high for the operation of certain aircraft.

Consultation with users regarding charges and airport planning

19. The Council recognizes the desirability of consultation with airport users before significant changes in charging systems or levels of charges are introduced, it being understood that the purpose of consultation is to ensure that the provider gives consideration to the views of users and the effect the charges will have on them; that consultation implies discussions between users and providers in an effort to reach general agreement on any proposed charges; and that, failing such agreement, airport authorities would continue to be free to impose the charges concerned. It is not possible to lay down a specific procedure for consultations of this kind owing to the diversity in the administrative, financial and legal frameworks within which airports function, but the Council recommends that:

i) When any significant revision of charges or imposition of new charges is contemplated by an airport operator or other competent authority, appropriate prior notice should, so far as possible, be given at least two months in advance to the principal users, either directly or through their representative bodies, in accordance with the regulations applicable in each State.

ii) In any such revision of charges or imposition of new charges the airport users should, so far as is possible, be given the opportunity to submit their views to and consult with the airport operator or competent authority. For this purpose the airport users should be provided with adequate financial information.

iii) Reasonable advance notice of the final decision on any revision of charges or imposition of new charges should be given to the airport users. This period of notice should take into account the implications for both the users and the airport.

20. The Council furthermore considers it desirable in the light of the enormous and ever-increasing cost of new airports and major developments at existing airports that the regular users or their representative organizations be consulted from the beginning of such projects. Equally, in order that airport authorities may better plan their future financial requirements, airport users, particularly airlines, should for their part provide advance planning data to individual airport authorities on a 5- to 10-year forecast basis relating to future types, characteristics and numbers of aircraft expected to be used; the anticipated growth of passengers and cargo to be handled; the special facilities which the airport users desire; and other relevant matters. Such planning could best be accomplished by two-way discussions between airports and airlines, either directly or through their respective representative organizations.

Development of revenues from concessions, rental of premises and 'free zones'

21. The Council recognizes the continuing importance to airports of income derived from such sources as concessions, rental of premises and "free zones". The Council recommends that, with the exception of concessions that are directly associated with the operation of air transport services, such as fuel, in-flight catering and ground handling, the full development of revenues of this kind be encouraged having regard to the need for moderation in prices to the public, the requirements of passengers and the need for terminal efficiency. In the development and determination of the fees for concessions directly associated with the operation of air transport services, the Council also recommends that consideration be given to the relevant guidance contained in the *ICAO Airport Economics Manual*, Chapters 4 and 6. All possibilities for developing airport concession revenues should be studied and ICAO should be kept informed of practices and conclusions in this regard so that the benefit of experience may be made available to all.

Fuel concession fees

22. The Council recommends that where fuel "throughput" charges are imposed, they should be recognized by airport authorities as being concession charges of an aeronautical nature and that fuel concessionaires should not add them automatically to the price of fuel to aircraft operators, although they may properly include them as a component of their costs in negotiating fuel supply prices with aircraft operators. The level of fuel "throughput" charges may reflect the value of the concessions granted to fuel suppliers and should be related to the cost of the facilities provided, if any. Alternatively, consideration may be given, where feasible, to replacing fuel throughput charges by fixed concession fees reflecting the value of the concession and related to the costs of the facilities provided, if any. The Council also recommends that any such charges or fees where imposed should be assessed by airport operators in such a manner as to avoid discriminatory effects, either direct or indirect, for both fuel suppliers and aircraft operators and to avoid their becoming an obstacle to the progress of civil aviation.

IV. ANY OTHER SUPPORTING SERVICES

169. The 'other supporting services' to be reviewed include: cleaning and disinfecting; fire fighting and fire protection services; and hangar services. Each of these services are considered to be sub-sectors of ground handling and/or airport management. Therefore, please refer to the ground handling section for information on cleaning and disinfecting, and to airport management for fire fighting and hangar services.

DEVELOPMENTS IN THE AIR TRANSPORT SECTOR SINCE THE CONCLUSION OF THE URUGUAY ROUND

PART THREE

Background Note by the Secretariat

Addendum

This background note brings additional information on the developments in the air transport sector since the conclusion of the Uruguay Round, covering sectors on air traffic control services (including charging systems), general aviation and aerial work, and commercial air transport services.

PART THREE

AIR TRAFFIC CONTROL SERVICES INCLUDING CHARGING SYSTEMS

GENERAL AVIATION AND AERIAL WORK SERVICES

COMMERCIAL AIR TRANSPORT SERVICES

I. AIR TRAFFIC CONTROL SERVICES INCLUDING CHARGING SYSTEMS

1. Air navigation services were mentioned briefly in document S/C/W/59, paragraphs 64 and 129.

2. The legal regime of the air navigation service, for instance in terms of charging, as well as its recent economic and regulatory evolution, presents great similarities with the situation of airport services. However they differ fundamentally in three respects. Firstly unlike airports, air navigation facilities and services provided by a State generally extend over the whole territory of the State concerned or even beyond, and they are frequently dependent on facilities and service provided in other States. Secondly, in most States all or most of the air navigation services are not provided by a single entity; several entities may be involved although only a few are major service providers. Thirdly, air navigation services are closely connected with the safety of aircraft operations and have national defence and external relations implications; they are also perceived as closely related to the sovereignty of the State. Consequently most governments favour maintaining their control over these services.

3. These characteristics have however not prevented significant economic and regulatory changes over the last ten years. What appears to be the driving force is the constant increase of traffic, which makes the management of air traffic services a perpetual race against growing congestion. To try to remedy this congestion, States are constantly looking for technological innovations and procedural, institutional and regulatory improvements. The need to finance these costly technological innovations by resources other than the general budget of the State, and the need for more reactive, more customer-oriented organizations has led in certain countries to limited but significant institutional change. Those attempts are however often judged insufficient by airlines and by customers faced with growing delays. This debate has recently reached a climax in Europe and to a lesser extent in the United States but is likely to extend in the years to come to the rest of the world.

4. These economic and regulatory developments will be described in the first part of this section while the second part will deal with the description and evolution of the internationally agreed charging system which is similar in essence to the one regulating airports and facing similar challenges.

A. AIR NAVIGATION SERVICES AND AIR NAVIGATION SERVICES PROVIDERS

1. Definition and classification

5. The provisional CPC contains a definition of air traffic control services: CPC 7462 "air traffic control services: flight control tower operation services, including approach, landing and take off control services. Also included are services provided by airport-located radar stations. "CPC rev1 for its part replicates this heading and this definition with a different number (r67720) and with a new exclusion of radio navigation services.

6. This definition does not appear to encompass the whole of the activities considered as air navigation services by the industry and by ICAO in its Manual on Air Navigation Services Economics (ICAO document No. 9161/3, third edition, 1997). In particular it does not cover "en route" services, that is the guiding of the plane at its cruise altitude between airports. Several services that are also considered by the industry as part of air navigation services, such as meteorological services and search and rescue services, are not encompassed either. For possible future classification purposes it may be worthwhile to examine the industry's and ICAO's concepts and definitions.

7. There is a universally agreed breakdown of air navigation services in the ICAO Manual on Air Navigation Services Economics (MAN), which could form a meaningful basis for a possible classification.

8. Table 1 describes the ICAO classification system. It presents its headings in a digital form, giving the corresponding definitions, describing the facilities and the types of providers involved, and attempts to indicate CPC correspondences. Its content is made up of direct quotations from the ICAO manual except for the CPC correspondences.

TABLE 1
Air Navigation Services – ICAO Classification

ICAO manual headings	ICAO manual definitions	Staff and facilities involved	ICAO remarks on the provider	Possible CPC correspondences
1 Air Traffic Services (ATS)			Usually provided by the civil aviation administration although in a growing number of States autonomous bodies also referred to as operating agencies have been assigned this function. In such instances the same authority may also be responsible for providing certain communication services for example some or all Aeronautical fixed services (AFS, see below, line 21) and Aeronautical Mobile Services (AMS see below line 22) or even radio navigation aids (see below line 23)	
11 Air traffic control services	A service provided for the purpose of: 1) preventing collision a) between aircraft; and b) on the manoeuvring area between aircraft and obstructions; and 2) expediting and maintaining an orderly flow of air traffic			
111 Area control services (en route)	Air traffic control services for controlled flights in control areas	Area Control Centers (ACC) including Oceanic Area Control Center	Provided in a majority of States by the same organization which provides Air Traffic Services (ATS) en route. In about one third of the States responding to the ICAO questionnaire the services are provided by the airport administration especially in the Asia Pacific Region	None
112 Approach control services	Air control services for arriving or departing controlled flights	Approach control offices, working positions integrated in area control centers	Provided in a majority of States by the same organization which provides Air Traffic Services (ATS) en route. In about one third of the States responding to the ICAO questionnaire the services are provided by the airport administration especially in the Asia Pacific Region	CPC 7462 "air traffic control services: flight control tower operation services, including approach, landing and take of control services. Also included are services provided by airport located radar stations."

ICAO manual headings	ICAO manual definitions	Staff and facilities involved	ICAO remarks on the provider	Possible CPC correspondences
113 Aerodrome control services	Air traffic control services for aerodrome traffic	Aerodrome control towers		CPC7462 "air traffic control services: flight control tower operation services, including approach, landing and take of control services. Also included are services provided by airport located radar stations."
12 Flight information services		Flight information centers		
13 Alerting services	A service provided to notify appropriate organizations regarding aircraft in need of search and rescue aid and assist such organizations as required			
2 Telecommunication services (COM)				CPC75299 "Other telecommunication services n.e.c." provides for the inclusion of e.g. "mobile maritime and air-to-ground communication services" which appear to accommodate the aeronautical (COM) telecom services. Existing GATS telecom commitments are rarely so elaborate under "other" as to specify such services. It is worth considering that existing telecom commitments on mobile and fixed radio (incl. satellite) services may already convey commitments on the transmission component for the COM services, but not necessarily the supply of the COM service itself.
21 Aeronautical Fixed Services (AFS)	A telecommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular efficient and economical operation of air services		AFS are frequently provided partially or wholly by postal and telecommunication branches of government although use is made of privately owned communications organizations in some instances	
22 Aeronautical Mobile Services (AMS)	A telecommunication service between aeronautical stations and aircraft stations or between aircraft stations		AMS are frequently provided partially or wholly by postal and telecommunication branches of government although use is made of privately owned communications organizations in some instances	

ICAO manual headings	ICAO manual definitions	Staff and facilities involved	ICAO remarks on the provider	Possible CPC correspondences
23 Aeronautical radio navigation services		Radio navigation aids	Usually provided by the civil aviation administration although the communications branch of government or an autonomous authority may also be involved	CPCrev1 67300 "navigation aid services: …radio navigational aid locating services such as GPS" (the corresponding CPC provisional item p74530 was limited to water transport)
3 Meteorological services for air navigation (MET)	[Provision of] meteorological observations, reports and forecasts, briefings and flight documentation, SIGMET and AIRMET[a] information, world area forecasts system, digital grid point data for computerized flight planning, meteorological information for inclusion in broadcasts, aeronautical meteorological telecommunications (if not included in COM) and any other meteorological data required from States for aeronautical use	World Areas Forecasts Centers (WAFCs), Volcanic Ash Advisory Centers (VAACs), Tropical Cyclone Advisory Centers (TCACs), meteorological watch offices (MWOs), aerodrome meteorological equipment for aeronautical purposes and telecommunication equipment for aeronautical purposes and various facilities and services which also serve meteorological requirement in general	MET is usually provided by a separate meteorological entity which in many States reports to another branch of government than do the civil aviation administration or the telecommunication services branch (see also table 2 below)	91138 "general administrative economic commercial and labour affairs related services:…administrative services by …weather forecasting institutions"
4 Search and rescue (SAR)	Search and rescue services provided to aviation	Rescue Coordinating Centers (RCC), Rescue SubCenters (RSC), if any aircraft including helicopters, rescue boats and vessels, mountain rescue units and other units forces or facilities which are designated primarily or exclusively or which are available to perform aeronautical search and rescue functions when required	While aeronautical SAR activities are often coordinated by the civil aviation administration, in most States the aircraft vehicle, vessels and personnel utilised in the actual SAR operations are provided by the military, civil defense and other forces	91290 "other public order and safety affairs related services " (see CPC provisional, page 220, "air-sea rescue services are classified in subclass 91290")
5 Aeronautical information services (AIS)	[Services consisting of] collecting, collating, editing, publishing and distributing aeronautical information concerning the entire territory of the State as well as any other areas for which it has undertaken to provide air navigation services. Included are the preparation and dissemination of Aeronautical Information Publication (AIP), Notice to Airmen (NOTAM), Aeronautical Information Circulars (AICs) and the provision of plain language preflight information bulletins to flight crews as part of the preflight information service	Staff facilities and equipment employed to that effect	AIS tend to be provided by the civil aviation administration	?

a SIGMET: information concerning en route weather phenomena which may affect the safety of aircraft operations.
AIRMET: information concerning en route weather phenomena which may affect the safety of low level aircraft operations.

Source: ECAO Manual on Air Navigation Services Economies (MAN).

9. It is worth noting that this breakdown is currently being revised to take into account technological development. With the progressive implementation of the CNS/ATM (Communication Navigation Surveillance/Air Traffic Management) automated systems the Air Traffic Services (ATS) category will be replaced in the future by a "Air Traffic Management Services" (ATM) category divided in the following manner:

1 Air Traffic Services
  1.1 air traffic control services
    1.1.1 area control services
    1.1.2 approach control services
    1.1.3 aerodrome control services
  1.2 flight information services
  1.3 alerting services
2 Air traffic flow management services
3 Airspace management services.[1]

10. Similarly the Telecommunications Services (COM) category will be replaced in the future by a "Communication Navigation and Surveillance" (CNS) category which is broader in scope and divided in the following manner:

1 Communication, Navigation and Surveillance
  1.1 communication services
    1.1.1 Aeronautical Fixed Services (AFS)
    1.1.2 Aeronautical Mobile Services (AMS)
  1.2 navigation services
  1.3 surveillance services.[2]

11. This revision will not be completed and implemented for several years.

2. Main characteristics

12. Air traffic control provision appears to be a complex business in at least three respects:

- In organic terms: it involves:
  - apparently always natural monopolies but which can be bundled or unbundled to various degrees depending on the organizational forms retained;
  - in certain instances governmental suppliers and in other regions private suppliers;
  - national providers (public or private) and intergovernmental international organizations, two types of providers whose activities overlap (as in the case of Eurocontrol).

- In operational terms

Since these activities involve traffic police activities, the allocation of scarce resources on a daily basis and management activities, they perform a mix of regulatory and operational functions without clear borders and definitions.

- and finally in financial terms: where
  - the collection of fees can in certain instances be delegated to a national public or private body or to an international intergovernmental body; and
  - the nature of the fees is an irrelevant[3] question in the actual regulatory context, and is therefore open to conflicting elements of appreciation.

The following section will expand in more detail on these complexities.

(a) A great organic diversity

(i) Bundled and unbundled natural monopolies

13. It is widely recognized, including by the commercial providers of Civil Air Navigation Services Organization (CANSO), that those services are natural monopolies even if they can be unbundled. In other terms Air Traffic Services (ATS), Aeronautical telecommunication service (COM), Meteorological services for air navigation (MET), Search and Rescue (SAR) and Aeronautical Information Services (AIS) are frequently provided altogether by one single provider. They may also be provided by different providers (unbundling) but for each type of service there can be only one provider (natural monopoly).

14. Table 2, drawn from a summary of the answers to the ICAO ANSConf questionnaire (WP/18) gives an idea of the degree of "bundling" of air navigation services, region by region:

1 For details on the provisional definitions see the MAN page 40 para 4.6 to 4.12 and glossary pages 83-86.

2 For details on the provisional definitions see the MAN page 40-41 para 4.13 to 4.17 and glossary pages 83-86.

3 Except probably for fiscal purposes.

TABLE 2
Provision of Other Air Navigation Services by the ATS Provider

Region	COM: Aeronautical telecommunication service	MET: Meteorological services for air navigation	SAR: Search and Rescue	AIS: Aeronautical information service
Asia/Pacific (14 States)	13	2	11	14
Middle East (8 States)	8	5	8	8
Africa (19 States)	19	5	15	19
Europe (29 States)	27	9	1	28
North America (2 States)	2	2	1	2
Caribbean/ Central/South America (9 States)	8	6	5	6
Total (81 States)	77	29	51	77

(ii) Governmental suppliers coexisting with private suppliers

15. Governmental provision of ATC services remains the rule in over two-thirds of the cases. There are however to date about 40 countries that have given their providers some kind of autonomous status, and in certain instances made them legally speaking private suppliers, and at least one case where full privatization with significant foreign ownership is envisaged. This evolution will be described in paragraph 81-89.

(iii) National providers (public or private) coexisting and sometimes overlapping with intergovernmental international organizations

16. Air navigation services are relatively frequently delivered by international intergovernmental cooperative ventures. ICAO distinguishes four types of international cooperation.[4]

- International operating agencies: separate entities to which the task has been assigned to provide air navigation services, principally routes facilities and services within a defined area, on behalf of two or more sovereign States. These agencies are also responsible for the collection of charges. Examples are: the *Agence pour la Sécurité de la Navigation Aérienne en Afrique et à Madagascar (ASECNA)*, the *Corporaciòn Centro Americana de Servicios de Navegacion Aera (COCESNA)* and EUROCONTROL;

- Joint charges collection agencies: such an agency collects route air navigation services charges on behalf of all the participating States including those which are flown over. The only example of such a dedicated agency is the IATA ATC Enhancement and Financing Service which collects charges for close to thirty, mainly developing, countries. However, ICAO encourages the creation of such agencies;

- Multinational facilities and services facilities or services included in an ICAO regional air navigation plan for the purpose of serving international air navigation in airspace extending beyond the airspace serviced by a single State. The World Area Forecast System (WAFS) represent a current global example while elements of the satellite communications systems required to implement the CNS/ATM concept and operated for groups of States represent examples of prospective multinational air navigation facilities/services;

- Joint financing types of arrangement whereby several States finance a facility or service operated by one State for the benefit of international civil aviation at large (concept of "joint support", Chapter XV of the Chicago Convention). Examples include the facilities managed respectively by Denmark and Iceland

4 For further information on this point see ANSConf-WP/5.

to which 23 States contribute, and the height monitoring systems program operated jointly by six States providing air navigation services on the North Atlantic.

17. For all these forms of international cooperation it may be worth recalling that in the similar case of Intergovernmental Satellite Organizations (ISO) providing satellite services, Members finally considered, during the telecommunications negotiations, that ISO were not covered by the scope of the GATS since they were intergovernmental and therefore not "a juridical person constituted or otherwise organized under the law of a Member", in the sense of Article XXVIII (l) and (m) of the Agreement (see notably document S/GBT/M/2, dated 17 October 1996, paragraph 6).

18. This is an important point since the implementation of CSN/ATM systems may very likely result in additional intergovernmental cooperation. Those systems will in effect offer the possibility of expanding the capacity of individual Area Control Centers (ACCs) in any part of the world and particularly over the high seas. As a result it would be possible and technically and economically feasible to merge many flight information regions (FIR) into a single multinational FIR. In addition, ICAO identifies other potential areas for further international intergovernmental cooperation: planning; research and development; training; technical support; meteorological services for air navigation (MET) and aeronautical information services.

(b) The dual and complex nature of the activities

19. ATC involves both traffic regulation in the police sense, allocation of scarce resources both from a regulatory and an operational point of view, and various management functions. For instance the December 1999 communication from the European Commission[5] distinguishes four types of activities: air space management, air traffic flow management, air operation regulation and air traffic services.

20. Air space management: this activity consists in managing the scarce resources of airspace and is considered by the Commission as a regulatory function.

21. Air traffic flow management: it is questionable for the Commission whether this activity is a regulatory function or a services provision function. It could be considered both as a service delivered to air traffic service providers to avoid overload but also as the regulation and management of demand and supply through various means ranging from mandatory regulatory measures (ATC clearance, routings) to collaborative decision-making. However, in view of the numerous police functions involved, the Commission has to date considered this as a regulatory function.

22. Air operations regulation: this activity is a regulation imposed by States enforcing the mandatory carriage of equipment with the required functionalities and levels of performance. It is however often devolved to air traffic services operators.

23. Air traffic services (strictly speaking): this activity is considered by the Commission in its last communication as a services provision function. However, even in this latter case it should be recalled that this activity consists essentially of police powers similar to those of road traffic police, though much more sophisticated, that is to say verifying the respect of pre-established rules and sanctioning violations. For instance, the traffic controller verifies the respect of the rules on flight altitude, on operational minima of separation between aircraft, the existence or non-existence of a slot and in the case of violation of these rules is empowered to issue a writ[6] and to sue the airline or the pilot before the competent judicial authorities. The same goes *a fortiori* for the granting of air traffic clearances, for verification of the conformity of the flight plan with this clearance, for the granting of derogations from the flight plan, for the obligation for the aircraft to report its position and if necessary to obey to any re-routing order.[7]

24. That is probably the reason why the European Court of Justice ruling in 1994 on the operational activities[8] of the Eurocontrol Maastricht Centre, decided that "for the purpose of such control, Eurocontrol is vested with rights and powers of coercion which derogate from ordinary law and which affect users of air space. In exercising those particular powers, it must ensure compliance with international agreements and national rules concerning access, overflight and the territorial security of the contracting States concerned".[9]

5 "The Creation of a Single European Sky" COM (1999) 614 final 2, dated 6 December 1999, available on http/europa.eu.int/eur-lex/en/com/pdf/1999/com1999_0614en01.pdf.

6 For more elements on these procedures see Annex 11 of the Chicago Convention "air traffic services", chapter 3, air traffic control services.

7 For more elements on these rules, see Annex 2 of the Chicago Convention "rules of the air".

8 Day to day air space control for the Benelux and the Northern part of Germany, distinct from the allocation of air slots by Eurocontrol's Central Flow Management Unit.

9 Recital 24 of ECJ decision of C364-1992 "SAT Fluggeselleschaft mbH V Eurocontrol" of 19 January 1994, also quoting a similar previous decision case 29/76 LTU versus Eurocontrol ECR 1541.

25. Hence the court concluded that:

"Taken as a whole Eurocontrol's activities, by their nature, their aim, and the rule to which they are subject are connected with the exercise of powers relating to the control and supervision of airspace which are typically those of the public authority. They are not of an economic nature justifying the application of the treaty rules of competition".[10]

(c) A complex fee system

26. The organization of the collection of the fees is extremely variable and so apparently is the nature of the fees collected.

(i) The various collection systems

27. The ICAO enquiry has shown that among 86 responding Members, the fees are collected at a national level in 56 cases, but also that 37 States have contracted this collection to a third party, primarily an international agency of the type described above in paragraph 16 and in a few other instances to other States. It is worth noting that in all instances all third parties are public entities. A regional breakdown of these practices can be found in the last two columns of Table 7.

28. Eurocontrol accounts for a large part of those 37 States. It is worth noting that the European Court of Justice has also decided that Eurocontrol's collection of route charges "cannot be separated from the organization's other activities. Those charges are merely the consideration, payable by users, for the obligatory and exclusive use of air navigation control facilities and services. (…) Eurocontrol must, in collecting the charges, be regarded as a public authority acting in the exercise of its powers".[11]

(ii) The nature of the fees is an irrelevant question in the actual regulatory context, and therefore opens the issue to conflicting elements of appreciation

29. It is very difficult to appreciate if the fees are administrative user fees or commercial user fees. The situation may in addition vary from country to country depending on each country's international obligations, its internal legislation and its practices.

30. The non-binding but, generally respected statement by the ICAO Council to contracting States on charges for air navigation services stipulates that:

"As a general principle, where air navigation services are provided for international use, the providers may require the users to pay their share of the related costs, but international civil aviation should not be asked to meet costs which are not properly allocable to it. The Council therefore encourages States to maintain accounts for the air navigation services they provide in a manner which ensures that air navigation services charges levied on international civil aviation are properly cost-based" (a provision mutatis mutandis similar to point 2.2(b) of the telecom reference paper); and that: "Air navigation services may produce sufficient revenues to exceed all direct and indirect operating costs and so provide for a reasonable return on assets (before tax and cost of capital) to contribute towards necessary capital improvements."

31. The use of the word "may" in the quote above seems to open the possibility of a commercial basis (cost + reasonable return on assets being a classical benchmark). It is a fact also that 13 of the 21 autonomous providers listed in Table 8 have been established as profit making organizations and have in fact reported profits, as shown in the 6th and 9th columns of this table. However, this is not the case for other autonomous providers, nor is it the case for non-autonomous providers which by their very nature cannot report profits.

32. ICAO has gathered elements on the main determinants applied in setting charges as shown in the chart below but it is impossible to determine from this chart how may countries apply a cost + reasonable return on assets policy since the "ICAO cost recovery policy" mentioned in the fifth column only mentions the return on assets as a possibility.

33. Actual practice is also in that respect an important element. For instance, until 1997, the United States, which has one of the most advanced air traffic control systems, had no cost basis for overflight charges. The FAA only came forward with a proposal in 1997 and had to withdraw it in view of protest. A new interim final rule on this was published by FAA on 6 June 2000[12] and came into effect in August 2000. This rule is still however subject to public comments until 27 October 2000.

10 Ibidem recital 30.

11 Ibidem recital 28.

12 FAA-2000-7018-94 available on http://www.faa.gov/aba/html_overflight_fees/index.htm.

TABLE 3
Main Determinants applied in setting Charges

Region	Cost-based Charges	Transparent Accounting System	Mandatory Consultation with Users	ICAO Cost Recovery Policy	Inter-governmental Factors	Other
Asia and Pacific (11 States)						
Airport charges	7	6	4	5		3
ANS charges	6	5	5	7		1
Middle East (8 States)						
Airport charges	5	3	3	6		1
ANS charges	4	2	4	5	1	
Africa (18 States)						
Airport charges	9	6	7	10		1
ANS charges	9	5	8	11	1	1
Europe (30 States)						
Airport charges	12	14	12	14	6	2
ANS charges	25	18	14	19	6	3
North America (2 States)						
Airport charges	2	2	2		1	
ANS charges	2	2	2	2	2	
Caribbean/ Central/ South America (6 States)						
Airport charges	4	3	2	3	3	
ANS charges	4	2	1	3	1	
Total* (75 States)						
Airport charges	39	34	30	38	10	7
ANS charges	50	34	34	47	11	5

* Double answers are possible.

Source: ANSConf-WP/9.

34. In addition all providers, including autonomous ones, are exerting traffic regulation powers akin to ones used by the police as explained in paragraphs 23 to 24 above, in the application of the internationally binding obligations of the annexes of the Chicago Convention. It could be argued that regardless of the commercial basis suggested as a possibility by the non-binding ICAO statement on air navigation charges, the fees are in consequence administrative user fees.

35. This is clearly the actual legal situation in the European Union where the European Court of Justice has, ruled as explained above in paragraph 28, that charges levied by Eurocontrol in the exercise of its operational function "are merely the consideration, payable by users, for the obligatory and exclusive use of air navigation control facilities and services.(...) Eurocontrol must, in collecting the charges, be regarded as a public authority acting in the exercise of its powers".[13]

13 Recital 28 of ECJ decision C364-1992 "SAT Fluggesellschaft mbH V Eurocontrol" of 19 January 1994, also quoting a similar previous decision case 29/76 LTU versus Eurocontrol ECR 1541.

36. Finally, with regard to the relationship between air navigation and traffic rights, one may note that air navigation services are delivered not only to airlines, but also to customers not flying under a traffic rights regime, such as general aviation (business aviation, aerial work, instructional and recreational flying) and military aircraft. The reconciliation of military needs for airspace and of commercial traffic requirements is indeed one of the main tasks and challenges of air traffic control management.

3. Recent economic and regulatory developments: delays and congestion as the driving forces of institutional reform and technological innovations

37. In the case of air navigation services it is difficult to separate economic from regulatory developments, since the latter are often responses to economic change.

(a) An ever increasing number of aircraft movements

38. There are many sources of traffic forecasts (aircraft manufacturers, ICAO, IATA, ACI) and all of them concur in predicting considerable growth of the traffic.

39. ICAO has prepared for the Montreal ANSConf a detailed document focused not only on the growth of passenger numbers but also on the growth of aircraft movements, which must take into account the growing capacity of the aircraft (wide bodies and soon Super Jumbos). The conclusions of the study are the following: "The global demand for air transport measured in terms of passenger-kilometres is projected to increase at an average annual rate of 4.5% for the period 1997-2020. Aircraft movements for the same period are projected to increase at an average annual growth rate of 3.5%. In response to this demand, the world aircraft fleet is expected to almost double from some 10,000 aircraft in 1998 to almost 20,000 aircraft in the year 2020. (…) These growth prospects present a major challenge to air transport as airports and air traffic management systems will be expected to accommodate almost a 2.7 fold increase in traffic and doubling of aircraft movements "(ANSConf-WP/13).

40. Table 4 drawn from the same document[14] details those forecasts for all major international traffic route groups.

14 ICAO, ANSConf-WP/13, dated 17 February 2000, table 2, page 8.

TABLE 4
ICAO Aircraft Movement Forecasts by Major International Traffic Route Group
(% increase *per annum* – base year 1996)

Route Group	5-year Horizon	15-year Horizon
Transpacific[a]	5.2	4.7
North Atlantic[a]	4.6	3.2
North America-Africa	4.0	
Europe-Africa	3.7	
Middle East-Africa	4.2	
Asia/Pacific-Africa	4.7	
Intra Africa	5.0	
Asia/Pacific-Middle East	4.5	
Europe-Middle East	3.3	
Intra Middle East	5.5	
South Atlantic	3.3	
Mid Atlantic	4.8	
Intra South America	2.5	
Intra Central America/Caribbean	3.6	
North America-South America/Central America/Caribbean	4.5	
South America-Central America/Caribbean	2.3	

a Base year 1998.

Source: (ANSConf-WP/13)

41. Among the causes of this congestion are the growth of traffic due to the democratisation of air travel but also its concentration on hubs, which implies not only a geographical but also a time concentration, especially on the morning and evening slots for short hauls. In addition the hub and spoke system and code sharing encourage the use of smaller planes with a higher frequency (shuttle). To take an example, Nice airport has seen in three years a growth of 42% in its aircraft movements while the number of passengers grew by only 18% during the same time.

42. Delays and congestion have evolved in the two most saturated areas, Europe and North America, from a technical debate to a political debate.

(b) A debate focused in Europe on the unification of the airspace

43. Between 1990 and 1999 total European air traffic grew by 51%. At the same time the question of air traffic delays in Europe has become the object of debate between the air transport operators and regulators but also in the general public in the recent years. This can easily be explained by the figures contained in Table 5:

44. Not all these delays are to be attributed to air traffic: of the 30.4% of delayed flights in 1999 4% was attributable to meteorological conditions, 14% to airports and the rest to air traffic congestion and chain effects. In 1998, the costs of saturation were estimated at €500 million in additional operating costs for airlines. It has been computed that in the absence of delays fuel consumption could be reduced by 6 to 12% and that waiting times generate 320,000 tons of additional carbon dioxide emissions per year.

45. According to certain sources this is due to the fact that traffic grows on average 8% a year while the system cannot cope with growth of more than 5%. One should note also that because of the saturation of the system the relation between the growth of the traffic and delays is not proportional but rather logarithmic: for instance, in the first six months of 1999 a growth of 5.6% in aircraft movements generated a growth of 45% in delays.[15]

46. The chronology of the regulatory debate and developments which is reconstituted below in a simplified manner shows a clear acceleration in the last two years.

47. Eurocontrol[16], founded in 1960, has implemented the European Air Traffic Control Harmonization and Implementation Program (EATCHIP) since 1991. This program has faced a growth of traffic of 50% without degradation of safety. However, partly due to the lack of enforcement powers for Eurocontrol the realization of the objectives of its Convergence Implementation Program is beyond schedule and reached only at 76%.

48. In 1997, Eurocontrol put into place the Central Flow Management Unit (CFMU) which arbitrates in last resort conflicting requirements on airspace, decides on the final attribution of slots and if necessary imposes delays.

49. In June 1997, the Ministers of Transport of the Member States of Eurocontrol signed the revised Convention with a view to improving the Agency's ability to carry out its responsibilities more effectively. The revised Convention provided for the reformulation of Eurocontrol's tasks and the creation of a new institutional structure to enable the Organisation to achieve:

- the expansion of available airspace to meet traffic demand and the optimum utilisation of available capacity within the framework of a uniform European Air Traffic Management System (EATMS);

15 Conventionally defined as the flights that are delayed for more than 15 minutes.

16 EUROCONTROL, the European Organisation for the Safety of Air Navigation has 29 Member States: Germany, Austria, Belgium, Bulgaria, Cyprus, Croatia, Denmark, Spain, France, Greece, Hungary, Ireland, Italy, The former Yugoslav Republic of Macedonia, Luxembourg, Malta, Moldova, Monaco, Norway, Netherlands, Portugal, Slovak Republic, Czech Republic, Romania, United Kingdom, Slovenia, Sweden, Switzerland, Turkey.

TABLE 5
Proportion of European flights delayed for more than 15 minutes

1993	1994	1995	1996	1997	1998	1999
12.7%	13.3%	18.4%	18.5%	19.5%	22.8%	30.4%

Source: Association of European Airlines.

- the strengthening of ATM planning by combining en-route and airport policies within a 2000+ Strategy based on a Gate-to-Gate concept;

- effective participation in the design and implementation of a global satellite navigation system;

- enhancement of cooperation with other European institutions;

- the introduction of an ATM performance review and target-setting system;

- the development of harmonised safety regulatory objectives and requirements for the ATM system;

- a more efficient decision-making process based on majority voting;

- the systematic involvement of representative organisations of airspace users and airports in the matters that concern them;

- the reinforcement of cooperation between civil and military authorities.

50. This revised Convention has however not entered into force yet as EU Member States and the European Commission are still discussing the modalities of a simultaneous ratification implying full membership of the Community.

51. In October 1998, the Transport Ministers of the European Community on civil aviation adopted the strategy document ATM2000+. Among the elements of this plan are; reform of procedures, integration of the IT systems, research on the human-machine interface, redefinition of vertical separation between aircraft, global datalink systems and communication upgrades. This programme is planned to last until 2015.

52. In July 1999 the European Council of Ministers adopted a Resolution on "The situation of air traffic delays in Europe" (1999/C22/01, 19 July 1999) and invited the Commission to report on the subject.

53. In October 1999 IATA began a campaign on air traffic delays and presented a five point plan to:

- adopt the ATM 2000+ strategy in full and implement immediately a top-down approach for planning and operating air space as a continuum across national boundaries;

- give Eurocontrol and the European Union the necessary regulatory powers and processes so that: (a) common rule making becomes possible; (b) Eurocontrol decisions have direct applicability in Member States; and (c) Eurocontrol standards are effectively applied and swiftly complied with in Member States;

- establish a permanent European-wide capacity planning process to ensure that capacity is added to the European network when and where it is needed;

- liberalize the provision of Air Traffic Services (ATS) through commercialization, privatization or corporatization as appropriate in each European State;

- develop incentives for ATS providers to deliver sufficient capacity and flight efficiency for air space users and do so cost-effectively.

54. In December 1999, CANSO formulated its own proposal for the December 1999 meeting of EU Transport Ministers and for the ECAC-MATSE Transport Ministers Conference of January 2000, proposals which are similar in a sense to the IATA ones:

- adopt the ATM2000+ strategy in full;

- services provision should be freed from political control and States should make available to the services providers appropriate resources such as air space and spectrum free from constraints of national boundaries;

- services providers should be made accountable for the safety and performance of the ATM system since they have direct control over meeting demand and developing the service;

- change the current charting mechanism for ATM so as to introduce appropriate incentives for service providers to perform in terms of services, value and safety;

- establish separate regulatory authorities to protect the interests of consumers by encouraging competition wherever possible and appropriate, while maintaining firm adherence to safety standards.

55. On 6 December 1999, the European Commission presented to the Council of Ministers and the European

Parliament a communication entitled the "Creation of a Single European Sky".[17]

56. The Commission communication first derives the need for political action at the highest level from statistics similar to those described above. It evaluates for instance the 1998 indirect cost of air traffic delays at €5,400 million and the direct operating costs for airlines at €600 million. It underlines the financial contribution of the Community to the research effort in the area of air traffic management and pays homage to the "gate to gate" ATM 2000+ Eurocontrol strategy, but acknowledges the fact that no technological revolution can reasonably be expected in the short term. It points out the lack of interoperability between national systems which creates a knock-on effect on the whole system and introduces artificial limits on or under-utlization of the capacity of their neighbours. It points out that the conflicting needs of military and civilian traffic have now been partially accommodated by the "flexible use of air space" concept where some military air space is made available for civilian users. It states however that the implementation of this concept remains at a national level and is seldom operated by an independent and neutral regulator. It also points out that States are sometimes resisting cross-border reorganization of routes in order to continue collecting the corresponding charges. It concludes in that respect that air space is a common asset which should be managed collectively as a continuum regardless of borders, with a view to satisfying all its users, civilian and military, and optimizing air traffic management.

57. To that effect, it suggests that a central organization should be given the full responsibility for the management of European air space at both the strategic and tactical level. With regard to investment in equipment, human resources and finally capacity, the communication notes that Eurocontrol has started an evaluation of capacity needs entitled "Medium-term capacity planning". It suggests that this process should be encouraged and that targeted increases of capacity should be decided according to the provisions of the revised Eurocontrol Convention.

58. After a discussion on the air traffic management flow concept (see above paragraphs 21) the Commission concludes that this function should be centralized and governed by high level rules. The Commission then suggests separating the regulations imposing the carriage of mandatory equipment from air traffic providers' activities.

59. The Commission then suggests that the provision of air traffic services in the strict sense should be regulated so as to ensure that they meet the necessary level of safety and interoperability. It proposes also that those services, when provided on a monopoly basis, should be submitted to an economic regulation ensuring that the agreed operational performance or services levels are implemented. The Commission suggests separating the regulatory function from the services provision function and economic regulators from safety regulators. This should apply in particular to Eurocontrol. New incentives based on rewards or penalties should also be developed. Finally the Commission will also examine the technical and economic feasibility of unbundling air traffic services.

60. This important communication has provoked an intense debate and has created tension in the workforce and social unrest.

61. In January 2000, Airport Council International (ACI) – Europe and the Association of European Airlines issued a statement comparable to those of IATA and CANSO urging governments to set up a chain of command and to put in place an enforcement mechanism, calling for the separation of regulators from the air traffic services providers and requesting an air space based on the needs of the markets and not on artificial frontiers between air spaces.

62. Following its December 1999 communication, the Commission established a high level working group comprising representatives of airlines, air navigation services providers, unions and consumers.

63. In June 2000, the Commission reported to the Council of Ministers that the first results emerging from the high level working group were the following:

- Europe requires both a strong regulator and regulation/legislation which is consistent across Europe.
- Airspace must be treated as a common resource, without internal frontiers, and we must work towards integrated management of Europe's airspace. Upper airspace will be the first focus of attention.
- Military needs for the use of airspace must be assured, while minimising segregated use of airspace for military purposes: both military and civil users are willing to improve arrangements for co-ordinating usage and establish arbitration procedures.

17 COM(1999) 614 final 2, dated 6 December 1999, available on http/europa.eu.int/eur-lex/en/com/pdf/1999/com1999_0614en01.pdf.

- The reform needs an active involvement and commitment by air traffic controllers. Recruitment efforts are needed for air traffic controllers to preserve Europe's strong safety culture.

- Incentives are needed to enhance interoperability of all aspects of managing air traffic across Europe.

64. In August 2000, IATA and CANSO produced a joint statement "A Joint Vision for the Future of Air Traffic Management in Europe" calling for a central European regulator, opening of the market and regulation of competition.

65. In September 2000 the Commission proposed the creation of a European Aviation Safety Agency whose function would mainly consist of certification - currently the Joint Aviation Authorities' function (for more details and references on this organization see the maintenance section of document S/C/W/163) but which could also serve as a central regulator for the safety aspects of air traffic control, including air operation regulation.

66. The final report of the high level group, initially expected for autumn 2000 is now due to be published at the end of the year. The discussions that will follow its issuance are likely to be intense in view of the political sensitivity of the question. The possibility of a simple functional separation of the regulator and the provider could constitute a compromise.

(c) An embryonic debate in the United States

67. The debate on institutional reform of air traffic management in the US has not yet reached the same intensity as in Europe, probably because the US airspace is less fragmented than that of Europe.[18] However the public debate on air traffic delays has also recently reached a peak: passengers' complaints have more than doubled in 1999 as compared to 1998. The main causes of complaint are delays and cancellations, many of them being caused by air traffic delays, although meteorological causes seem to play a more important role than in Europe.

68. It is difficult to gather a consistent series of figures on delays, since one of the problems that the airlines and the FAA are facing is the lack of a harmonized measurement system. Some fragmented data is however available. The number of delays has increased between 1995 and 1999 by 58%, while cancellations have grown by 68%, although total flight operations have only increased by 8.3%. The duration of delays has also grown by 18% during the same period. A new measurement devised by the DOT and combining the scheduled and unscheduled delays experienced by 10 major carriers shows on average a 42% delay increase, from 11 minutes to 16 minutes, between 1998 and 1999. Delays of more than one hour on taxiing out, which constitute a marginal part of the delays, have however increased by 130% between 1995 and 1998. The Air Transport Association (ATA) has estimated the cost of delays to be US$4.6 billion in 1998, a progression of 5% as compared to 1997.

69. In mid-1998, the industry faced the prospect of legislation being introduced that would make certain procedures designed to improve overall services compulsory. Fearing what they termed re-regulation, airlines put in place a voluntary programme: "customer first" including offering the lowest fares available, notifying customers of known delays and cancellations, allowing reservations to be held or cancelled within 24 hours without penalty and increasing baggage liability limits. In the summer 2000 certain Congressmen, in view of the mid-term reports of the DOT Inspector General, have indicated that they may push forward additional passenger-fairness legislation.

70. In August 2000, the Secretary for Transportation convened an emergency summit to be attended by the major carriers, air traffic control administrators and union representatives to seek short term improvements and relaunch the debate on the longer term challenges. At this occasion the FAA produced a plan containing 21 initiatives, 11 of which should be completed by late October for tackling 7 "choke points" at airports east of the Mississippi, from Atlanta to Boston. These 21 possible changes were in fact announced by the FAA administration on 9 October 2000. These changes include also more efficient utilization of space through the reduction of vertical separation between aircraft above 29,000 feet from 2000 feet to 1000 feet, flying lower between 8,000 and 20,000 feet on short flights, reducing miles in-trail, increasing the number of low altitude arrival and departure routes. To face the statistical and information systems problems mentioned above, a task force on services quality performance has been created, as well as another task force in charge of expediting investment infrastructure such as runways

18 There was however, a certain degree of fragmentation since in September 1999, a study by the FAA has identified as the main causes of air traffic delay the poor communication between traffic management in the various regions and the FAA command centre in Washington and the lack of standardized equipment. As a result of this report the management flow and the meteorological information system have been centralized in Washington. However, according to certain industry sources this centralization has in fact made the situation worse.

and airport expansion, following the adoption of the US$40 billion FAA re-authorization bill.

71. In September 2000, the airlines have suggested that in cases of severe congestion, the prohibition of the coordination of schedules among airlines should be lifted and given case-by-case anti-trust immunity. The absence of coordination is considered as one of the main causes of delays, since airlines are all programming flights at peak times when the system cannot physically accommodate this volume of traffic.

72. The institutional debate is less active. Although certain organizations like the American Automobile Association (AAA), the largest leisure travel organization, have called for the privatization of the air traffic system, the question is clearly not on the agenda of the Administration nor of the Congress. Airlines themselves are divided: Continental is in favour of partial privatization but Northwest is against it, as it considers that it would mean higher costs and a concentration of investments on certain big hubs. American Airlines and United take the middle line in favour of the institutional status quo accompanied by the application of private management disciplines and accounting methods and performance measurement systems for the FAA. The FAA has partially anticipated these requests by deciding to turn itself into a "semi-autonomous performance based organization".

73. As in many cases, data is lacking for the rest of the world in the specialized press and in the international organizations there is little material available. Members may wish to reflect on the possible need and ways and means to gather such information.

(d) An improved financial situation faced with new challenges

74. In the context of the ANSConf conference, ICAO has collected data on the financial situation of air navigation services providers (document ANSConf-WP/3, dated 3 May 2000). About 70 States have answered the enquiry but they represent more than 75% of the traffic. A similar enquiry had been conducted in 1989 but with a smaller number of responses (49 States).

75. As for airports, comparison of the 1989 and 1999 data shows considerable improvement of the financial situation of air navigation providers. Income equalled or exceeded expenses in 49 of 62 States in 1999, whereas in 1989 the comparable figure was 24 States out of 49. The situation has improved in all regions.[19]

76. However, as for airports again, expenses may have been underestimated in certain instances. Among the causes of these improvements, ICAO identified the growing emphasis States are placing on recovering air navigation services costs, the continued growth of traffic and an increase in the number of States levying approach and aerodrome charges.

77. ATS and COM services account for the majority of expenses (from 75 to 90%), MET for between 5 and 20%, AIS around 5% and SAR between 0 and 3%. The share of ATS and COM has also grown in relative terms which reflects the heavy investment in those areas. Similarly the relative share of depreciation and/or amortisation costs has grown from 9 to 17%.

78. In terms of sources of financing, the ICAO enquiry shows a considerable diversification of the sources of financing, as illustrated by Table 6.

19 For a detailed regional breakdown see table 5, page 7 of ANSConf-WP/3.

TABLE 6
Primary Sources for Financing Air Navigation Services (ANS) in 71 States 1999

		Self-financing	National government	Foreign government loans or aid	Development banks or funds	Commercial loans		Share capital	Other
						domestic	foreign		
Applied	Number of ANS	53	33	17	20	15	20	5	4
Planned		26	7	7	9	11	11	6	0

79. According to ICAO this tendency will become even more pronounced since governments are relying increasingly on the private sector or on financially autonomous public or semi-public bodies to finance investments in air navigation services.

80. There is no data available on which to base a comparison between operating surpluses and capital expenditure, whereas for airports such a comparison can be made (S/C/W/163, paragraph 88). However, CANSO considers that among the US$250-350 billion deemed as necessary by ICAO for investment in airport and air navigation infrastructures from 1999-2005[20] at least US$50 billion should be devoted to air navigation infrastructure. Similarly recognizing that there may be insufficient funds available in many States, notably to implement the CNS/ATM concept, ICAO is actively exploring all available and potential funding sources including new applications of the joint-financing concept (see paragraph 16 above) and an International Financial Facility for Aviation Safety (IFFAS). This last concept is the object of an intense debate among ICAO Members.

(e) A limited but significant movement in institutional structures largely driven by financial considerations.

81. In the context of the ANS-Conf, ICAO has gathered data on the ownership and operation of air navigation services. The results of this study, by region, appear in table 7. Comparison with earlier systematic data are unfortunately impossible as this was the first general study ever undertaken on this subject.

82. Table 8 compiled by CANSO gives the essential characteristics of the various Members of this organization of commercial air navigation providers.

20 See S/C/W/163, paragraph 91.

TABLE 7
Ownership and Operation of Air Navigation Services[21]

Region	Ownership and Operation						Charges Collection	
	Gov't owned autonomous entity	Directorate of Civil Aviation	Ministry or other govt department	International operating agency	Privately owned entity	Other	Collects itself	Collected by another body/ agency
Asia/Pacific (14 States)								
Current	8	7	2	0	0	0	10	2
Planned	4	1	2	0	0	0		
Middle East (8 States)								
Current	0	6	1	0	0	1	6	2
Planned	2	0	0	0	0	0		
Africa (19 States)								
Current	8	9	2	2	0	0	15	5
Planned	4	1	0	0	0	0		
Europe (29 States)								
Current	17	8	3	0	0	2	15	25
Planned	7	2	4	0	2	1		
North America (2 States)								
Current	0	0	1	0	1	0	1	0
Planned	0	0	0	0	0	1		
Caribbean/Central/South America (9 States)								
Current	4	2	3	3	1	0	9	3
Planned	0	0	1	0	0	0		
Total (81 States)								
Current	37	32	12	5	2	3	56	37
Planned	17	4	7	0	2	2		

21 The country by country breakdown of this chart is contained in document ANSConf-WP/18Add1.

TABLE 8
Characteristics of the Main Commercial Air Navigation Services Providers

Country	Name	Year of Foundation/ Corporatisation	Type of Company	Shareholder	Profit?	Revenues	Employees	Profit	Investment Abroad
Australia	Airservices	1988	State corporation	No	Targeted return on investment (ROI)	US$ 349,023 M	3.954	US$ 26,981 M	
Austria	Austrocontrol	1955/1994	Limited liability company	100% State-owned	No	US$ 139,567 M	1.059		
Belgium	Belgocontrol	1998	Public Business Entity		Yes, but cost-recovery user charges	BEF 6,317 B	972	BEF 281 M	
Canada	NAV Canada	1996	Private non-share capital corporation	No	No	US$ 632,096 M	5.200		
Czech Rep.	ANS of the Czech Rep.	1997	State corporation	No	Yes, but cost-recovery user charges	US$ 53,134 M	736	US$ 13,571 M	
Estonia	Estonian Air Navigation Services	1998	Limited liability company	100% State-owned		EKR 113,736 M	120		
Germany	Deutsche Flugsicherung (DFS)	1993	Limited liability company	100% State-owned	Yes, but cost-recovery user charges	US$ 707,332 M	5.038	US$ 57,346 M	
Ireland	Irish Aviation Authority	1994	Limited liability company	100% State-owned	Yes, but cost-recovery user charges	€ 76,282 M	493	€ 6,217 M	
Italy	Ente Nazionale di Assistenza al Volo (ENAV)						3.240		
Latvia	Latvijas Gaisa Satiksme (LGS)	1991/1997	Joint-stock company	100% State-owned	Yes, but state-controlled	LVL 9,433 M	109	LVL 0,703 M	
Netherlands	Luchtverkeersleiding Nederland (LVNL)	1945/1993	State corporation	No	No	NLG 338,162 M	879		
New Zealand	Airways Corporation of New Zealand	1987	State corporation			US$ 45,362 M	614	US$ 3,378 M	

Country	Name	Year of Foundation/ Corporatisation	Type of Company	Shareholder	Profit?	Revenues	Employees	Profit	Investment Abroad
Portugal	NAV Portugal	1978/1999	State corporation	100% State-owned	Yes, but cost-recovery user charges	US$ 117,024 M	986		
Romania	Romanian Air Traffic Services Administration (ROMATSA)	1953/1991	State corporation		Yes, but cost-recovery user charges		1.937		
South Africa	Air Traffic & Navigation Services	1994	State corporation	100% State-owned	Yes	SAR 165,302 M	564	SAR 26,520 M	
Spain	Aéropuertos Españoles y Navegación Aérea (AENA)	1990/1997	State corporation	No	Yes, but cost-recovery user charges	€ 353,483 M	9,200 total, of which 2,948 in ANS	€10,008 M	
Switzerland	Swisscontrol	1921/1987	Joint-stock company	99,85% State-owned, 0,15% others	No	CHF 265,174 M	902		
Thailand	Aerothai	1963/	Limited company with registered share capital	Government, 91%, airlines, 9%	No	TBT 1,818 B	682		
United King.	National Air Traffic Services (NATS)	1962/1996	Wholly-owned subsidiary of UK CAA	No	Yes, but cost-recovery user charges	£ 535,012 M	5.372	£ 14,717 M	
	SERCO					£ 807,544 M*		£ 29,332 M*	
Ukraine	Ukrainian State Air Traffic Services Enterprise (UkSATSE)	1993/1998	State corporation	No	Yes	US$ 56,678 M	3.656	US$ 23,373 M	

83. It is worth noting that the list of CANSO Members is narrower (21) than the list of "government-owned autonomous entities" (37 existing, 17 planned), of "privately-owned entities" (2 existing, 2 planned) and of "other entities" (3 current, 2 planned) in Table 7.

84. The countries concerned by these discrepancies are the following:

- for the existing government owned autonomous entities: Algeria, Bolivia, Brazil, Brunei Darussalam, Bulgaria, Finland, Greece, Grenada, Maldives, Malta Morocco, Norway, Pakistan, Saint Vincent and the Grenadines, Sao Tome and Principe, Singapore, Sri Lanka, Sweden, Tunisia, Uganda, Tanzania, Zimbabwe;
- for the planned government autonomous entities: Bostwana, Iran, Kenya, Kuwait, Namibia, Poland, FYROM; Tajikistan;[22]
- for the existing privately owned entities: Brazil;[23]
- for the planned privately owned entities: Lithuania;
- for the existing "other" entities Poland and Qatar;[24] and
- for the planned other entities, the United States who are planning to turn the FAA division concerned into a "semi-autonomous performance based organization".[25]

85. This movement towards "commercialisation" cannot be compared in scale to the one affecting airports. All autonomous bodies listed in Table 8 are either State corporations or commercial corporations 100% owned by the State. In only two instances are there shares held by other actors and this external participation is very marginal (9% in Thailand, 0.95% in Switzerland). No foreign interest is involved and none of these bodies has commercial interests outside its own national territory.

86. It is also worth noting that to address the same compelling financial need for stable and foreseeable resources and to obtain the same borrowing capacity certain countries have had recourse to other formulae than corporatization and privatization. For instance France has retained the classical system of the provision of air traffic control services by a governmental branch (a directorate of the Ministry of Transport without a legal personality distinct from the state) but has created a *"budget annexe de la navigation aérienne"*, an exceptional budget formula that entails a borrowing capacity.

87. The first case where partial private ownership and a substantial foreign share is envisaged is the privatization of 46% of the NATS, the air navigation corporation of the UK, in the framework of a Public-Private Partnership, planned for March 2001. Four consortia are competing: "Novares" (Lockeed Martin - New Zealand Airways Corporation - Apax partners); "Nimbus" (SERCO - PPM Venture/Raytheon systems ltd); "Airlines Group" (British Airways - British Midlands - Virgin Atlantic - Airtours - Britannia - JMC - easyJet - Monarch) and the Irish Aviation Authority. It is interesting to note the presence in these consortia of equipment manufacturers (Lockeed, Raytheon and at and an earlier stage of the bidding process Boeing and Thomson CSF) of airlines traditionally rivals but united here by the fear of charges escalation, of financial companies (Apax partners, PPM Venture - the venture capital subsidiary of the insurer Prudential) and of foreign air navigation services providers (New Zealand Airways Corporation, SERCO, Irish Aviation Authorities).

88. However, even in this case the state will keep a 49% share in the short term and a 30% share in the long term, as well as a permanent golden share (the employees receiving the remaining 5%). The exact amount of foreign participation is still unknown since it varies between consortia. Again the main reason for this process is the financial needs of the system, since the objective is to finance £1.3 billion of investment by 2010 to face a planned traffic growth of 43%.

89. To be complete, legally speaking the creation of NAV-Canada in 1996 was also a privatization and is considered so by ICAO (see ANSConf-WP/6, annex, page 6, para 3.15). However, the new body is a "private non-share capital corporation", without external or foreign ownership and is acting on a non-profit basis.

22 8 countries instead of 17 mentioned above as ICAO in 9 cases ticked both the "current" and "planned" column, see ANSConf WP/18, appendix 1.

23 ICAO mentions also in this category NAV Canada, Member of CANSO.

24 ICAO also mentions in this category Ukraine Member of CANSO.

25 For more information on this US policy see "air traffic services performance plan, fiscal years 2000-2002", October 1999. ICAO also mention in this category the UK NATS future "public private partnership", already a Member of CANSO.

B. AN INTERNATIONALLY AGREED CHARGING SYSTEM UNDER STRAIN

90. This subsection will describe (1) the classical internationally agreed charging system and (2) the debates held and the decision taken at the Montreal ANSConf conference held in June 2000.

91. This charging system is an essential feature of the operating conditions of airlines as it determines in a very precise manner how the billions of dollars represented each year by en route charges are established and levied. Table 9 gives an idea of the amounts at stake.

92. This section will largely draw on information contained in ICAO document 9161/3 "Manual on Air Navigation Services Economics" (third edition, 1997) and 9082/5 "Statements by the Council to contracting States on charges for airports and route air navigation facilities" (1997) as well as on the relevant ANSConf documents.

1. An internationally agreed charging system

93. The ICAO air navigation charges principles are contained in two different sets of documents of a different legal nature. The first set is Article 15 of the Chicago Convention which is legally binding on ICAO Members and therefore subject to the seldom-used ICAO dispute settlement system. The second set is constituted by the non-binding but very detailed Statement by the Council to Contracting States on Charges for Air navigation Services.

(a) Article 15 of the Chicago Convention.

94. The basic policy established by ICAO in the area of air navigation charges is expressed in article 15 of the Chicago Convention as follows (this text is common to airport charging and air navigation charging, sections specific to air navigation have been put in bold).

"Every airport in a contracting State which is open to public use by its national aircraft shall likewise, subject to the provisions of Article 68, be open under uniform conditions to the aircraft of all the other contracting States. **The like uniform conditions shall apply to the use, by aircraft of every contracting State, of all air navigation facilities, including radio and meteorological services, which may be provided for public use for the safety and expedition of air navigation.**

Any charges that may be imposed or permitted to be imposed by a contracting State for the use of such airports and **air navigation facilities** by the aircraft of any other contracting State shall not be higher:

- As to aircraft not engaged in scheduled international air services, than those that would be paid by its national aircraft of the same class engaged in similar operations; and
- As to aircraft engaged in scheduled international air services, than those that would be paid by its national aircraft engaged in similar international air services.

All such charges shall be published and communicated to the International Civil Aviation Organization: provided that, upon representation by an interested contracting State, the charges imposed for the use of airports and other facilities shall be subject to review by the Council, which shall report and make recommendations thereon for the consideration of the State or States concerned. **No fees, dues or other charges shall be imposed by any contracting State in respect solely of the right of transit over or entry into or exit from its territory of any aircraft of a contracting State or persons or property thereon."**

TABLE 9
En route Facility Charges (1993-1998)

En route facility charges	1993	1994	1995	1996	1997	1998
Amount ($ million)	5420	5950	7120	7010	7650	8460
Proportion of operating charges (%)	2.4	2.5	2.8	2.6	2.8	3.0

95. This last principle has in some instances been interpreted to mean that no charges are to be levied when an aircraft flies into, out of, or over a State. That, however, is not the intent of this principle since all States are fully within their rights to recover the costs of the services they provide to aircraft operators through charges. The substance of this principle is in fact that a State should not charge solely for granting an authorization for flight into, out of, or over its territory. It is comparable though not exactly similar to the provisions of Article V:4 of the GATT which stipulates that "all charges and regulations imposed by contracting parties on traffic in transit to or from territories of other contracting parties shall be reasonable having regard to the conditions of traffic" and which apply to the air transit of goods but not to the operation of aircraft in transit (Article V:7 of the GATS).

96. The various obligations of the States in terms of MFN, national treatment, publication and consultations are exactly the same as those applying to airports and which are described in detail in document S/C/W/163/Add1 paragraphs 133 to 138.

97. As for airports, the ICAO dispute settlement system has never been used in the case of air navigation charges. IATA is also monitoring closely the respect of Article 15 with regard to air navigation services, but the situation there seems proportionally less tense than for airport charges.

98. The ICAO enquiry confirms this appreciation since out of 75 answers, 47 States were following the ICAO cost recovery policy (compared with only 38 for airports) and 34 following mandatory consultations with users[26] (compared with 30 for airports). ICAO attributes that difference to the fact that autonomous bodies and privatization are more common and longer-established in airport operation than in air navigation services. Another illustration of this proportionally less tense situation is the fact that IATA and CANSO have been able to produce several common position papers in recent years on regulatory reform. One may note however that the IATA position in favour of "commercialization" is qualified by a series of prerequisites. Among the prerequisites listed in document ANSConf- WP/26[27] are:

- the full involvement of users from the beginning to the end of the commercialization process;
- a charging policy which would be cost-based and agreed with users;
- charges:
  - determined on the basis of transparent, fair and reasonable costs;
  - in line with international obligations for the particular States;
  - compatible with ICAO's principles on user charges; and
  - subject to a regulatory process (ideally through an independent regulatory body).

(b) Statement by the ICAO Council to contracting States on charges for air navigation services.

99. Additional and more detailed policy guidance in the area of air navigation charges is provided in the Statement by the Council to Contracting States on Charges for Air Navigation Services reproduced in Annex. As for airports, this statement has been periodically revised.

100. The prevention of discrimination between air navigation services customers is not the only purpose of the Statement, which is in fact largely focused on the establishment of a finely tuned and very detailed economic balance between airlines and air navigation services providers. As for airports the statement is non-binding and ICAO relies on a "strong moral obligation" to ensure an enforcement, which it judges to be the general practice.

101. The principles contained in the Council Statement address such subjects as the cost basis for air navigation services charges, allocation of air navigation services costs among aeronautical users, air navigation services charging systems, approach and aerodrome control charges, route air navigation services charges, charges for air navigation services used by aircraft when not over the provider State, and consultation with users regarding charges and air navigation services planning.

102. The Statement contains provisions on the balance of interests between providers and users and consultation obligations between them which are similar to those applicable to airports.

103. An important principle expressed in the Statement is that where air navigation services are provided for international use, the providers may require the users to pay their share of the related costs, but international civil aviation should not be asked to meet costs

26 Double answers are possible.

27 ANSConf-WP/26, dated 16 December 1999, part V.

which are not properly allocable to it. The cost to be shared is the full cost of providing the air navigation services, including interest on capital investment and depreciation (paragraph 34 (i)).

104. Other principles and recommendations of particular relevance in the context of the cost basis for air navigation services charges, charging systems and the collection of charges are:

a) states are encouraged to maintain accounts for the air navigation services they provide in a manner which ensures that air navigation services charges levied on international civil aviation are properly cost-based (paragraph 32); also, that for the purpose of consultation users should be provided with adequate financial information (paragraph 45 (ii));

b) air navigation services may produce sufficient revenues to exceed all direct and indirect operating costs and so provide for a reasonable return on assets to contribute towards necessary capital improvements (paragraph 34 (iv));

c) the allocation of air navigation services costs among aeronautical users should be carried out in a manner equitable to all users, and the proportions of cost attributable to international civil aviation and other utilization of the facilities and services (including domestic civil aviation, State or other exempted aircraft, non-aeronautical users) should be determined in such a way as to ensure that no users are burdened with costs not properly allocable to them according to sound accounting principles (paragraph 36);

d) any charging systems should, so far as possible, be simple, equitable and, with regard to route air navigation services charges, suitable for general application at least on a regional basis. The administrative cost of collection charges should not exceed a reasonable proportion of the charges collected (paragraph 37 (i));

e) the charges should not be imposed in such a way as to discourage the use of facilities and services necessary for safety or the introduction of new aids and techniques (paragraph 37 (ii));

f) any charging system should take into account the cost of providing air navigation services and the effectiveness of the air services rendered. The charging system should be introduced in such a fashion as to take account of the economic and financial situation of the users directly affected on the one hand, and that of the provider State or States on the other (paragraph 37 (v));

g) the charges levied on international general aviation should be assessed in a reasonable manner having regard to the costs of the facilities needed and used and the goal of promoting the sound development of international civil aviation as a whole (paragraph 37 (vii));

h) approach and aerodrome control charges, whether a part of the landing charges or levied separately, should as far as possible be a single element of the landing charge or single charge per flight and could take aircraft weight into account but less than in direct proportion (paragraph 39);

i) route air navigation services charges should essentially be based on distance flown and aircraft weight but that weight should be taken into account less than proportionately (paragraph 40); and

j) all users may be required to pay their share of the costs of providing air navigation services regardless of whether or not the utilization takes place over the territory of the provider State (paragraph 42).

105. An interesting provision concerns the currency and remittances problem. It is proportionally more sophisticated than the provisions of Article XI and XII of the GATS. On this issue the Council Statement recommends that under normal circumstances, user charges should be expressed and be payable in the local currency of the State concerned, but that under special circumstances, for example where economic conditions are not stable, when user charges are denominated in other than local currency, airlines could apply the currency of denomination using the same exchange rate as for their local ticket sales; the Council also recommends that remittance problems be resolved. It is also recognized that when route air navigation services charges are billed on a regional basis (i.e. on behalf of several States or by a jointly operated

agency), it may be advantageous to both users and providers to denominate and pay charges in a single convertible currency (paragraph 38).

106. Finally, as concerns cost recovery of search and rescue services the principle is that costs attributable to the provision of search and rescue services provided by a permanent civil establishment can be included in the cost basis for air navigation services charges but that such services provided by parties or entities not falling within that category (for example military forces) should not.

2. The Montreal ANSConf debate

107. The Montreal ANSConf debate has shown that the air navigation charging system was experiencing the same kind of strain as that for airports, though more recently and less acutely.

108. The diagnosis made by ICAO for airports on the situation and its consequences (paragraph 155 and 156 of document S/C/W/163/Add.1) is also valid for air navigation services. ICAO makes the same plea that the State cannot abdicate or delegate its responsibility with regard to the standards of facilities and services provided because Article 28 of the Chicago Convention has granted those responsibilities exclusively to the State.

109. The proposal made by ICAO to insert in the Council statements a paragraph recommending States to consider setting up an independent regulatory authority to oversee financial practices of airports, was also valid for air navigation services providers and had the same fate. That is, States considered that this body was not necessary if a generic competition authority pre-existed but also that the overseeing duties of this regulatory body should extend beyond simple financial practices (for more detail see S/C/W/163/Add.1, paragraphs 159 and 160).

110. The second proposal made by ICAO, to strengthen its policy regarding consultations notably by raising in the revised Statement the possibility for a State to impose on an operator respect of Article 15 of the Chicago Convention and of the Statement by the Council was equally valid for air navigation services. The result of the discussion was that States agreed to amend the text but only to the extent of reaffirming the compulsory nature of Article 15 of the Chicago Convention and the less mandatory nature of the Statement (for more detail see S/C/W/163/Add.1, paragraphs 161 and 162).

111. A third ICAO proposal was air navigation-specific. ICAO asked the conference if "with the increasing autonomy in the services provision… [it] may wish to consider whether there may be a need for an extended ICAO role in this area particularly in the case of air space over the high seas where the responsibility for the provision of air navigation services has been assigned to different States by ICAO". In response Members considered that they did not feel prepared to address that issue at the present juncture (WP/115 recommendation/4/3.4.6.7).

112. A fourth proposal was the establishment of a first resort mechanism, that is to say a neutral party at local level to prevent and resolve disputes before they enter the international arena. There again, this proposal was valid both for airport services and air navigation services. The Conference agreed with the inclusion of that suggestion in the revised Council Statement (for more detail see S/C/W/163/Add.1, paragraphs 163 and 164).

113. Finally, the same remarks made on the Airport Charges Statement, in paragraph 168 of document S/C/W/163/Add.1, concerning its sophistication, its adaptability through periodical redrafting but also its lack of an effective enforcement and dispute settlement mechanism, could be made *mutatis mutandis* for the air navigation charging Statement.

ANNEX

Statement by the ICAO Council on charges for Air Navigation Services

Introduction

1. The global costs of providing air navigation services continue to increase relatively rapidly to handle growing volumes of traffic more efficiently. However, the level of cost recovery is now greater than it was in 1981, not only because of increases in existing charges but also because charges for route air navigation services are presently almost universally applied, such charges currently accounting for around 1.5% of total scheduled airline operating expenses. In addition a small but growing number of States are also introducing separate charges for approach and aerodrome control.

2. The comments made in paragraph 6 concerning the potential benefits offered by assigning the operation of airports to autonomous authorities also apply to air navigation services. Where this is in the best interest of providers and users, governments may wish to explore the possibility of establishing autonomous authorities to operate their air navigation services, recognizing that in some circumstances a single authority may operate both airports and air navigation services, and that the authority may be in the form of an autonomous civil aviation authority. The Council also encourages international co-operation in the provision and operation of air navigation services where this is beneficial for the providers and users concerned.

3. A number of additional factors are likely to exert an important influence on the organization and economic development of air navigation services. For example, the number of autonomous airport authorities is expected to increase. This could result in more situations where a different entity provides both approach and aerodrome control and route air navigation services. Also, additional resources will be required to deal with the problem of airspace congestion, and to implement satellite-based communications, navigation and surveillance (CNS) and air traffic management (ATM) systems, as well as other multinational facilities and services and other improvements in infrastructure.

4. States are likely to increase their efforts to recover their air navigation services costs from users in order to meet the increasing financial obligations of providing air navigation services. However, the Council recommends that States exercise caution in their general policy on charges for air navigation services and take into consideration the effect on users, in particular the air carriers which may need to adjust their tariffs to deal with increased costs arising from new or higher charges. The Council also considers that a balance should be maintained between the respective interests of providers of air navigation services and airlines and therefore recommends that States should encourage a greater level of co-operation between them.

5. The Council also expresses concern over the proliferation of charges on air traffic, and the retaliatory effects this could lead to, and recommends that States should:

i) Impose charges only for services and functions which are required for international civil aviation.

ii) Refrain from imposing charges which discriminate against international civil aviation in relation to other modes of international transport.

6. The problems involved in providing and maintaining the facilities required by the Regional Air Navigation Plans are particularly serious for the less advanced economies, principal among these being the limited financial resources available for economic development generally, the higher priority assigned to other sectors of the economy whose needs are considered more urgent, under-utilization of air navigation services, the high cost of obtaining equipment from other States and the difficulties in recruiting sufficient numbers of qualified personnel. The Council will continue to take appropriate action towards obtaining more assistance for the States concerned in planning and financing air navigation services as well as with regard to the provision of adequate human resources.

The cost basis for air navigation services charges

7. As a general principle, where air navigation services are provided for international use, the providers may require the users to pay their share of the related costs, but international civil aviation should not be asked to meet costs which are not properly allocable to it. The Council therefore encourages States to maintain accounts for the air navigation services they provide in a manner which ensures that air navigation services charges levied on international civil aviation are properly cost-based.

8. The Council considers that an equitable cost recovery system could proceed from an accounting of total air navigation services costs incurred on behalf of aeronautical users, to an allocation of these costs among categories of users and finally to the development of a charging or pricing policy system. In determining the total costs to be paid for by charges on international air services, the list in Appendix 2 may serve as a general guide to the facilities and services to be taken into account. The guidance on accounting provided in the ICAO *Manual on Route Air Navigation Facility Economics (Doc 9161),* Chapters 3 and 4, and the *Airport Economics Manual,* Chapters 3 and 4, may also be found useful in this context.

9. When establishing the cost basis for air navigation services charges, the following principles should be applied:

i) The cost to be shared is the full cost of providing the air navigation services, including appropriate amounts for cost of capital and depreciation of assets, as well as the costs of maintenance, operation, management and administration.

ii) The costs to be taken into account should be those assessed in relation to the facilities and services, including satellite services, provided for and implemented under the ICAO Regional Air Navigation Plan(s), supplemented where necessary pursuant to recommendations made by the relevant ICAO Regional Air Navigation Meeting, as approved by the Council. Any other facilities and services, unless provided at the request of operators, should be excluded, as should the cost of facilities or services provided on contract or by the carriers themselves, as well as any excessive construction, operation or maintenance expenditures.

iii) The costs of air navigation services provided during the approach and aerodrome phase of aircraft operations should be identified separately.

iv) Air navigation services may produce sufficient revenues to exceed all direct and indirect operating costs and so provide for a reasonable return on assets (before tax and cost of capital) to contribute towards necessary capital improvements.

10. In determining the costs to be recovered from users, it should be noted that:

i) Governments may choose to recover less than full costs in recognition of local, regional or national benefits.

ii) It is for each State to decide for itself whether, when and at what level any air navigation services charges should be imposed, and it is recognized that States in developing regions of the world, where financing the installation and maintenance of air navigation services is difficult, are particularly justified in asking the international airlines to contribute through user charges towards bearing a fair share of the cost of the services.

iii) The approach towards the recovery of full costs should be a gradual progression.

Allocation of air navigation services costs among aeronautical users

11. The allocation of air navigation services costs among aeronautical users should be carried out in a manner equitable to all users. The proportions of cost attributable to international civil aviation and other utlilization of the facilities and services (including domestic civil aviation, State or other exempted aircraft, non-aeronauti-

cal users) should be determined in such a way as to ensure that no users are burdened with costs not properly allocable to them according to sound accounting principles. The Council recommends that States should:

i) Acquire basic utilization data in respect of air navigation services, including the number of flights by category of user (i.e. air transport, general aviation and other) in both domestic and international operations, and other data such as the distance flown and aircraft type or weight, where such information is relevant to the allocation of costs and the cost recovery system.

ii) Take into account the guidance on cost allocation contained in the ICAO *Manual on Route Air Navigation Facility Economics*, Chapters 3 and 4, and *Airport Economics Manual*, Chapters 3 and 4, although they may use any accounting approach they consider meets their particular requirements.

Air navigation services charging systems

12. States should ensure that systems used for charging for air navigation services are established in accordance with the following principles:

i) Any charging system should, as far as possible, be simple, equitable and, with regard to route air navigation services charges, suitable for general application at least on a regional basis. The administrative cost of collecting charges should not exceed a reasonable proportion of the charges collected.

ii) The charges should not be imposed in such a way as to discourage the use of facilities and services necessary for safety or the introduction of new aids and techniques. The facilities or services provided for in the ICAO Regional Air Navigation Plan(s) or in any recommendations of the relevant ICAO Regional Air Navigation Meeting as are approved by the Council are, however, considered to be necessary for general safety and efficiency.

iii) The system of charges must be non-discriminatory both between foreign users and having the nationality of the State or States providing the air navigation services and engaged in similar international operations, and between two or more foreign users.

iv) Where any preferential charges, special rebates or other kinds of reduction in charges normally payable in respect of air navigation services are extended to particular categories of users, governments should ensure, so far as practicable, that any resultant under-recovery of costs properly allocable to the users concerned is not shouldered onto other users.

v) Any charging system should take into account the cost of providing air navigation services and the effectiveness of the services rendered. The charging system should be introduced in such fashion as to take account of the economic and financial situation of the users directly affected, on the one hand, and that of the provider State or States, on the other.

vi) Charges should be levied in such a way that no facility or service is charged for twice with respect to the same utilization. In cases where certain facilities or services have a dual utilization (e.g. approach and aerodrome control as well as en route control), their cost should be equitably distributed in the charges concerned.

vii) The charges levied on international general aviation should be assessed in a reasonable manner, having regard to the cost of the facilities needed and used and the goal of promoting the sound development of international civil aviation as a whole.

13. The Council:

i) Recommends that under normal circumstances, user charges should be expressed and payable in the local currency of the State concerned.

ii) Recommends that under special circumstances, for example where economic conditions are not stable, when a State proposes, or allows, denomination of user charges in other than local currency, airlines could apply the same currency of denomination, using the same exchange rate, for their local ticket sales.

iii) Recommends that remittance problems be resolved.

iv) Recognizes that when route air navigation services charges are billed on a regional basis (i.e. on behalf of several States or by a jointly operated agency), it may be advantageous to both users and providers to denominate and pay charges in a single convertible currency.

Approach and aerodrome control charges

14. Where charges for approach and aerodrome control are levied, whether as part of the landing charge or separately, the charge should, so far as possible, be a single element of the landing charge or a single charge per flight and could take aircraft weight into account but less than in direct proportion.

Route air navigation services charges

15. The charge for route air navigation services should, so far as possible, be a single charge per flight; that is to say, it should constitute a single charge for all route air navigation services provided by a State or group of States for the airspace to which the charge applies. The charge should be based essentially on:

i) the distance flown within a defined area;

ii) the aircraft weight.

The element of distance flown, taken as one of the acceptable measures of the service rendered, should be applied by means of a distance scale using great circle distances or other commonly agreed distances. The element of aircraft weight should be applied by means of a weight scale using broad intervals which should he standardized so far as possible. This weight scale should take into account. less than proportionately, the relative productive capacities of the different aircraft types concerned.

16. Without prejudice to the guidelines provided above, which constitute a charging system for general application, the Council recognizes however that:

i) the characteristics of a given airspace will determine the most appropriate charging method for that airspace, having regard to the type of traffic, the distances flown and the characteristics of the aircraft in that airspace;

ii) when the distance flown and/or the aircraft types are reasonably homogeneous, the distance and weight elements may be separately or jointly neglected as the case may be;

iii) in some circumstances, it may be considered appropriate to use a combination of a flat charge per flight and a charge based on the parameters recommended above in recognition of there being an element of fixed costs in providing air traffic services.

Charges for air navigation services used by aircraft when not over the provider State

17. The providers of air navigation services for international use may require all users to pay their share of the cost of providing them regardless of whether or not the utilization takes place over the territory of the provider State. Accordingly, wherever a State has accepted the responsibility for providing route air navigation services over another State, over the high seas or in an airspace of undetermined sovereignty (in accordance with the provisions of Annex 11 and Regional Air Navigation Agreements approved by the Council), the State concerned may levy charges on all users for the services provided. A State may delegate to another State or to an organization the authority to levy such charges on its behalf.

18. The collection of air navigation services charges in cases where the aircraft does not fly over the provider State poses difficult and complex problems. It is for the States to find the appropriate kind of machinery on a bilateral or regional basis for meetings between provider States and those of the users, aiming to reach as much agreement as possible concerning the facilities and services provided, the charges to be levied and the methods of collecting these charges.

Consultation with users regarding charges and air navigation services planning

19. The principles enunciated with respect to consultation concerning changes in airport charges in paragraph 22 are applicable also to changes in air navigation services charges, but in the latter case a need may also exist for more specific consultation between providers and airlines since air navigation services are generally provided by governments and it will therefore be easier to obtain a consultative opinion concerning their charges than in the case of airport charges where a number of conflicting interests may arise.

20. On the understanding that consultation implies no more than discussions between users and providers in an attempt to reach general agreement on any proposed charges, and that failing such agreement governments would continue to be free to impose the charges concerned, the Council therefore recommends that:

i) When any significant review of existing charges or the imposition of new charges is contemplated by a provider of air navigation services, appropriate prior notice should, so far as possible, be given at least two months in advance to the principal users, either directly or through their representative bodies, in accordance with the regulations applicable in each State.

ii) In any such review, these users should, so far as possible, be given the opportunity to submit their views to and consult with the competent authority. For this purpose the users should be provided with adequate financial information.

iii) Reasonable advance notice of the final decision on any revision of charges or imposition of new charges should be given to these users. This period of notice should take into account the implications for both the users and the provider of the air navigation services.

21. When major new air navigation services are being planned, it is desirable that the regular users of air navigation services or their representative organizations be consulted as early as practicable. Equally, in order that providers of air navigation services may better plan their future financial requirements, the Council considers that users, particularly airlines, should, either directly or through their representative bodies, provide advance planning data relating to future types, characteristics and numbers of aircraft expected to be used; the special facilities which the users desire; and other relevant matters, to the extent possible on a 5- to 10-year forecast basis.

II. GENERAL AVIATION AND AERIAL WORK SERVICES

1. Introduction

114. According to ICAO, "general aviation and aerial work (GA/AW) operations form the foundation of the world's transportation system. Airline pilots are created through its training, critical care is provided to the populace through emergency medical service aircraft and business aviation supports national and international commerce; GA/AW forms an essential and significant force in the world of air transportation. The more than 600,000 pilots and 300,000 aircraft engaged in general aviation and aerial work operations throughout the world comprise a majority of aviation operations; they contribute significantly to national and international economies". (ICAO *Conference on the Economics of Airports and Air Navigation Services (ANSConf-WP/64)*, Montreal, 19 - 28 June 2000)

115. According to the International Business Aviation Council (IBAC), GA/AW generates approximately US$6 trillion per annum and employs over 20 million people world-wide. In the US, general aviation is "estimated to be a US$17 billion industry, generating more than US$51 billion annually in economic activity (*NBAA*[28] *Fact Book 2000*)." These figures confirm the observation made in S/C/W/59 paragraphs 61 and 69 – 70 that this sector is economically important both in terms of revenue generation and employment figures.

116. The definition of GA/AW in this paper is drawn from ICAO standards, numerous national regulations, and business associations. While terminology may vary from country to country, there appears to be a consensus that general aviation includes business (e.g. air taxis) and corporate aviation while aerial work includes a range of commercial operations (e.g. aerial advertising, surveying, flight training). In order to provide a clear understanding of how States define both general aviation and aerial services, short passages from a number of sources are provided.

117. Like commercial air transport, general aviation requires support services including *inter alia*: fuelling, catering, hangar services, air traffic control, and navigational aids. However, since these supporting services have been covered in the relevant areas of this review, they will not be addressed here. For purposes of understanding, the difference between 'general aviation' and 'aerial work' is that the former is considered to be 'private carriage' (excluding air taxi operations), while the latter are commercial service providers (including air taxi operations).

118. The paper will begin with a selection of definitions that indicate that most countries follow ICAO's definitional separation between GA/AW. This will be followed by an overview of national regulatory standards governing the two categories and their sub-sectors. There is also a separate section for fractional ownership schemes due to the exceptional growth rate of this corporate sub-sector over the past five years. The possible linkages between the different sub-sectors of aerial work and air taxis are provided in a chart, and finally, the economic overview will highlight the present value of the world markets. There will be few comparisons made with 1993 due to the paucity of information available.

2. Definitions and Regimes

119. Due to the number of variations between definitions and regulatory frameworks we have synthesised a number of standards from different geographic regions and business associations. This is to provide an overview of both general aviation and aerial work.

ICAO

120. "The Standards and Recommended Practices for the Operation of Aircraft - International General Aviation were first adopted by the Council on 2 December 1968 pursuant to the provisions of Article 37 of the Convention on International Civil Aviation (Chicago, 1944) and designated as Annex 6, Part I, to the Convention." (ICAO, *Annex 6 Part II International General Aviation - Aeroplanes)* In this Annex, 'aerial work' was specifically excluded because it was not considered to have a large enough presence in the international world. At the time, aerial work was primarily a domestic industry. However, "it was clearly the view of the conference that the Annex should be framed in such a manner as to facilitate its extension to cover aerial work operations at a later date, should such extension prove desirable." (*Annex 6 Part II*, ICAO)

121. Aerial work is now included within Annex 6 Part II and is defined as follows: "An aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc."

122. A "General aviation operation" is defined as: "An aircraft operation other than a commercial air transport operation or an aerial work operation." (*Annex 6 Part*

28 National Business Aviation Association of the United States. http://www.nbaa.org

II) While this does not specify business (air taxi) and corporate aviation, this is the direct intent since they do not fit into either commercial aviation or aerial categories since they are primarily operated on a not for hire basis (excluding air taxi services).

US

123. The FAA defines business transportation as "any use of an aircraft (not for compensation or hire) by an individual for transport required by the business in which the individual is engaged." Corporate/executive transportation is defined as "any use of an aircraft by a corporation, company or other organisation (not for compensation or hire) for the purposes of transporting its employees and/or property, and employing professional pilots for the operation of the aircraft." (Extract from National Business Aviation Association - *NBAA Fact Book 2000*) The definition for aerial work (specialty air services) complies with the definition set out in the NAFTA Specialty Air Services below.

NAFTA[29] (US, Canada, Mexico)

124. NAFTA provides for the elimination of barriers to trade in goods and services between the parties to NAFTA. Although air transportation and related activities are excluded from coverage, the NAFTA covers specialty air services providers between Canada, Mexico and the US. These services are listed as: forest fire management, fire fighting, glider towing, parachute jumping, aerial advertising, aerial mapping, aerial surveying, aerial photography, aerial construction, heli-logging, flight training, aerial sightseeing, aerial inspection, aerial surveillance, and aerial spraying. (*North American Free Trade Agreement (NAFTA) Interim Guidance (Amended).* (http://www.faa.gov), (http://www.tc.goc.ca/aviation)

EU

125. Business Aircraft are defined by the European Commission DGIII as "aircraft used for business reasons. They are not operated on scheduled routes and their services are not marketed to the public. Piston aircraft are excluded as they are by nature designed for leisure activities." (www.ebaa.org/Pages/Public/information/info.htm)

126. JAR 1.1 – General Definitions (18 October 1999) defines aerial work as: "an aircraft operation in which an aircraft is used for specialised services such as agriculture and patrol, search and rescue, aerial advertisement, etc."

127. Business aviation (e.g. air taxi) is that sector of aviation which concerns the operation or use of aircraft by companies for the carriage of passengers and goods as an aid to the conduct of their business, and piloted by individuals having at the minimum a valid commercial pilot licence with an instrument rating.

Chile

128. In S/C/W/166 (paragraph 20), Chile states that specialised air services "such as fire-fighting, fisheries and mining prospection, and aerial spraying among others, … do not come under the exercise of traffic rights, according to the definition in the GATS Annex." Under the Chilean Civil Aviation Act, there have been no limits placed upon the operation of foreign aircraft, except in cases where Chilean aircraft have been restricted. Chile has also signed a free trade agreement with Canada, Mexico and Central America. This treaty allows "persons and companies from those countries to supply specialised air services in Chile without any limitations[30] other than those of safety, and the same applies to Chilean companies or persons in those countries."

New Zealand

129. In S/C/W/165 (paragraph 14), New Zealand states the following: "The functions of general aviation are many and varied including aerial photography/mapping, agricultural aviation, flight training, scenic flights, aircraft taxi services, traffic surveillance, fire fighting and emergency services." None of these services are included in bilateral agreements and "there are no economic barriers to a foreign enterprise establishing general aviation operations. There is no reference made to business/corporate aviation, suggesting that New Zealand also makes a distinction between these two elements of general aviation.

Australia

130. Australia's definition is based on the ICAO model whereby "aircraft have been separated into commercial air transport aircraft, aerial work aircraft and general aviation aircraft." (http://casa.gov.au/newrules/refer-

29 North American Free Trade Agreement between the Government of the United States of America, the Government of Canada, and the Government of the United Mexican States, signed 17 December 1992, entered into force 1 January 1994. The operation of specialty air services is provided for in Chapter 12, Cross-Border Trade in Services, Article 1201, paragraph 2(b)(ii).

30 "Glider-towing and parachuting services are excluded from this limitation, since in Chile these are only offered, on a non-profit basis, by aviation clubs to their members."

ence/icao.htm, 26, May 1999) For purposes of clarity, Australia provides a description of each category (only general aviation and aerial work are included).

> 1.3.3 An aerial work operation shall be a specialised aviation operation, other than an air transport operation, in which an aircraft is flown by the operator or owner of that aircraft so as to provide a service for purposes such as agriculture, construction, photography, surveying, observation and patrol, aerial ambulance and rescue.
>
> 1.3.4 A general aviation operation shall be any type of aviation operation other than commercial air transport operations and aerial work operations. (*Classification of Operations* - ICAO Model from Doc 9388-AN/918, Section 1 Chapter 3)

National Business Aviation Association (NBAA)

131. "General aviation includes all aircraft not flown by the airlines or the military. Business aviation, one of the most important segments of general aviation, consists of companies and individuals using aircraft as tools in the conduct of their business." (*NBAA Fact Book 2000)*

International Business Aviation Association (IBAC)

132. "Business aviation is that sector of aviation which concerns the operation or use of aircraft by companies for the carriage of passengers and goods as an aid to the conduct of their business, and piloted by individuals having at the minimum a valid commercial pilot licence with an instrument rating." (IBAC) Specifically, they cite air taxi and corporate aviation operations (including fractional ownership schemes).

European Business Aviation Association (EBAA)

133. According to the EBAA, general aviation encompasses all civil aviation operations apart from airlines operations. This covers such various activities as aerial work, agricultural aviation, advertisement flying, flying schools, joy-riding flights, aerial photography, parachute jumping, recreational flying, sport flying, aerobatics, private flying, air ambulance, air taxi, and business aviation (EBAA). While this association generally accepts the ICAO model that differentiates between general aviation and aerial work, they are presently working with ICAO, and the European Commission to separate business aviation from general aviation.

General Aviation Manufacturers Association (GAMA)

134. According to GAMA, among the numerous definitions of general aviation (official and unofficial) "general aviation is usually taken to mean all aeroplane and helicopter flying except that performed by the major airlines and the military (www.gamta.org/industry/whatis.htm)."

135. To summarise the above definitions it can be said that, while general aviation and aerial work are separate sectors in most States, they retain operational similarities. The size and type of aircraft are often the same, and both use secondary airports extensively. However, when referring to 'general aviation aircraft' or 'general aviation airports' it is important to note that all aspects of aerial work are included despite the regulatory and operational differences.

3. Regulations

136. In accordance with the definitional differences between general aviation and aerial work, most countries have specific regulations governing each type of operation. The regulations are for the purpose of ensuring safety standards for foreign and domestic aircraft and their operators, and regulating market access in the case of aerial work and air taxi operations. Table 10 provides an overview of the regulations for the countries where data is available.

TABLE 10
Regulatory Bodies and Regulations Governing General Aviation and Aerial Work - 1999

	Regulatory Authority	Regulations/International agreements
Global	ICAO	Annex 6 Part II
US[a]	FAA (Federal Aviation Administration)	FAR Part 91 (aerial work – fractional ownership) FAR Part 135 (business/corporate – fractional ownership NAFTA Article 1213 (aerial work/specialty air services) Chapter 12, Article 1201, paragraph 2(b)(ii).
Canada	Transport Canada (Department of Transport)	NAFTA Article 1213 (aerial work/specialty air services) Chapter 12, Article 1201, paragraph 2(b)(ii). FTA with Chile over specialty air services CAR Part VII, Subpart 3 (Air Taxi Operations)
Mexico	Civil Aviation Authority	NAFTA Article 1213 (aerial work/specialty air services) Chapter 12, Article 1201, paragraph 2(b)(ii).
Chile	Civil Aviation Board	FTA with Canada over specialty air services
European Communities	JAA (Joint Aviation Administration)	JAR OPS 1 (commercial air transportation – aircraft JAR 21.11 (aircraft type certification and rules) JAR OPS 3 (commercial air transport – helicopters)
EU Member States	National Transportation Departments	
New Zealand	CAA (Civil Aviation Authority)	Part 91 (general operating flight rules division) Part 119 (requirements for an aircraft operating certificate (AOC)) Part 125 (operating rules for aircraft with 10 – 30 seats) Part 135 (general aviation operators of helicopters and aircraft with less than 10 seats) Part 133 (helicopter sling load operations) Part 119 (operator certificate for Part 133 operations) Part 137 (certification and operation of agricultural aircraft operations)
Australia	CASA (Civil Aviation Safety Authority)	Model Regulations (ICAO standards) 1.3.3 An aerial work operation shall be a specialised aviation operation, other than an air transport operation, in which an aircraft is flown by the operator or owner of that aircraft so as to provide a service for purposes such as agriculture, construction, photography, surveying, observation and patrol, aerial ambulance and rescue. 1.3.4 A general aviation operation shall be any type of aviation operation other than commercial air transport operations and aerial work operations. 1.3.5 When an aircraft is being used for commercial air transport operations, it shall be classified as a commercial air transport aircraft; when it is being used for aerial work operations, it shall be classified as an aerial work aircraft; when it is being used for general aviation operations it shall be classified as a general aviation aircraft.

a Beginning in 1993 the 'use' categories were changed, such that External Load and Sight Seeing were created as separate categories and in 1995 Sight Seeing is divided into Sight Seeing under 14CFR 91 (general aviation) and 14 CFR 135 (air taxi)

4. Business/Corporate Aviation (including fractional ownership)

137. The definitions provided by Members, ICAO, and the industry associations generally acknowledge that business aviation includes air taxi operations and corporate aviation. While air taxi and corporate charters are considered to be commercial service operations, corporate aviation operates on the basis of its 'own account'. Under the regulatory conditions in all States, corporate aviation is for the purposes of aiding in the conduct of the corporation's business. The aircraft are owned and operated by the corporation and for the use of owners, employees, and guests. Within corporate aviation there is a new mode of aircraft ownership called 'fractional ownership'.

138. The Fractional Ownership Structure began in 1986 in the US. It is a programme designed to allow joint ownership of aircraft, and provides for aircraft management services (including aircraft maintenance) by a single aircraft management company to the fractional owners. The scheme is based on the concept of shared aircraft ownership and usage (through a

dry lease arrangement) between the owners. This is facilitated through the use of a common management company. It is the management company that provides all the services necessary for the fractional owners to conduct safe operations and to administer the dry leasing of aircraft among the participants in the programme. This method of aircraft ownership has grown in size since its inception to the degree that the FAA is considering issuing a *Notice of Proposed Rulemaking* (NPRM) containing inputs from many members of the general aviation sector on how to accommodate this new form of aviation operation. The US regulations may be issued as early as 2001 and the new JAA regulations are likely to be issued in early 2001.

139. Under a recommendation provided to the Federal Aviation Administration (FAA) by the Fractional Ownership Aviation Rulemaking Committee (FOARC) in the US, fractional ownership operations would be permitted to be conducted under 14 FAR Part 91. However, many of the safety standards will be drawn from both 14 FAR Parts 135 and 121, and will define responsibility/accountability. The latter will be detailed in a new subpart K in 14 FAR Part 91. However, the draft also allows a programme to operate under Part 135 and 121 *(Regulation of Fractional Ownership Programs* 23 February 2000).

140. "Regarding foreign ownership, there are restrictions on operations under Part 135 or 121, and Section 119.33 requires a direct air carrier and persons other than a direct air carrier that conduct any commercial passenger or cargo aircraft operation for compensation or hire under Part 121 or Part 135, to be a US citizen." (*Regulation of Fractional Ownership Programs* 23 February 2000)

141. Under the draft proposal (when all the conditions of the draft regulations are satisfied), it would be recognised that the owners, not the programme manager, are the operators. The programme manager would provide aviation expertise and services to the owners, and under the proposal, would not be considered a commercial operator for compensation or hire. In the FOARC recommendation, fractional ownership management companies are not considered air carriers, thus they are not subject to US citizenship requirements. To the extent they are not US citizens, however, the owners of the aircraft will, as aircraft operators, be subject to the requirements of 14 CFR Part 375 of the Department of Transportation's economic regulations governing the operation of foreign civil aircraft in the US.

142. The FOARC recommendation asks the FAA to conclude "that fractional ownership programs that are in compliance with the provisions of proposed subpart K of 14 CFR Part 91 are not engaged in commercial aviation, but rather are engaged in that portion of non-commercial aviation commonly referred to in the United States as general aviation or business aviation." (FOARC Recommendation[31]) Until the legislation is enacted, the majority of fractional programmes will continue to operate under Part 91 of the regulations, and under Part 135 for those which have been certified under this part.

143. What is most notable about this sub-sector of general aviation is the spectacular growth that has been experienced since its inception. "In 1986, there were four owners of fractionally held aircraft. By 1993, there were 89. From 1998 to 1999, the number of companies using fractional ownership has grown by over 50% from 1,125 to 1,693 companies (*Fact Book 2000*). *Aviation Week & Space Technology* notes that fractional ownership holdings will soon account for about 10% of the worldwide business jet fleet. (17 January 2000)

5. Possible UN CPC Classification Linkages (GA/AW)

144. Members may wish to consider sub-sectors that may have been inadvertently omitted from the original classification list, S/C/W/59. To provide a comprehensive list of possible categories the following chart includes: a detailed list from the NAFTA specialty air services agreement; air taxi services, and fractional ownership service providers. Additionally, Members may wish to consider elements that exist in their own countries that may need to be included.

31 Note: This is from a proposal to the FAA and not a pending Notice of Proposed Rulemaking.

TABLE 11
Possible Classification Linkages Between GA/AW and the UN CPC

Services Provided	Possible Corresponding CPC Classifications
S/C/W/59 paragraph 69 classifications	
Photographic services	875
Flight training	92400 – Adult education services not elsewhere covered
Aerial advertising	87190 – Other advertising services
Fire-fighting, police services	91260 – police and fire protection services
Agriculture	88110 – Services incidental to agriculture
Heli-logging	88140 – Services incidental to forestry and logging
NAFTA Specialty Air Services (SAS) CATEGORIES[a]	
Forest fire management	88140 – Services incidental to forestry and logging
Fire-fighting	91260 – Police and fire protection services 88140 – Service incidental to forestry and logging
Glider towing	96412 – Sports event organisation services 96413 – Sports facility operation services 96419 – Other Sporting services
Parachute jumping	96412 – Sports event organisation services 96413 – Sports facility operation services 96419 – Other Sporting services
Aerial advertising	87190 – Other advertising services
Aerial mapping	86753 – Surface surveying services
Aerial surveying	86753 – Surface surveying services 87504 – Specialty photography services
Aerial photography	87504 – Specialty photography services
Aerial construction	51800 – Renting services related to equipment for construction or demolition of buildings or civil engineering works, with operator.
Heli-logging	88140 – Services incidental to forestry and logging
Flight training	92310 – Post –secondary technical and vocational education services 92390 – Other higher education services 92400 – Adult education services not elsewhere covered 92900 – Other education services
Aerial sightseeing	72219 – Other Passenger transportation 73120 – Non-scheduled passenger transportation by air 91136 – Administrative services related to tourism affairs
Aerial inspection	86753 – Surface surveying services 88300 – Services incidental to mining 88120 – Service incidental to animal husbandry
Aerial surveillance	87309 – Security services not elsewhere classified 91260 – Police and fire protection services 88120 – Service incidental to animal husbandry
Aerial spraying	88110 – Services incidental to agriculture
Not included in NAFTA SAS or S/C/W/59	
Air Taxi (considered to be in general aviation)	73120 – Non-scheduled passenger transportation by air
Fractional Ownership Programs	83104 – Leasing or rental services without operator 87909 – Services generally provided to businesses, not elsewhere classified. 86609 – Other management services n.e.c.

a All of these categories fall under the ICAO definition of aerial work.

6. Economic

145. The largest markets for GA/AW are located in the US, followed by Europe, South America, and throughout the rest of the world. Despite the regulatory differences between general aviation and aerial work, the industry associations that represent the majority of operators do not always provide a clear delineation. We have attempted to provide distinctions where possible by labelling inclusive figures as GA/AW and specifying (e.g. aerial work) where necessary. In cases where only 'general aviation' is used, it means all corporate and business activity. Table 12 has been constructed to highlight the revenue and employment figures in GA/AW for the 1999 period.

(a) US Business Aviation

146. Although corporate and business aviation are operated on a 'not for hire' basis they contribute to national economic revenue and have a high level of international movements. In 1999, the NBAA reports that nearly 70% of their members fly outside the US to all parts of the world. The percentages for each geographic region are the following: 60% to Canada, 40% to the Caribbean, Mexico or Central America; 27% to Europe; 17% to South America; 10% to the Pacific; 7% to the Middle East; and 6% to Africa. The economic spill-over effect into the local economies will be experienced through *inter alia*: landing fees, ground services, and hangar facilities.

147. The overall numbers of US GA/AW aircraft and operators is provided in Table 13 to highlight the actual number of aircraft and operators that are part of the general aviation side of the GA/AW sector. In the US (70% of the world fleet), these aircraft account for approximately 40% of the more than 51 million instrument operations[32] at FAA facilities each year, whereas air carriers account for approximately 30%. Air taxis account for approximately 22% and military approximately 7%.

32 Instrument operations usually occur when pilots are operating under instrument flight rules (IFR) and are using air traffic controlled (ATC) airports.

TABLE 12
GA/AW: Sectoral Figures

1999	Global	US, Canada	Europe	Latin America	New Zealand, Australia	South Africa	Africa	Asia
Employees (millions)	20		3					
Business Aircraft (piston and jet)	19,498	13,766 (70%)	2,405 (10%)	1,547 (8.2%)	1,780 Combined numbers equal 11.2% of global total			
Hours Flown (millions)		27						
Passengers (millions)		145						
Number of airports served		5,400 (scheduled carriers use 580)						

Source: *NBAA Fact Book 2000*; www.ibac.org/gen.htm

TABLE 13
1999 - Business Aviation Operators and Aircraft

Aircraft in use	Operators	Number of Aircraft
US	9,525	13,766
Europe	1,225	2,405
South America	1,066	1,547
Rest of World	1,289	1,780
Total	**13,105**	**19,498**

Source: *NBAA Fact Book 2000.*

148. The NBAA statistics in Table 13 (above) represent the business aviation industry at the global level for aircraft type and the number of operators, highlighting where the primary markets are geographically located.

149. That GA/AW aircraft have "the ability to use smaller, less-congested airports located closer to one's final destination is a vital part of the utility and flexibility of general aviation aircraft. In fact, most operators of business aircraft prefer to use these so-called "reliever airports" in major metropolitan areas instead of airline hubs whenever possible. That is why general aviation operations at the busiest U.S. air carrier airports are usually a single-digit percentage of total operations at those facilities." (*Fact Book 2000*) In fact, while general aviation aircraft fly over 27 million hours (nearly double the number of airline flight hours), and carry 145 million passengers per year, they only account for 9% of the total traffic at the top 30 major hub-carrier airports in the US. (*NBAA Fact Book 2000*). Although there is no detailed (or compiled) data for the actual hours flown in GA/AW Table 14 provides an overview for the 1993 – 1996 period.

150. Although the sample given in Table 14 does not provide current data, the numbers still indicate substantial non-commercial airline movement of aircraft. There is no indication that these numbers would be smaller for the subsequent years.

(b) European Business Aviation

151. Eurocontrol estimates that between 5 and 10% of the total number of movements in Europe are business aircraft. In 1999, the daily average total number of movements was about 220,000 (Eurocontrol CFMU). The average load factor is about 3.5 passengers per flight and the total number of passengers carried by business aviation is between 400,000 and 800,000 persons (EBAA). There are not specific numbers for aerial work or specialty air services.

7. Conclusion

152. It would appear that in most States, separate regulations for general aviation (corporate and business) and aerial work support the concept of separating commercial operations and non-commercial operations. Thus, corporate aviation is considered to be not-for-hire corporate activity whereas business aviation (e.g. air taxi) and aerial work are distinctly commercial operations.

TABLE 14
Active General Aviation Aircraft Total Hours Flown by Use in the US (1993 – 1996)
(Hours in Thousands)

Use Category	1996	1995	1994	1993	Change 1993 - 1996
Corporate	2,718	2,869	2,486	2,653	+65
Business	3,152	3,191	3,012	3,350	-198
Personal	8,893	9,320	8,248	8,202	+691
Instructional	4,425	4,106	4,382	4,625	-200
Aerial Application	1,787	1,557	1,364	1,283	+504
Aerial Observation	1,036	1,385	1,746	1,627	-591
External Load	203	118	135	83	+120
Other Work	262	268	241	180	+80
Sight Seeing	186	206	309	325	-139
Air Tours	70	155	N/A	N/A	
Other	1,703	1,372	1,545	1,334	+369
All Aircraft	644	1,121	622	603	+41
Total Hours	**26,100**	**25,667**	**24,092**	**24,455**	**+1,645**

Note: Beginning in 1995 Sight Seeing is divided into Sight Seeing under 14CFR 91 (general aviation) and 14 CFR 135 (air taxi)

III. COMMERCIAL AIR TRANSPORT SERVICES

153. This section will address the general economic and regulatory development of commercial air transport services. Further papers are to be published at a later date which will deal with: 1) the various types of standard bilaterals, elements of bilaterals, and regional agreements (*inter alia* route, capacity, tariffs, and designation); 2) ownership and control among airlines including alliances and codesharing; 3) slot allocation; and 4) specific subsectors (non-scheduled services, cargo services and multimodal operations).

A. ECONOMIC DEVELOPMENTS

154. The following elements are largely drawn from the ICAO annual Study *The World of Civil Aviation* and in particular its last edition (1999-2002). It should be noted that ICAO data are collected and published annually. Each publication provides a 10-year history, and a three-year forecast. Whenever possible the 1993-1999 period has been isolated. This section will successively deal with traffic, financial trends and employment.

1. Traffic and Financial Trends

(a) Global tendencies

155. Structurally the commercial air transport industry is extremely cyclical and the demand for air passenger travel is highly elastic due to income levels, demographic tendencies and the cost of international air travel (business and leisure). This is particularly true of business travel, where corporations, or individual enterprises will restrict or prohibit first or business class travel during periods of economic difficulty. The absolute number of business related trips may also be restricted. Although first and business class seats account for only 20% of capacity, they do contribute approximately 80% of the revenue. Thus, changes in this area add to the cyclical nature of the industry. In contrast, air cargo growth is relatively constant (e.g. normally above the growth rate of an economy) and subject only to seasonal or severe economic change. On the cost side, the importance of fuel prices, labour costs, and the cyclical nature of investment in new aircraft also manifest sensitivity to economic fluctuations.

156. The period under review, 1993-1999, followed the 1991 Gulf War recession, which had a serious effect on air traffic. The recovery of traffic in 1992 occurred despite continuing poor economic performance, and was achieved at a cost of significantly reduced revenue yield. Although real yields declined further in 1993 and 1994, the effect on traffic demand was less dramatic than in 1992. Economic growth began to provide a more solid foundation for traffic growth. These trends continued until 1997 but were reversed in 1998 when world GDP grew at only 1.9%, providing for growth of total scheduled passenger traffic of only 2.1% in that year. However, a strong economic performance resulted in 6.1% traffic growth in 1999. The following two tables describe in detail the evolution of the traffic for this period. They are limited to scheduled airlines, as data on non-scheduled airlines are scarce and heterogeneous. International traffic has been isolated from the total traffic since it is the only segment that is exposed to international competition.[33]

33 Except for the rare cases where the eighth (cabotage) or ninth freedoms have been granted.

TABLE 15

World Total International and Domestic Revenue Traffic
(Scheduled Services of Airlines of ICAO Contracting States: 1993-1999)

	Passengers carried		Passenger-km		Freight tonnes carried		Freight tonne-km performed		Mail tonne-km performed		Total tonne-km performed	
Year	Million	Annual increase (%)	Million	Annual increase (%)	Million	Annual increase (%)	Millions	Annual increase (%)	Million	Annual increase (%)	Million	Annual increase (%)
1993	1 142	-0.3	1 949 420	1.1	18.1	2.8	68 450	9.3	5 230	1.9	250 630	3.5
1994	1 233	8.0	2 099 940	7.7	20.5	13.3	77 220	12.8	5 410	3.4	273 420	9.1
1995	1 304	5.8	2 248 210	7.1	22.2	8.3	83 130	7.7	5 630	4.1	293 930	7.5
1996	1 391	6.7	2 431 690	8.2	23.2	4.5	89 200	7.3	5 800	3.0	317 150	7.9
1997	1 457	4.7	2 573 010	5.8	26.4	13.8	102 880	15.3	5 990	3.3	344 190	8.5
1998	1 471	1.0	2 626 910	2.1	26.5	0.4	101 770	-1.1	5 770	-3.7	348 470	1.2
1999	1 558	5.9	2 787 880	6.1	28.2	6.4	108 040	6.2	5 700	-1.2	368 800	5.8

Source: ICAO Air Transport Reporting Form A-1.

TABLE 16

World International Revenue Traffic

(Scheduled Services of Airlines of ICAO Contracting States: 1993-1999)

	Passengers carried		Passenger-km		Freight tonnes carried		Freight tonne-km performed		Mail tonne-km performed		Total tonne-km performed	
Year	Million	Annual increase (%)	Million	Annual increase (%)	Million	Annual increase (%)	Million	Annual increase (%)	Million	Annual increase (%)	Million	Annual increase (%)
1993	319	6.7	1 047 380	6.6	10.3	10.8	56 050	10.4	2 200	0.5	155 490	8.3
1994	347	8.8	1 143 180	9.1	11.8	14.6	64 700	15.4	2 240	1.8	173 080	11.3
1995	375	8.1	1 249 160	9.3	13.0	10.2	70 340	8.7	2 400	7.1	189 430	9.4
1996	412	9.9	1 380 680	10.5	13.6	4.6	75 510	7.4	2 450	2.1	206 870	9.2
1997	438	6.3	1 468 150	6.3	15.7	15.4	87 740	16.2	2 490	1.6	227 390	9.9
1998	458	4.6	1 511 680	3.0	15.8	0.6	87 010	-0.8	2 480	-0.4	231 410	1.8
1999	489	6.8	1 613 990	6.8	17.2	8.9	92 680	6.5	2 480	0.0	246 230	6.4

Source: ICAO air Transport Reporting Form A-1.

157. The scheduled airline industry has a long history of reducing costs through increased productivity levels. This has affected the growth in the output of the industry (traffic volumes, measured by tonne-kilometres performed or TKP) has been greater than the growth in the various inputs used by the industry (mainly labour, fuel and aircraft). The average annual growth in productivity since 1988 has been about 3.8%. The progressive absorption of new technology aircraft into airline fleets has been a major reason for the improvement in productivity. In particular, the new aircraft are more fuel- and labour-efficient. Improved aircraft utilisation and load factors have also made important contributions.

158. Although there has been neither an improvement nor a decline in the long-term trend in the financial performance of scheduled airlines as a whole, there have been relatively large changes in the operating results over the medium term. Table 17 shows the annual development since 1988 in operating revenues and expenses, the operating results (earnings before interest, other non-operating items and taxes) and the net result (after interest, other non-operating items and taxes).

159. The growth in revenues and expenses over the period reflects an expansion in activity levels and general inflationary pressures, offset by improvements in the efficiency of the industry. In the early 1990s, demand weakened and the utilisation of airline resources tended to decline. The emergence of excess capacity and consequent competitive pressures placed downward pressure on yields. These factors combined to produce negative operating results for 1990 through to 1992. In 1993, the airline industry started to move towards a more appropriate balance of supply and demand and achieved a small operating surplus. A much better operating result was obtained in 1994 and by 1995 the industry delivered an operating surplus of US$13.5 billion and obtained a positive net result of about US$4.5 billion. In 1996, a reduced operating surplus of about US$12.3 billion was achieved, with a net result of US$5.3 billion, but in 1997, there was an operating surplus of US$16.3 billion and a net result of almost US$8.6 billion. In 1998 the operating surplus reached US$15.9 billion with a net result of US$8.2 billion. According to preliminary estimates for 1999, an operating surplus of US$12.5 billion is expected.

160. The change in the structure of operating revenues and expenses over the past decade is illustrated in Table 18.

TABLE 17
Operating and Net Results[a]
(scheduled airlines of ICAO Contracting States. 1993-1999)[b]

			Operating result		Net result[c]			
Year	Operating revenues US$ (million)	Operating expenses US$ (million)	Amount US$ (million)	Percentage of operating revenues	Amount US$ (million)	Percentage of operating revenues	Direct subsidies US$ (million)	Income taxes US$ (million)
1993	226 000	223 700	2 300	1.0	-4 400	-1.9	150	-270
1994	244 700	237 000	7 700	3.1	-200	-0.1	70	-1 300
1995	267 000	253 500	13 500	5.1	4 500	1.7	100	-2 170
1996	282 500	270 200	12 300	4.4	5 300	1.9	30	-2 500
1997	291 000	274 700	16 300	5.6	8 550	2.9	180	-4 200
1998	295 500	279 600	15 900	5.4	8 200	2.8	10	-4 800
1999[d]	306 600	294 050	12 550	4.1				

a Revenues and expenses are estimated for non-reporting airlines.

b Up to and including 1997, it excludes operations within the Commonwealth of Independent States.

c The net result is derived from the operating result by adding (with plus or minus sign as appropriate) non-operating items (such as interest and direct subsidies) and income tax. The operating and net results quoted, particularly the net results, are the small differences between the estimates of large figures (revenues and expenses) and are therefore susceptible to substantial uncertainties.

d Preliminary data – net results are not yet available.

Source: ICAO Air Transport Reporting Form EF-1.

TABLE 18

Distribution of operating revenues and expenses from 1993 to 1998
(scheduled airlines of ICAO Contracting States[a], total domestic and international services)

Description	Distribution by item (per cent)					
	1993	1994	1995	1996	1997	1998
Operating Revenues						
Scheduled services (total)	85.8	85.4	87.5	87.7	87.3	87.3
Passenger	75.9	74.9	76.8	77.1	76.2	76.5
Freight	9.0	9.6	9.7	9.6	10.2	10.0
Mail	1.0	0.9	1.0	1.0	0.9	0.8
Non-scheduled operations	3.6	4.1	4.0	3.9	3.9	3.3
Incidental	10.6	10.5	8.5	8.4	8.8	9.4
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Operating Expenses						
Direct aircraft						
Flight operations (total)	26.5	25.5	26.3	27.7	27.8	26.9
Flight crew	7.4	7.4	7.7	7.8	7.8	8.0
Fuel and oil	12.0	11.2	11.4	12.8	12.6	10.4
Other	7.1	6.9	7.2	7.1	7.4	8.5
Maintenance and overhaul	10.1	10.0	10.6	10.5	11.0	11.1
Depreciation and amortization	7.0	7.6	7.3	7.1	6.5	6.5
Sub-total	43.6	43.1	44.2	45.3	45.3	44.5
Indirect						
User charges and station expenses (total)	17.3	17.3	18.2	17.7	17.4	17.9
Landing and associated airport charges	4.1	4.3	4.5	4.3	4.1	4.4
En route facility charges	2.4	2.5	2.8	2.6	2.8	3.0
Station expenses	10.8	10.5	10.9	10.8	10.5	10.4
Passenger services	10.5	10.7	11.0	10.8	10.7	10.7
Ticketing, sales, promotion	16.4	15.7	15.6	15.3	14.8	14.3
General, administrative and other operating expenses	12.2	13.2	11.0	10.9	11.8	12.6
Sub-total	56.4	56.9	55.8	54.7	54.7	55.5
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

a Excludes operations within the Commonwealth of Independent States.

Source: ICAO Air Transport Reporting Form EF-1.

161. The share of incidental revenues (which include sales of services and maintenance, and the leasing of aircraft to other airlines) has increased, while there has been a comparable decline in the share of revenues from scheduled services. The counterpart of some of these changes on the expense side was an increase in the share of "Flight operations - Other", which includes rental of aircraft from other companies. This suggests some restructuring within the airline industry. The share of indirect expenses, and especially general, administrative and other operating expenses has increased slightly, corresponding to the decline in the share of direct aircraft expenses, which benefited from productivity improvements and reductions in fuel prices.

(b) Developmental aspects

162. The following developments will deliberately not cover traffic and financial performances of airlines of OECD countries or more generally developed countries since an ample literature exists on that subject which is not worth recounting here. They will insist to the contrary on the situation of developing countries, where the documentation is traditionally scarce and available with difficulties.

163. ICAO statistics do not isolate developing countries as a single statistical category. However, they divide the world into six statistical regions: North America, Asia-Pacific, Latin America and Caribbean, Europe, Africa, Middle East.

164. With the exception of the European zone, which includes CIS countries and therefore mixes developed countries and countries in transition, and of the Asia Pacific Zone, which also contains both developing and developed economies, these regions are homogeneous in terms of level of development and significant in aeropolitical terms. That is why they will be used across this paper to study the developmental aspects of the subsectors. The regional breakdown of traffic during the period under review is summed up in Table 19:

(i) Africa

165. Africa accounted across the period 1993-1999 for between 2.1 and 2.4% of the total traffic. Over the 1988-1998 period, the aggregate African economy grew at an average annual rate of 2.5% (GDP in real terms), although GDP per capita declined at a rate of 0.3% over that decade.

166. Over the 1988-1998 period, scheduled passenger traffic (in PKPs) of the airlines of the African region increased at an average annual rate of 3.9% (compared to the world annual average of 4.4%). Traffic growth in recent years markedly exceeded this decade's average; 6.2% growth was recorded in 1996 followed by a 6.1% growth in 1997. This trend reversed in 1998 with traffic declining by 0.9% (compared to world average growth of 2.1%).

167. For the 1988-1998 period, average scheduled passenger yields for airlines of the region, measured in terms of cents per passenger-kilometres performed (PKPs), declined at an average annual rate of 4.8% in real terms (compared to a 2.9% decline for the world). Throughout the period concerned, the region's airlines average yield level was lower than the world average. In terms of financial performance, over the 1988-1998 period, operating revenues (in dollars) of the scheduled airlines of the African region increased at an average annual rate of 1.6% (compared to world annual average of 5.9%). Operating expenses for the same period increased by 1.8% per annum. These rates reflect the relatively low traffic growth experienced over most of the period, but also the efforts by the African industry to improve efficiency and financial performance. Since 1992, positive operating results have been achieved, with the exception of 1994 and 1997.

(ii) Latin America and the Caribbean

168. This region accounts across the period 1993-1999 for between 4.8% and 5.1% of total traffic. Over the 1988-1998 period, the aggregate Latin American and Caribbean economy (GDP) grew at an average annual rate of 2.6% in real terms, whereas GDP per capita grew at 0.8%. A robust recovery of the economy of the region started in 1991.After a record 5.3% growth in GDP in 1997, the regional economy started to decline dramatically, to 2.0% growth in 1998 and further to an irreducible growth of 0.2% in 1999. The economic performance of the region is expected to recover markedly in 2000, reaching a growth of 4.0%.

169. Over the 1988-1998 period, the scheduled passenger traffic (in PKPs) of airlines of the Latin American and the Caribbean region increased at an average annual rate of 5.6% (compared to the world average growth rate of 4.4%). In recent years, flag carrier privatization, intra-regional mergers and alliances, along with extensive fleet and route rationalization, were among measures that enabled airlines of the region to capture a larger share of the United States-Latin America and Caribbean traffic, one of the world's fastest growing aviation markets. Following very high traffic growth rates for 1997 and 1998 (11.6 and 9.2% respectively), the estimated traffic growth in 1999 dropped to 0.6%.

TABLE 19
Regional distribution of scheduled traffic – 1993 to 1999

By ICAO statistical region of airline registration	Passenger-Kilometres performed (millions)						
	1993	1994	1995	1996	1997	1998	1999
TOTAL (INTERNATIONAL AND DOMESTIC) SERVICES OF AIRLINES OF ICAO CONTRACTING STATES							
Europe (including CIS*)	507 620	521 498	550 813	591 750	646 899	691 480	742 970
Percentage of world traffic	25.8	25.0	24.7	24.5	25.2	26.3	26.6
Europe (not including CIS)	403 220	437 674					
Percentage of world traffic	20.5	21.0					
Africa	41 739	45 728	53 004	55 430	56 782	55 180	60 920
Percentage of world traffic	2.1	2.2	2.4	2.3	2.2	2.1	2.2
Middle East	58 438	62 193	69 613	72 012	74 945	77 740	79 070
Percentage of world traffic	3.0	3.0	3.1	3.0	2.9	3.0	2.8
Asia and Pacific	452 903	490 460	546 822	605 967	644 919	630 050	665 510
Percentage of world traffic	23.0	23.5	24.5	25.1	25.1	24.0	23.9
North America	816 190	863 467	897 510	970 147	1 019 137	1 042 100	1 104 880
Percentage of world traffic	41.4	41.4	40.3	40.3	39.6	39.6	39.6
Latin America and Caribbean	93 950	102 754	112 288	115 704	127 818	133 820	134 530
Percentage of world traffic	4.8	4.9	5.0	4.8	5.0	5.1	4.8
Total (including CIS)	**1 970 840**	**2 086 100**	**2 230 050**	**2 411 010**	**2 570 500**	**2 630 370**	**2 787 880**
INTERNATIONAL SERVICES OF AIRLINES OF ICAO CONTRACTING STATES							
Europe (including CIS)	353 460	390 719	427 132	474 837	535 280	572 080	622 790
Percentage of world traffic	33.8	34.4	34.4	34.8	36.2	37.9	38.6
Europe (not including CIS)	344 000	375 500					
Percentage of world traffic	32.9	33.1					
Africa	34 600	37 522	43 467	45 769	47 369	46 840	52 550
Percentage of world traffic	3.3	3.3	3.5	3.4	3.2	3.1	3.3
Middle East	49 020	51 809	58 788	60 916	63 156	65 330	67 670
Percentage of world traffic	4.7	4.6	4.7	4.5	4.3	4.3	4.2
Asia and Pacific	300 900	333 863	371 228	417 045	443 775	433 510	462 280
Percentage of world traffic	28.8	29.4	29.9	30.6	30.0	28.7	28.6
North America	248 810	256 242	269 255	286 664	302 660	310 320	327 740
Percentage of world traffic	23.8	22.5	21.7	21.0	20.5	20.5	20.3
Latin America and Caribbean	58 840	65 945	71 700	78 119	85 300	82 690	80 960
Percentage of world traffic	5.6	5.8	5.8	5.7	5.8	5.5	5.0
Total (including CIS)	**1 045 630**	**1 136 100**	**1 241 570**	**1 363 350**	**1 477 540**	**1 510 770**	**1 613 990**

* Commonwealth of Independent States

Source: ICAO Air Transport Reporting Form A-1.

170. Average scheduled passenger yields for airlines of the region, measured in terms of U.S. cents per PKP and expressed in constant price terms, fluctuated substantially between 1988 and 1998 and declined to about 1.6%. Over the 1988-1998 period, operating revenues of the scheduled airlines of the Latin American and Caribbean region increased at an average annual rate of 7.1% (compared to the world annual average of 5.9%). Operating expenses for the same period increased by 7.1% per annum. The overall financial performance of the airlines of the region has been poor over the whole period with five consecutive years (1989 to 1993) of serious operating losses. A concerted effort of drastic cost-cutting, airline industry restructuring and demand recovery led to a significant turnaround and brought positive operating results for four consecutive years. Many airlines had returned to profitability by 1995 and were reporting healthy net results in 1997 and 1998.

(iii) Middle East

171. This region accounts across the period 1993-1999 for between 2.8% and 3.1% of the total traffic. As of 1992 continuous growth, though varying in strength, was sustained for five years. From 1988-1998, the aggregate GDP for the Middle East grew at an average annual rate of 3.5% in real terms, while GDP per capita levelled off at 0.8% per annum. In 1999, the economy of the region remained basically stable with a GDP growth of 2.5% compared to the previous year.

172. Over the 1988-1998 period, scheduled passenger traffic (in PKPs) of the airlines of the Middle East region increased at an average annual rate of 5.6%. Traffic growth has been reasonably buoyant since the declines in 1990 and 1991 associated primarily with the Gulf War.

173. For the 1988-1998 period, average scheduled passenger yields for airlines of the region, measured in terms of U.S. cents per PKP, declined at an average annual rate of 3.5% in real terms (compared to a 2.9% decline for the world). It is estimated that real yield increased in 1999 accompanied by a small increase in traffic and revenues. Over the 1988-1998 period, operating revenues of the scheduled airlines of the Middle East region increased at an average annual rate of 5.2% (compared to the world annual average of 5.9%). Operating expenses for the same period increased by 4.8% per annum. Since 1994 the airlines in the region have experienced a string of operating losses. Traffic has grown continuously but capacity expansion has been even greater and unit costs remain comparatively high. Efforts to cut operational costs include inter-airline cooperation, for example, on the common handling of a number of airlines from the Middle East and North Africa at airports in Europe. These resulted in an estimated operating surplus for 1999 of about US$230 million.

(iv) Asia Pacific

174. This region accounts across the period 1993-1999 for between 23.9% and 25.1% of the total traffic. Over the 1988-1998 period, the Asia/Pacific economy (GDP) grew at an average annual rate of 4.2% in real terms, and GDP per capita increased at 2.6%, the highest growth rates of all ICAO regions. For more than 10 years Asia/Pacific has been the fastest growing region despite the recent slowdown and recession when GDP growth dropped from 5.4% in 1996 to 3.9% in 1997 and further to -0.3% in 1998. In 1999 the region regained some of its economic strength with a GDP growth of 3.5%.

175. The recovery process of the region's affected economics in 1999 was stronger and swifter than expected. Developing economies in the Asia/Pacific region continued to make a significant contribution as their average GDP grew at 6.0%. Several developing economies in East and South-East Asia recovered from the 1998 recession, as did Japan, which saw its economy recovering only slowly with a GDP growth of 0.3%.

176. Over the 1988-1998 period, scheduled passenger traffic (in PKPs) of airlines of the Asia/Pacific region increased at the average annual rate of 7.3%, significantly higher than the world's annual average of 4.4%. Having exhibited the highest growth rates among all ICAO regions for almost a decade, in 1998 airlines of the region experienced a decline in traffic of 2.6%, dampening the world traffic growth which averaged at a low 2.1%. As a result of the speedy economic recovery in the Asian economies affected by the 1997/1998 recession, and revived demand for air travel and freight, traffic is estimated to have increased by almost 7.0% in 1999.

177. Average scheduled passenger yields for airlines of the region, measured in terms of cents per PKP, have fluctuated significantly since 1988 and resulted in an annualized decline of 4.4% during the 1988-1998 period. The sharp fluctuations in airline yield reflect, in part, the fluctuation of the yen and other Asian currencies against the U.S. dollar. Over the 1988-1998 period, operating revenues of the scheduled airlines of the Asia/Pacific region increased at an average annual rate of 6.1% (compared to the world average annual growth rate of 5.9%). Operating expenses for the same period increased by 6.9% per annum. Airlines in the region

enjoyed positive operating results throughout the last decade. However, it is estimated that the aggregate operating profit for 1999 of the Asia/Pacific airlines was around US$3 000 million, significantly higher than that of 1998.

2. Employment

178. Table 20 tries to compile, in one single chart, the data contained in the successive editions of the ICAO "World of Civil Aviation" annual publication and whose statistical framework have evolved over time, which explains the various blanks in the chart. Those figures reflect the employment by the airlines only. IATA itself gives much bigger figures for the employment in the whole air transport sector (28 millions in 1999) and so does Airport Council International for airports only (22 millions including indirect employment in 1997).

179. It is difficult to interpret this chart in the absence of more detailed studies. It seems to demonstrate that the growth of traffic has not generated a parallel growth of employment, but that employment is in the medium term more or less stable if not in slight progression across the period. The growing recourse to outsourcing, which translate into employment outside the airlines may also be one of the factors in the slow growth of employment.

180. It is worth noting that movements of natural persons in the GATS sense have always been important in the sector and are increasingly so. Pilots, cabin crew, engineers and local as well as headquarters managers do not always have the nationality of the carrier.

B. REGULATORY DEVELOPMENTS

181. The two main regulatory developments during the period have been the privatization movement and a clear tendency towards liberalization through bilateral and regional agreements. Other specific regulatory developments such as the growing intervention of competition authorities in alliances and slots questions or the evolution of ownership legislation will be dealt with in the relevant annexes.

TABLE 20
Airline Employment 1987-1999

	1987[a]	1993 million	1994 million	1995 million	1996 million	1997 million	1998 million	1999 million
Total staff employed by all the commercial air carriers						1.9 million		2
Total staff employed by scheduled airlines		1.51	1.51	1.52	1.54			1.5
Staff employed by international scheduled airlines		1.13	1.12	1.12	1.15			
Staff employed by domestic scheduled airlines		0.38	0.39	0.40	0.39			
IATA total of which (in percentage)	1.473 million					1.611 million		
Pilots and co-pilots	6.6%					7.8%		
Other cockpit staff	1.7%					0.7%		
Cabin attendants	13.8%					17.3%		
Maintenance	18.3%					16.4%		
Ticketing and sales	13.4%					13.7%		
Airport handling	18.7%					19.4%		
All other	27.5%					24.7%		

a Although 1987 is beyond the scope of this review these were the only relevant figures available.

Source: ICAO.

1. Privatization

182. Privatization has been one of the major regulatory development for air transport during the 1993-2000 period as it has been for other sectors.

183. Table 21 compiled by ICAO gives an idea of the extent of the process.

184. It is difficult to draw a typology of the privatization processes as they are extremely diverse. Privatization can be full or partial, the state keeping a golden share or even a majority of the stakes. It can be reserved to nationals or opened to foreign investors or be a complex combination of both, it can be reserved to other air carriers or to the contrary involve only financial investors such as banks or be a combination of the two options. It can be devised in order to have a stable core of stakeholders and one single investor in control or to the contrary be devised so as to avoid any majority ownership. It can be made on a contractual basis or through a flotation on local or international stock markets.

185. Regardless of those ample variations it is possible to identify certain common features: privatizations of airlines are difficult processes, often staged, delayed or stalled. Among the causes of delays are general economic conditions, the economic situation of the air transport sector, the financial and/or social difficulties of the carrier concerned and changes of government or of governmental policies.

186. These operations are always carefully devised so as to avoid conflicting with foreign ownership limitation rules, except of course, in the rare cases where those limitations have been lifted. Personnel often receives a share (often around 10%) in order to ensure social peace during the transitional period and productivity gains. Recourse to a "strategic partner" i.e. another air carrier holding only a minority of the share but providing operational management and offering its network of alliances in addition to infusion of management skills is also a common feature. Such partnerships can be preceded on a trial basis by management contracts, that can sometimes turn sour and not be followed by equity infusion, as recent cases have shown.

187. Another clear tendency is the geographical extension of the phenomenon. It touches the entire world developing as well as developed, including CIS countries and China, the only difference being the pace with which the different regions follow that trend. In 1998, ICAO made the following assessment of the geographical extension of privatization:

TABLE 21
Progress of Airline Privatization by Regions from 1985 to 2000

	Asia	Africa	Middle East	Eastern Europe	Western Europe	Latin America	U.S. Canada	Pacific*	Total
Number of airlines	94	78	30	69	126	90	86	38	611
Airlines in which State has share-holding	44	43	22	53	22	35	1	14	234
Announcement of privatization plan	24	25	18	38	15	25	1	7	153
Aims achieved	16	7	1	19	11	22	1	3	80

Note: * Includes Australia, New Zealand and South Pacific Islands countries.
"Number of airlines" includes airlines currently operating plus ones that ceased operations since 1985.
"Airlines that State has shareholding" includes airlines fully privatized since 1985.
"Announcement of privatization plan" means State expressed its intention to privatize or reduce its shares.
"Aims achieved" means State (and/or shareholders owned by State) reduced its shares during this period.
Data collected based on available information, the list (as of 22AUG 00) is not exhaustive.

Source: *ICAO Air Transport Bureau.*

"Since the early 1990's, over 80 carriers have been targeted for privatization. Currently all airlines in North America are privately owned. In Latin America and the Caribbean nearly all major carriers are now majority owned by private interests. In Europe over half the major western European Airlines are privately owned while most national carriers of the Eastern European states are majority state owned (although 15 of them have been targeted for privatization). In the Asia Pacific region, partial or full privatization objectives have been made known by some 15 governments while carriers in Japan, the Republic of Korea, Brunei Darussalam, Malaysia, the Philippines, Australia and New Zealand as well as those based in Hong Kong, China and Taiwan are now privately owned. In the Middle East and Africa almost all national carriers remain government owned although some 25 carriers from these two regions have been targeted for privatization."

188. It is worth noting also the role played by privatizations in the formation of alliances. Privatization is a way for alliances to extend their networks through equity links and there is a competition between alliances in that respect. Symmetrically from the point of view of the privatized airline, privatization is an opportunity to integrate the network of a big alliance and to achieve access to a world-wide hub and spoke system.

2. Bilateral Liberalization and Regional Integration

189. As indicated by ICAO during the first session of the review, liberalization is an accelerating and widespread trend, involving now 85% of ICAO Members in some form of liberalization. This does not mean that 85% of the bilateral agreements contain liberal provisions since most of the pre-1990 agreements still in force are of the classical Bermuda 1 type. ICAO has also indicated than more than half of ICAO states are now parties to some arrangements, whether bilateral or regional, towards full market access. There again this does not mean, by far, that half of the agreements are geared towards full market access.

190. The more liberal form of these agreement is traditionally called an "open skies" agreement. ICAO has compiled a list of open skies agreements in effect to date. However ICAO itself indicates that this list must be read with caution. There is no agreed definition of what constitutes an open skies agreement except in the USA, where there exists a standard open skies agreement[34]. However even the agreements signed by the United States contain variations from this model. Other agreements not involving the USA have been termed so by ICAO since they were inspired by a similar philosophy and contained a lot of technical similarities. However, these agreements can be different from the US ones and sometimes be more far reaching, going as far as including the eighth freedom, cabotage, as in the Brunei Darussalam - New Zealand agreement. These precautions aside, the typical provisions of an open skies agreement are summed up in Table 22, compiled by OECD:

191. The following chart compiled by ICAO gives the main characteristics of all open skies agreements concluded to date.

34 See "a US standard "post 1977" agreement"; Air Transport Association, 15 May 1989, a summary of the typical provision of an US open skies agreement can be found in: http:/www.state.gov/www/issues/econmic/tra and the underlying policy is explained in the DOT "US international transportation policy statement " dated April 1995.

TABLE 22
Main Open Skies Principles

Combined passenger/cargo services	All-cargo services
Complete exchange of the five basic traffic rights (including 5th freedoms)	Same liberal provisions on traffic rights and rates(same regime as for combination carriers)
Free market access for designated carriers (free determination of routes, capacity, frequency)	'Pro-competitive' ground support (self-handling, intermodal rights, user charges)
Freedom of fares and rates (double-disapproval if threat to competition)	Liberal treatment of non-scheduled cargo services (the least restrictive charter regulations of the two countries apply)

Source: OECD, DSTI/DOT (99), 1 June 1999.

TABLE 23
Open Skies Agreement

Type	Conclusion		Entity		Remarks
	Year	Month			
Open Skies	1992	9	US	Netherlands	
Open Skies	1995	5	US	Austria	
Open Skies	1995	5	US	Belgium	Signed in September 1995
Open Skies	1995	5	US	Denmark	
Open Skies	1995	5	US	Finland	
Open Skies	1995	5	US	Iceland	
Open Skies	1995	5	US	Luxembourg	
Open Skies	1995	5	US	Norway	
Open Skies	1995	5	US	Sweden	
Open Skies	1995	5	US	Switzerland	
Open Skies	1995	12	US	Czech Republic	Have three-year-phased period
Open Skies	1996	2	US	Germany	
Open Skies	1996	11	US	Jordan	
Open Skies	1997	1	US	Singapore	7th freedom rights for all cargo
Open Skies	1997	2	US	Brunei	
Open Skies	1997	3	US	Panama	
Open Skies	1997	3	US	Taiwan, Province of	
Open Skies	1997	4	US	Costa Rica	
Open Skies	1997	4	US	El Salvador	7th freedom rights for all cargo
Open Skies	1997	4	US	Guatemala	
Open Skies	1997	4	US	Honduras	
Open Skies	1997	5	US	New Zealand	7th freedom rights for all cargo
Open Skies	1997	5	US	Nicaragua	
Open Skies	1997	6	US	Malaysia	7th freedom rights for all cargo
Open Skies	1997	7	US	Aruba	
Open Skies	1997	10	US	Chile	Signed in October 1999, 7th freedom rights for all cargo
Open Skies	1997	12	US	Netherlands Antilles	7th freedom rights for all cargo
Open Skies	1997	12	US	Romania	Have four-year-phased period
Open Skies	1998	2	US	Uzbekistan	7th freedom rights for all cargo
Open Skies	1998	4	US	Korea, Republic of	
Open Skies	1998	5	US	Peru	Have four and two-year phased periods for passenger and cargo services, 7th freedom rights for all cargo
Open Skies	1998	11	US	Italy	Signed in December 1999
Open Skies	1999	4	US	Pakistan	
Open Skies	1999	4	US	UAE	7th freedom rights for all cargo. Restrictions exist due to multinational nature of Gulf Air
Open Skies	1999	5	US	Bahrain	
Open Skies	1999	8	US	Argentina	Have four-year-phased period for passenger service; Argentina suspended in February 2000
Open Skies	1999	10	US	Qatar	

Type	Conclusion		Entity		Remarks
	Year	Month			
Open Skies	1999	11	US	Tanzania	Have two-year-phased period for charter service, 7th freedom rights for all cargo
Open Skies	1999	12	US	Dominican Republic	
Open Skies	1999	12	US	Portugal	Include intermodal; Open charter and 7th freedom of cargo will be at the end of 2002/2003
Open Skies	2000	1	US	Slovak Republic	7th freedom rights for all cargo, Have two-year-phased period for single cargo charter flights
Open Skies	2000	2	US	Namibia	Have two-year-phased period for number of airlines and open charter rights
Open Skies	2000	3	US	Ghana	Have six-year phased period for passenger and cargo services, 7th freedom rights for all cargo
Open Skies	2000	2	US	Burkino Faso	7th freedom rights for all cargo, Restrictions exist due to multinationality of Air Afrique
Open Skies	2000	3	US	Turkey	Have three-year-phased period for passenger services
Open Skies	2000	5	US	Gambia	7th freedom rights for all cargo
Open Skies	2000	5	US	Nigeria	
Open Skies	1995	2	US	Canada	Have three-year-phased period for US carriers' access
Open Skies	1996	11	Australia	New Zealand	Created single aviation market, Have a ceiling for 5th freedom
Open Skies	1996	6	Brazil	Chile	
Open Skies	1996	3	Brazil	New Zealand	
Open Skies	1999		Brunei	New Zealand	Include the provision to permit 7th/8th freedom
Open Skies	1997	4	Brunei	Singapore	
Open Skies	1999		Chile	Costa Rica	
Open Skies	1998?		Chile	Panama	
Open Skies	2000		Cook Islands	New Zealand	
Open Skies	1998		Denmark	New Zealand	
Open Skies	1998		Ethiopia	UAE	Signed by Dubai on its own account
Open Skies	1997		Guatemala	Panama	
Open Skies	1997		Kenya	Netherlands	
Open Skies	1996		Macau	Nepal	
Open Skies	1997		Macau	Singapore	
Open Skies	1998		Malaysia	New Zealand	
Open Skies	1998		New Zealand	Norway	
Open Skies	1997		New Zealand	Singapore	Include the provision to permit 7th freedom for cargo service
Open Skies	1998		New Zealand	Sweden	
Open Skies	1997		New Zealand	UAE	
Open Skies	1998		Pakistan	UAE	Signed by Dubai on its own account
Open Skies	1997	3	Panama	Peru	
Open Skies	1996		Panama	Venezuela	
Open Skies	1998		Turkmenistan	UAE	
Open Skies	1998		UAE	Uganda	

Type	Conclusion		Entity	Remarks
	Year	Month		
Open Skies	1998		Four Latin American States	Dominican Republic, Guatemala, Costa Rica and Panama
Open Skies	1999		Three Southeast Asian States	Limited to specific areas in Indonesia, Malaysia and Thailand

Grand Total	**74**	**(including Open Transborder and Multi Open Skies)**
Total US	**48**	**(including Open Transborder)**
Total non-US	**26**	**(including Multi Open Skies)**
Total Developing countries	**54**	**(including Multi Open Skies)**

192. The liberalization process extends well beyond open skies agreements. That is why ICAO has drawn up to Table 24 containing a list of countries involved in liberal agreements (either bilateral or regional). It is worth noting that this chart does not contain references to agreements more liberal than the classical Bermuda type agreement but less liberal than open skies agreements (e.g Japan-USA) and this because there are extremely difficult to typologize in a simple manner. The picture is therefore incomplete. For a more precise idea of the "less than open skies agreements", please refer to the future annex of this document on routes, tariffs, capacity and designation. However, ICAO made in June 1999 the following assessment of the regulatory evolution contained in the bilateral agreements notified to ICAO between 1994 and 1999. "…measures to ensure effective and sustained participation in international air transport through the progressive liberalization of market access, were present in about 55% of the 295 bilateral instruments for which information is available. The most popular measures included multiple designation of airlines, gradual, negotiated capacity increases and the removal of restrictions on cargo services."

TABLE 24
List of countries involved in Liberal Agreements as of 12 September 2000

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Algeria										x							x
Angola									x	x							x
Antigua & Barbuda											x						x
Argentina	x												x				x
Aruba	x																
Australia		x													x	x	x
Austria	x		x	x													x
Bahamas											x						x
Bahrain	x						x										x
Barbados											x						x
Belgium	x		x	x													x
Belize											x						x
Benin										x							x
Bolivia						x							x				x
Botswana										x							x
Brazil		x											x				x

1. **US Open Skies Agreements**
2. **Non-US Open Skies Agreements**
3. **European Union (EU)**
4. **European Common Aviation Area**
5. **EU Expanded Agreements**
6. **Andean Pact**
7. **Arab Civil Aviation Commission (ACA)**
8. **Central African Economic Union**
9. **COMESA**
10. **Yamoussoukro II**
11. **CARICOM**
12. **Banjut Accord**
13. **Fortaleza Agreement**
14. **CLMV Agreement (Southeast Asia)**
15. **Asia Pacific Economic Cooperation (APEC)**
16. **South Pacific Forum**
17. **ICAO States or not**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Brunei	x	x													x		x
Bulgaria					x												x
Burkino Faso	x									x							x
Burundi									x	x							x
Cambodia														x			x
Cameroon								x		x							x
Canada	x														x		x
Cape Verde										x		x					x
CAR								x		x							x
Chad								x		x							x
Chile	x	x											x		x		x
China														x			x
Colombia						x											x
Comores									x	x							x
Congo								x									x
Congo, Demo Rep									x	x							x
Cook Islands		x														x	x
Costa Rica	x	x															x
Côte d'Ivoire										x							x
Cyprus						x											x
Czech Rep.	x				x												x
Denmark	x	x	x	x													x
Djibouti									x	x							x
Dominica											x						
Dominican Rep	x	x															x
Egypt							x		x	x							x
El Salvador	x																x
Ecuador						x											x
Equatorial Guinea								x		x							x
Eritrea									x	x							x
Estonia					x												x
Ethiopia		x							x	x							x
Fiji																x	x
Finland	x		x	x													x
France			x	x													x
Gabon								x		x							x
Gambia	x									x		x					x
Germany	x		x	x													x
Ghana	x									x		x					x
Greece			x	x													x

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17. **ICAO States or not**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Grenada											x						x
Guatemala	x	x															x
Guinea										x							x
Guinea Bissau										x		x					x
Guyana											x						x
Honduras	x																x
Hong Kong, SAR															x		
Hungary					x												x
Iceland	x			x													x
Indonesia		x													x		x
Iraq							x										x
Ireland			x	x													x
Italy	x		x	x													x
Jamaica											x						x
Japan															x		x
Jordan	x						x										x
Kenya		x							x	x							x
Kiribati																x	x
Korea, Rep of	x														x		x
Lao People's Dem Rep													x				x
Latvia					x												x
Lebanon							x										x
Lesotho										x							x
Liberia										x							x
Libya							x			x							x
Liechtenstein				x													
Lithuania					x												x
Luxembourg	x		x	x													x
Macau, SAR		x															
Madagascar									x	x							x
Malawi									x	x							x
Malaysia	x	x													x		x
Mali										x							x
Malta					x												x
Marshall Islands																x	x
Mauritania										x							x
Mauritius									x	x							x
Mexico															x		x
Micronesia, Fed. States of																x	x

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16. **South Pacific Forum**
17. **ICAO States or not**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Montserrat											x						
Morocco							x										x
Mozambique										x							x
Myanmar														x			x
Namibia	x								x	x							x
Nauru																x	x
Nepal		x															x
Netherlands	x		x	x													x
Neth. Antilles	x																
New Zealand	x	x													x	x	x
Nicaragua	x																x
Nieu																x	
Niger										x							x
Nigeria	x									x		x					x
Norway	x	x		x													x
Oman							x										x
Pakistan	x	x															x
Palau																x	x
Palestine							x										
Panama	x	x															x
Papua New G.															x	x	x
Paraguay													x				x
Peru	x	x				x									x		x
Philippines															x		x
Poland					x												x
Portugal	x		x	x													x
Qatar	x						x										x
Romania	x				x												x
Russian Fed.															x		x
Rwanda									x	x							x
Saharawi Arab										x							
St Kitts and Nevis											x						
Saint Lucia											x						x
St Vincent & Grenadines											x						x
Samoa																x	x
Sao Tome & Principe										x							x
Saudi Arabia							x										x
Senegal										x							x
Seychelles									x	x							x
Sierra Leone										x		x					x

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17. **ICAO States or not**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Singapore	x	x													x		x
Slovak Rep.	x				x												x
Slovenia					x												x
Soloman Islands																x	x
Somalia										x							x
South Africa										x							x
Spain			x	x													x
Sudan							x		x	x							x
Suriname											x						x
Swaziland									x	x							x
Sweden	x	x	x	x													x
Switzerland	x			x													x
Syria							x										x
Taiwan, Province of	x														x		
Tanzania	x								x	x							x
Thailand		x													x		x
Togo										x							x
Tonga																x	x
Trinidad & Tob.											x						x
Tunisia							x			x							x
Turkey	x				x												x
Turkmenistan		x															x
Tuvalu																x	
UAE	x	x					x										x
Uganda		x							x	x							x
UK			x	x													x
Uruguay													x				x
USA	x														x		x
Uzbekistan	x																x
Vanuatu																x	x
Venezuela		x				x											x
Vietnam														x	x		x
Yemen							x										x
Zambia									x	x							x
Zimbabwe									x	x							x
TOTAL	49	27	15	19	13	5	16	6	21	52	14	6	6	4	21	16	157

1. **US Open Skies Agreements**
2. **Non-US Open Skies Agreements**
3. **European Union (EU)**
4. **European Common Aviation Area**
5. **EU Expanded Agreements**
6. **Andean Pact**
7. **Arab Civil Aviation Commission (ACA)**
8. **Central African Economic Union**
9. **COMESA**
10. **Yamoussoukro II**
11. **CARICOM**
12. **Banjut Accord**
13. **Fortaleza Agreement**
14. **CLMV Agreement (Southeast Asia)**
15. **Asia Pacific Economic Cooperation (APEC)**
16. **South Pacific Forum**
17. **ICAO States or not**

193. Table 25 updates and completes the chart contained in document S/C/W/59, Annex 8, page 32 and describes the main provisions of the existing regional agreements except for EU. It is worth noting however that the actual stage of implementation of those provisions is extremely variable.

TABLE 25
Selected Provisions from Regional Agreements and Arrangements on Air Services

Andean Pact – 1991 (5 States)	**Caribbean Community** (CARICOM) – 1996 (14 States)	**Fortaleza Agreement** – 1997 (6 States)	**Banjul Accord** – 1997 (6 States)	**CLMV Agreement** – 1998 (4 States)	**COMESA** – 1999 (21 States)	**ACAC** – 1999 (16 States)
Non-Scheduled Services						
Permits unrestricted all-cargo flights and inclusive tour passenger charters within the region which do not endanger the economic stability of existing scheduled services	No provision	No provision	No provision	No limitation subject to permission procedures of each country	Permit free movement of intra-COMESA air cargo and non-scheduled passenger traffic	No restriction subject to regulatory procedures
Third and Fourth Freedoms						
Yes	Yes – when licensed and with prior notification; day tours/air taxis may be subject to uplift/ directional conditions	Yes, but only on routes not being served under bilateral agreements	Yes, for two traffic points in each State	No limitation on 3rd/4th freedom traffic rights; no limitations on eight international airports for origin, destination, intermediate and beyond points within region	Up to two daily flights between any city pair, beyond that bilateral air service applies (phase I). No intra-COMESA limitation (phase II)	Capacity divided to a 60 to 40% ratio by 2001 No restriction by 2003
Fifth and Sixth Freedoms						
Fifth: Yes Sixth: Not mentioned per se	Fifth: To be exchanged on a reciprocal and liberal basis between members Sixth: Not mentioned	Carriage of Fifth and Sixth freedom traffic permitted only with consent of States concerned	Fifth: Yes, unrestricted where no 3rd and 4th freedom operations; limited to 20% of capacity with 3rd/4th; reciprocal for non-African carriers	Fifth: No limitation on traffic Sixth: Implicitly recognized from traffic points description (see 3rd/4th freedoms above)	Fifth: Unrestricted where no 3rd and 4th freedom operations, limited to 30% of capacity with 3rd/4th (phase I). No restriction (phase II)	Fifth: No restriction by 2005
Multiple Designation						
Yes	Yes, except where it would lead to serious financial loss to the existing air carriers licensed by both States	Yes	Maximum of two airlines per State	Yes	Yes	Yes

Andean Pact – 1991 (5 States)	**Caribbean Community** (CARICOM) – 1996 (14 States)	**Fortaleza Agreement** – 1997 (6 States)	**Banjul Accord** – 1997 (6 States)	**CLMV Agreement** – 1998 (4 States)	**COMESA** – 1999 (21 States)	**ACAC** – 1999 (16 States)
Tariffs						
Country of origin	Dual approval required by States concerned, but tariffs to be approved which meet general criteria	Country of origin; tariffs applied can be examined by Council of Aeronautical Authorities	Double approval; tariffs fixed on basis of price cap policy based on operating cost of designated airlines	Dual disapproval for sub-regional tariffs	No specific provision	By 2003, apply rules of supply and demand for tariffs
Ownership and Control						
Determined by national law (legally constituted in Pact country designating air carrier)	Air carrier must be owned and controlled by one or more Member States or nationals thereof	No specific provision	Headquarters and major operations in designating State which should have minority interest with veto	No specific provision	Air carrier substantially owned and effectively controlled by one or more COMESA members or their nationals	Air carrier substantially owned and effectively controlled by Arab States or nationals, with Headquarters and registration in an Arab State
Capacity						
Accords the "free exercise of rights of third, fourth and fifth freedoms of the air", but the offer of non-scheduled flights on scheduled service routes may not endanger the economic viability of scheduled services	A primary objective is the provision, at a reasonable load factor, of capacity adequate to meet the current and reasonably anticipated requirements for the carriage of passengers, cargo and mail on specified routes; limitations are permitted on multiple-designation, air taxi operations	Capacity must be adapted to the respective traffic potential. States involved to consider capacity proposed by airlines to avoid any excess capacity not in accordance with traffic potential (an anti-competitive practice) taking into account airport technical limitations	Five frequencies per week per airline; schedules should be harmonized	No limitation on capacity and frequency	No restriction on type and capacity of aircraft, except for airport operating limitations and air-worthiness requirements	No restriction on type of traffic or points of operation. Capacity freeze can be imposed for one year, non renewable in case of rapid decline in market-share
Fair Competition						
Competition rules of Andean Pact are applicable to air transport	Accords airlines fair and equal opportunity to compete; requires action to eliminate all forms of discrimination or unfair competitive practices; no undue effect on airline services of other Member States	Members to adopt measures to eliminate all forms of discrimination and unfair competition practices; establishes a national standard for treatment of airlines of other Member States	No specific provision	No specific provision	Members to apply COMESA competition rules and regulations to alliances and commercial arrangements	Apply ICAO guidance and rules of the Arab League for fair competition and non-discrimination. Existing bilateral provisions or a set mechanism for settlement of disputes

Andean Pact – 1991 (5 States)	**Caribbean Community** (CARICOM) – 1996 (14 States)	**Fortaleza Agreement** – 1997 (6 States)	**Banjul Accord** – 1997 (6 States)	**CLMV Agreement** – 1998 (4 States)	**COMESA** – 1999 (21 States)	**ACAC** – 1999 (16 States)
Other Agreements Among Parties						
May not impose restrictions to any facilities which Member States have granted, or may grant, through bilateral or multilateral agreements	Shall not affect any bilateral, multilateral or other contractual agreement or arrangements	May not establish restrictions on what is established in air service agreements among Parties, provisions of which are applied subsidiarily	Prior consultation, observer status for States for bilateral negotiations within, outside of group; States to reflect and promote broader group interest in such negotiations. In event of inconsistencies, Yamoussoukro Declaration prevails	Existing bilateral air services agreements recognized; progressive implementation; any two States may initiate cooperative arrangements, others join when ready	Existing bilateral air services agreements recognized; progressive implementation; alliances and commercial arrangements encouraged	Existing bilateral air services agreements recognized; progressive implementation, alliances and marketing arrangements encouraged
Non-party States						
Permits non-scheduled cargo flights between Pact and non-Pact States; fifth freedom rights exchanged with non-Pact States on basis of equity and adequate compensation	Does not affect bilateral agreements/arrangements or operating licenses/similar authorizations already in force between a Member State and a non-Member State	No specific provision	See "Other Agreements among Parties," above	Existing bilateral air service agreements recognized	Existing bilateral air service agreements recognized	No provision
Inclusion of New Member States						
Presumably requires State to join Andean Pact	Open to State or Territory which becomes part of Caribbean Community	Open to other States of South America; requires unanimous approval of States Parties to the Agreement	No provision	Open to other countries subject to acceptance by all member States (agreed in 1999)	No provision	No provision
Entry into Force						
Decision 297 (June 1991)	When eighth ratification was deposited, 8 December 1998	30 days after third ratification deposited	Upon signature of three States	Upon signature, 14 January 1998	First phase of liberalization scheduled for 1 October 1999	First phase of liberalization scheduled for 1999
Amendment						
Through Decision of Cartagena Commission	Requires agreement, ratification and deposit of all Member States	Aeronautical Authorities can modify Appendices by unanimous agreement	No provision	All parties must accept proposed amendments	No provision	No provision

194. In view of their technical complexity and economic importance the provisions of the single European air transport market deserve a specific description. It is contained in Table 26.

TABLE 26
Summary of Three European Air Packages

Scope	1st package From 1 January 1988 International scheduled passenger transport	2nd package From 1 November 1990 International scheduled passenger transport	3rd package From 1 January 1993 Intra-Community air transport
Fares	*Fare type* / *% of ref. fare* / *Fare approved by State* Discount 66-90 Automatically Deep discount 45-65 Automatically All other Dbl approval	*Fare type* / *% of ref. fare* / *Fares approved by States* Fully flexible 106- Unless double disapproval Normal econ 95-105 Automatically Discount 80-94 Automatically Deep discount 30-79 Automatically All other If dbl approva/	*Free pricing* However, provisions made for States and/or the Commission to intervene against - excessive basic fares (in relation to long term fully allocated costs) - sustained downward development of fares
Designation	Multiple designation by a State allowed if: - 250 000 pass (1st year after notification) - 200 000 pass or 1 200 rt flights (2nd year) - 180 000 pass or 1 000 rt flights (3rd year)	Multiple designation by a State allowed if: - 140 000 pass or 800 rt flight (from Jan 91) - 100 000 pass or 600 rt flight (from Jan 92)	No longer applicable
Capacity	Capacity shares between States 45/55% (from Jan 88) 40/60% (from Oct 89)	Capacity shares of a State of up to 60% Capacity can be increased by 7.5% per year	Unrestricted
Route access	• 3rd/4th Freedom region to hub routes permitted • 5th Freedom traffic allowed up to 30% of capacity • Additional 5th Freedom rights for Irish and Portuguese • Combination of points allowed • Some exemptions	• 3rd/4th Freedom between all airports • 5th Freedom traffic allowed up to 50% of capacity • Public service obligations and certain protection for new regional routes • A 3rd/4th Freedom service can be matched by an airline from the other State • Scope for traffic distribution rules and restrictions related to congestion and environmental protection	• Full access to international and domestic routes within the EU including routes between States other than the base of the carrier exemptions for Greek islands and Azores • Cabotage is allowed for up to 50% of capacity if the domestic sector is combined with a route to the home country Cabotage is unrestricted from April 1997 • More developed public service obligations and certain protection for new thin regional routes • More developed scope for traffic distribution rules and restrictions related to congestion and environmental protection

Competition rules	*Group exemptions regarding* • Some capacity coordinations • Tariff consultations • Slot allocation at airports • Common computer reservation systems • Ground handling of aircraft, freight, passengers and inflight catering • Some sharing of pool revenues	*Group exemptions regarding* • Some capacity coordinations • Tariff consultations • Slot allocation at airports • Common computer reservation systems • Ground handling of aircraft, freight, passengers and inflight catering	*Group exemptions regarding* • Some schedule coordinations • Tariff consultations • Slot allocation at airports • Common computer reservation systems • Joint operation of new thin routes
Licensing of air carriers	Not provided for in the 1st and 2nd packages		*Full freedom to start an airline* Uniform conditions across EU Concept of Community ownership and control replaces national ownership and control Requirements for financial fitness specified Small carriers subject to looser regulatory requirements

Source: European Commission, Europe Single Market Review, Air Transport, 1997/OECD.

195. Moreover, in addition to these arrangements which are already in place or about to become so, others are in the pipeline, for example:

- an initiative by the 16 *Pacific Forum Island Countries* for multilateral liberalization;
- a proposal endorsed by leaders of the *Asia Pacific Economic Cooperation (APEC)* aimed at increasing competitive air services within this 21 member group[35];
- a liberalization initiative by the United States with a number of Caribbean States;
- A common regional commercial air policy for South America being prepared under the aegis of a regional Conference of Ministers.

196. Finally as this resulted also clearly from the first session of the review, three texts currently under discussion: the draft Transatlantic Common Aviation Agreement (TCAA); the Chicago II Initiative; and the draft "like minded" – APEC countries plurilateral agreement, contain far reaching liberal provisions that may have a considerable future impact.

197. As described by Mrs De Palacio, European Commissioner for transport and energy at the "beyond open skies" symposium held in Chicago on December 1999, the draft Transatlantic Common Aviation Agreement (TCAA) with the United States[36] would comprise three types of provisions.

- Market access provisions: this would include not only the classical open skies exchange of the five first freedoms but also set the stage for the negotiation for a shared and completely open market environment. This would include a fundamental change of ownership and control legislation, if not even the complete elimination of restrictions in this area.
- Regulatory provisions: a broad framework of harmonization and policy convergence would be devised. It would include issues such as computer reservation systems, code sharing, slots, state aid, bankruptcy protection and leasing. The convergence of EU competition rules and US anti-trust policy will be a central question. Other useful areas for regulatory convergence would be safety standards, environmental measures and social policies such as flight time limitations and cabin crew protection.

35 For details on this proposal, refer to Job No 3203, dated 19 May 2000, Communication from Australia, Implementing the Eight Recommendations for more Competitive Air Services.

36 See "Towards a Transatlantic Common Aviation Area", Association of European Airlines policy statement, September 1999, and speech by Mrs de Palacio, on the web-site http.\\www.eurunion/org/news/speeches/991206ldp.htm.

- Dispute settlement provisions: these should be "strong, effective and swift".

198. At this stage the discussion of the TCAA is academic, since the European Commission has not yet been given a mandate to negotiate it and since the attribution of this mandate is partially linked to the pending judicial action before the European Court of Justice, initiated by the Commission against several Member States on the grounds that the open skies agreements and the staged liberalization agreements that they have signed with the United States have a negative bearing on the European single market.

199. The "Chicago II" or "beyond open skies initiative" is also a recent and important development. At this conference, held under the auspices of the US Secretary for Transport, in December 1999, in the same premises where the original Chicago Convention had been discussed and signed, representatives of open skies signatory countries agreed a common declaration paving the way for plurilateral forms of open skies agreements.

200. More precisely the declaration states that "as the next step for advancing international aviation liberalization there is a need to continue exploring the potential for aviation liberalization beyond open skies [...] the goals for this follow-up initiative are two-fold. First to identify effective mechanisms to exchange opportunities among like-minded partners, including considerations of regional, multilateral and plurilateral systems. Second, to create a framework that will allow additional partners to join in such exchanges of opportunities. This initiative will extend beyond routes to include other elements of the operating environment to facilitate the safe, secure, sustainable, efficient and cost-effective movement of passengers and goods".

201. To a certain extent, the negotiations that began in August 2000 among five "like-minded APEC countries" (Brunei Darussalam, Chile, New Zealand; Singapore and the United States[37]) are a follow-up of this "beyond open skies initiative". The negotiations are still under way and it is therefore impossible to describe the definitive features of the agreement. However from various public declarations made by the participants it appears that this draft agreement entails the exchange of the first five freedoms among members for passengers and the first five plus the seventh freedom for all cargo services. An additional optional protocol will be drafted in order to allow members that so wish to exchange passenger seventh freedom and cabotage rights. It also includes the right to multi-designate, the choice between a narrow (substantial ownership and control) and a wide (principal place of business) criterion for ownership. The idea of including also airlines whose substantial ownership is vested in one **or more parties** or their nationals or both (multinational ownership limited to members) is still between brackets but is widely considered as one of the most important potential steps forward of this draft agreement. The other provisions are similar to classical open skies texts.

37 Australia and Japan are observers to these talks.

DEVELOPMENTS IN THE AIR TRANSPORT SECTOR SINCE THE CONCLUSION OF THE URUGUAY ROUND

PART FOUR

Background Note by the Secretariat

Addendum

This background note provides additional information about developments in the air transport sector since the conclusion of the Uruguay Round. The first part discusses the Freedoms of the Air, while the second part focuses on bilateral, plurilateral and multilateral agreements.

PART FOUR

INTRODUCTION

FREEDOMS OF THE AIR

OVERVIEW OF BILATERAL AGREEMENTS

DESIGNATION

TARIFFS

CAPACITY

A. INTRODUCTION

1. Focussing on tariffs, capacity, designation, and 'other standard elements', this document seeks to trace the significant changes that have occurred over the past number of years and to indicate how liberalization is occurring.[1] For this purpose, both standard and actual bilateral agreements have been selected to discuss the relevant articles that are usually included. Standard or framework agreements are not bilateral agreements between two States, but rather define structure and general content that will be fleshed out in bilateral negotiations.

2. Compared to Job Number 2451, the presentation and format in this document will be altered to comply with the standard framework in the Digest of Bilateral Air Transport Agreements, Doc 9511, 1988 (hereinafter referred to as Doc 9511). This ensures consistency with accepted practices throughout the sector and assists Members in identifying recent trends. The structure used, which complies with the accepted International Civil Aviation Organization (ICAO) standards, may also prove useful for any future discussions over commercial air transport services in the GATS.

B. FREEDOMS OF THE AIR

3. This section describes each of the Eight 'Freedoms' one-by-one, referring to the official ICAO definition and providing concrete examples drawn from a study of the US Air Lines Pilot Association (ALPA)[2]. As far as possible and for the purpose of this note, peculiarities of the regulatory regimes have been included and an attempt has been made to categorize the freedoms and to trace changes between 1993 and 2000.

4. "Freedoms of the Air" are defined in Chart 1.

1 See Job Number 2451, S/C/W/59 and S/C/W/129.

2 October 2000 report of the ALPA's Global Aviation Strategy Group.

CHART 1

Air Freedom Rights in Air Services Agreements

FIRST FREEDOM

To overfly one country en-route to another



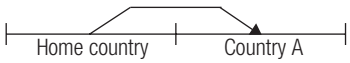
SECOND FREEDOM

To make a technical stop in another country



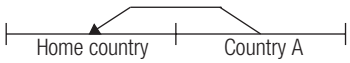
THIRD FREEDOM

To carry freight and passengers from the home country to another country



FOURTH FREEDOM

To carry freight and passengers to the home country from another country



FIFTH FREEDOM

To carry freight and passengers between two countries by an airline of a thirdcountry on route with origin / destination in its home country



SIXTH FREEDOM

To carry freight and passengers between two countries by an airline of a third country on two routes connecting in its home country



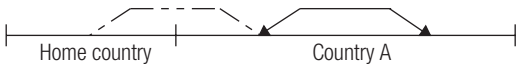
SEVENTH FREEDOM

To carry freight and passengers betweeen two countries by an airline of a third country on a route with no connection with its home country



EIGHTH FREEDOM OR CABOTAGE

To carry freight and passengers within a country by an airline of anothercountry on a route with origin / destination in its home country



TRUE DOMESTIC

To carry freight and passengers within a foreign country with no connection with the home country



Source: Association of European Airlines/European Commission/OECD.

1. Operational Freedoms: First and Second Freedoms

5. The First Freedom is defined by the ICAO Manual on the Regulation of International Air Transport (hereinafter referred to as Doc 9626) as "the right or privilege, in respect of scheduled international air services, granted by one State to another State or States to fly across its territory without landing".

6. The Second Freedom is defined in Doc 9626 as "the right or privilege, in respect of scheduled international air services, granted by one State to another State or States to land in its territory for non-traffic purposes".[3]

3 Doc 9626, page 4.1-5.

TABLE A1
LIST OF MEMBERS OF THE INTERNATIONAL AIR SERVICES TRANSIT AGREEMENT SIGNED AT CHICAGO ON 7 DECEMBER 1944
(Status as of 4 October 2000)

Entry into force: The Agreement entered into force on 30 January 1945.
Status: 118 contracting States

This list is based on information received from the depositary, the Government of the United States of America.

State	Date of Deposit of Notification of Acceptance
Afghanistan	17 May 1945
Albania	21 October 1997
Algeria	16 April 1964
Antigua & Barbuda	16 November 1988
Argentina	4 June 1946
Armenia	29 May 1996
Australia	28 August 1945
Austria	10 December 1958
Azerbaijan	3 March 2000
Bahamas	27 May 1975
Bahrain	12 October 1971
Bangladesh	9 February 1979
Barbados	10 July 1970
Belgium	19 July 1945
Benin	23 April 1963
Bolivia	4 April 1947
Bosnia and Herzegovina	3 March 1995

State	Date of Deposit of Notification of Acceptance
Brunei Darussalam	4 December 1984
Bulgaria	21 September 1970
Burkina Faso	25 September 1992
Burundi	19 January 1968
Cameroon	30 March 1960
Chile	24 April 1974
China (for Hong Kong, China only)	3 June1997
Costa Rica	1 May 1958
Côte d'Ivoire	20 March 1961
Croatia	9 May 1992
Cuba	20 June 1947
Cyprus	12 October 1961
Czech Republic	3 April 1993
Democratic People's Republic of Korea	8 February 1995
Denmark	1 December 1948
Ecuador	28 July 1983
Egypt	13 March 1947

State	Date of Deposit of Notification of Acceptance
El Salvador	1 June 1945
Estonia	16 August 1995
Ethiopia	22 March 1945
Fiji	14 February 1973
Finland	9 April 1957
France	24 June 1948
Gabon	15 January 1970
Germany	9 May 1956
Greece	21 September 1945
Guatemala	28 April 1947
Guinea	5 November 1998
Guyana	28 April 1986
Honduras	13 November 1945
Hungary	15 January 1973
Iceland	21 March 1947
India	2 May 1945
Iran, Islamic Republic of	19 April 1950
Iraq	15 June 1945
Ireland	15 November 1957
Israel	16 June 1954
Italy	27 June 1984
Jamaica	18 October 1963

State	Date of Deposit of Notification of Acceptance
Japan	20 October 1953
Jordan	18 March 1947
Kuwait	18 May 1960
Latvia	21 May 1997
Lebanon	5 June 1974
Lesotho	2 October 1975
Liberia	19 March 1945
Luxembourg	28 April 1948
Madagascar	14 May 1962
Malawi	27 March 1975
Malaysia	31 May 1945
Mali	27 May 1970
Malta	4 June 1965
Mauritania	11 May 1979
Mauritius	13 September 1971
Mexico	25 June 1946
Monaco	3 January 1996
Morocco	26 August 1957
Nauru	25 August 1975
Nepal	23 November 1965
Netherlands	12 January 1945
New Zealand	19 April 1945

State	Date of Deposit of Notification of Acceptance
Nicaragua	28 December 1945
Niger	16 March 1962
Nigeria	25 January 1961
Norway	30 January 1945
Oman	23 February 1973
Pakistan	15 August 1947
Palau	3 November 1995
Panama	8 October 1982
Paraguay	27 July 1945
Philippines	22 March 1946
Poland	6 April 1945
Portugal	1 September 1959
Republic of Korea	22 June 1960
Republic of Moldova	21 November 1994
Rwanda	6 July 1964
Senegal	8 March 1961
Seychelles	16 October 1979
Singapore	22 August 1966
Slovakia	14 April 1993
Slovenia	12 June 1992
Somalia	10 June 1964
South Africa	30 November 1945

State	Date of Deposit of Notification of Acceptance
Spain	30 July 1945
Sri Lanka	31 May 1945
Swaziland	30 April 1973
Sweden	19 November 1945
Switzerland	6 July 1945
Thailand	6 March 1947
The former Yugoslav Republic of Macedonia	9 January 1993
Togo	24 June 1948
Trinidad and Tobago	14 March 1963
Tunisia	26 April 1962
Turkey	6 June 1945
Ukraine	14 August 1997
United Arab Emirates	25 April 1972
United Kingdom	31 May 1945
United States	8 February 1945
Uzbekistan	17 February 1997
Vanuatu	14 January 1988
Venezuela	28 March 1946
Zambia	13 October 1965

7. The following considerations suggest that the First and Second Freedoms have a particular status, different from the other freedoms:

(i) They are not considered as traffic freedoms by ICAO but as "operational" freedoms since no commercial traffic is involved;[4]

(ii) They may not be covered by the definition of traffic rights in the relevant GATS Annex which states that the right has to be exerted for "remuneration or for hire";

(iii) They are not generally dealt with in bilateral agreements, but in a quasi-universal multilateral agreement, namely the 1944 ICAO International Air Services Transit Agreement (IASTA). The relevant provisions are in essence similar to those of Article V of the GATT.

4 Note: traffic rights are considered to be part of the Third to Eighth Freedoms (Doc 9626, page 4.1-8).

8. The IASTA has been ratified, as of 4 October 2000, by 118 States, 17 of which have ratified during the last five years. The complete list of Members is contained in Table A1 (Annex).

9. ICAO considers universal adherence to the IASTA as an essential policy objective. The ICAO Assembly has urged States to ratify the Transit Agreement on a number of occasions, and continues to do so as a permanent policy in Resolution A32-17. The 1994 Worldwide Air Transport Conference in its Recommendation, AT Conf/4, also called for universal adherence to, and implementation of, the Agreement.

10. The substantive provisions of the IASTA warrant closer attention; in Table 1 they are compared to similar provisions contained in the GATT (transit) and GATS (denial of benefits, security exception).

TABLE 1
A Comparison between IASTA, GATT and GATS

International Air Services Transit Agreement Substantive provisions	Comparable GATT and GATS provisions	Observations
Article I *Section 1* Each Contracting State grants to the other Contracting States the following freedoms of the air in respect of scheduled international air services: 1) the privilege to fly across its territory without landing; 2) the privilege to land for non-traffic purposes.	GATT Article V-1: "Goods (including baggage), and also vessels and other means of transport, shall be deemed to be in transit across the territory of a contracting party when the passage across such territory, with or without trans-shipment, warehousing, breaking bulk, or change in the mode of transport, is only a portion of a complete journey beginning and terminating beyond the frontier of the contracting party across whose territory the traffic passes. Traffic of this nature is termed in this Article "traffic in transit". GATT Article V-2: "There shall be freedom of transit through the territory of each contracting party, via the routes most convenient of international transit, for traffic in transit to or from the territory of other contracting parties. No distinction shall be made which is based on the flag of vessels, the place of origin, departure, entry, exit or destination, or on any circumstances relating to the ownership of goods, of vessels or of other means of transport."	
The privileges of this section shall not be applicable with respect to airports utilized for military purposes to the exclusion of any scheduled international air services. In areas of active hostilities or of military occupation, and in time of war along the supply routes leading to such areas, the exercise of such privileges shall be subject to the approval of the competent military authorities.	GATS Article I.3(c): governmental service carve-out. GATT Article XXI, GATS Article XIV ***bis:*** National security exceptions.	
Section 3 A Contracting State granting to the airlines of another Contracting State the privilege to stop for non-traffic purposes may require such airlines to offer reasonable commercial service at the points at which such stops are made. Such requirement shall not involve any discrimination between airlines operating on the same route, shall take into account the capacity of the aircraft, and shall be exercised in such a manner as not to prejudice the normal operations of the international air services concerned or the rights and obligations of a Contracting State.	None None	Neither GATT nor GATS contains such "hitch-hiking" provisions.

International Air Services Transit Agreement Substantive provisions	Comparable GATT and GATS provisions	Observations
Section 4 Each Contracting State may, subject to the provisions of this Agreement, 1) Designate the route to be followed within its territory by any international air service and the airports which any such service may use;	GATT Article V-2: "there shall be freedom of transit through the territory of each contracting party, via the routes most convenient for international transit ..." and V-3 "any contracting party may require that traffic in transit through its territory be entered at the proper custom house…"	The GATT is apparently more liberal in terms of choice of routes, which may help to accommodate technical air traffic constraints. In addition, the air traffic corridors are *ipso facto* the "most convenient routes".
2) Impose or permit to be imposed on any such service just and reasonable charges for the use of such airports and other facilities;	GATT Article V-4: "all charges and regulations imposed by contracting parties on traffic in transit to and from the territories of other contracting parties shall be reasonable having regard to the conditions of the traffic".	
3) These charges shall not be higher than would be paid for the use of such airports and facilities by its national aircraft engaged in similar international services…	GATT Article V-5: "with respect to all charges, regulations and formalities in connection with transit each contracting party shall accord to traffic in transit to or from the territory of any other contracting party treatment no less favourable than the treatment accorded to traffic in transit to or from any contracting party".	The IASTA imposes a national treatment obligation, while the GATT only imposes an MFN obligation.
	GATT ArticleV-6: "Each contracting party shall accord to products which have been in transit through the territory of any other contracting party treatment no less favourable than that which would have been accorded to such products, had they been transported from the place of origin to their destination without going through the territory of such other contracting party".	The IASTA has no provision equivalent to this standard of treatment based on an alternative direct route. The relevance of such a provision for air transport seems obvious.
Section 5 Each Contracting State reserves the right to withhold or revoke a certificate or permit to an air transport enterprise of another State in any case where it is not satisfied that substantial ownership and effective control are vested in nationals of a Contracting State, or in case of failure of such air transport enterprise to comply with the laws of the State over which it operates, or to perform its obligations under this Agreement.	GATS Article XXVII (denial of benefits).	

11. In addition to IASTA, certain provisions of the Chicago Convention, which has 185 members (compared to the 118 members of IASTA), also regulate First and Second Freedoms. Article 5 of the Chicago Convention grants to non-scheduled flights, *inter alia* First and Second Freedoms.

> "Right of non-scheduled flight:
>
> Each Contracting State agrees that all aircraft of the other Contracting States, being aircraft not engaged in scheduled international air services shall have the right, subject to the observance of the terms of this Convention, to make flights into or in transit non-stop across its territory and to make stops for non-traffic purposes without the necessity of obtaining prior permission, and subject to the right of the State flown over to require landing. Each Contracting State nevertheless reserves the right, for reasons of safety of flight, to require aircraft desiring to proceed over regions which are inaccessible or without adequate air navigation facilities to follow prescribed routes, or to obtain special permission for such flights. [Emphasis added]
>
> Such aircraft, if engaged in the carriage of passengers, cargo, or mail for remuneration or hire on other than scheduled international air services, shall also, subject to the provisions of Article 7, have the privilege of taking on or discharging passengers, cargo, or mail, subject to the right of any State where such embarkation or discharge takes place to impose such regulations, conditions or limitations as it may consider desirable."[5]

12. In a similar vein, Article 15 of the Chicago Convention, in its last sentence, stipulates: "No fees, dues or other charges should be imposed by any Contracting State in respect solely of the right of transit or entry into or exit from its territory of any aircraft of a contracting state or persons or property thereon".[6]

13. The question of transit through sovereign airspace has always been politically sensitive. Dispute settlement Articles of the Chicago Convention (Articles 84-88) have been invoked in five instances to date, three of which concerned disputes over sovereign airspace infringement. The three cases were: India versus Pakistan 1952-1953, Pakistan versus India 1971-1976, Cuba versus United States 1996-1998, and all three were settled through diplomatic negotiations.[7] Also it is interesting to note that the four countries with the largest airspace (Canada[8], Brazil, Russian Federation and China[9]) are not members of IASTA.

14. The charging practices of the Russian Federation, particularly across Siberia and on routes between Western Europe and the Far East, have been the object of repeated challenges and *démarches* by ICAO and WTO Members, including the European Civil Aviation Conference (ECAC) and European Union Member States, and airlines. The Association of European Airlines (AEA) estimate the payments to be approximately €220 million per year. This is considered to be inconsistent with the ICAO charging policy and Article 15 of the Chicago Convention. The Council of the European Union expressed serious concerns about this system. The ECAC also challenged this system on two separate occasions in ICAO, first in the 1999 General Assembly (deferred working paper) and then at an ANSConf (Conference on the Economics of Airports and Air Navigation Services) meeting (information paper ANSConf WP/73, dated 8 June 2000[10]). Another ECAC document[11] even mentions the WTO as an option to solving this problem, should ICAO fail.

15. The principles laid down by Article V of the GATT are a transposition of the pre-existing Barcelona Convention of 1921. At the time of drafting the GATT, it was decided not to include the operation of aircraft in transit as this subject would be dealt with by ICAO, but rather to cover only the air transit of goods including baggage. This explains the actual wording of Article V-7 of the GATT[12]: "The provisions of this Article shall not apply to the operation of aircraft in transit, but shall apply to air transit goods (including baggage)."

16. Members might wish to discuss this exclusion in view of: (i) the wider actual and prospective membership of WTO as compared to the IASTA agreement; (ii) discrepancy created between air transportation of goods and the operation of aircraft in transit; and (iii) the effectiveness of the dispute settlement systems of ICAO and GATT-WTO.

5 The Chicago Convention, Article 5.

6 An interpretation of this provision is contained in paragraph 94 of document S/C/W/163/Add.2.

7 ICAO document C-DEC154/16, 22 June 1998.

8 Canada withdrew from IASTA in 1988.

9 Excluding Hong Kong, China.

10 See http://www.icao.int/icao/en/atb/ansconf2000/docs/wp73e.pdf

11 DGCA/108-DP/8, dated 1 December 1999.

12 For the negotiating history and interpretation of Article V, see *Analytical Index*, 1995 edition, Volume 1, pages 214 to 217 and for Article V-7, EPCT/c.II/54/rev1, page 7.

2. Traffic Rights

(a) Introduction: the genesis of traffic rights

17. It may be worth recalling that the drafters of the Chicago Convention envisioned a multilateral system with a complete opening of routes.[13] The International Air Transport Agreement, adopted in 1944 in parallel to the IASTA, reconfirmed the first two Freedoms, and in addition, stipulated:

- "the right or privilege, in respect of scheduled international air services, granted from one State to another State to put down, in the territory of the first State, traffic coming from the home State of the carrier (3rd Freedom);

- the privilege, in respect of international air services, granted by one State to another State to take on, in the territory of the first State, traffic destined for the home State of the carrier (4th Freedom);

- the privilege to take on passengers, mail and cargo destined for the territory of any other contracting state and the privilege to put down passengers, mail and cargo coming from any such territory (Fifth, Sixth and Seventh Freedoms)".[14]

18. The International Air Transport Agreement, however, was ratified by only 19 States, 8 of which later withdrew.

19. The multilateral framework was completed in 1947 by the drafting of the Multilateral Agreement on Commercial Rights in International Civil Air Transport and contains provisions relating to market access, capacity, and tariffs. The draft Agreement envisaged free access to markets subject to four months notice (Articles 6-9), relatively flexible capacity control operated solely by the State of origin (Articles 10-13), provisions on unfair pricing practices (Articles 14-16), and a system of dispute settlement, notably for tariff questions.[15]

20. In terms of routes, the draft confirmed the multilateral granting of Third, Fourth, Fifth, Sixth, and Seventh Freedoms. The following portion of the draft text is still relevant today: "…if nations, each sovereign on its own territory, are left to bargain the exchange of rights in international civil air transport, in limiting and varying degrees, the bargainings will be sources of conflicts. Such bargainings will be discriminatory in nature. A regulated freedom of the air under which all participating states may exercise commercial rights under rules which shall be the same for all and which shall include proper safeguards as to capacity, routes and methods of competition is the only solution".[16]

21. This translated into a simple clause, contained in Chapter II ("Freedoms of the Air") Article 6 of the PICAO (Provisional ICAO) reads: "subject to the provisions of this agreement, each contracting State shall have the right that its duly authorized airlines shall be entitled to fly their aircraft across the territory of any contracting State without landing and to make in such territory, stops for non traffic purposes and for the purpose of putting down and taking on passengers, mail and cargo".[17]

22. In November 1947, a final attempt was made in Geneva by the Commission for a Multilateral Agreement on Commercial Rights in International Civil Air Transport to find a formula for a multilateral traffic rights solution. This failed and ICAO Members turned towards bilateral solutions.[18]

(b) Third and Fourth Freedoms

23. The Third Freedom is defined as "the right or privilege, in respect of international scheduled air services, granted by one State to another State to put down in the territory of the first State, traffic coming from the home State of the carrier".[19]

24. The Fourth Freedom is defined as "the right or privilege, in respect of international air scheduled services to take on, in the territory of the first State, traffic destined for the home State of the carrier".[20]

25. Aero Accords, a consulting firm, has conducted a study on the evolution of these routes. Although based on a comparison of two periods (1966 - 1975 and 1986 - 1995) different from our review period (1993 - 2000), it gives interesting results. The main tendencies identified in the study remain valid. These are long term trends and are based on large statistical samples of over 1000 agreements for each of the periods

13 See document S/C/W/59, paragraphs 73 to 78.

14 Doc 9626, page 4.1-8 and 4.1-9.

15 Document PICAO (Provisional ICAO) 4014, A1-EC/1, March 1947, available from the WTO Secretariat.

16 Ibid.

17 Ibid.

18 See in particular John Gunther, "Multilateralism in International Air Transport - The Concept and the Quest", Annals of Air and Space Law, Vol. XIX, Part I, 1994, McGill University and Duane W. Freer "The PICAO Years 1945-1947", ICAO Bulletin, No. 8, July 1986.

19 Doc 9626, page 4.1-8.

20 Ibid.

examined. The results are summed up in Table 2. (A comparable sample by ICAO for 1993 - 1999 includes only 225 agreements and has not, up to now, been the object of a similar analysis).

26. Between the two periods major changes took place:

(i) proliferation of new and revised routes within established markets;

(ii) a movement away from the traditional single gateway format "from my major city to your major city and vice versa" towards the exchange of additional gateways; and

(iii) the use of the "non-specific route format", i.e. of clauses allowing traffic "from points in my country to points in your country", has also nearly doubled (200 cases compared to 104). It now represents 16.5% of all cases against 9.8% in the preceding period.

27. In addition, several regional agreements contain provisions granting Third and Fourth Freedom Rights (see Table 3):

TABLE 2
Gateway Access by Route

Number of gateways	1966-1975 (number)	1966-1975 (per cent)	1986-1995 (number)	1986-1995 (per cent)
Single	764	72.3	731	60.5
Dual	129	12.2	163	13.5
Three	37	3.5	64	5.3
Four	11	1	14	1.2
Five	4	0.4	6	0.5
Six-ten	5	0.5	25	2.1
Over ten	2	0.2	6	0.5
All specific routes	**952**	**90.2**	**1009**	**0.5**
Multiple	80	7.6	180	14.9
Multiple implied	24	2.3	20	1.7
Non-specific routes	**104**	**9.8**	**200**	**16.5**
Total	**1056**	**100**	**1209**	**100**

Source: Aero Accords.

TABLE 3
Regional Agreements with Third and Fourth Freedom Rights

Andean Pact 1991 (5 States)	Caribbean Community (CARICOM) 1996 (14 States)	Fortaleza Agreement 1997 (6 States)	Banjul Accord 1997 (6 States)	CLMV Agreement 1998 (4 States)	COMESA 1999 (21 States)	ACAC 1999 (16 States)
Yes	When licenced and with prior notification; day tours/air taxis may be subject to uplift/directional conditions.	Only on routes not being served under bilateral agreements.	For two traffic points in each State.	No limitation on 3rd/4th freedom traffic rights; no limitations on eight international airports for origin, destination, intermediate and beyond points within region.	Up to two daily flights between any city pair. No intra-COMESA limitations.	Capacity will be divided into a 60 /40 per cent ratio by 2001. No restrictions by 2003.

Source: ICAO.

(c) Fifth Freedom

28. The Fifth Freedom is defined as "the right or privilege, in respect of scheduled international air services, granted by one State to another State to put down and take on, in the territory of the first State, traffic coming from or destined to a third State".[21]

29. Table 4 shows the number and proportion of agreements containing the granting of some form of Fifth Freedom rights among the agreements notified to ICAO between 1993 and 1999.

30. It is difficult to draw firm conclusions from this table. First, the relevant sample covers probably only half of the bilateral agreements signed during this period. The ICAO database contains approximately 1,700 agreements out of an estimated total of more than 3,000. Please note that a survey of ICAO data compiled by Aero Accords indicates that the average delay in the registration of an air service agreement is about four years.[22] Second, the numbers may be too small to be representative of any trend. Nevertheless, there is a relatively clear indication that the granting of Fifth Freedom rights is a relatively common feature, contained in approximately 40% of the bilaterals concluded in years with significant statistical data. Further, agreements granting limited Fifth Freedom account for a large majority (about four-fifths) of the cases. Unfortunately, it was not possible within the timeframe available to provide a more detailed typology of the agreements with limitations distinguishing, for example, between highly restrictive, moderately restrictive and nearly open regimes. Finally, it is worth noting that the agreements with unlimited Fifth Freedom Rights (not prescribing any specific number of points as intermediate or beyond) are not limited to open skies agreements, but may also involve, for example, staged liberalization. Again, the relevant numbers are too small to give a reliable picture. However, there is evidence to suggest that open skies agreements are clearly under-represented in the ICAO sample of 225 agreements (7 versus 73 that were recorded in Table 23, document S/C/W/163/Add.2).

31. The above information on bilateral agreements should be read in conjunction with Table 5 on regional agreements containing Fifth Freedom provision.

21 Ibid.

22 Airline Business, July 2000.

TABLE 4

Number and Proportion of Agreements Granting Fifth Freedom Rights among the Bilateral Agreements deposited at ICAO from 1993 to 1999

	1993	1994	1995	1996	1997	1998	1999	Total 1993-1999
Total number of agreements in the year concerned	68 (100%)	44 (100%)	32 (100%)	36 (100%)	30 (100%)	14 (100%)	1 (100%)	225 (100%)
Number of agreements granting Fifth Freedom rights, among which:	30 (44.1%)	17 (38.6%)	13 (40.6%)	16 (44.4%)	15 (50%)	4 (28.5%)	0 (0%)	95 (42.2%)
(i) Number of agreements granting limited Fifth Freedom rights	26 (38.2%)	14 (31.8%)	11 (34.3%)	14 (38.8%)	8 (26.6%)	2 (14.2%)	0 (0%)	75 (33.3%)
(ii) Number of agreements granting Fifth Freedom Rights without restrictions on market access	4 (5.9%)	3 (6.8%)	2 (6.3%)	2 (5.6%)	7 (23.4%)	2 (14.2%)	0 (0%)	20 (8.88%)
(iii) Open Skies[a]	0 (0%)	0 (0%)	1 (3.1%)	1 (2.7%)	4 (13.3%)	1 (7.1%)	0 (0%)	7 (3.1%)

a An agreement granting unlimited Fifth Freedom rights is not necessarily an open skies Agreement. For instance, such an agreement could restrict Third and Fourth Freedoms.

TABLE 5
Regional Agreements with Fifth Freedom Rights

Andean Pact 1991 (5 States)	Caribbean Community (CARICOM) 1996 (14 States)	Fortaleza Agreement 1997 (6 States)	Banjul Accord 1997 (6 States)	CLMV Agreement 1998 (4 States)	COMESA 1999 (21 States)	ACAC 1999 (16 States)
Fifth: Yes	Fifth: To be exchanged on a reciprocal and liberal basis between members.	Carriage of Fifth Freedom traffic permitted only with consent of States concerned.	Fifth: Yes, unrestricted where no 3rd and 4th Freedom operations; limited to 20% of capacity with 3rd/4th; reciprocal for non-African carriers.	Fifth: No limitation on traffic.	Fifth: Unrestricted where there are no 3rd and 4th freedom operations. Initially, there are 30-40% capacity limitations on 3rd and 4th Freedoms. Eventually there will be no restrictions.	Fifth: No restrictions by 2005.

Source: ICAO.

(d) So-called "Sixth Freedom"

32. Rights beyond Fifth Freedoms are traditionally named "so-called" x th Freedoms, since the 1944 Chicago Conference established only five Freedoms of the Air. The Sixth Freedom is defined as "the right or privilege, in respect of scheduled international air services, of transporting via the home State of the carrier, traffic moving between two other States".[23]

33. After the Chicago Convention and the adoption of Bermuda I bilateral principles, States began considering that there was an "ownership" by a pair of States (and by extension by their airlines) of air traffic picked up in the territory of one and set down in the territory of the other.[24]

34. As carriers' routes and traffic volume grew, so did the opportunities for airlines to attract traffic between two foreign States via their home State. This developed the concept of the so-called Sixth Freedom of the Air. The States affected by potential or actual diversion of "their" traffic by "homeland bridge carriers" sought to develop counter-strategies. These strategies included:

(i) refusal to negotiate any routes to/from the homeland of the bridge carrier;

(ii) strict capacity limitations on the bridge carrier if such routes were established;

(iii) exclusion of the bridge carrier from discount tariffs authorized to its own carrier(s) in traffic between the home territories;

(iv) prohibitions on offering or advertising any single-plane services on a so-called Sixth Freedom basis in their country;

(v) implicit incentive by treating traffic having a "legitimate" stopover in the bridge carrier's homeland for one or more days; and

(vi) refusal to grant Fifth Freedom rights to the government of a bridge carrier or limitations on the ability of the carrier to exercise such rights.

35. Generally, such strategies were only marginally successful for two reasons: the natural inclination of airlines to maximize profitable carriage by seeking traffic from all sources, and the preference of consumers for the most convenient on-line connections.

36. However, there are geographic limitations on a carrier's ability to provide a "home-land bridge". In particular, the relevant markets must be situated on a reasonably direct route. For example, airlines based

23 Doc 9626, page 4.1-9.

24 Discussions about Bermuda I and Bermuda II bilateral agreements are a direct reference to the structure of the actual bilateral agreements between the US and the UK. Bermuda I became a standard that was followed by other States in developing and signing bilateral air service agreements. Bermuda I was signed in 1946 and Bermuda II was signed in 1977.

in Southern Africa, South America and Australia have virtually no "Sixth Freedom" opportunities. Carriers based in north-eastern Asia will find it relatively easy to attract North American, East Asian, and Southeast Asian traffic flows. The geographic location of a carrier's home base also plays a role in its ability to attract intraregional bridge traffic. Thus, a carrier in Western Europe is well placed to attract Baltic-Mediterranean traffic; a carrier in North America could attract traffic from Canada, Central American, and Caribbean destinations.

37. Aero Accords have noted that in an increasing (although not specified) number of bilateral agreements the Sixth Freedom was explicitly authorized as "points behind our country via our country to your country".[25]

38. Among the regional agreements, only two reportedly deal with the Sixth Freedom Rights and only one explicitly (see Table 6).

39. The WTO Secretariat is not aware of publicly available statistics on the Sixth Freedom. Reporting of such traffic is hampered by its composite nature (the addition of a Fourth Freedom between A and B and of a Third Freedom between B and C). However, some States apparently do provide relevant information.

(e) So-called "Seventh Freedom"

40. The Seventh Freedom is defined as "the right or privilege, in respect of scheduled international air services, of transporting traffic between the territory of the granting State and any third State with no requirements to include on such operation any point in the territory of the recipient State i.e. the services need not connect to or be an extension of any service to/from the home State of the carrier".[26]

25 Quoted in Airline Business, July 2000.

26 Doc 9626, page 4.1-9.

41. Among the 1,500 bilateral agreements deposited with ICAO, only one, New Zealand-Brunei 1999, contains full Seventh Freedom Rights for cargo and passengers. Sixteen agreements provide Seventh Freedom Rights for all-cargo.[27]

42. The EU single aviation market, as well as the planned expansion, provides for the so-called Seventh Freedom, while the Australia-New Zealand Single Aviation Market (SAM) grants Seventh Freedom for cargo services. As far as passengers are concerned, in a Memorandum of Understanding, dated 20 November 2000, the Ministers of the two countries "undertake to examine further the introduction of seventh freedom traffic rights for passenger services by carriers of both parties in the light of the ongoing development of a competitive aviation market". The Memorandum also includes an asymmetric MFN clause pertaining only to the granting of traffic rights to third parties by Australia ("in the event the airline(s) of a third party are granted traffic rights by Australia, then such opportunities will be granted to the designated airline(s) of each party under this agreement".[28])

43. The new plurilateral Asia Pacific Economic Cooperation (APEC) agreement also foresees Seventh Freedom for cargo.[29] Regarding passengers, an option can be exercised in the form of an additional protocol between interested parties.

27 USA / Singapore (1997), USA / El Salvador (1997), USA / New Zealand (1997), USA / Malaysia (1997), USA / Chile (1997), USA / Netherlands Antilles (1997), USA / Uzbekistan (1998), USA / Peru (1998), USA / UAE (1999), USA / Tanzania (1999), USA / Portugal (1999), USA / Slovakia (2000), USA / Ghana (2000), USA / Burkina (2000), USA / Gambia (2000), New Zealand / Singapore (1997).

28 "Memorandum of Understanding on Open Skies Agreement Between Australia and New Zealand", see http://www.mft.govt.nz/foreign/regions/australia/austopenskies.html.

29 The United States, Chile, Brunei, New Zealand and Singapore, all APEC Members, signed this agreement on 1 May 2001.

TABLE 6
Regional Agreements with Sixth Freedom Rights

Fortaleza Agreement 1997 (6 States)	**CLMV Agreement** 1998 (4 States)
Carriage of Fifth and Sixth Freedom traffic permitted only with consent of States concerned.	No limitation on Sixth Freedom traffic. This is implicitly recognized in traffic points description.

Source: ICAO.

(f) So-called "Eighth Freedom"

44. The Eighth Freedom or "consecutive cabotage" is defined as "the right or privilege, in respect of scheduled international air services, of transporting cabotage traffic between two points in the territory of the granting State on a service which originates and terminates in the home territory of the foreign carrier or (in connection with the so-called Seventh Freedom) outside the territory of the granting state".[30] A hypothetical example of this Freedom could be: US-registered aircraft with a flight originating in London (or New York) destined for Nice with the ability en route to land and pick up passengers in Paris.

45. The granting of the Eighth Freedom is even rarer than that of Seventh Freedom. Among all bilateral agreements, only one, the 1999 Brunei-New Zealand grants this freedom for both passenger and cargo, but this possibility has not been exercised to date.

46. As far as regional agreements are concerned, this freedom has been in existence, and exercised, in the EU single aviation market since 1 April 1997. For instance, in November 1998 there were 22 cabotage routes operated by EU carriers.[31] Nevertheless, EU carriers have preferred entering other EU markets through take-overs of small national carriers (e.g. British Airways and TAT) or through the creation of local subsidiaries (e.g. Deutsche BA). In both instances, use is being made of the complete removal of ownership restrictions, inside the EU, for Community-registered carriers.

47. The Australia-New Zealand SAM also allows for the exercise of the Eighth Freedom. Some "like-minded" APEC countries are pushing for its inclusion, at least as an option, in the form of an additional protocol of Eighth Freedom rights. The draft Transatlantic Common Aviation Agreement (TCAA) also contains provisions for Eighth Freedom rights.

30 Doc 9626, page 4.1-10.

31 Aviation Week and Space Technology, 9 November 1998.

(g) So-called "Ninth Freedom"

48. The Ninth Freedom or "stand alone cabotage" is defined as "the right or privilege of transporting cabotage traffic of the granting State on a service performed entirely within the territory of the granting State."[32] An example of this would be that a French registered aircraft could pick up passengers in New York destined for Los Angeles.

49. No agreement registered in ICAO contains a Ninth Freedom and no regional agreement contains it either, except for the EU single aviation market (and its extensions) and the Australia-New Zealand SAM.

C. OVERVIEW OF BILATERAL AGREEMENTS

50. This section provides short summaries of each type of standard agreement. In addition, Table A2 gives a tabular overview of these agreements based on ICAO's standard description.[33] Since the steps taken by the EU to create a common aviation area do not fit conceptually with this description, they are described separately in Table A3.

32 Doc 9626, page 4.1-10.

33 The comparison of the GATS and bilateral ASAs is an expansion of the chart drawn up by the US Office of International Aviation in its document "Aviation Issues in GATS 2000 and Other Fora", Appendix C "Air Transport Bilateral Provisions and Corresponding GATS General Obligations." It is not intended to interpret the scope of the Air Transport Annex.

The second column (entitled ICAO Description) of Table A2, reflects the amount of detail and specificity that has traditionally guided the operational structure of the industry, intended to safeguard national flag carriers through capacity arrangements, tariff articles, designation and capacity.

TABLE A2
Summaries of Provisions in Bilateral Air Transport Agreements

Sections (ICAO Doc 9511)	ICAO General Standard Elements - Part A and Framework Agreements Description (ICAO Doc 9511)[a]	US Typical Post 1977 Agreement[b]	US Model Open Skies Agreement[c]	Australia New Zealand Open Skies[d] (20 Nov 2000) (Interim Effect)	Australia New Zealand Single Aviation Market[e]	Five APEC Plurilateral (1 May 2001)[f]	Comparable GATS Provisions
1) Identification and applicability							
ICAO number	Registration number	Art. 17	Art. 16	Art. 20	---	---	
Names of countries	Contracting parties	Names; Preamble	Names; Preamble	Preamble	Preamble	Art. 20	
Agreement date	Date signed	Art. 18	Art. 17	Art. 21	19 September 1996	Art. 20	
Effective date	Entry into force	Art. 18	Art. 17	Art. 21	Art. 1	Art. 20	
Termination date	Date of termination	Art. 15	Art. 15	Art. 19	---	---	
Notice period	Time-period between date of notice of termination and date of actual termination.	Art. 15	Art. 15	Art. 19	---	Art. 18 Withdrawal only	
Amendment date and ICAO number	Date the amendment entered into force & ICAO Number.	---	---	Art. 17	---	Art. 17	
Scope of agreement	Types of operations encompassed by the agreement (scheduled; non- scheduled; both scheduled and non-scheduled.)	Annex I Annex II	Annex I Annex II	Preamble Annex - Sections 1 and 2	Art. 2; Art. 7; Art. 14	Art. 2	
2) Administrative clauses							
Designation	Each contracting party names its airline or airlines which will exercise the agreed operating rights.	Art. 3	Art. 3	Art. 2	Art. 8	Art. 3	XVI; XVII; XXVII;
User charges	Imposition of user charges for airports, air navigation facilities.	Art. 10(1)	Art. 10.2	Art. 7.1	---	Art. 10	XXVIII cii
	Application of user charge principles.	Art. 10(2)	Art. 10.1	Art. 7	---	Art. 10	

a The Digest of Bilateral Air Transport Agreements is available from the WTO Secretariat.

b The text is available from the WTO Secretariat.

c Ibid.

d Ibid.

e The Single Aviation Market Agreement should be read in conjunction with the Memorandum Of Understanding to the Agreement (copies are available from the WTO Secretariat).

f This Agreement should be read together with the Protocol to the Agreement (copies are available from the WTO Secretariat).

Sections (ICAO Doc 9511)	ICAO General Standard Elements - Part A and Framework Agreements Description (ICAO Doc 9511)[a]	US Typical Post 1977 Agreement[b]	US Model Open Skies Agreement[c]	Australia New Zealand Open Skies[d] (20 Nov 2000) (Interim Effect)	Australia New Zealand Single Aviation Market[e]	Five APEC Plurilateral (1 May 2001)[f]	Comparable GATS Provisions
Aviation security	Commitment to Tokyo, Hague and Montréal Conventions and/or Annex 17 - Security - Safeguarding International Civil Aviation	Art. 7 (1-7)	Art. 7.1	Art. 6	---	Art. 7	XIV
	Co-operation in situations involving aviation security.	Art. 7 (1-7)	Art. 7	Art. 6.2; Art. 6.6	---	Art. 7	
Withholding	Authorization or permission to operate may be withheld or refused if certain conditions are not met.	Art. 4	Art. 4	Art. 2.7; Art. 2.8; Art. 2.9	---	Art. 7.6; Art. 7.7	XVI; XVII
Flight operations	Arrangements for the provision of flight and other operational information.	---	---	---	---	---	
Statistics	Exchange of statistics and procedure for exchange of statistics at specified intervals.	---	---	Art. 8	Art. 12	---	
Revocation	Authorization or permission to operate may be revoked, suspended or limited if certain requirements are not met.	Art. 4	Art. 4; Art. 7.6	Art. 2; Art. 6.8	---	Art.4; Art. 6.2	XVI; XVII
Accident investigation	Procedures for accidents or forced landings.	Art. 7	Art. 7; Art. 7.5	Art. 6.6	---	Art. 7.5	
Consultations	Consultation between the aeronautical authorities or governments.	Art. 7(7); Art. 13	Art. 7.6	Art. 16		Art.7.6; Art.6.2	XXIII
Application of laws	Application of national laws to the operation, navigation admission and departure of aircraft.	Art. 5	Art. 5	Art. 4	---	Art. 5	VI
	Simplified control procedures for transit passengers.	---	---	Art. 4.4		Art. 5.4	
Non-scheduled operations	Provision(s) in agreement specifically regarding non-scheduled operations.	Annex II	Annex II	---	Art. 10	---	XVI; XVII

Sections (ICAO Doc 9511)	ICAO General Standard Elements - Part A and Framework Agreements Description (ICAO Doc 9511)[a]	US Typical Post 1977 Agreement[b]	US Model Open Skies Agreement[c]	Australia New Zealand Open Skies[d] (20 Nov 2000) (Interim Effect)	Australia New Zealand Single Aviation Market[e]	Five APEC Plurilateral (1 May 2001)[f]	Comparable GATS Provisions
Settlement of disputes	Procedures for consultation and/or negotiation.	Art. 14(1)	Art. 14.	Art. 18	Art 17	Art. 14	XXIII
	Referral of dispute to a specific or *ad hoc* tribunal.	Art. 14(2)	Art. 14.2	Art. 18	Art. 17	Art. 14.2	
Recognition of certificates	Recognition by each contracting party of validity of certificates of airworthiness and certificates of competency and personnel licences of other party.	Art. 6	Art. 6	Art. 5	Art. 9	Art. 6	VII
All-cargo operations	Special provision(s) in agreement for all-cargo operations.	Annex II	Annex I - Section 1; Annex II - Section 4	Annex Section 1	---	---	XVI; XVII
Amendment clause	Procedure for amendment or modification of the agreement.	---	---	Art. 17	---	Art. 17	
Customs duties and taxes	Exemption from customs duties of specified equipment and supplies on board the aircraft.	Art. 9(1)	Art. 9(a)	Art. 9	---	Art. 9	XIV; XVII; XXIII (footnote 11)
	Exemption from taxes of airline revenues.	Art. 8(5)	Art. 8.5	---	---	---	
Commercial operations	A Establishment of offices and airline representation.	Art. 8(1)	Art. 8.1	Arts. 12.1; Art. 12.4; Art. 13	---	Art. 8.1(a)	XVI; XVII; XI; XII See ground handling section, S/C/W/163. Add.2; XVI; XVII See CRS section, S/C/W/163; XII
	B Local or convertible currency sales by airlines.	Art. 8(4)	Art 8.6	Art. 12.7	---	Art. 8; Art. 8 1(b)	
	C Ground handling arrangements.	Art. 8(3)	Art. 8.3	Art. 12.10	---	Art. 8 1(b)	
	D Computer reservation systems.	---	Annex III	---	---	Art. 11.6	
	E Currency conversion and remittance by airlines.	Art. 8(5)	Art. 8.5; Art. 8.6	Art. 12.7	---	Art. 81(c)	
	F Other commercial guidelines for airlines.	Art. 8	Art. 8	Art. 12	Art. 6	Art. 8	

Sections (ICAO Doc 9511)	ICAO General Standard Elements - Part A and Framework Agreements Description (ICAO Doc 9511)[a]	US Typical Post 1977 Agreement[b]	US Model Open Skies Agreement[c]	Australia New Zealand Open Skies[d] (20 Nov 2000) (Interim Effect)	Australia New Zealand Single Aviation Market[e]	Five APEC Plurilateral (1 May 2001)[f]	Comparable GATS Provisions
Multilateral agreements	Modification of agreement to conform with any future applicable multilateral agreement.	Art. 16	Removed	---	---	---	
3) Tariff clause							
Scope of applicability	Tariff article applicable to tariffs for the agreed services.	Art. 12	Art. 12	Art. 10	Art. 5(2)	Art. 12	XVI
	Tariff article applicable only to tariffs between the territories of the contracting parties.	Art. 12	Art. 8.3	Art. 10	Art. 5(2)	Art. 12	
Tariff establishment	A Definition of tariffs.	Art. 1(f)	Art. 1.8	Art. 1(o)	---	Art. 1.7	XVI
	B Relevant factors governing tariff establishment.	Art. 12	---	Art. 10	---	Art. 12	
	C Airlines given initial responsibility for negotiating tariffs.	Art. 12(1)	Art. 12	Art. 10.1	Art. 5(2)	---	
	D Reference to a multilateral tariff mechanism or consultation at airline level.	---	---	---	---	---	
	E Secondary tariff establishment mechanism if initial airline mechanism fails.	Art. 12(3)	---	---	---	---	
	F Arbitration of tariff disputes.	Art 14	Art. 10.4	---	Art. 14	---	

Sections (ICAO Doc 9511)	ICAO General Standard Elements - Part A and Framework Agreements Description (ICAO Doc 9511)[a]	US Typical Post 1977 Agreement[b]	US Model Open Skies Agreement[c]	Australia New Zealand Open Skies[d] (20 Nov 2000) (Interim Effect)	Australia New Zealand Single Aviation Market[e]	Five APEC Plurilateral (1 May 2001)[f]	Comparable GATS Provisions
Tariff control process	A Justification to accompany submission of tariffs.	---	---	---	---	---	XVI
	B For double or dual approval process:	Art 12	---	---	---	---	
	B1 - express approval by aeronautical authorities;	---	---	---	---	---	
	B2 - tacit approval where express approval not stipulated; and	---	---	---	---	---	
	B3 - filing period for submission of tariffs. (Coding: number of days.)	---	---	---	---	---	
	B4 Time-period within which action to be taken by authorities. (Coding: number of days.)	---	---	---	---	---	
	C For double or dual disapproval process:	Art. 12	---	---	---	---	
	C1 - tariffs become effective unless both authorities disapprove.	---	---	---	---	---	
	C2 Requirement for notification or filing of tariffs under this process.	Art. 12(2)	---	---	---	---	
	D For country of origin process:	---	---	---	---	---	
	D1 - only the country of origin of a tariff may disapprove it.	---	---	---	---	---	
	D2 Requirement for notification or filing of tariffs under this process.	---	---	---	---	---	
	E For pricing zone process: - disapproval only if outside established pricing zone(s).	---	---	---	---	---	
	F For continuation of existing tariffs:	---		---		---	
	F1 - continuation in certain circumstances.	---	---	---	---	---	
	F2 - time limit on continuation. (Coding: number of days).	---	---	---	---	---	

Sections (ICAO Doc 9511)	ICAO General Standard Elements - Part A and Framework Agreements Description (ICAO Doc 9511)[a]	US Typical Post 1977 Agreement[b]	US Model Open Skies Agreement[c]	Australia New Zealand Open Skies[d] (20 Nov 2000) (Interim Effect)	Australia New Zealand Single Aviation Market[e]	Five APEC Plurilateral (1 May 2001)[f]	Comparable GATS Provisions
	G Tariff enforcement provision.	---	Art. 12.3	---	---	---	
	H Non-scheduled tariffs arrangements.	Art. 12	Art. 12.2	---	---	---	
4) Capacity Clause							
Type of capacity clause	Classification of applicable capacity régime. ICAO Coding 0 = no capacity clause; 1 = predetermination; 2 = Bermuda I; 3 = free-determination; 4 = Other (unclassifiable or a hybrid of different types of capacity regime).	Annex I Section 3	Art. 10 (3 - free determination)	Art. 5 (3 --free determination	Art. 5(1) (3 - free determination)	3 - free determination	XVI

Sections (ICAO Doc 9511)	ICAO General Standard Elements - Part A and Framework Agreements Description (ICAO Doc 9511)[a]	US Typical Post 1977 Agreement[b]	US Model Open Skies Agreement[c]	Australia New Zealand Open Skies[d] (20 Nov 2000) (Interim Effect)	Australia New Zealand Single Aviation Market[e]	Five APEC Plurilateral (1 May 2001)[f]	Comparable GATS Provisions
Significant elements	A Statement of general principles governing capacity.	---	Art. 11.1	Art. 5	Art. 5(5)	Art. 2	XVI
	B Specific formula or division of capacity on routes between two contracting parties.	Annex I Section 1	---	---	---	---	
	C Statement of principles governing capacity on routes to or from third countries.	Annex I Section 3	Annex II Section 3	Annex Section 3	Art. 5(1)	---	
	D Specific formula or division of capacity on routes to or from third countries.	---	---	---	---	---	
	E Principles expressly excluding unilateral capacity controls.	---	---	---	---	---	
	F Inter-airline arrangements affecting capacity.	---	Art. 8.6; Art. 8.7	Annex Sections 2 and 3	---	---	
	G Requirement for filing and approval by authorities of capacity, frequencies.	---	---	---	---	---	
	H Non-scheduled capacity arrangement(s).	Annex II	---	---	---	---	
	I Scheduled all-cargo capacity arrangement(s).	---	---	Annex Section 1	---	---	
	J Change of gauge.	---	Annex I Section 3	Annex Section 3	---	Art. 2.4	
	K Transferring scheduled capacity. Cross-reference to page number in Part B where the route exchange for this agreement may be found.	---	Annex I Sections 2 and 3	Annex Sections 1, 2, and 3	---	---	

Sections (ICAO Doc 9511)	ICAO General Standard Elements - Part A and Framework Agreements Description (ICAO Doc 9511)[a]	US Typical Post 1977 Agreement[b]	US Model Open Skies Agreement[c]	Australia New Zealand Open Skies[d] (20 Nov 2000) (Interim Effect)	Australia New Zealand Single Aviation Market[e]	Five APEC Plurilateral (1 May 2001)[f]	Comparable GATS Provisions
5) Grant of rights							
Rights granted	A Over-flight and technical stops granted for non-traffic purposes.	Art. 2(1)a; Art. 2(1)b	Art. 2	Annex Sections 1, 2, and 3	---	Art. 2.a; Art. 2.b	XVI
	B Traffic rights granted for scheduled services between territories of contracting parties.	Art. 2 Annex I	Annex I	Annex Sections 1, 2, and 3	Art. 2	Art. 2	
	C Non-scheduled passenger traffic rights specifically granted.	Art. 2(1)c Annex II	Annex II	---	Art. 7	Art. 2	
	C1 Non-scheduled cargo traffic rights specifically granted.	---	Annex II	---	Art. 7	Art. 2(c)(ii)	
	D All-cargo scheduled service traffic rights specifically granted.	Art. 2(1)c Annex II	Annex I	Annex Section 1	Art. 2	Art. 2 (c)(ii)	
	D1 All-cargo non-scheduled service traffic rights specifically granted.	---	Annex II	---	Art. 2	Art. 1(c)(ii)	

51. Air Services Agreements have started from a very restrictive approach with severe market access limitations, toward gradually embracing more liberal provisions within the bilateral framework. These include increased freedom for designated carriers to choose the entry point and the destination country, freedom to choose the gauge of aircraft,[34] and an increased ability to utilise behind and beyond destination points.[35] Nevertheless, bilateral air transport traffic rights remain the *modus operandi* throughout most of the world.

52. The Digest of Bilateral Air Transport Agreements (Doc 9511), was prepared in response to the Assembly Resolution A24-11 that called upon the ICAO Council "to prepare and maintain reference files on the main provisions of existing bilateral agreements". It includes detailed explanatory notes on the main elements and also a description of all the provisions in a two-part format: part A provides information on: (i) identification and applicability; (ii) administrative clauses; (iii) tariff clause; (iv) capacity clause; and (v) the grant of rights; Part B includes provisions governing the route exchanges between the signatories.

53. The comparability of individual agreements is limited by a lack of standardization of wording in bilateral agreements. Also, similar terminology can reflect different intentions and take on different meanings, and particular elements can be included by the parties in a variety of ways. In view of these factors, and because the purpose is to identify only the existence or absence in an agreement of specified elements, the codification of agreements has been governed generally by a broad interpretative approach (Doc 9511 En-viii). It provides the basis for a comparison between the US Standard Post 1977, The Standard Open Skies Agreements, the recently signed five APEC States Plurilateral, the Australia-New Zealand SAM, and the Australia-New Zealand open skies agreement.

54. The Standard Post 1977 Bilateral Agreement (US) is made up of eighteen Articles and two Annexes in line with Part A and Part B of the ICAO structure. Articles 1 - 18 specify all standard elements, including: definitions, market access, tariffs, security and settlement of disputes. Annex I addresses route designation, geographic limitation, and change of gauge. Annex II relates to charter services. The Standard Post 1977 Agreement is the most restrictive, in terms of market access and regulatory oversight, of the agreements listed in Table A2.

55. The Standard Open Skies Agreement (US) retains most of the elements included in the Standard Post 1977 Agreement. However, there are also significant changes: all articles have been revised either in drafting or in substance (in some cases, text has been added, deleted or consolidated; an article pertaining to provisions for multilateral agreements has been dropped). Both Annexes have been substantively altered and a third Annex has been included to cover "principles of non-discrimination within and competition among computer reservation systems" in open skies agreements. The most substantive changes are to be found in the market access area: increased freedom over pricing, designation and routes.

56. The Australia-New Zealand Single Aviation Market, and the new open skies agreement are liberal in virtually all market access areas, except foreign ownership restrictions on the flag carriers. Airlines may be established in both countries by nationals of the other, and there are no capacity or pricing restrictions. If foreign ownership restrictions were to be lifted, this Agreement could be considered to establish a true common aviation market.

57. The five APEC States Plurilateral retains many elements of the open skies agreements. In particular, the designated carriers have no capacity limitations, route or frequency restrictions, and retain independence over pricing. The actual format of the text largely conforms to traditional bilateral agreements.

58. The Agreement supersedes the bilateral arrangements previously governing air transport arrangements of the present signatories; its Annex opens to other APEC members the opportunity to participate in the future. There is no alteration or relaxation in the prohibition of cabotage rights or wet leasing.

59. The most important change, representing a significant departure from the post-1977 framework, relates to the conditions for foreign ownership and effective control of a designated carrier. The signatories have omitted the standard term that a carrier must be both substantially owned and effectively controlled by the designating State. Instead, Article 3 (Designation and Authorization) speaks about "effective control", "incorporation in" and "principle place of business" by the designating State. However, it is important to note that the underlying national legislative conditions, which stipulate foreign ownership levels have not been altered, and continue to be set by each State.

34 Change of gauge specifies *inter alia* what type of aircraft equipment may be used on designated routes.

35 ICAO Doc. wp/2;4;5;7 Paris, 1 February 2000.

60. The liberalization of the EU's air transport sector marks the first significant departure by individual States from a bilateral regulatory framework. Table 8 highlights the incremental steps undertaken to ensure a smooth transition to a quasi-domestic regulatory environment. The length of the transition process was intended to afford carriers sufficient time to adjust their operations to an increasingly competitive environment.

61. The first liberalization 'package' (1988) was comprised of four elements: (i) extension of the applicability of Articles 85 and 86 in the Single European Area (SEA) to civil aviation in general; (ii) block exemption from EU competition law for airline co-operation agreements, Computer Reservation Systems (CRS), and ground handling; (iii) liberalized fare regulation; and (iv) capacity and market access rules. The second package (1990) changed the Freedoms of Flight, route access, and entry and exit within the European market. Third and Fourth Freedoms were granted between all airports within Europe; Fifth Freedom rights were limited to fifty per cent capacity (up from thirty in the first package)[36]. The third and final 'package' completed the liberalization process with the implementation of full cabotage, and the removal of foreign ownership restrictions. However, the liberalization process did not extend to relations outside the European Union. Member States have retained authority over third-country bilateral arrangements, and airspace. The Commission has, however, initiated a case before the European Court of Justice (ECJ) against eight member States on this subject. The hearings began in May 2001 and a decision is expected by November-December of this year.

36 See Chart 1, Air Freedom Rights in Air Services Agreements.

D. DESIGNATION

1. Introduction

62. Designation is granted by a State to an airline to conduct international air services under the terms of bilateral or plurilateral agreements. Traditionally, State flag carriers were designated to operate routes covered by the bilaterals. The standard practice was then to specify routes, frequency and aircraft type that the carriers were permitted to operate. Designation is included in the Administration Articles (see Table 9) and is always present in bilateral or plurilateral agreements.

TABLE A3
Liberalization in the European Union: Development of a Common Aviation Area

Date from -	01.01.88	01.11.90	01.01.93
Fare approval	Automatic approval of discount fares		Free pricing on all fares
	Double approval of full fares	Double disapproval applied to full fares	Member States and/or EC can intervene against excessive economy fares and fare dumping
Market access	Multiple designation on country-to-country routes	Multiple designation permitted on higher volume city-city routes	Full access to all routes between all EU countries
	5th Freedom[a]	5th Freedom[a]	Cabotage (operation of domestic route in another country) completely free
			Starting April 1997, up to 50% capacity allowed if domestic sector is combined with route to home country.
		Protection for routes designated as public service obligations and certain new routes	More developed public service obligations and some protection for new regional routes
Licensing of Carriers	Not provided for		Full freedom to start an airline: 1. if EU ownership; 2. if financially sound; if safety requirements are met.

a See Chart 1, Air Freedom Rights in Air Services Agreements.

Source: AEA, 1993.

2. Designation as part of Operational Rights

63. An operational right is a market access right specifying how many carriers may be designated; how aircraft may be operated; and what aircraft types, parts of aircraft, or substitute conveyances may be employed over an agreed route or routes. In practice, operational rights may be found in Air Services Agreements (ASA), in the route Annexes, in various articles or in side understandings, and may or may not be implicitly included.

64. The most basic operational rights are conferred by carrier designation. Designation is the formal diplomatic notification by one State to another of the name of an air carrier chosen to use market access rights received by that State under its ASA. Depending upon the terms of the agreement, a designation may cover any or all market access rights on a particular route, or a particular part of a route.

65. Single designation[37] is the right to designate only one carrier. Dual designation is the right to designate up to two carriers. Multiple controlled designation is the right to designate a specified number of carriers per route, per gateway, or per route sector. Multiple unlimited designation is the right to designate any number of carriers. In each case there is an implicit right for carrier substitution.

66. Bilateral agreements usually contain the explicit right for one State to reject the other's designation only on grounds that the designated carrier is not substantially owned and effectively controlled by nationals of the designating State. Carrier choice is otherwise considered a sovereign right of the designating State. Bilaterals typically do include the right of the first State to deny, revoke, suspend, or impose conditions on operating authorizations for such designated airline on specific grounds. These normally are limited to failure to satisfy the requirement that substantial ownership and effective control of the airline be vested with the designating State or its nationals, or failure to comply with the national laws and regulations of the State revoking, suspending, or conditioning the operating authorization.

67. Such provisions are important in the context of transnational mergers. For instance, the proposed KLM-British Airways merger in 2000 would have implied that KLM became British-controlled, since the capitalization of BA was approximately four times that of KLM. The US Department of Transport indicated that if such a merger were to take place, it would deny KLM the routes between the Netherlands and the United States on the grounds that KLM would no longer be under Dutch control and therefore in violation of the 1992 US-Netherlands Agreement.

3. Regulatory Developments

68. Historically, the treatment of market access in air transport was subject to similar mercantilist considerations as virtually all areas of trade. In addition, of course, strong policy considerations related to national security, safety, *et cetera* came into play. There were also, however, early attempts to establish a multilateral framework. The 1947 draft "Multilateral Agreement on Commercial Rights in International Civil Air Transport"[38] contained (in Article 9) a relatively open designation/withholding-revocation clause: "Each contracting party reserves the right to withhold or revoke the rights granted by this agreement if substantial ownership and effective control of the airline concerned are not vested in nationals, or in the government of the contracting State or States in which the airlines is established".

69. The collapse of multilateral attempts and the advent of bilateral agreements governing market access, led to a standard clause on designation. It is based on substantial ownership and effective control by the nationals of one State only.[39] Such clauses are generally rendered more restrictive by the practice of single designation. This type of provision makes it easier for States to implement an airline "balance-of-benefits" policy and prevent non-party State carriers from gaining, indirectly, unreciprocated benefits.

70. Throughout most of the world, bilaterals still tend to be relatively restrictive. However, market access has undergone some degree of liberalization. The relaxation of designation restrictions began earlier than the open skies polices and the conclusion of regional arrangements, but it has clearly been fostered by these two tendencies.

71. Nevertheless, there have remained "long-standing exceptions" (where different numbers of carriers are specified by route) such as the US-Canada, the US-Mexico and the US-UK agreements. For instance,

37 Single designation is when one flag carrier from each country is permitted to operate a specific route.

38 See above, section B.2(a).

39 A "multilateral" ownership clause has survived in the International Air Services Transit Agreement (IASTA) which grants overflight rights for scheduled air services to an "air transport enterprise" substantially owned and effectively controlled by a national of a Contracting State to IASTA. For a description of IASTA paragraphs 7-10 and Table 1.

in the latter case the limitation to four designated carriers (BA, Virgin, American, United) to serve Heathrow airport persists despite nearly ten year old negotiations between the UK and the US. Another exception is the 1996 Czech-Swiss agreement which allows each party to designate one or more carriers, requiring that no more than one carrier is designated "on each individual route".[40]

72. In the open skies agreements, (primarily involving the US) the numerical limitation on the number of designated carriers has been lifted, as have the routes each carrier is allowed to operate. Under these Agreements, a designated carrier is able to operate, without restriction, between whichever city-pairs it chooses. In addition to this market access flexibility, carriers are also permitted to carry from behind points, and to points beyond. Flights can also be permitted to operate without carrying overseas and domestic traffic on certain segments; such segments are called "blind sectors". However, Agreements with the US do not provide for the possibility of picking up and dropping off traffic within the US (cabotage).

73. Cabotage restrictions have been lifted in the New Zealand-Australia open skies, and SAM Agreements. Carriers may operate behind, beyond, and within the other Party's territory. Designation in the traditional sense has been abolished so long as the carriers remain owned and effectively controlled by nationals of the two signatories.

40 Earl Scott, "Freer Skies", Airline Business, July 2000.

74. The criteria of substantial ownership and effective control have remained an important feature in bilateral agreements. However, other criteria have emerged such as the "principal place of business" or the "community of interest" at bilateral, plurilateral and multilateral levels.

75. Firstly, concerning the bilateral level, Table 7 gives an idea of the use of various designation criteria in the bilateral agreements notified to ICAO during the period 1993-1999.[41]

76. It appears that substantial ownership and effective control have remained important criteria in bilateral agreements.

77. The criterion of principal place of business has become more important over time. Close examination of the agreements shows that among the 52 parties[42] involved in 26 agreements that have principal place of business as a criterion, 30 were from Asia (mostly from the Far East), 13 from Northern Europe, and the remaining 9 from other regions. All WTO/ICAO Members on this list, except Hong Kong, China and Macau, China have signed bilateral agreements containing the traditional criteria of ownership and control rather than the principal place of business. This shows that the use of designation/revocation criteria is variable (the same country can have two different criteria in two different agreements) and can be made on a case-by-case basis according to circumstances.

41 The information contained in this Table needs to be interpreted with care. The same qualifications apply here that have been mentioned in the context of Table 4.

42 Double counting is possible, e.g. Latvia is counted three times since it is involved in three agreements.

TABLE 7
Designation Criteria in Bilateral Agreements
(1993-1999)

	1993	1994	1995	1996	1997	1998	1999	Total 1993-99
No provision	1 (1.5%)	1 (2.3%)	0 (0%)	0 (0%)	0 (0%)	1 (7.2%)	0	3 (1.3%)
Principal place of business	4 (5.9%)	2 (4.5%)	4 (12.5%)	5 (13.9%)	9 (30%)	2 (14.3%)	0	26 (11.6%)
Community of interest	2 (2.9%)	0 (0%)	0 (0%)	1 (2.8%)	0 (0%)	0 (0%)	0	3 (1.3%)
Substantial ownership and effective control	61 (89.8%)	41 (93.2%)	28 (87.5%)	30 (83.3%)	21 (70%)	11 (78.6%)	1 (100%)	193 (85.7%)
Total	**68**	**44**	**32**	**36**	**30**	**14**	**1**	**225**

Source: ICAO bilateral agreements date base. Compiled by the WTO Secretariat.

78. Finally, the community of interest criterion covers cases where the carriers remain substantially owned and effectively controlled by nationals of one or more States which are not necessarily party to the agreement concerned, but Members of a pre-defined group (e.g. the Member States of the EU). The use of this criterion has remained marginal and geographically disparate (South Africa/Senegal, Trinidad/Suriname and Brunei/Germany); it may gain in importance with the expansion of regional integration. It appears primarily in agreements signed for the benefit of the multinational airlines such as SAS, Air Afrique, Gulf Air and more recently BWIA in the Caribbean Islands and Alliance Air in East Africa.

79. There is little documentation available on individual States' policies with regard to designation/revocation. To date, the most complete source of information is from a survey recently undertaken (September 2000) by the International Air Transport Association (IATA) among its Members.[43] The relevant questions are:

> *"- What are your country's laws, policies and practices (and the resulting requirements) regarding ownership and control of foreign airlines operating into your country?*

43 Peter van Fenema, "Ownership and Control: Report of the Think Tank, World Aviation Regulatory Monitor 2000", IATA, Government and Industry Affairs Department, September 2000.

TABLE 8
Provisions on Ownership and Control of Foreign Airlines Operating in the Reporting Country

States or group of States	Provisions
Brazil	There are no restrictions on the ownership of foreign airlines operating into Brazil.
Canada	As a general rule, foreign carriers operating into Canada must be controlled by nationals of the country from which the service originates, although there are some exceptions - such as Caribbean States.
Chile	The bilateral agreements signed by Chile continue to contain the "traditional" clause of substantial ownership and effective control.
India	Air services agreements signed by India stipulate that foreign airlines must be substantially owned and effectively controlled by the government or nationals of the designating country. There are two exceptions, one being Hong Kong. Some bilaterals include the condition that ownership and control of the foreign airline's assets must be in the designating country to prevent "indirect" use of bilateral entitlements by third country carriers through leasing arrangements.
Israel	Foreign airlines serving Israel must be substantially owned and effectively controlled by the government or nationals of the designating country, which must also be a Member of ICAO.
Japan	As regards foreign airlines operating into Japan, the Air Law only makes reference to "in accordance with international agreements" but it seems that up to 50% ownership/control by a third party could be permitted. The bilateral agreements use the standard articles and the government has so far made no major exceptions. It has reviewed the Sabena case (where the SAir Group has a majority holding) and decided to take no action.
Malaysia	Foreign airlines must in general be substantially owned and effectively controlled by the designating country. Exceptions have been made for Hong Kong, Macau SAR and, in the case of SAS, for Denmark, Norway and Sweden. They are permissible since a bilateral agreement is an international treaty and can supersede national legislation.
Mauritius	For foreign airlines serving Mauritius, the Government normally insists that ownership and control be in the other contracting country. An exception is made for Cathay Pacific of the Hong Kong SAR.
Singapore	There are no rules regarding the ownership and control of foreign designated airlines, the criteria being established in each individual air services agreement. The agreements with Hong Kong SAR and Macau SAR use the "principal place of business" as the sole criterion and that with New Zealand uses "principal place of business and effective control. "The ASAs with Laos and Myanmar permit foreign ownership and control of their airlines.
USA	As regards ownership and control of foreign carriers operating into the USA, the Department of Transport (DOT) has been flexible, particularly where there is an "open skies" agreement with the foreign country concerned. SAir Group's control of Sabena above 49%, for example, has not been challenged. A 1991 memorandum between the USA and the United Kingdom noted that UK ownership of less than 50% of an airline incorporated and having its principal place of business in the European Community would not in itself constitute an objection to that airline's entitlement to provide air services under the bilateral agreement with the USA.[a]

a IATA describes the US approach regarding third party ownership in the following manner: "whether or not the nationality clause is invoked ***vis-à-vis*** a foreign carrier is a matter of choice, of expediency, determined by political and aeropolitical considerations and national interest. With more and more "open skies" agreements in place, the ***quid pro quo*** approach is obviously on the way out". There is no equivalent description for the EU since designation has remained under national competence.

Source: IATA Questionnaire, reproduced with the permission of IATA.

- Are there any bilateral air transport agreements concluded by your country which contain an ownership and control clause in the "designation" and (revocation of) "authorization" articles which materially deviates from the standard clause usually employed?

- Did/does your government make any exception in practice to the above ownership and control requirement imposed on foreign airlines?"

80. Whereas the IATA sample included over thirty States or group of States, answers were only obtained from ten States (Table 8).

81. It is worth noting that in the preparation of its Air Transport Conference, to be held on 24-29 March 2003, ICAO has recently issued (June 2001) a more detailed questionnaire[44] which should be answered by its 183 Members by the end of August 2001. The answers are expected to greatly enhance the level and detail of information available for the ICAO membership.

82. The use of criteria other than "substantial ownership and effective control" has also been considered at plurilateral and multilateral level during the period under review. In 1997, after careful consideration of safety risks (e.g. proliferation of flags of convenience) and other problems involved,[45] the ICAO Air Transport Regulation Panel (ATRP) recommended in ATRP/9-4, the broadening of ownership and control criteria used in bilateral agreements. The complete text of this panel recommendation reads as follows:

"The panel recommends:

that States wishing to accept broadened criteria for air carrier use of market access in their bilateral and multilateral air services agreements agree to authorize market access for a designated air carrier which:

(a) has its principal place of business and permanent residence in the territory of the designating State; and

(b) has and maintains a strong link to the designating State.

In judging the existence of a strong link, States should take into account elements such as the designated air carrier establishing itself, and having a substantial amount of its operations and capital investment in physical facilities in the designating State, paying income tax and registering its aircraft there, and employing a significant number of nationals in managerial, technical and operational positions.

Where a State believes it requires conditions or exceptions concerning the use of the principal place of business and permanent residence criterion based on national security, strategic, economic or commercial reasons this should be the subject of bilateral or multilateral negotiations or consultations, as appropriate."

83. In a similar effort, the European Civil Aviation Conference (ECAC) struck in 1998 the Task Force on Ownership and Control (OWNCO) which produced a model article for Members' bilateral agreements. This text was endorsed in 1999 by ECAC[46], and reads as follows:

"Draft model article on a strong link between airlines and the designating state in bilateral air services agreement:

44 Attachment to State letter SC 5/2-01/50 June 2001, available from the WTO Secretariat.

45 See ICAO document ATRP/WP/5, 14 November 1996, page 2.

46 The airlines workers' unions, represented by the International Transport Federation (ITF) have been associated both with the ICAO's ATRP and ECAC's OWNCO initiatives. They were opposed in both instances to the final results on the grounds that the precautions envisaged would not be sufficient to prevent the appearance of flags of convenience in air transport. (ITF News No. 5/99 and ITF Civil Aviation Review, 1999, page 15).

TABLE 9
Regional Agreements containing "Community of Interest" Provisions

Caribbean Community (CARICOM) - 1996 (14 States)	COMESA – 1999 (21 States)	ACAC - 1999 (16 States)
Air carrier must be owned and controlled by one or more Member States or nationals thereof.	Air carrier substantially owned and effectively controlled by one or more COMESA members or their nationals.	Air carrier substantially owned and effectively controlled by Arab States or nationals, with headquarters and registration in an Arab State.

Source: ICAO.

Each Contracting Party may refuse to grant an operating authorization, [may revoke or suspend such an authorization] or may impose such conditions as it deems necessary on the operation of a designated airline, in any case where the said Contracting Party is not satisfied that the airline:

i) is incorporated and has its principal place of business in the territory of the other contracting party; and
ii) holds a current Air Operator's Certificate issued by the aeronautical authority of the other Contracting Party".

84. Some regional agreements also contain liberal designation provisions (i.e. control "by one or more members or their nationals") as referred to in Table 9.

85. The EU single aviation market goes further by substituting "community ownership and control" for "national ownership and control" in its Third Package (Council Regulation No. 2407/92 [47] on the licencing of air carriers).

86. These regional designation clauses are, of course, only valid for international trips inside the regional grouping. For trips outside the grouping, the designation clauses contained in the relevant bilateral agreements come into play. These agreements may, in turn, contain a "community of interest clause", but this is a relatively rare case. This situation may change depending on the outcome of the cases pending before the ECJ between the Commission and eight Member States on Community competence in external air transport policy.

87. The new Plurilateral Agreement between five APEC Members has also substantially liberalized the Designation Article, and specification of foreign ownership and effective control restrictions. The signatories have omitted the standard term that a carrier must be both substantially owned and effectively controlled by the designating State. Instead, Article 3 (Designation and Authorization), speaks about "effective control," "incorporation in," and "principle place of business" by the designating State. However, the underlying national legislative conditions stipulating foreign ownership levels have not been altered, and continue to be set by each State. However, the individual States are still able to establish and/or maintain ownership and control levels in accordance with national laws. For example, the US has imposed an equity reporting requirement on air carriers of its four partners to detect increased US ownership of the foreign-designated carriers. This is to ensure that there is no possibility for "flags of convenience" or avoidance of US safety and labour standards.[48] The relevant provisions commit only the signatories to the Agreement and do not affect existing bilateral agreements with non-signatory States.

88. The draft TCAA, as envisioned by the AEA, would also entail liberal designation provisions. For instance, a September 1999 communication by AEA ("Towards a Transatlantic Common Aviation Agreement") suggests to "allow airlines to enter the market and conduct air transport within the TCAA provided they are majority owned or controlled by nationals of the parties or their respective governments."

E. TARIFFS

89. There has been significant movement away from highly detailed tariff clauses to almost complete freedom by carriers to set their own prices. This is highlighted in Table A2. The underlying intention is to avoid anti-competitive practices; tariff policies have also come under close scrutiny by competition authorities.

90. This section discusses changes in the Tariff Articles found in the open skies and plurilateral agreements and the ongoing role of IATA Tariff Conferences.[49]

1. Definition of Tariffs

91. In general terms, a tariff is understood to represent the price charged for the carriage of passengers, baggage or cargo (excluding mail) and the conditions governing its availability and use in some States. The term also refers to the document containing prices and conditions that a carrier or its agent files (either in electronic or paper form) with the competent regulatory authorities. An international tariff is for transportation between two or more States (and may encompass domestic segments of an international journey); a domestic tariff is for transportation between two or more points of a single State. The term "fare" usually refers to the carriage of passengers while "rate" is a tariff for the carriage of cargo. There are definitional variations between States, however, reflecting the authorities' regulatory approach. Governments with

47 Council Regulation No. 2407/92, 23 July 1992, in the Official Journal L240, 24 August 1992.

48 In January 2001, according to its own terms, the Department of Transport issued a 'Show Cause Order': "amending the U.S. licences of carriers of the participating countries, requiring them to notify DOT of any increase in beneficial shareholding by a U.S. shareholder by 20% or more, within 30 days after such a change". (DOT Order 2001-1-13, issued 16 January 2001).

49 See documents S/C/W/59, paragraphs 86 - 91 and S/C/W/129, paragraph 19(c), available from the WTO Secretariat.

an ambitious regulatory agenda are inclined to use a broad tariff definition while some governments are inclined to use a narrower definition.

92. A tariff includes commissions, i.e. fees paid by an airline to intermediaries such as travel agents and freight forwarders/consolidators. These are not typically the subject of international agreements and not usually specified separately in tariffs filed with governmental authorities. It also reflects any significant benefits provided to users and can alter the effective price paid by the purchaser of the transportation and so would, under some countries' laws, have to be filed as tariffs.

93. A tariff condition or rule, is an integral part of the tariff governing its applicability. With respect to a passenger tariff, these conditions include such elements as the number of pieces and/or weight of accompanied baggage which may be carried without additional charges (and charges for excess baggage), the ability to change the itinerary or similar benefits, requiring payment during a specified period in advance of travel, requiring a minimum stay at the destination and limiting the routing and/or the combination of the tariff with other tariffs. In general, airlines include these conditions as a means of minimizing the revenue effects associated with lower-priced fares.

2. Tariff Development

94. Tariffs are usually referred to as proposed tariffs, allowing air carriers to develop specific prices and conditions, either individually or collectively. In both cases, the rates are submitted for approval to the governments concerned. There are three main forms of bilateral tariff regulation: dual approval; country-of-origin, and double disapproval. In most cases, under all three regimes, airlines serving a specific route submit tariffs for the city-pairs involved to the respective authorities of the two States for approval. When both governments must approve a tariff before it can become effective, it is known as an agreed tariff or dual approval. Under a country-of-origin regime, each party controls fares and rates for traffic originating in its territory (carried by airlines of either party). The most liberal arrangement is double disapproval, in which a tariff becomes effective automatically unless disapproved by both parties within a short, specified period. This last procedure is in all open skies and in other liberal agreements.

95. There is also a separate tariff development process undertaken through various Traffic Conferences of the International Air Transport Association to co-ordinate fares and rates on a market-by-market basis. Tariffs developed through the IATA process are then filed with the appropriate national aeronautical authorities under applicable bilateral requirements (see Chart 2 for an illustration of the Conference Scheduling structure).

3. Types and Characteristics of Tariffs

96. In contrast to other modes of international transport, such as rail and water, international air transport has developed a wide variety of tariffs. As noted above, this reflects national regulatory intentions. For example, by allocating more seats at discount fares to routes, flights or time periods with weak demand, and vice versa, airlines seek to have as many passengers as possible to fly at normal economy or premium fares, while concurrently stimulating discretionary travel.

97. Some States have begun to reduce substantially the requirement for tariff filings. The US, for example, abolished all charter tariff and domestic scheduled tariff filing requirements in connection with domestic deregulation in the early 1980s. It has since unilaterally eliminated scheduled international cargo tariff filing requirements and substantially reduced the number and type of international passenger tariffs that must be filed.

(a) Principal Types of Fares

98. Full or normal economy fare is the lowest-priced fare which allows a passenger maximum flexibility in terms of fare combination, refund, changes in itinerary and routing. First class fare and business/intermediary class fare, are higher than a fully flexible or normal economy fare, while special, discount or restricted fares are lower and have more restrictions.

(b) Cargo Rates

99. The cargo rates have fewer categories than passenger fares. They include *inter alia*: a specific commodity rate, an intermodal rate, a general cargo rate, and a container rate (a ULD[50] discount rate and freight-all-kinds rate). A class rate is determined by applying a discount or surcharge to a general cargo rate for certain commodities, e.g. newspapers or goods requiring special treatment during shipment such as livestock or some dangerous goods.

50 A "Unit Loading Device" is a container designed especially to fit one or more aircraft types.

(c) Charter Rates

100. A charter rate is a tariff for the charter, or lease of all or part of the capacity of an aircraft while a charter fare is the price charged for passengers. Charter fares have some of the characteristics of comparable fares on scheduled services, but are usually lower and more restrictive. Fare distinctions are based on benefits and relationships to the type of service purchased. For example, a bundled fare includes certain facilities for the passenger for a single price.[51]

(d) IATA Tariff Co-ordination

101. When discussing tariffs and tariff articles in bilateral agreements, it is important to understand the role of IATA. It is a worldwide non-governmental organization that represents scheduled airlines. Established in 1945, its mandate is "to promote safe, regular and economical air transport, to provide means for collaboration among air transport enterprises, and to co-operate with ICAO, other international organisations and regional airline associations".[52] The membership is open to any government-approved scheduled airline whose home country is eligible to join ICAO.

102. Chart 2 has been drawn from Doc 9626 and highlights the co-ordination aspects of international tariff structures. All geographic regions are represented through three primary geographic regions with sub-areas existing within and between the primary regions. Conferences must be held at least every two years, although in practice this occurs on an annual basis.

103. IATA tariff co-ordinating conferences are divided into three main geographical areas and sub-areas. The sub-areas exist within and between the three main areas. Area 1 encompasses the North and South American continents and adjacent islands (Greenland, Bermuda, the West Indies and islands of the Caribbean, the Hawaiian Islands, including Midway and Palmyra). Area 2 encompasses all of Europe (including part of the Russian Federation) and adjacent islands (including Iceland and the Azores), all of Africa and adjacent islands (including Ascension Island), and that part of Asia lying west of and including the Islamic Republic of Iran. Area 3 encompasses all of Asia and adjacent islands except areas included in Area 2, all of the East Indies, Australia, New Zealand and adjacent islands, and the islands of the Pacific Ocean other than those included in Area 1.[53]

104. Inter-line fares that are established through the IATA Conference System are normally based on full fares and facilitate the flexibility of movement between carriers that are not part of an alliance or co-operation agreement with other carriers. Interlining permits a passenger to purchase one ticket using different carriers, pay in one currency, and provides for baggage to be transferred from point of origin to destination. Interline fares establish a price for both the individual sectors and the sum of sectors. However, they do not alter or reduce the ability of any one carrier to establish different fare structures or the flexibility of conditions for tickets.

(e) Tariff Liberalization

105. While tariffs remain a significant element of any bilateral agreement, there appears to be a movement away from detailed articles relating to approval or disapproval procedures. Table 12 highlights the movement away from strict State control to a more market based framework.

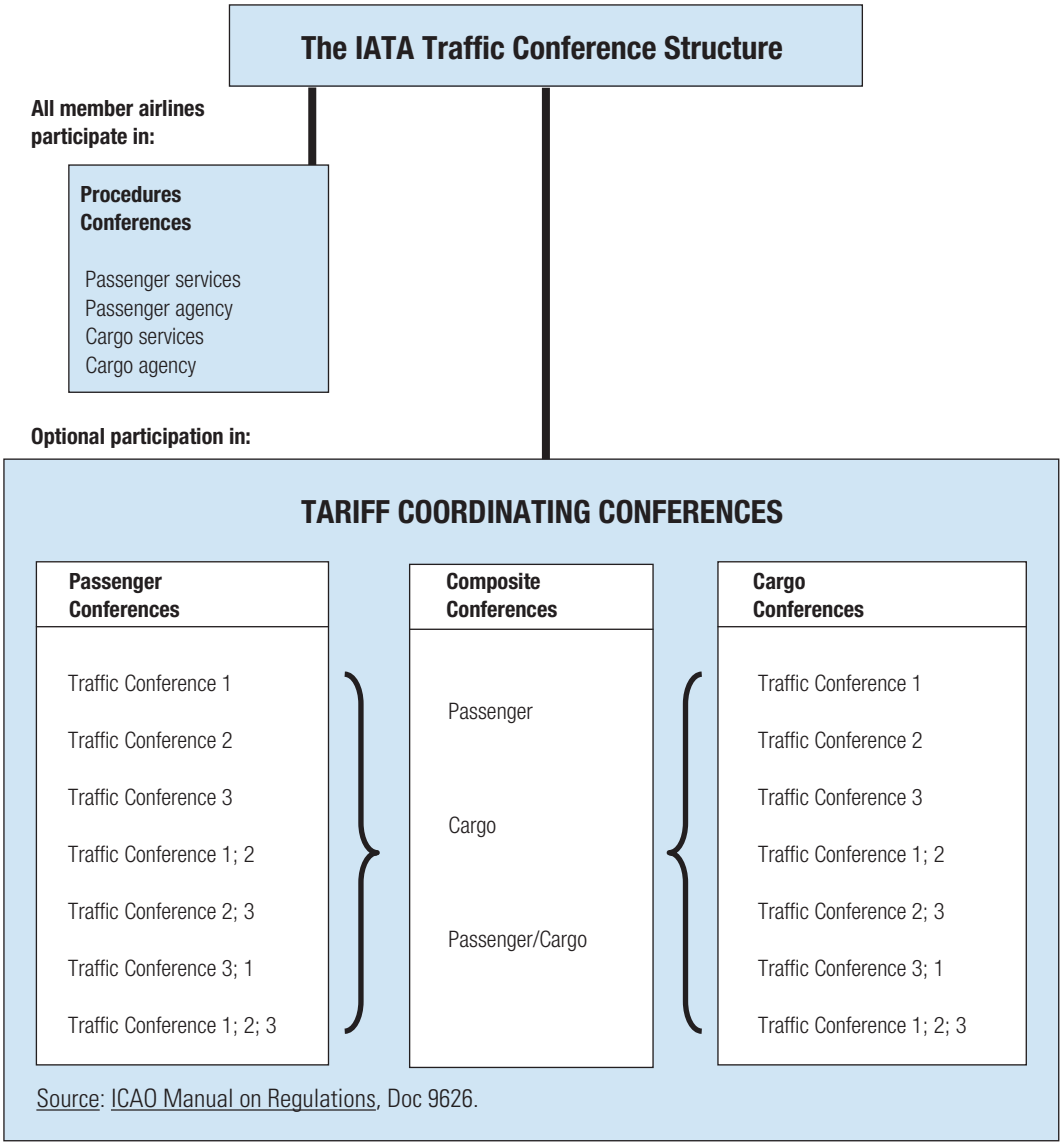
106. The trend of Tariff Articles until 1996 has been to remove the States' control over the setting of prices charged on international routes. The Standard Post-1977 Agreements signed with the US provide for mutual disapproval between the Parties. In open skies agreements (post 1992), the airlines are able to set their own fare while retaining the ability to resort to consultation in the event that there are disagreements between the Parties. Similar provisions are contained in other plurilateral, and bilateral Agreements that are based on the open skies concept. In short, airlines are permitted increased freedom to set prices.

51 See Doc 9626, page 4.1-3.

52 See Doc 9626.

53 Doc 9626.

CHART 2
IATA Conference Structure



Source: ICAO Manual on Regulations, Doc 9626.

TABLE 12
History of Tariff Articles in Bilateral Agreements

Tariff Article Type	1975 - 1986		1986 - 1995	
	Number	Percent	Number	Percent
No tariff	4	1%	6	1%
Dual approval	395	99%	310	42%
Limited disapproval	0	0%	421	57%
Total	**399**	**100%**	**737**	**100%**

Source: Aero Accords Treaties Database (in "Freer Skies", Airline Business, July 2000)

F. CAPACITY

107. Capacity is a quantitative measurement of supply. When applied to air services in a regulatory context, capacity can be measured in terms of aircraft, passenger seats and/or units of weight or space (e.g. tonne or cubic foot); as well as in terms of frequency of a particular service. In other cases (e.g. statistical comparison), air transport capacity may also be expressed in terms of combined indicators such as seat-kilometres and tonne-kilometres. National governments generally view capacity in a broader context than air carriers. Consequently, capacity regulation involves a wide spectrum of national interests extending beyond the economics of air transport.

108. Capacity plays an essential role in maintaining the profitability of routes.[54] The ICAO classification for capacity in Table A2 (Annex) is consolidated into four general types and then further classified into eleven individual elements. The same Table indicates the general movement from very detailed capacity regulations specified in the bilateral articles to a more liberal approach where carriers are permitted to set their capacity through the choice of aircraft used and subsequent variations according to operational requirements.

G. CONCLUSION

109. Bilateral agreements have remained the cornerstone of the international air transport regulatory system. The built-in flexibility of the bilateral system has allowed substantial liberalization to take place in recent years, in particular during the period under review 1993-2000. This was further accelerated through the development of plurilateral and regional agreements, which may institute a common market whose regime can come close to that of an internal market. The provisions of such agreements tend to be more liberal on average than those of bilateral agreements, and they are simpler than those of the standard Bermuda agreement which was used largely as a model for the ICAO compendium.

110. The formation of regional systems has lead some commentators to imagine "bridged liberalization scenarios". Integrated regional markets would conclude agreements with each other and create, in the long term, a wider plurilateral and possibly multilateral framework. The European TCAA proposal envisions such a scenario.

111. Overall, it appears that structure and substance of ASAs are comparable to maritime or road transport agreements. Ownership provisions are also common both in maritime and road transport and the same goes for many other features (distinction between regular and occasional services, licences/designation, authorization of certain types of traffic on specified routes, sharing of capacity, exclusion of third parties, and in certain instances, tariff filing and approval).[55] The only real difference between these agreements, apart from their coverage by the GATS, resides in their geographical extension. Given the regional character of road transport, road transport agreements are significantly smaller in number than the current 3,000 plus ASAs. Cargo sharing arrangements in maritime transport are likely to be even scarcer as a result of the liberalization that has taken place over the last twenty years in most regions.

112. The simplification of bilateral agreements, the conclusion of open skies agreements, and the trend towards integrated regional markets will continue to provide for a gradual narrowing of existing regulatory discrepancies. The intent of ICAO to draft a template bilateral ASA for its 2003 Air Transport Conference is further evidence of this trend.

54 See document S/C/W/59, paragraphs 83 - 85.

55 See the European Conference of Ministers of Transport, CEMT/CM(97)21, 20 March 1997, "Framework for Bilateral Agreements in Road Transport". A similar compendium does not exist apparently for maritime transport. However, relevant information has been forwarded to the OECD and is contained in the 1995-1996 replies to the NGMTS maritime questionnaire.

DEVELOPMENTS IN THE AIR TRANSPORT SECTOR SINCE THE CONCLUSION OF THE URUGUAY ROUND

PART FIVE

Background Note by the Secretariat

Addendum

This Note provides information about developments in the air transport sector since the conclusion of the Uruguay Round. It covers aspects specific (see document S/C/W/163/Add.2, paragraph 153) to ownership and co-operation among airlines (including alliances and codesharing).

PART FIVE

TRANSNATIONAL OWNERSHIP

BILATERAL COMMERCIAL CO-OPERATION ("ONE TO ONE")

GLOBAL ALLIANCES

OTHER FORMS OF CO-OPERATION

ANNEX

1. Introduction[1]

1. There are many different forms of airline co-operation. They may differ, for example, in terms of geographic coverage, the number of airlines involved, and of the financial intensity and technical linkages. Most co-operative agreements are in the form of "one to one" commercial agreements, essentially through codesharing. Global alliances, centered on commercial agreements but often including additional features, are another important development.

2. Transnational ownership, although legally distinct from alliance strategies, has similar features; it relies on a strategic investor, coordinates through codesharing flights, provides common management and information systems, and develops international hub networks. Not all cases of foreign ownership correspond to such a structure.

3. There are additional forms of co-operation, consisting of airline groupings, which work together for specific purposes. These often include carriers which otherwise participate in different alliances. A case in point are Computer Reservations Systems (CRSs) such as Amadeus which was owned by Lufthansa, Iberia and Air France. This is also the case for business-to-business (B2B) buying platforms and multi-airline distribution portals such as Orbitz.

1 The following observations are in addition to information contained in S/C/W/59, paragraphs 102 to 106, annex 2 on page 53 and in S/C/W/129, paragraphs 13, 15(a), 19(b), 19(c), 19C(c) and 20(c).

I. TRANSNATIONAL OWNERSHIP

A. ECONOMIC ASPECTS

4. Transnational ownership was a marginal phenomenon before the 1990s and largely reflected the legacy of former colonial or historical ties. It has since become a relatively common feature of the air transport sector, following the example of many other corporate industries. This development is principally the result of three factors: privatization of airlines, emergence of global alliances, and the creation of regional aviation markets. Low ceilings on foreign ownership, however, have prevented transnational mergers and acquisitions and thus the formation of multinational corporations. In turn, this has promoted the development of other forms of co-operation such as codesharing and alliances.

5. In early 2001, more than 57 carriers reportedly held shares in foreign airlines, and over 160 airlines have foreign equity ownership (Table 1). Table A-1 provides a more detailed overview of commercial changes between 1993 and 1994, including not only investment in existing companies, but also foreign involvement in new international joint ventures, the formation of fully owned subsidiaries, and divestitures.[2] While all segments of the air transport industry are affected, scheduled transport of passengers as well as cargo and charters are strongly represented. Investments far outpaced divestitures which often involved inter-airline sales. Annual changes in divestitures reflect the cyclical nature of the industry, and national privatization initiatives.

6. Many regions are involved. Not surprisingly, Foreign Direct Investment (FDI) from developed to developing countries is an important part of the total, complemented by "north-north" investment flows, "south-south" investments, and even investments from transition or developing economies in airlines of developed countries. Many investments are between neighbouring countries, but transcontinental flows also occur. Banks and private investors are involved in many cases.

B. REGULATORY ASPECTS

1. National Regulation of Foreign Ownership and Designation Provisions

7. Airlines have traditionally been subject to strict foreign ownership restrictions aimed at ensuring ownership and effective control remains in the hands of

2 Complementary data, based on different methodologies and samples, can be found in various issues of Airline Business, I June 1998, pages 48-49 ("Airlines with Ownership by other Carriers"); July 1998, page 63-66 ("Lords and Masters"); and September 1999, page 101 ("Major Airlines Acquisition deals 1994-1999").

TABLE 1
Transnational Ownership by Region

	Asia	Africa	Middle East	Eastern Europe	Western Europe	Latin America	US Canada	Southwest Pacific	Total
Number of operating carriers	135	91	44	143	244	117	149	61	984
Airlines owned by foreign carriers/ investors*	15	25	6	17	55	31	8	9	166
Airlines owning stakes in foreign carriers	9	6	4	2	20	9	5	2	57

Note: *Excludes small individual private shareholders.
Source: ICAO Air Transport Bureau (data collected as of 31 May 2001).

nationals. The relevant definitions in national legislation are normally distinct from the definitions used in designation provisions in bilateral agreements.[3] Similarly, for approving or refusing of foreign investment in a national airline, domestic legislation is used regardless of the designation provisions contained in the bilateral agreements. For example, the US does not apply the 25% national foreign ownership ceiling as a benchmark for revocation and withholding in bilateral aviation agreements.[4]

8. There may be a partial overlap between these two sets of regulations: national legislation is used to interpret the provisions of designation for the national airline. However, this standard is not absolute, for two reasons. First, while there is only one legal provision for ownership and control, the same country's designation provisions may vary depending on the bilateral agreement involved (unspecified substantial ownership and effective control in one case, principal place of business in another, and community of interest in a third). Second, there are historical cases where foreign-controlled airlines have been designated in bilateral agreements as if they were flag carriers (e.g. Canadian-owned Britannia Airways and Liechtenstein controlled Monarch Airlines). IATA and ICAO both appear to acknowledge this regulatory distinction through the separation of national regulations and designation provisions in their questionnaires.[5]

9. This is an important issue since ownership and control are specified in the GATS Annex on Air Transport (paragraph 6, definition of hard rights) only for designation: "traffic rights mean … criteria for designation of airlines, including such criteria as number, ownership and control".

2. Recent Regulatory Developments

10. Traditionally, foreign ownership restrictions and effective control requirements are intended to ensure that the flag carrier is: a tool for promotion of national trade and tourism; provides public service (domestic transportation); creates employment; promotes high technology development; contributes to foreign currency earnings; provides military/emergency transportation (domestic and international); and symbolizes national sovereignty and prestige.

11. The importance of these considerations has faded over the years. ICAO lists the following reasons: the changing global business and trading environment (increasing multinational ownership in other services industries, and increased competition); GATS obligations on foreign ownership; inability or unwillingness of governments to fund the capital needs of national carriers; better access to foreign management expertise through co-operative arrangements (e.g. codesharing, joint operations, etc.); a broader range of potential investors facilitating privatization of government-owned airlines; and improved opportunities for small airlines to survive in a competitive environment.

12. A number of countries have thus adopted new policies and amended rules regarding foreign investment in national airlines during the period under review (1993-1999). In many cases, existing regulations were relaxed. For example, in 1994, China increased its foreign ownership limit to 35%, Mexico to 25%, and Peru also eased its ownership rules. In 1995, Australia raised the foreign equity ceiling from 35 % to 49%; in 1996, New Zealand from 35% to 49%. In 1997, Brazil raised its ceiling from 20% to 49.5% and Peru up to 70%. In 1998, Bangladesh authorized unlimited foreign ownership for its cargo airlines and joint ventures to operate domestic carriers, while Korea raised the ceiling from 20 to 49%, and Thailand from 30 to 49%. In 1999, the Australian government amended the rules on foreign investment in its national carriers.[6]

13. In a few instances, however, ownership regulations have actually been tightened: in 1997 India adopted a new policy limiting foreign ownership to 40% by investors other than airlines and airports. To comply with this regulation, Kuwait Airways and Gulf Air reduced their stakes to 40% in Jet Airways. The same year, the Russian Federation introduced rules

3 See document S/C/W/163/Add.3, paragraphs 62 to 88 inclusive.

4 For a detailed description of the US approach to third-party ownership see document S/C/W/163. These two sets of regulations are distinct and applied in different contexts, they prevent international mergers or acquisitions from occurring. For example, the envisaged BA-KLM merger was compatible with British and Dutch legislation, which incorporated the EU "Community ownership" rule in the third package, while the Netherlands-US 1992 open skies agreement still contained the traditional substantial ownership and effective control rule. See also S/C/W/163/Add.3, paragraph 67.

5 Peter van Fenema, "Ownership and Control: Report of the Think Tank World Aviation Regulatory Monitor 2000". IATA, Government and Industry Affairs Department, September 2000; ICAO attachment to State letter SC 5/2-01/50 June 2001. Both are available from the WTO Secretariat.

6 Before the amendment, limits on foreign ownership in Australia's international carriers, other than Qantas Airways, were 25% for a single owner and 35% in total, and in domestic carriers 25% for a single owner and 40% in total. Under the revised rules, all limits on ownership of national carriers, other than Qantas, were scrapped, except for an overall 49% international carriers. Qantas is covered by separate legislation under which no single foreigner can own more than 25%, total foreign carrier equity holdings are capped at 35% and total foreign ownership at 49%. The Australian Government could still block an acquisition falling within these limits if it was found to be "contrary to the national interest". Separately, the Government approved Virgin Atlantic's setting up a domestic carrier in Australia.

barring foreign majority ownership in joint venture airlines. Table A2 (Annex), gives an overview of foreign ownership limitations in a selected number of countries from all continents. The Table focuses on the level of the operative thresholds; it is not intended to be an accurate description of the underlying legislation, which may be very complex. Relevant parameters include distinctions between members of a regional agreement and non-members; between international and domestic traffic; between individual and aggregate ownership; between airlines, airports, and financial investors. In some cases, there are also nationality requirement for members of the board and/or managers. There is no complete inventory of the legislation. However, in preparation for the 2003 Air Transport Conference ICAO has prepared a detailed questionnaire which is to be answered by the end of August 2001.

14. IATA has recently made an enquiry into national regulations; Table A3 summarizes the answers.[7] The sample used by IATA is largely similar to the one used for Table A2 and was based on the following questions:

"Ownership
What limits/restrictions are imposed on foreign ownership of (shares of) your national airline(s)?
- If foreign ownership is permitted, specify (1) the maximum foreign ownership percent permitted, (2) the maximum foreign airline ownership permitted. Conditions such as "golden shares" should be specified.
- If the limits/restrictions are different in case the national airline only operates domestic services (such as in Australia), please specify.

Control
What limits/restrictions are imposed on foreign control of your national airline(s) (incl. possible different criteria for domestic operators, see Question 1)?

Interpretation and application of above ownership and control criteria
How did/do your national authorities interpret/apply the above ownership and control criteria in practice? Are there any recent developments with respect to these criteria, including proposals to modify them, which (may) affect the application thereof?

Availability of "national" fleet for national emergencies
Do your national laws or policies provide for a program comparable to the US Civil Reserve Air Fleet (CRAF) Program, by virtue of which US air carriers have pledged (part of) their fleet to the US Department of Defense for use in time of emergency?

Ownership and control of other important national industries
Do your national laws or policies specify any important national industries (e.g. telecommunications, rail-roads, etc.), that must remain nationally owned and controlled?"

15. Finally, it is worth noting that the relaxation of ownership legislation remains a major policy goal for ICAO: "in short air carrier ownership and control vested in a single State or its nationals is an anachronism in the global economy and liberalization of ownership and control provisions a necessary precursor of widespread liberalization. At the same time there is a need to link liberalization with safeguards to alleviate safety and other concerns regarding the evolution of flags of convenience and the sustainability of smaller air carriers".[8]

7 Table A2 includes the following countries that are not covered by the IATA survey: Argentina, Czech Republic, Indonesia, Mexico, Poland, Russia and Turkey. In contrast, the IATA survey includes in addition to Table A2: Israel, Colombia and Mauritius. More detailed information on OECD countries is contained in the OECD document DSTI/DOT(99)1, 23 June 1999, "Regulatory Reform in International Air Cargo Transportation", pages 50-52.

8 Dr. Assad Kotaite, President of the ICAO Council, at the last IATA Annual General meeting, held in Madrid on 28 May 2001.

II. BILATERAL COMMERCIAL COOPERATION ("One to One")

A. ECONOMIC ASPECTS: A GROWING PHENOMENON

16. There is no specific terminology, statistical information, or regulatory data to assess the expanding airline commercial cooperation except for codesharing. ICAO uses the term "alliance" to cover any kind of commercial cooperation between two or more airlines while other commentators reserve this term to the five global or mega alliances.[9] Similarly, there is no agreed definition for the various types of cooperation. ICAO distinguishes between the following types of cooperation: codesharing, blocked space, capacity sharing, joint service; pooling; franchising; leasing (dry, wet or damp); ground handling; flight scheduling; frequent-flyer programs; in-flight services and onboard equipment; maintenance, repair and overhaul services; joint fuel purchasing and insurance; equity exchange; joint ventures; marketing; airport facilities; joint use or interchange of personnel; and management contracts. A more simplified categorization has been used by ICAO in its first statistical collection (2001) of these agreements: codesharing, franchising, cargo, intermodal, and other.

9 Document RPS-WP/9, 22 February 2000.

TABLE 2
Types of Co-operative Arrangements among Airlines

Total number of commercial agreements containing provisions on	
Codeshare	911
Frequent-flyer programs	114
Cargo	106
Marketing	78
Joint venture on a destination	55
Pool agreement	33
Joint ground handling	32
Franchise/regional connection	31
Shared passenger lounges/one stop check in	30
Schedule coordination	29
Joint flight	28
Commercial agreement	24
Strategic alliance	19
Purchasing cooperation	17
Alliance scheme	11
Maintenance	11
Engineering, spare parts, fleet management	11
Charter	10
Computer Reservation Systems	10
Management contract	9
Operational agreement	9
Catering	8
Joint lease	7
Through fares	4
Revenue sharing	4
Joint terminal	3
Mail, courier, cargo	3
Training	2
Crew exchange	2
Pro-rate agreement	1
TOTAL	**1222**

Source: Airline Business, July 2000. Categories recompiled by the WTO Secretariat.

17. Observers have identified 579 agreements among 220 carriers and distinguished between 29 categories of cooperation, sometimes overlapping (Table 2). These are similar to the ICAO categories mentioned above.

18. These data should be interpreted with caution. An agreement between two airlines of the same pool is counted on either side and thus appears twice. Second, some of these agreements are with smaller airlines that are not part of the 220 airline sample. Third, an agreement may cover several areas of cooperation in which case it is being counted several times. Fourth, the scope and coverage of an individual codesharing agreement may vary enormously. Systematic and universal data comparing the number of city-pairs served and the existing codeshare agreements are presently not available. Fifth, as noted above, the categories partly overlap.

19. The expansion of commercial co-operation over the past three decades is reflected in Chart 1. The data contained in this Chart is comprised of agreements between airlines from all regions. It also captures a great diversity of companies: medium and large carriers in global alliances; regional and international carriers (e.g. Armenian Airlines and Swissair); regional airlines with other regional airlines (e.g. Air Baltic and Estonian Air); and domestic and international airlines (e.g. US commuters/feeder services into the majors). Alliances can be of any size, temporary or permanent, with different strategic objectives and involve different degrees of cooperation. The information contained in the survey by Airline Business is complemented by a list of commercial agreements compiled by ICAO, soon to be published (Tables A4(a) and A4(b), Annex).[10]

10 The World of Civil Aviation 2000-2003.

20. Modern alliances differ from traditional cooperations such as pooling which usually involved agreement on tariffs, costs, capacity and revenue sharing, most often on duopoly routes. In contrast, modern alliances seek to develop possible synergies; exploiting complementarity of routes, structures and services. ICAO attributes the recent development of alliances to factors such as: globalization of business practices and attitudes; existing market access constraints resulting from the bilateral system; liberalization trends at domestic and regional levels; and commercial incentive related to economies of scope and scale.

B. REGULATORY ASPECTS OF CODESHARING REGIMES[11]

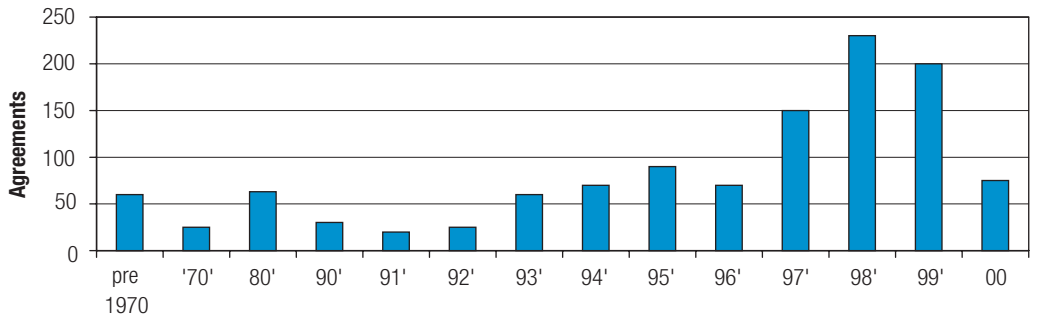
1. Advantages and Disadvantages

21. Codesharing is defined by ICAO as "the practice whereby one carrier permits a second carrier to use its airline designator code on a flight, or where two carriers share the same airline designator code on a flight".[12] In its application, passengers often fly on an airline other than the one identified on the ticket. Codesharing thus involves one airline advertising and selling the services of another airline as its own." It is the most frequent form of airline cooperation (Table 2).

11 The only form of regulatory cooperation for which data exist, is codesharing. Non-codesharing forms of cooperation may be provided for in bilateral agreements and may be subject to scrutiny by competition authorities.

12 Circular 269/AT110. The Manual on the Regulation of International Air Transport (Doc 9626) defines codesharing as "the use of the flight designator code of one air carrier on a service performed by a second air carrier, which service is usually also identified (and may be required to be identified) as a service [operated …] by the second air carrier". (p. 4.1-7)

CHART 1
Alliance Survey 2000 (by Date of Signature)



22. Although the term "codesharing" does not appear in the definition of hard rights in the GATS Annex on Air Transport, there appears to be little doubt as to its exclusion from the GATS (see reference to "flight" in the above ICAO definition). However, underlying traffic rights authority is not always required for all the carriers concerned or on all of the segments (see Section 2 below).

23. It has been suggested that, from the carriers' perspective, the main reasons for codesharing are:

- to achieve better display position in computer reservation systems, in cases where it is treated as an on-line service with a higher priority in listing than inter-line service;
- in the context of an increasingly competitive environment, to form some kind of cooperative links with other carriers to maintain, protect and improve market positions;
- to achieve better presence on routes they do not fly, thus being an inexpensive marketing tool;
- to enable joint operation carriers to operate a viable service where traffic volumes do not justify individual operations, and to obtain feeder traffic;
- to foster competitiveness by drawing traffic within the orbit of codesharing partners; and
- to obtain increased market access to points hitherto restricted by capacity provisions in bilateral air services agreements.

24. From the passengers' perspective, potential advantages are:

- the convenience of co-ordinated schedules, allowing for improved connections;
- possible shorter elapsed journey time;
- shared terminals between partner carriers facilitate transfer;
- the possibility of lower fares or greater choice of special fares;
- single carrier supervision of the through journey; and
- common frequent-flyer programmes.

25. Recent studies on codesharing have taken a more positive view than initial surveys. They consider that the hub effect of alliances is the main cause for intensification of competition, for the substantial price benefits that have occurred on these lines over the last five to ten years and for the increase of destinations served.[13] Unlike an earlier ICAO study, these studies consider that codeshares and alliances in the wider sense have created an additional demand for air transport.

26. Regarding the specific situation of developing countries, ICAO notes that codesharing may have advantages insofar as it offers the possibility of serving thin routes at minimal cost and using previously unused rights. It may thus facilitate the participation of developing countries' airlines in international air transport. However, ICAO also says that the practice has yet to take hold in a substantive way. The potential benefits of this form of cooperation could be viewed as a means of enabling developing countries' airlines to participate more economically and effectively in international air transport.

2. Main Aspects of the Regulation of Codesharing[14]

(a) Traffic Rights and Market Access Issues

27. This section covers issues of: underlying route authority; special codesharing rights; and Third Country CodeSharing (TCCS).

Underlying Route Authority

28. Codesharing in international markets was initially considered as an extension of domestic codesharing, a marketing instrument, and an enhancement of interlining. Only the actual operator of the aircraft needed regulatory approval, and neither carrier required additional approval.

29. In the mid 1980s, concerns arose that codesharing in the large US domestic market would enable foreign carriers to market services as their own without any equivalent benefits abroad. This led the authorities to introduce an authorization requirement for foreign carriers. Points served within the United States had to be specified and included in the bilateral air service agreements. Other countries followed this approach, in some instances requiring both codesharing partners

13 US DOT 1999 "International Aviation Developments: Global Deregulation Takes Off" and October 2000 "Transatlantic Deregulation: The Alliance Network Effect."

14 The following presentation draws largely from the ICAO study "Implications of airlines codesharing" (Circular 269/AT110).

to have the underlying authority, even on sectors where a carrier was not carrying any local traffic. Under an alternative approach, the operating carriers must have the necessary traffic rights, especially on "gateway " routes.

Special Codesharing Rights (TCCS)

30. Since 1988, the US Department of Transportation (DOT) requires specific authorization for all codesharing operations. This is also the case for wet leasing, and blocked space arrangements. A "public interest" test involves an assessment of the impact of the proposed codeshared service on competition, the overall balance of bilateral benefits, and the possibility of using the authorization as a negotiating lever. The DOT decision did not turn codesharing into a quasi-traffic right; in the absence of a bilateral provision on codesharing, the Government is free to regulate and approve such agreements. This approach prompted some countries to secure codesharing rights by incorporating a specific provision in their bilateral air services agreements with the United States and others.

31. The next step was to specify traffic rights for the sole purpose of codesharing. Since 1989, codeshare provisions have been included in several new bilateral air services agreements between the US and some European and Asia-Pacific countries. These were essentially based on principles of comity and reciprocity. Between 1991 and 1993, specific codeshare rights for the carriers of both sides were included in agreements between the US and major traffic-generating European countries (Germany, Netherlands and the United Kingdom). However, this was the outcome of specific negotiations and did not represent a systematic pattern of treatment. No major government has openly declared under which circumstances codesharing may or may not be used. In the case of the US, codesharing has become an element to be examined on a case-by-case basis within the framework of bilateral relationships.

32. A consequence of the *ad hoc* approaches are significant differences in the treatment of codesharing rights. In the case of the US/Netherlands open skies agreement, the KLM/Northwest codeshare and broader commercial agreement were granted antitrust immunity for the two airlines, enabling them to operate as one and without restrictions. In contrast, the agreements between the US and Germany[15] and Austria, respectively, apply quotas on codesharing flights both to and beyond the concerned countries.

15 This was the situation in early 1996 before the signing of an open skies agreement was considered by Germany and the US.

33. Some countries require that the codeshared service should be in a developing market segment and the routings follow a reasonably straight line.

Third Country Codesharing

34. A complicating factor in international codesharing is the involvement of a third country. Outside regional blocks within which intra-regional traffic is liberalized (depending on the air service agreements), it might be necessary for the codesharing partners to obtain approval from three separate governments (or even more in the case of multi-stop flights). Concerned that codesharing could undermine bilateral limitations on capacity control,[16] some countries have begun treating it as a specific traffic right, seeking bilateral concessions in exchange.

35. Some experts believe that the "quasi-traffic right" approach risks undermining the functioning of the bilateral air transport system. The application of frequency limitations to codeshare services and potential connecting services could compromise interline practices.

36. ICAO notes that codesharing could be an area "particularly suited to a multilateral agreement," after it has been demonstrated that all parties would benefit. "The challenge would be to ensure that codesharing, which presently exists in a narrow bilateral context for the purpose of increasing market access would not in fact be an impediment to any development of a liberalized multilateral framework." Furthermore, ICAO argues that any such multilateral agreement should not constrain any codesharing practices, except for safety matters, consumer protection and information, and possibly, competition aspects.

(b) Competition Issues

37. Codesharing raises at least two competition issues: one the one hand, it may enhance competition by engendering additional or better services. On the other hand, it may result in market concentration. The outcome will depend on the characteristics of the markets served.

38. The US DOT approves codesharing arrangements only subject to a "public interest" test, whereby, the public benefits must outweigh the economic costs associated with a loss of competition. International comity and foreign policy considerations, such as

16 This may explain the opposition by Germany to codeshared services by NorthWest Airlines as part of its agreement with KLM.

reciprocity and the balance of benefits in a bilateral aviation relationship, may also be considered. With the current development of codesharing agreements and alliances, there are increased expectations for the US authorities to grant antitrust immunity on a wider basis. When immunity has not been granted, US antitrust laws prohibit further integration of the airlines' operations. Delta Airlines and Swissair, for example, were allowed to codeshare on the basis that they maintain separate marketing, sales and pricing for the routes covered by the agreement. Both airlines were explicitly obliged to compete with each other over the codeshared routes.

39. The European Commission does not examine codeshare cases *per se* but rather their impact on competition, a matter within EU jurisdiction under the Treaty of Rome.[17] The objective of the relevant competition provisions of the Treaty (Article 85 and 86) is to avoid the abuse of a dominant position. The same is valid for situations in which codesharing between EU carriers would devolve into pooling arrangements that existed prior to liberalization. The EU authorities also closely monitor the display of codeshared services in computer reservation systems.

17 Nevertheless, in 1995, the European Commission initiated a study on four aspects of the codesharing practice, namely, competition issues, CRS display, consumer aspects and the effect on regional airports.

III. GLOBAL ALLIANCES

A. ECONOMIC ASPECTS

40. The advent of "global alliances" is one of the major commercial developments of the last five to ten years. The main features of the five current global alliances are summarized by Table A5; information on major "unaligned" airlines is provided in Table A6 (Annex). Traffic figures of alliances carriers, major unaligned carriers, and remaining carriers, are compared in Table 3.

41. As shown in Table 3, approximately 50% of traffic is carried by the core members of the five alliances in terms of passengers and approximately 57% in terms of RPKs. This share increases to 69 and over 73%, respectively if associated carriers are added. This is not meant to imply, however, that the majority of the world's traffic is conducted within a liberal framework. First, alliance members sometimes operate under restrictive bilateral agreements where designation, capacity, tariffs, frequencies and routes are limited.[18] Second, since limitations on routes and ownership continue, alliance members connect with each others' hubs creating global networks. This is sub-optimal from an economic perspective.

B. REGULATORY ASPECTS

42. The regulatory issues involved in alliances are to a large extent similar to those raised by codesharing. Airline alliances are often accused of generating anti-competitive effects. Nevertheless, a recent study by the University of Illinois found that alliance partners charge on-line fares that are approximately 25% below those charged by non-allied carriers.[19] The main source of this fare reduction is the internalization of negative externalities arising from the uncoordinated choice of interline "subfares" in absence of an alliance. The same study also looks for evidence of anti-competitive alliance effects in the gateway markets. It is suggested that an alliance between two previously competitive carriers would raise fares by about 5%, a margin that is statistically insignificant.

43. From a regulatory point of view, there seems to be a paradox: Competition authorities dealing with alliances have usually focused on two alliance members at a time (e.g. BA and AA or SAS and Lufthansa) and not the alliance in its entirety (e.g. Star Alliance includes more than five airlines). Similarly, global alliances are not mentioned in bilateral agreements. This may be attributable *inter alia*, to the instability of membership, e.g. Austrian moving from Qualiflyer to Star Alliance, Alitalia from Wings to Skyteam.

18 Members often profit from bilateral restrictions and their impact on competition. For instance, the restrictive conditions of the UK-US Bermuda II agreement are a key element of the profitability of the transatlantic routes for BA and to a lesser extent for American and United. At the same time, these restrictive conditions have prevented BA and American from obtaining anti-trust immunity from the US and subsequently forming a closer alliance.

19 Jan K. Brueckner and W. Tom Whalen, "The Price Effects of International Airline Alliances", The Journal of Law & Economics, October, 2000.

TABLE 3
Traffic by Type of Carriers

Types of Carriers	Passengers Transported (%)	Revenue Passenger Kilometres (RPK) (%)
Alliance (core and associates) [Alliance (core)]	59.1% [49.1%]	73% [57.1%]
Major unaligned	14.6%	13.1%
Other carriers	26.3%	13.9%
Total	**100%**	**100%**

Source: Airline Business, July 2000.

IV. OTHER FORMS OF COOPERATION

44. *Ad hoc* groupings is a technical term, not a regulatory category, and refers to more than two airlines teaming up for a specific purpose. Such purpose may include cooperation in distribution through CRS, participation in online travel agents, and on-line sales portals as well as cooperation in maintenance, repair and overhaul.[20] Another example is the bid by eight British airlines for the tendering of 46% of the UK air traffic control company, the National Air Traffic Services (NATS).[21] Cooperation also extends to non-air transport businesses.

45. The airline sector, like many other industries, is developing online sales and purchasing platforms. Some platforms extend beyond airlines, but are limited to the intra-industry sales.[22] In addition, at least two specific business to business (B2B) platforms are dedicated to the whole range of procurement. This includes catering, groundhandling, fuelling and refuelling. Such platforms are exclusive to airlines; one is linked to an alliance, but does not comprise of all members, the other is independent. The main characteristics of those two platforms are described by Table 4.

46. These B2B platforms are subject to the scrutiny of competition authorities without any air transport specificity. The first clearance given by the European Community has been granted to an aeronautical consortium, myaircraft.com. Many other B2B cases are pending before the European Commission, and in the US before the Department of Justice (DOJ).

20 See document S/C/W/163, Table 3 and 7 and paragraphs 14, 24, and 82.

21 See document S/C/W/163/Add.2, paragraphs 87 and 88.

22 See document S/C/W/163, paragraph 24, page 7.

TABLE 4
Main Business to Business (B2B) Buying Platforms

Grouping	Aeroexchange.com	Cordiem.com (merger of AirNewco and My Aircraft)
Founding members	Air Canada, Air New Zealand, All Nippon Airways, America West, Cathay Pacific, Fedex, Japan Airlines, Lufthansa, NorthWest Airlines, SAS, Singapore Airlines, Air New Zealand, Austrian, and KLM.	British Airways, Air France, American Airlines, Continental Airlines, Delta Airlines, United Airlines,
Additional members	18 unspecified affiliate airlines	Iberia, Swissair, UPS
Announcement	July 2000	April 2000
Beginning of operations	October 2000	February 2001
Purchasing power	15 billion $US/year	32 billion $US/year

Source: ICAO, The World of Civil Aviation, 2000-2003.

ANNEX

TABLE A1

Transnational Investment, Joint Ventures, Wholly Owned Subsidiaries and Divestitures in Commercial Air Transport 1993-1999

Investments		New joint ventures or newly established fully owned subsidiaries abroad	Divestitures	
Airlines partially or totally owned by a foreign carrier	**Foreign airlines owning stakes**		**Airlines divested**	**Airlines divesting/ share divested**
1993				
US Air (US)	British Airways (UK) 25%	Euroglobal Aviation (UK) and Tajikistan Government in Tajikistan Airlines		
Aeroperu (Peru)	Aeromexico (Mexico) 49%	Myanmar Airways and Highsonic Enterprise Pte. Ltd. (Singapore) in Myanmar Airways International		
Jet Airways (India)	Gulf Air (Arab multinational) Kuwait Airways (Kuwait)	EBA (Italy) established by Eurobelgian Airlines (Belgium)		
Royal Air Cambodge (Cambodia)	Singapore Airlines (Singapore 40%)			
Hajvairi airlines (Pakistan)	Aeroflot (Russian Federation)			
Tatra Air (Slovakia)	Alpha Lines (Switzerland)			
1994				
Business Air (UK)	Lufthansa (Germany) 38%	Governments and airlines of South Africa, Uganda and Tanzania in Alliance - African Joint Air Services	Air New Zealand (New Zealand)	Japan Airlines (Japan) 5%
Lauda Air (Austria)	Lufthansa (Germany) adds 13.3% to previous 26.4%	Five Caribbean governments and British Airways (UK) in Carib Express	Lanchile	SAS 42%
Star line (Netherlands)	El Al (Israel) 48%	Companhia de Servicios De Avaiaçao de Macau (China) Government of Macau, TAP Air Portugal (Portugal) in Air Macau	CSA (Czech Republic)	Air France (France) 19.1%
Air Afrique (Multinational: African)	DHL (USA)	Myanmar Airways (Myanmar) and Mandalay Holdings (Singapore) in Air Mandalay		
SAS (Denmark, Norway, Sweden)	British Midland (UK) adds 5.1% to previous 34.9%	Maldives government and Malaysia helicopter services (Malaysia) in Air Maldives		
Air Mauritius (Mauritius)	British Airways (UK) adds 0.5% to previous 12.7%	Latvian government and SAS (Denmark, Norway, Sweden) in Air Baltic		
Air Mauritius (Mauritius)	Air India (India) adds 3.5% to previous 8.5%	Regional Airlines (France) and Gestair (Spain) in Regional Lineas Aereas		
Northwest Airlines (US)	KLM (Netherlands) adds 5% to previous 20%			
Aerolineas Argentinas (Argentina)	Iberia (Spain) adds 40% to previous 45%			
1995				

Investments		New joint ventures or newly established fully owned subsidiaries abroad	Divestitures	
Airlines partially or totally owned by a foreign carrier	**Foreign airlines owning stakes**		**Airlines divested**	**Airlines divesting/ share divested**
Laos Aviation (Laos)	Yunnan Airlines (China) 60%	Lufthansa Cargo (Germany) 40% and Hinduja Group (India) 60% in Lufthansa Cargo India	Sabena (Belgium)	Air France (France) 25%
Ansett Australia Airlines	Air New Zealand (New Zealand) 25%	Uganda Airlines and (Uganda) and Al-Redwan Holding Co. (Saudi Arabia)		
LIAT (multinational Caribbean)	BWIA (Trinidad and Tobago) 29%	South African Express (South Africa) and Zambian private interest in ZAMEX (Zambia)		
Ecuatoriana (Ecuador)	VASP (Brazil) 50.1%	Air Malawi (Malawi) and Malaysia Airlines		
LAB (Bolivia)	VASP (Brazil) 49%			
Pluna (Uruguay)	VARIG (Brazil) 12.75%			
Sabena (Belgium)	Swissair (Switzerland) 49.5%			
Austrian Airlines (Austria)	Swissair (Switzerland) adds 15% to previous 10%			
Jet Airways (UK)	KLM (Netherlands) 49%			
Air UK (UK)	KLM (Netherlands) adds 30.1% to previous 14.9%			
Europe Aero Service (France)	Andalusair (Spain)			
Air Pacific (Fiji)	Qantas (Australia) adds 7.5 % to previous 10%			
European Airways (UK)	Uzbekistan Airways (Uzbekistan) 45%			
Albania Airways	MA Kharafi group (Kuwait)			
1996				
Air Baltic (Latvia)	SAS (Denmark, Norway, Sweden) adds 13% to previous 16%		Continental Airlines (US)	Air Canada (Canada) 9.6%
TAT (France)	British Airways adds 50.1% to previous 49.9 %		Aerolineas Argentinas (Argentina)	Iberia (Spain) 25%
Air Liberté (France)	British Airways 67%			
Tampa (Colombia)	Martinair (Netherlands)			
Ukraine International Airlines (Ukraine)	Swissair and Austrian Airlines 13.87% through common holdings			
Eurobelgian Airlines (Belgium)	Virgin Atlantic (90%)			
Ansett Australia (Australia)	Air New Zealand 25 %			
Air Philippines (Philippines)	Japan Air System (10%)			
Community Express Airline (UK)	Mesa Air Group (US) 44%			

Investments		New joint ventures or newly established fully owned subsidiaries abroad	Divestitures	
Airlines partially or totally owned by a foreign carrier	**Foreign airlines owning stakes**		**Airlines divested**	**Airlines divesting/ share divested**
Lina Congo (Congo)	New England International (US and Switzerland) 67%			
LAPSA (Paraguay)	TAM (Brazil)			
1997				
Deutsche BA (Germany)	British Airways adds 16% to previous 49%		US Air (US)	British Airways 25%
Braathens SAFE (Norway)	KLM (Netherlands) 30%		Lauda Air (Austria)	Lufthansa (Germany) 19.7%
Tampa (Colombia)	Martinair (Netherlands) adds 39% to previous 40%		Ladeco (Chile)	Iberia (Spain) 38%
Cargolux (Luxembourg)	Swissair Cargo (Switzerland) 25%		Aereolineas Argentinas (Argentina)	Iberia 10%
Europe Continental Airways (France)	Crossair (Switzerland) 35%		Malev (Hungary)	Alitalia (Italy) 35%
Air Littoral (France)	Lufthansa 13.2%		Northwest (USA)	KLM 19%
Aeroperu (Peru)	Continental Airlines (US) 30%		Jet Airways (India)	Gulf Air (Arab multinational) and Kuwait Airways 40%
La Costena (Nicaragua)	TACA (El Salvador) 50%		Air New Zealand (New Zealand)	Qantas (Australia) 19.4%
Rwanda Airlines (Rwanda)	Alliance Air (South Africa, Tanzania, Uganda) 49%			
1998				
Air Lanka (Sri Lanka)	Emirates (UAE) 40%			
Air Pacific (Fiji)	Qantas adds 28.5% to previous 17.5%			
Astro Air International (Philippines)	U Land Airlines (Chinese Taipei) 40%			
Air Philippines (Philippines)	U Land Airlines 30%			
China Airlines (Chinese Taipei)	Singapore Airlines 10%			
Air One (Italy)	Swissair 40%			
Volare (Italy)	Swissair 34%			
Air Europe (Italy)	Swissair 45%			
Air Littoral (France)	Swissair 44%			
LTU (Charters -Germany)	Swissair 49%			
Air Botnia (Finland)	SAS (Denmark, Norway, Sweden) 100%			
Iberia (Spain)	British Airways (UK) and American Airlines (US) 10% in a common holding			

Investments		New joint ventures or newly established fully owned subsidiaries abroad	Divestitures	
Airlines partially or totally owned by a foreign carrier	**Foreign airlines owning stakes**		**Airlines divested**	**Airlines divesting/ share divested**
TEA (charters - Switzerland)	EasyJet (UK) 44%			
Malmö Aviation (Sweden)	Braathens ASA (Norway) 25%			
ACES (Colombia)	American Airlines (US) 40%			
Aerolineas Argentinas (Argentina)	American Airlines (US) 8.5%			
Aeroperu (Peru)	Delta Airlines (US) 35%			
COPA (Panama)	Continental Airlines (US) 49%			
Islena Airlines (Honduras)	TACA (El Salvador) 20%			
Air Aruba (Aruba)	ASERCA (Venezuela)			
1999				
Virgin Atlantic (UK)	Singapore Airlines (Singapore) 49%			
Air Mekong (Cargo - Vietnam)	Singapore Airlines (Singapore) 40%			
South African Airways (South Africa)	Swissair (Switzerland) 20%			
TAP Air Portugal (Portugal)	Swissair (Switzerland) 34%			
Portugalia (Portugal)	Swissair (Switzerland) 42%			
AOM (France)	Swissair (Switzerland)			
Sabena (Belgium)	Swissair (Switzerland) adds 13% to previous 49.5%			
LOT Polish Airlines	Swissair (Switzerland) 37.6%			
Air Dolomiti (Italy)	Lufthansa (Germany) 26%			
Air Baltic (Latvia)	SAS (Denmark, Norway, Sweden) adds 5% to previous 29%			

Source: ICAO, "*The World of Civil Aviation*" [series], 1993.

TABLE A2
Foreign Ownership Limitations (1 October 2000)

Country	Limit	Notes
Argentina	49%	In the case of Aerolineas Argentinas, 85% shareholding by Interinvest (Spain, US etc.) was allowed
Australia	49%	There are no foreign ownership restrictions for purely domestic operators. For Australian international operators, foreign shareholder participation is limited to 49% "unless this is contrary to the national interest". Qantas is regulated under the provisions of the Qantas Sale Act of 1992. Aggregate foreign ownership is limited to 49% with up to 35% allowed to be held by foreign airlines, with a maximum of 25% for any single foreign airline.
Brazil	49.50%	Since 1997 (previously 20%).
Canada	25% (voting)	The Governor in Council (federal Cabinet) has the power to increase the limit on foreign ownership of voting shares applicable to all Canadian carriers. Other types of foreign ownership, including non voting shares of a Canadian carrier are permitted subject to compliance with the Canada Investment Act and provided that effective control of the carrier is by Canadians.
Chile		No restriction but airline must have its principal place of business in Chile.
China	35% (25% voting)	Since May 1994, intended to change to 49%.
Chinese Taipei	33%	Domestic airlines, 50% apply to air-cargo since 1997
Czech Republic	49%	At least 51% shares and voting are owned and controlled by nationals.
EU Member States (15)	less than 50%	Bound by EU Regulation 2407/92 (Community carrier) for investors from non-EU member States, but no restriction on investments from EU Member States.
Japan	33.33%	Japanese carriers must be more than two thirds owned, controlled and managed by Japanese nationals.
India	40%	40% in private domestic airlines, but investments from foreign airlines or airport investors are not allowed since April 1997.
Indonesia		Initially 49%, abolished by a Presidential decree in 2000.
Kenya	49%	
Korea	less than 50%	Raised from 20% to 49.99% on 12 February 1998 provided that effective control remains with Korean nationals.
Malaysia	45%	Applied to Malaysia Airlines, changed from 30% to 45% in July 2000.
Mexico	25% (voting)	Since 1994 allows over 25% limit if investment through firms where foreign investment is less than 50% of voting stock.

Country	Limit	Notes
New Zealand	49%	Since 1996, 25% for single foreign airline, and 35% for total foreign airlines. At least 50% ownership and effective board control by Australian and/or New Zealand nationals (SAM airline).
Peru	70%	Since 1997
Philippines	40%	Airlines are considered to be public utilities. All executive and managing officers must be nationals.
Poland		Air Law of 1962 (Article 65a) requires authorization by the Minister of Transport and Maritime Economy.
Russian Federation		In 1997 the Russian Government introduced rules which would bar foreign majority ownership in joint venture airlines.
Singapore		There are no formal restrictions on ownership of Singapore companies..
Switzerland	40%	After joining the European Common Aviation Area (ECAA), same rules as for EU Member States.
Turkey	49%	Turkish airlines must be incorporated in Turkey and majority-owned, controlled and managed by Turkish nationals.
Thailand	49%	Requirement of State ownership in Thai International reduced from 70% to 51%. Angel Air's foreign equity limitation was changed from 15% to 30%.
United States	49% (25% voting)	Two thirds of the board of directors must be nationals and effective control must be national. Could be subject to control test.

Sources: ICAO, IATA.

TABLE A3
National Regulations on Ownership and Control in a Selected Number of Countries

Country or regional groups	National legislation on ownership	Emergency provisions	Existence of similar legislation in other sectors
Australia	There are no foreign ownership restrictions for purely domestic operators. For Australian international operators, foreign shareholder participation is limited to 49% "unless this is contrary to the national interest". Aggregate foreign ownership is limited to 49% with up to 35% allowed to be held by foreign airlines, with a maximum of 25% for any single foreign airline. Qantas is covered by the Qantas Sale Act of 1992, containing more restrictive provisions but the Government is thinking of aligning the requirements for the carrier with those of other Australian airlines.		
Brazil	Article 181 of the Brazilian Aeronautical Code (BAC) stipulates that only 20% of the voting shares of Brazilian airlines, international and domestic operators, can be held by foreign interests, whether airlines or other companies. There is a proposal to increase the permissible foreign holding limit - possibly even allowing foreigners to control a Brazilian airline. The Civil Aviation Department (CAD) issues licenses to public air services providers. Brazilian airlines must file bi-annually with the CAD details of all shareholders and of any transfer of shares during the preceding six months. Prior approval for any share transfer is required: 1) where majority shareholding or company control would be affected; 2) sale of voting shares to foreigners is proposed; and 3) when acquisition of more than 10% of shares is involved.	The Government can requisition Brazilian registered aircraft in times of emergency.	Mineral resources and hydro-energy may only be exploited by Brazilians or companies incorporated and with head offices in the country.
Canada	The maximum foreign ownership in a Canadian airline is currently limited to 25%. The Minister of Transport has announced that the Air Canada Public Participation Act will be amended to remove the 15% limit on voting shares held in Air Canada by any person. Once the legislation is passed, all carriers in Canada will be subject to the same regime. Control of a Canadian carrier must reside with "national interests". For a Canadian domestic service, the Minister may exempt the non-Canadian carrier from the licence condition requiring it to be Canadian where the Minister considers it necessary or advisable in the public interest that a domestic licence be issued to a non-Canadian carrier. The Minister does not have the power to make a similar exemption for carriers operating international services.	The Emergency Preparedness Act in Canada provides the Government with the legislative power to requisition aircraft in the event of an emergency.	There are some general foreign investment laws. The Government has a policy of limiting foreign acquisition possibilities for rail or telecommunications.
Chile	Decree Law 2564 of 1979 (also known as the "Open Skies Law") has abolished all restrictions on the ownership of an airline registered in Chile. There was some discussion in 1989, at the time of LanChile's privatization, whether some traffic rights could be lost since SAS had a 35% stake in the company. However, the law was not changed. The essential element is that Chile is the airline's principal place of doing business ("sede efectiva"). Any carrier with headquarters in the country is treated by the Civil Aviation Authority as a Chilean airline.		
China	Non-mainland Chinese holdings (including Hong Kong SAR, Macau SAR and Chinese Taipei interests) in Chinese carriers are currently limited to 35% of the shares and 25% of the voting rights. The President/Chairman must be from the mainland. The Government is considering raising the shareholding limit to 49%.		

Country or regional groups	National legislation on ownership	Emergency provisions	Existence of similar legislation in other sectors
Colombia	The Colombian Commerce Code requires that every company in the country must have 60% of its shares in Colombian ownership, and a maximum of 40% in foreign hands. However, the Council of State (an administrative authority) has ruled that the Code is inoperative, since legislation is in place that permits the free entrance of foreign investment in every industry and commercial sector. The opinion of Aerocivil (the Colombian Civil Aviation Authority) is that the bilateral agreements signed by Colombia are above any national law, since they are international treaties. In practical terms, the requirement for 51 % of a local airline to be in Colombian hands is still in force. Presently the major airlines meet these conditions (Avianca/ Sam and Aces).		
European Community and European Economic Area	Article 4 of Council Regulation 24071/92 states on licensing of air carriers: 1. No undertaking shall be granted an operating licence by a Member State unless: (a) its principal place of business and, if any, its registered office are located in that Member State; and, (b) its main occupation is air transport… 2. Without prejudice to agreements and conventions to which the Community is a contracting party, the undertaking shall be owned and continue to be owned directly or through majority ownership by Member States and/or nationals of Member States. It shall at all times, be effectively controlled by such States or such nationals … 3. Any undertaking, which directly or indirectly participates in a controlling shareholding in an air carrier, shall meet the requirements of paragraph 2.		
Hong Kong, China	Hong Kong registered airlines are required to be established in the territory which should be their principal place of business.		
India	Indian carriers are required to be substantially owned and effectively controlled by Indian nationals, but the rules were recently modified. Regarding Air India, a strategic partner "will be permitted to take a shareholding of up to 40%, including 26% of foreign equity, with an airline holding permitted. For Indian Airlines, up to 26% can be sold to a "strategic partner". No foreign airline will be permitted to hold equity and foreign holdings in the strategic partner and are limited to 40% of its capital. The rules are being changed for privately-owned domestic carriers to permit 40% foreign equity or 100% "non-resident Indian" holdings, but no participation is permitted by foreign airlines, either directly or indirectly.	The Government reserves the right to use any civil aviation equipment or installations (aircraft, airports, etc.) in case of emergency.	The rules relating to foreign investment in other industries have been liberalized in recent years, including "automatic approval" in some cases. Automatic approval does not apply to sectors, notably banking, atomic energy, petroleum, and coal and lignite. Foreign investment is not permitted in real estate, agriculture, print media and broadcasting, postal services, and defence and strategic industries.

Country or regional groups	National legislation on ownership	Emergency provisions	Existence of similar legislation in other sectors
Israel	Foreign ownership of any Israeli airline is limited to 34% maximum. The Chairman, 2/3's of the directors, and the principal place of business must be in Israel. No distinction is made between foreign airlines and foreign non-airline companies. If El Al were to be privatized, certain decisions would require the consent of the golden share holder (aircraft procurement, etc). In addition, 2/3's of the board would still have to be Israeli and the principal place of business would have to remain in Israel.	The government is entitled to requisition the aircraft of the country's airlines in case of national emergency.	
Japan	Japanese air law stipulates that an airline with more than 1/3 foreign ownership and/or control cannot be registered as a Japanese carrier.	There are no formal provisions for the Government to requisition airlines, however, it has the authority to request assistance.	
Kenya	Kenya limits foreign ownership of airlines registered in the country to 49 %. KLM currently holds 26% of Kenya Airways and the Kenyan Government 23%, the rest being in local hands.		
Malaysia	The ownership criteria are set by the Government through the Ministry of Finance. Foreign equity is restricted to 30% for all airlines, except for Malaysia Airlines where the limit is 45%. However, the maximum holding by any single foreign entity is limited to 20% and the Government will retain a "golden share" in Malaysia Airlines.	There is no law specifically empowering the Government to take over aircraft in times of emergency. However, the Government can implement any programme it sees fit.	There is no legislation relating to the control of specific national industries, but the policy for the foreseeable future is that industries considered to be "essential services" will remain under Malaysian control.
Mauritius	The national carrier's Articles of Association limit foreign ownership to a maximum of 40% of the issued share capital, with no distinction between foreign airline and non-airline ownership. Regarding control, there is no clear legal requirement, but the standard clauses in bilateral agreements would preclude foreign control. The UN Economic Commission for Africa insists that any airline for which it provides aircraft financing must be controlled by the national government.		
New Zealand	There are no restrictions on foreign ownership of domestic carriers. Local law limits foreign holdings in a New Zealand international carrier to 49%, with a single airline not being allowed to hold more than 25%, and total airline participation being limited to 35%.		
Peru	Law No.27.261 (Civil Aeronautical Law) states that the percentage of ownership in Peruvian hands must be at least 51%. However, at present there are some airlines in Peru, which may need to adjust in order to comply with his requirement.		

Country or regional groups	National legislation on ownership	Emergency provisions	Existence of similar legislation in other sectors
Philippines	Airlines are considered to be public utilities. Section 11 of the 1987 Constitution states: "No franchise, certificate, or any other form of authorization for the operation of a public utility shall be granted, except to citizens of the Philippines or to corporations or associations organized under the laws of the Philippines, at least sixty per centum of whose capital is owned by such citizens"; "Nor shall such franchise, certificate, or authorization be exclusive in character or for a longer period than fifty years." "Neither shall any such franchise or right be granted except under the condition that it shall be subject to amendment, alteration, or repeal by the Congress when the common good so requires."; "The State shall encourage equity participation in public utilities by the general public. The participation of foreign investors in the governing body of any public utility enterprise shall be limited to their proportionate share in its capital, and all the executive and managing officers of such corporation or association must be citizens of the Philippines."		
Singapore	There is no limit on foreign ownership of Singapore Airlines' shares. The airline's Articles of Association allow the directors to set a maximum limit for foreign ownership of shares, but there is currently none. No single shareholder may hold more than 5% without the approval of the directors. There is a mechanism for issuing "ASA shares" to the Ministry of Finance in the event that the level of foreign holding of ordinary shares could threaten an air services agreement.	The Government has the right to requisition civil aircraft in certain circumstances.	The only national industry where Singaporean ownership and control is stipulated is the media.
Korea, Republic of	Foreign shareholdings in local airlines are limited to less than 50%, as is representation on the board.		
Chinese Taipei	Foreign holdings in airlines are limited to 1/3 of the shares.		
USA	Under current US law, only "air carriers" may offer commercial air transportation within the US. An air carrier must, among other things, be owned by a "citizen of the United States". The criteria include: 1) an individual who is a citizen of the US; 2) a partnership with each of the partners being an individual who is a citizen of the US; 3) a corporation or an association organized under the laws of the US, or a State, the District of Columbia, or a territory or possession of the US. At least 2/3's of the board of directors and other managing officers must be US citizens, and at least 75% of the voting interest owned or controlled by persons who are US citizens. The maximum foreign voting interest permitted is 24.9%. No distinction is made between foreign airline and non-airline ownership of US carriers. The Department of Transportation can conduct a "fitness investigation" to determine whether a US carrier continues to remain a US citizen. In addition to the 24.9% cap on voting interests, the US applies a requirement that a non-US citizen cannot actually control a US airline. Even where a non-US citizen structures its holdings to remain below the 25% voting interest level, the DOT may find that de facto impermissible control can exist. This occurred in the early days of the KLM-Northwest Airlines relationship, when the DOT determined that KLM's majority ownership of the holding company, its nominee on the board of directors, and the financial advisory board were problematic - forcing the parties to restructure the deal. Subsequent DOT decisions have liberalized the control test to allow a total aggregate equity ownership by non-US citizens of up to 49%. The voting interest cap remains.	In the US Civilian Reserve Air Fleet (CRAF), American carriers voluntarily commit to providing a pre-determined number of aircraft and crew to the US Department of Defense in times of emergency.	There are no formal requirements for certain industries to be nationally owned and controlled, although some national security provisions prevent foreign interests from having access to "sensitive" information.

Source: IATA.

TABLE A4(a)
Airlines' Commercial Agreements Concluded and Amended in 2000

Note: Agreements shown in bold letters are either a part of global alliances, or alliances approved by the Australian Competition and Consumer Commission, European Commission and/or United States Department of Transportation.

Aer Lingus-American Airlines (C, N)	Alitalia-Japan Airlines (C, N)	British Airways-Deutsche BA (C)	Finnair-TAP Air Portugal (C, N)
Aeroflot-AeroSvit Airlines (C, N)	**Alitalia-KLM (T)**	**British Airways-Finnair (C)**	Garuda-Malaysian Airlines (C)
Aeroflot-Air France (M)	Alitalia-Korean Air (C)	British Airways-GB Airways (F)	Gulf Air-Philippine Airlines (C, N)
Aeroflot-Air India (M)	Alitalia-Meridiana (C, N)	**British Airways-Iberia (C)**	Gulfstream-Northwest Airlines (C, N)
Aeroflot-Air Kazakhstan (C, N)	**Alitalia-Northwest (C*, N)**	**British Airways-LanChile (C, N)**	Gulfstream-Trans World Airlines (C, N)
Aeroflot-Air Ukraine (C, N)	Alitalia-Palestinan Airlines (C, N)	British Airways-National Jets Italia (F, N)	Hawaiian Airlines-Northwest Airlines (C)
Aeroflot-Armenian Airlines (C)	Alitalia-Varig (C, N)	**British Airways-Qantas (C)**	Iberia-Air France (C, N)
Aeroflot-Georgian Airlines (C, N)	All Nippon Airways-Asiana (C, N)	British Airways-Zambian Air Services (F, N)	**Iberia-LanChile (C, N)**
Aeroflot-Moldavian Airlines (C, N)	**All Nippon Airways-Austrian Airlines (C)**	**British Midland-United Airlines (C)**	**Icelandair-SAS (C)**
Aerolineas Argentinas-Alitalia (C, N)	All Nippon Airways-Emirates (M)	BWIA West Indies Airways-LIAT (M)	Japan Air System-Japan Airlines (M)
Aerolineas Argentinas-American Airlines (C*)	All Nippon Airways-Japan Air System (M)	BWIA West Indies Airways-United Airlines (C, N)	Japan Air System-KLM (C)
Aerolineas Argentinas-TAM (C, N)	**All Nippon Airways-Thai Airways International (C)**	**Canadian Airlines-Cathay Pacific (T)**	Japan Air System-Northwest Airlines (C)
AeroMexico-Air France (C)	All Nippon Airways-Trans World Airlines (CG, N)	Canadian Airlines-Japan Airlines (T)	Japan Air System-Northwest Airlines (C)
AeroMexico-Delta Air Lines (C)	All Nippon Airways-Virgin Atlantic Airways (C, N)	Canadian Airlines-LanChile (T)	Japan Airlines-Northwest Airlines (CG, N)
Air Afrique-Air France (C)	Alpi Eagles-Olympic Airways (C, N)	**Canadian Airlines-Qantas (T)**	Japan Airlines-Singapore Airlines (CG)
Air ALM-City Bird (M, N)	America West-Trans World Airlines (C, N)	Cathay Pacific-Malaysian Airlines (C, N)	Japan Airlines-Vietnam Airlines (C)
Air ALM-KLM (T)	**American Airlines-Canadian Airlines (T)**	Cathay Pacific-Qantas New Zealand (C, N)	KLM-Lituanian Airlines (C, N)
Air ALM-Surinam Airways (T)	**American Airlines-Cathay Pacific (C)**	Cathay Pacific-Turkish Airlines (C, N)	KLM-Malaysian Airlines (C)
Air ALM-Winair (M)	American Airlines-China Eastern Airlines (C)	China Airlines-Vietnam Airlines (C)	KLM-Regional Airlines (T)
Air Canada-Air New Zealand (C)	American Airlines-EVA Airways (C)	China Eastern Airlines-Qantas (C, N)	Kuwait Airways-Philippine Airlines (C*)
Air Canada-Canadian Airlines (C, N)	American Airlines-Japan Airlines (C)	China Southern Airlines-Japan Air System (C, N)	Kuwait Airways-Trans World Airlines (C*)

Air Canada-Delta Air Lines (C)	American Airlines-Ozark Airlines (M)	China Southern Airlines-Vietnam Airlines (C, N)	LAM-TAP Air Portugal (C, N)
Air Canada-Singapore Airlines (C*)	**American Airlines-Qantas (C)**	Cirrus Airlines-Lufthansa (F, N)	LTU-Sabena (C, N)
Air Caraibes-LIAT-Winair (C, N)	**American Airlines-Sabena-Swissair (C)**	City Bird-Lignes Aériennes Congolaises (T)	Lufthansa-Deutsche Bahn (I, N)
Air China-Lufthansa (C, N)	**American Airlines-Swissair (C)**	City Bird-Sabena (T)	Lufthansa-Philippine Airlines (CG*, N)
Air China-Northwest Airlines (C)	**American Airlines-TACA (C)**	CommutAir-US Airways (T)	**Lufthansa-SAS-Singapore Airlines (CG*)**
Air Europa-Alitalia (C, N)	American Airlines-TAP Air Portugal (C, N)	Continental Airlines-CommutAir (F, N)	**Lufthansa-Thai Airways International (C)**
Air Europa-Trans World Airlines (C, N)	American Airlines-Thalys (I, N)	Continental Airlines-Emirates (C, N)	**Lufthansa-Varig (CG)**
Air France-Comair (C)	American Airlines-Turkish Airlines (C*, N)	**Continental Airlines-Northwest Airlines (C)**	Malaysian Airlines-Middle East Airlines (C, N)
Air France-Delta Air Lines (C)	American Airlines-US Airways (T)	**CSA Czech Airlines-Delta Air Lines (C, N)**	**Malaysian Airlines-Northwest Airlines (C)**
Air France-Japan Airlines (C)	American Eagle-Northwest Airlines (C)	Delta Air Lines-Trans States Airlines (T)	Malaysian Airlines-Philippine Airlines (C*)
Air France-Korean Air (M)	American Eagle-Trans World Airlines (C, N)	Delta Air Lines-ACES (C, N)	Malaysian Airlines-Swissair (C)
Air France-TACA (C, N)	Angel Air-China Northern Airlines (M, N)	Delta Air Lines-Aerolitoral (C, N)	Mesa Airlines-Midwest Express (C)
Air France-Thalys (I)	Aserca-Avensa (T)	Delta Air Lines-El Al (C, N)	Mesa Airlines-US Airways (F)
Air India-Emirates (C, N)	Asiana-Cargolux (CG, N)	Delta Air Lines-Malev (T)	**Mexicana-United Airlines (C)**
Air India-Malaysian Airlines (C)	Asiana-China Southern Airlines (C)	Delta Air Lines-Royal Air Maroc (C, N)	National Airlines-Virgin Atlantic Airways (M, N)
Air India-Virgin Atlantic Airways (C*, N)	Asiana-Turkish Airlines (C, N)	**Delta Air Lines-Sabena-Swissair (T*)**	Nationwide Air-Virgin Atlantic Airways (F, N)
Air Jamaica-Cubana (C, N)	Asiana-Uzbekistan Airways (C, N)	Delta Air Lines-South African Airways (C)	Nigeria Airways-South African Airways (C, N)
Air Jamaica-Delta Air Lines (C)	Atlantic Coast Airlines-United Airlines (F)	Delta Air Lines-Tunisair (C, N)	Qantas-Qantas New Zealand (F, N)
Air Kazakhstan-Transaero (C, N)	Atlantic Coast Jet-Delta Air Lines (F, N)	Deutesche BA-Iberia (C*)	Qantas-South African Airways (C)
Air Littoral-Finnair (C, N)	**Austrian Airlines-Delta Air Lines (T*)**	Ecuatoriana-LanChile (C, N)	Roraima Airways-Rutaca Airlinres (C, N)
Air Malta-Trans World Airlines (C, N)	Austrian Airlines-El Al (C, N)	Egyptair-Middle East Airlines-Royal Air Maroc-	Royal Air Maroc-Tunisair (C, N)
Air Moldova International-Transaero (C, N)	**Austrian Airlines-United Airlines (C, N)**	Royal Jordanian-Saudi Arabian Airlines (M, N)	Sabena-Ukraine International Airlines (C)
Air Namibia-Deutsche BA (C, N)	Aviaekspresskruiz-Chelyabinsk Airlines-	Egyptair-Philippine Airlines (C*)	SATA International-TAP Air Portugal (C)

Air Namibia-Uganda Airlines (T)	Demodedovo Airlines-Kras Air (M, N)	El Al-Swissair (C, N)	SNCF-United Airlines (I)
Air New Zealand-Canadian Airlines (C, N, T)	Avianca-Mexicana (C, N)	El Al-Thai Airways International (C*, N)	Swissair-Thai Airways International (C, N)
Air One-Lufthansa (C, N)	Azerbaijan Airlines-Transaero (C, N)	Emirates-MNG Cargo Airlines (CG, N)	Syrian Arab Airlines-Tarom Romanian (C, N)
Air Tahiti Nui-American Airlines (M, N)	Balkan Bulgarian-Uzbekistan Airlines (C)	Emirates-Philippine Airlines (C*, N)	TACA-TACA Peru (C)
Air Tahiti Nui-Qantas (C, N)	Bangkok Airways-Thai Airways International (C, N)	EVA Airways-Qantas (C, N)	TAM-Transbrasil (T)
Air Zimbabwe-Comair BA (C, N)	**British Airways-Canadian Airlines (T)**	**Finnair-Iberia (C)**	Trans States Airlines-Trans World Airlines (T)
Alaska Airlines-Qantas (C)	**British Airways-Cathay Pacific (C)**	**Finnair-Qantas (C)**	

C Denotes codesharing or operational agreements
CG Denotes cargo agreements
F Denotes franchise agreements
I Denotes intermodal agreements
M Denotes agreements not involving codesharing
N Denotes new partnership formed in 2000
T Denotes agreements were terminated in 2000
* Denotes agreements were signed in previous years but implemented in 2000

TABLE A4(b)
Summary Tabulation of Airlines' Commercial Agreements Concluded and Amended in 2000

	Concluded in 1999 but implemented in 2000	Newly concluded in 2000	Amended in 2000	Terminated in 2000
Codeshare agreements	12	75	55	Not Available
Cargo agreements	2	4	2	N/A
Franchise agreements	0	7	3	N/A
Intermodal agreements	0	2	2	N/A
Other agreements not involving codesharing	0	6	9	N/A
Total	**14**	**94**	**71**	**22**

TABLE A5
Main Characteristics of the Five Global Alliances

Alliances	Star	Oneworld	Skyteam	Qualiflyer	Wings
Foundation date	May 1997	February 1999	June 2000	March 1998	No date as such. Regulatory approval of the KLM/Northwest cooperation in January 1993
Founding members	Air Canada United Airlines Lufthansa Thai Airways SAS	American Airlines British Airways Cathay Pacific Quantas	Air France Aeromexico Delta Airlines Korean Air	Swissair Austrian (departed October 1999 to join Star) AOM Crossair SABENA Turkish Airlines	KLM Northwest
Additional members	Air New Zealand (March 99) All Nippon Airways (October 99) Ansett Australia (March 99) Austrian Airlines (March 00) British Midland (July 00) Lauda Air (March 00) Mexicana (July 00) Singapore Airlines (April 00) Tyrolean (March 00) Varig (October 97)	Finnair (Sep. 99) Iberia (Sep 99) Aer Lingus (June 00) LanChile (June 00)	CSA (March 01), and for the future Aeroflot (2003)	Air Europe (Apr 99) Air Littoral (May 00) LOT (Jan 00) Portugalia (Jan 00) Volare (Jan 00) Air Liberté (Sep 00)	Alitalia (withdrew)
Number of aircraft	2,711	1,975	1,283	496	824
Aircraft on order	391	360	330	135	108
Number of employees	296,122	251,965	137,030	58,298	82,735
Main hubs	Europe: Copenhagen, Frankfurt, London-Heathrow, Paris-CDG, Stockholm, Vienna Americas: Buenos Aires, Chicago, Los Angeles, Montreal, Rio de Janeiro, Sao Paulo Asia: Bangkok, Hong Kong, Singapore, Tokyo Oceania: Auckland, Sydney	Europe: Dublin, London-Heathrow, London-Gatwick, Helsinki, Madrid, Manchester Americas: Chicago, Dallas, New York-JFK, Santiago de Chile Asia: Hong Kong Oceania: Sydney	Europe: Paris-CDG, Paris-Orly Americas: Atlanta, Cincinnati, Salt Lake City, Mexico City Asia: Seoul	Europe: Brussels, Basel Istanbul, Lisbon, Milan Malpensa, Nice, Paris -Orly, Warsaw, Zurich	Europe: Amsterdam Americas: Detroit, Minneapolis

Alliances	Star	Oneworld	Skyteam	Qualiflyer	Wings
Types of cooperation involved:					
Codeshare	Extensive network of bilateral codeshare agreements linking individual members to each other	Codeshare (except so far between American Airlines and British Airways on the transatlantic market by lack of antitrust immunity by the US DOT and of individual exemption by the European Commission)			
Common tariffs	-"Round the world " fares for global travellers	-"Oneworld explorer" fares			
Lounges	Access to 500 common lounges	Reciprocal access to airport lounges	Reciprocal access to airport lounges		
Frequent-flier programmes	Reciprocal frequent-flier programmes	Linking of frequent-flier programmes	Reciprocal-frequent flier programmes		Yes
Check-in	Through check-in	Smooth transfers of passengers between carriers	Smooth transfers of passengers between carriers, standardized procedures		
Equity links	Various equity links	Various equity links		Various equity links	Dissolved
Airport operations	Streamlined airport operations			Ground handling baggage handling	
Cargo cooperation	Yes		Yes	Yes	
Joint purchasing	Yes				Yes
Marketing	Advertising and promotion				Yes
Other				Common call centres, IT, sales, training, maintenance	

Alliances	Star	Oneworld	Skyteam	Qualiflyer	Wings
Destinations served	760[a]	559	230	329	400
Countries served	112[b]	134	85	68	75
Revenue passengers Kilometres (RPK) 1999 (billion)	593.9 +254.7 for associated carriers (AC)[c]	456.5 + 12 AC[d]	264.6 + 53.1 AC[e]	100.7 + 16.0 AC[f]	177.4 +107.7 AC[g]
World share[h] RPK 1999	21.3% + 4.4% AC	16.4% + 0.4% AC	9.5% + 1.9% AC	3.6% + 0.6% AC	6.4% + 3.9% AC
Passengers carried (million)	292.7 + 73.3 AC	199.3 + 4.5 AC	151.2 + 28.3 AC	52.3 + 5.2 AC	71.6 + 55.9 AC
World share[i] passengers carried 1999	18.8% + 4.7% AC	12.8% + 0.3% AC	9.7% + 1.8% AC	3.4% + 0.3% AC	4.6% +3.6% AC
Group sales($bn)[j]	69.6 + 12.6AC	50.0 + 1.0 AC	26.1 + 4.0 AC	16.2 + 1.3 AC	16.8 + 9.9 AC

a Not yet including Austrian, Canadian, Mexicana and Singapore.

b *Idem.*

c Airline Business International defines associated carriers as "those which have equity links or comprehensive marketing agreements with at least one major partner, but which are not closely tied with other alliance groupings". In the case of STAR: US Airways, Canadian, Virgin Atlantic and Spanair.

d Aerolineas Argentinas via ties with Iberia and American Airlines.

e As of 1999 Korean Airlines, Aeroflot.

f South African Airways.

g Continental, Transavia, Braathens, Kenya Airways.

h World shares based on ICAO statistics for total (domestic + national) scheduled traffic in 1999 i.e. 2,788 billion RPK.

i World shares based on ICAO statistics for total (domestic + national) scheduled traffic in 1999 i.e. 1,560 milion passengers carried.

j Group revenues including non-flying business.

Sources: http://airlinealliance.tripod.com and Airline Business, July 2000, for the last five rows of the table.

TABLE A6
Major Unaligned Carriers

Major "unaligned carriers"	RPKs billion	World Share %	Passengers million	World Share %	Group Sales US$ billion
Japan Airlines	84.1	3.0	35.5	2.3	14.4
Southwest Airlines	58.7	2.1	57.5	3.7	4.7
TWA	41.9	1.5	25.8	1.7	3.3
Alitalia	36.9	1.3	24.2	1.5	5.2
Malaysia Airlines	35.0	1.3	16.0	1.0	2.1
America West	28.5	1.0	18.7	1.2	2.2
China Airlines	22.2	0.8	1.9	0.5	1.9
Saudi Arabian Airlines	19.6	0.7	12.3	0.8	-
Alaska Airlines	18.9	0.7	13.6	0.9	2.1
China Southern	18.7	0.7	15.0	1.0	1.6
Total	**364.5**	**13.1**	**226.5**	**14.6**	**37.5**

Source: Airline Business, July 2000.

DEVELOPMENTS IN THE AIR TRANSPORT SECTOR SINCE THE CONCLUSION OF THE URUGUAY ROUND

PART SIX

Background Note by the Secretariat

Addendum

This background note provides additional information about developments in the air transport sector since the conclusion of the Uruguay Round, covering slot allocation (see document S/C/W/163/Add2 as indicated in paragraph 153).

PART SIX

SLOT ALLOCATION

1. Introduction

1. This section defines slot allocation, discusses the multilateral International Air Transport Association (IATA) framework, international market access, and the general regulatory framework of the European Union (EU) and the United States (US).[1]

2. The terms "slot allocation" and "slots" apply only at airports where take-offs, landings, and parking are co-ordinated by airport authorities. In this case, a regulatory regime is constructed to allocate arrival and departure times and airport gates among different carriers. At airports that have no controls, 'slots' do not exist.

3. Slot allocation is part of an air carrier's commercial operations, and slot availability impacts on the level of market access. Traditionally, international slot allocation has been co-ordinated by IATA[2]. IATA organizes the bi-annual Scheduling Conferences (June and November) to cover plans for the next season. The schedules are then made available to the public. All international airlines, whether scheduled, low-cost, charter, cargo or any combination thereof, whose home State is eligible for membership to t he International Civil Aviation Organization (ICAO), are able to participate in the Conferences. Airlines must be designated as international carriers by their home State.

4. During the period under review (1993-2000), the process of international slot allocation remained unchanged despite increased traffic and changing domestic regulations (primarily in the EU and US). Due to steadily increasing traffic, capacity at most international hub airports has exceeded demand, which in turn has led to discussions about how to improve airport access without compromising safety standards. This has created a dilemma for airport authorities. On the one hand airlines are increasing their demand for additional capacity (more slots), and on the other hand, local residents are urging authorities to limit capacity for environmental reasons (noise and air pollution).

2. Definition of a Slot

5. ICAO and IATA define slots virtually in the same way. This review uses the more detailed IATA definition, which states: "a slot is defined as the scheduled time of arrival or departure available, or allocated to an aircraft movement on a specific date at an airport."

1 See also S/C/W/59 paragraphs 120 - 125 and S/C/W129 paragraph 8.

2 See, "IATA Scheduling Procedures Guide", Twenty-Second Edition, August 1997 and Twenty-Fourth Edition 1998.

An airport slot should not be confused with an air traffic control (ATC) slot. The latter signifies the take-off or landing time of an aircraft that is assigned by the relevant ATC authority to make optimum use of available capacity at points *en route,* or at the destination airport by sequencing the air traffic.[3]

6. To air carriers, slots are important not only for operational purposes (e.g. for aircraft, crew, and gate use scheduling), but also for commercial reasons (e.g. matching departure and arrival times between disparate geographical points). The availability of slots at an airport can be affected by various physical constraints, such as capacity limitations of the runway(s), terminal(s), boarding gates and air traffic control facilities. Therefore, in situations where an airport becomes congested and the demand for slots exceeds available supply, some type of rationing or slot allocation mechanism (i.e. a formula for the allocation of slots among their users) is used. The allocation is typically carried out among the airlines serving the same airport and involves consultation with the airport authorities. Since a slot change at one airport may have major implications for a flight in terms of securing corresponding slots at other airports, wider co-ordination is often necessary. This has been achieved primarily through the multilaterally organized IATA Scheduling Conferences.

3. The IATA Multilateral Scheduling Conference System[4]

7. The mechanism most often used by airlines for schedule co-ordination and slot allocation is the IATA Airline Schedule Coordination Conference.[5] It is held twice yearly, about four months prior to each scheduling season (one runs from April to October, the

3 "An airport slot is an essential element in order to mount commercial services at an airport which has a slot allocation regime, but it is also part of a multi-faceted package of services and facilities provided by different entities, such as gates, air traffic control, ground handling, passenger and cargo processing - all of which require close coordination and co-operation between and among national authorities, airports and airlines. In a few slot regimes, procedures have been different depending on the type of entity using them. Thus, there can be commuter slots, air carrier slots, new entrant (to a city-pair market) slots, and slots for general aviation, military, domestic or international flights." ANSConf-WP/11, 28/03/00.

4 This section is based on : "IATA Scheduling Procedures Guide", Twenty-Second Edition, August 1997 and Twenty-Fourth Edition 1998; "OECD Competition Policy and International Airport Services", DAFFE/CLP(98)3, 14 May 1998; "ICAO Manual on the Regulation of Air Transport", 1996, Doc 9626; "ICAO Conference on the Economics of Airports and Air Navigation Services", (Montreal, 19 - 28 June 2000), ANSConf-WP/11 28/3/00, Item 4; ICAO, "Study on the Allocation of Flight Departure and Arrival Slots at International Airports", ANSConf-WP/11, Appendix B.

5 An illustration of the Conference is given in document S/C/W/163/Add.3, Chart 2, paragraph 102.

other from November to March). Participation is open to any airline registered in a State eligible for ICAO membership. An important element in this system is the so-called "historical precedence", or "grandfather rights". This refers to the right of a carrier to retain the slots it held and used in the previous equivalent season. Schedule changes, including those required by new flights or services, are accommodated mainly through voluntary adjustments or exchange of slots between the airlines concerned. The worldwide membership of the Conference provides a unique ability to adjust flight schedules at all affected airports, as long as sufficient slots are available. However, a system based on "grandfather rights" can, in the view of some observers, result in new entrant airlines and new services not being accommodated at airports that are particularly congested.

8. Many international airports experience high congestion levels at different times throughout the day in terms of capacity (runways and gates). A co-ordinating body is, thus, needed to ensure that traffic moves smoothly and safely. Finding a balance among airlines that compete for the same slot times is often difficult and raises questions about the limitations of the present framework.

9. The IATA mechanism is generally endorsed by States. However, in some States where the problem of insufficient airport capacity is more serious, regulatory authorities have found it necessary to introduce additional measures to limit or ration access. In some cases, airlines not presently servicing the congested airport are not allowed to begin service, and certain types of operations (e.g. non-scheduled flights, general aviation aircraft, or all-cargo services) are either not permitted or severely limited. In others instances, international services with rights granted under a bilateral air service agreement (ASA) are given priority for slots over domestic flights. Limitations at some congested airports are sometimes mitigated through the use of secondary airports (serving the same city) where slots are available. In some severe cases, government negotiations and/or agreements are required to resolve specific allocation problems. In most States, internationally agreed allocation rules are applied. In the EU, Member States follow a code of conduct based on the IATA mechanism, with additional constraints. For example, new entrant airlines will be given priority in the allocation of 50% of the slots that become available.

10. The use of a multilateral body to co-ordinate slot allocation is considered by airlines to be advantageous since one co-ordinating body, which facilitates international scheduling, ensures that all States and air carriers are represented in one location at the same time. This is particularly efficient because a change in one country can affect the scheduling in other countries.

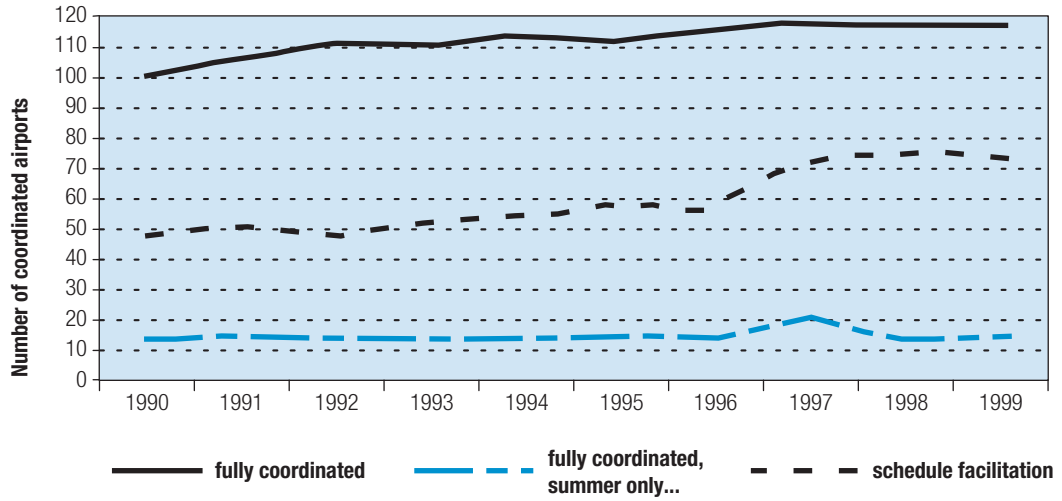
11. IATA originally launched its Schedule Coordination activity to facilitate inter-line connections and handling arrangements, and this remains an important objective today. However, increasing congestion at certain key international airports requires an efficient means for allocating take-off and landing slots. This is particularly the case at major hubs. Participants in the Scheduling Conferences work in concert to ensure that airlines can plan their international operations in the forthcoming season. The purposes of the Conferences are "to provide a forum for reaching consensus on the schedule adjustments necessary to conform to airport capacity limitations and to avoid undue service delays, to optimise interline connections, and to allow for the coordination of schedules where inter-line handling takes place."[6]

12. Over the past ten years, there has been an increase in the number of airports that are co-ordinated through the IATA Conference system. Chart 1 provides an indication of the growth pattern. Traffic at fully coordinated airports grew by approximately 18%. During the summer season there was a negligible increase, and for schedule facilitation there was a growth rate of about 63%. According to ICAO, this Chart may actually overstate the extent of capacity constraints in terms of fully coordinated airports, because a number of airports in this category have low annual total aircraft movements. Moreover, access problems can occur even if slots are available, because flights may be subject to curfews or other restrictions at different airports and thus can only use slots within a certain block time or "window".

6 IATA "Scheduling Procedures Guide", 1998.

CHART 1

Airports coordinated through Schedule Coordination Procedures by degree of coordination

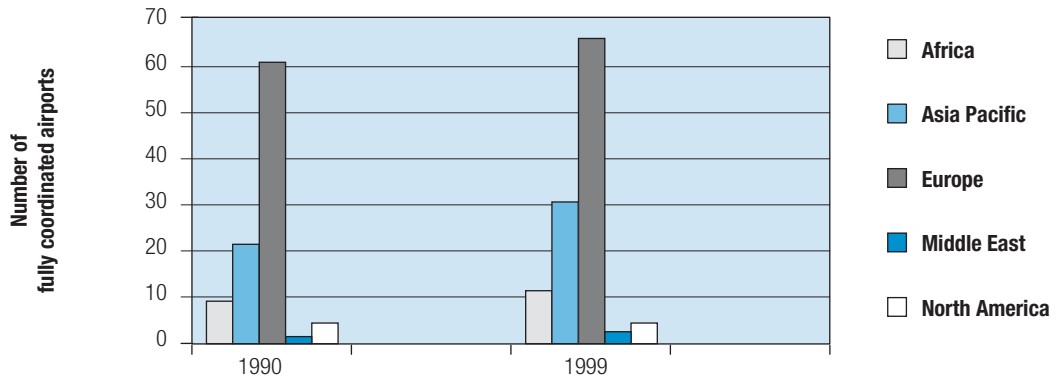


Source: ANSConf-WP/11,p.7.

13. Chart 2 shows that the greatest number of fully coordinated airports are located in Europe. The 1993 EU common rules on slot allocation led to many additional airports being designated by national administrations, which are therefore included in the IATA system as well. There has also been an increase in fully coordinated airports in other regions, particularly in the Asia/Pacific region in the second half of the period, reflecting strong traffic growth.

CHART 2

Airports coordinated through Schedule Coordinating Procedures by region



Source: ANSConf-WP/11,p.8.

4. International Market Access

14. Access to an international airport can also be achieved through codesharing or participation in a global alliance. These methods allow airlines to enter new markets without actually operating the flights or acquiring slots. However, it has been argued that disadvantages arise for new entrants and those airlines that remain outside of alliances or do not have strategic codeshare partners.

15. Since the situation at each congested airport tends to be unique to that facility, the IATA Scheduling Conference has used different approaches. Apart from "grandfathering", there is a "use or lose" rule, under which a carrier that does not use its assigned slots a specified number of times loses them. A third approach allows air carriers to exchange slots on a one-for-one basis. Other possibilities include buying and selling of slots, auctioning, or combinations thereof.[7]

16. While slot allocation is a mechanism to ration a scarce resource, there are of course alternatives. These include: building new airports, enlarging existing ones, and improving air traffic control efficiency. These are long-term solutions, however, requiring considerable time and resources. A further option is increased usage of secondary airports, such as Stansted or Gatwick, (rather than Heathrow) in London.

5. European Union[8]

17. Through the use of slot coordinators to solve congestion problems at many of its airports, the EU provides an example of regulatory structures which use many features of the IATA Conference system. However, while the IATA system is voluntary, the EU rules are mandatory at airports designated as coordinated.

18. Council Regulation 95/93 "On Common Rules for the Allocation of Slots at Community Airports" was passed on 18 January 1993. Its key objectives are: "to facilitate competition, and to encourage entrance into the Community air market; to ensure that slots at congested airports are allocated on the basis of neutral, transparent and non-discriminatory rules; and, albeit implicitly to encourage the efficient use of airport capacity by making best use of available slots."

19. The Regulation was based on the process of airport coordination developed by IATA to help foster an open and competitive market. While many key elements of the Regulation retain the IATA guidelines, there are three main differences: "First, it places a legal obligation on Member States to play a role in deciding on the need for slot allocation. Second, the Regulation establishes a set of institutional arrangements and a system of legally binding rules for the allocation of slots. Third, the Regulation makes further provision to facilitate new entrant competition than the IATA guidelines."[9] The Regulation was also intended to promote competition at major hub airports. It sets out how slots should be shared between existing and new entrant carriers.

20. The main requirements of the Regulation include:

(i) A biannual audit of capacity has to be carried out at these airports;
(ii) Grandfather rights: an airline using a slot in one season has first claim in the next season;
(iii) Co-ordinator: has responsibility for applying the Regulation in terms of slot allocation, monitoring of slot usage and slot withdrawal in the event of non-usage;
(iv) Coordination Committee: established with the role of considering complaints about slot allocation and proposing solutions to the Co-ordinator;
(v) Slot pools: created from new slots, those returned voluntarily by airlines and those lost under the "use it or lose it" rule;
(vi) Priority for new entrants: 50% of the slots in the pool are allocated to new entrants;
(vii) Definition of new entrants: an airline requesting a slot for a direct intra-EU flight on a route which is a duopoly; an airline with under four slots a day on a requested route; an airline which has less than 3% of all slots at an airport;
(viii) Recognition of IATA rules: this refers mainly to the re-timing of slots that have priority over the allocation of new slots;

7 ICAO Manual on the Regulation of International Air Transport, Doc. 9626, pp. 4.3-6, 4.3-7.

8 This section is based on : Coopers & Lybrand, "The Application and Possible Modification of Council Regulation 95/93 on Common Rules for the Allocation of Slots at Community Airports: Final Report", 17 October 1995; "Slot Allocation – A Review of the European Situation", Aviation Economics, November 27, 2000; PricewaterhouseCoopers, "Study of Certain Aspects of Council Regulation 95/93 on Common Rules for the Allocation of Slots at Community Airports", Final Report, European Commission, 20 May 2000; United States Congress, "Wendall H. Ford Aviation Investment and Reform Act for the 21st Century", Public Law 106-181, April 5, 2000.

9 Council Regulation 95/93, 18 January 1993.

21. Member States themselves designate "fully coordinated airports", which are characterized by congestion during at least part of the year (as a result, the UK has three such airports and Greece thirty).

22. The Regulation pertains only to airport slot allocation and not air traffic flow management (ATFM). While the first is a planning tool, the second is an operational control tool. Airport slot allocation is normally established during the IATA Scheduling Conferences and ATFM slots are submitted the day of operation and are for the purpose of circuitous flight routings or delays and are forwarded to ATC.**10**

23. The introduction of the Regulation for EU Member States did not affect the IATA Scheduling Conference system. Member States also retain the authority to organize how airports are operated.

6. The United States11

24. One of the oldest national regulations governing slot allocation is the High Density Rule (HDR) of the United States Federal Aviation Administration (FAA). The rule was introduced to meet a temporary air traffic control problem in 1986, and by 1999 applied to only four airports. At all other airports in the US, there are no slot allocation mechanisms. Airlines are only required to submit their flight schedules.

25. The HDR applies to two international airports, Chicago O'Hare and New York-JFK (both of which are fully coordinated under the IATA scheduling system), and two domestic airports, New York-La Guardia and Reagan Washington National (both of which offer services to the Bahamas and Canada). While the rule has evolved and changed, it retains some features that it shares with the IATA and the European systems, such as air carriers begin able to use seasonal slots, which have been used during previous seasons for international services. It also allows air carriers to exchange slots on a one-to-one basis, and provides for new entrants. However, unlike the IATA and the EU systems, slot allocation at high density airports is directly operated by the aeronautical authorities.

26. The introduction in 1986 of selling, purchasing, and leasing of airport slots for domestic services at US airports subject to the HDR required separate procedures for allocating slots for international services and for domestic services classified as essential air services, which cannot be bought, sold or leased. In effect, there are separate pools of slots for international, essential air services and domestic air services, with the pool for domestic air services sub-divided into air carrier, commuter, and other. The HDR also contains a reciprocity provision similar to that of the EU, permitting its suspension for an air carrier or commuter operator of a country that provides slots to US air carriers and commuter operators on a more restrictive basis than the US rule.

27. The HDR is considerably more complex than either the IATA or the EU systems. It creates separate limits for different categories of users within an overall hourly or half hour limit on takeoffs or landings (described as Instrument Flight Rule (IFR) operations per hour) and permits the purchase, sale or lease of slots for certain domestic only air services.**12** The hourly limits at New York-JFK airport vary during the period 15:00 to 19:00 from sixty-three to eighty for air carriers, from ten to fifteen for commuters and from none to two for other. At Chicago O'Hare airport, there are limitations for both half-hours and hours from 06:45 until 21:15, with the number and type of operations (air carrier, commuter and other) varying to take into account peak periods of traffic throughout the day.

28. In 1995, the United States Department of Transportation conducted a comprehensive and detailed study of the HDR, looking specifically at the expected effects of four alternatives based on the situation in 1993 : (i) eliminating the HDR; (ii) phasing it out over five years; (iii) keeping the rule but adding some slots; and (iv) lifting the rule during certain periods when airport operations are not congested. In March 2000, legislation was prepared that would phase out the HDR with exemptions being used during the transition period.

29. On 5 April 2000, the 106th Congress enacted Public Law 106-181, (the "Wendall H. Ford Aviation Investment and Reform Act for the 21st Century") to amend Title 49, US Code, to re-authorize programmes of the FAA. The US Government determines the nature of slots and

10 "Air Traffic Control (ATC) authorities typically identify likely *en route* ATC bottlenecks and congested periods prior to receiving applications for ATFM slots, based on the planned schedules submitted by the airlines (and largely agreed at the biannual IATA Schedule Coordination Conference). This is intended to alert all interested parties to potential problems, and ATC authorities may attempt to increase capacity in critical *en route* sectors. However, the first allocation of cleared airport schedules to available ATC capacity occurs only on the day." Coopers & Lybrand, "The Application and Possible Modification of Council Regulation 95/93 on Common Rules for the Allocation of Slots at Community Airports", Final Report, 17 October 1995.

11 This section is drawn from the ICAO "Study on the Allocation of Flight Departure and Arrival Slots at International Airports", March 2000.

12 The simplest example of the prescribed limits is at Newark Airport where the IFR operations per hour cannot exceed 40 for air carriers, ten for commuters and ten for others.

their saleability. Once all slots have been abolished, private ownership ceases to exist. A short summary of the highlights of the principal changes at Chicago O'Hare, New York-La Guardia, New York-JFK, and Reagan Washington National is provided below.**13**

O'Hare Airport

(i) Slot rules will be eliminated for operations before 14:45 and after 20:14 as of 1 July 2001 and eliminated completely on 1 July 2002.
(ii) Thirty exemptions were granted to new entrants and limited incumbent carriers.
(iii) Upgrades from turboprops to regional jets will receive 1 additional slot for each 2 that are upgraded.
(iv) Slots are provided for added small aircraft operations to small hub or non-hub airports.
(v) International slots became free as of 1 May 2000, subject to national reciprocity for foreign flag carriers. Slots used by US holders for international operations, or previously withdrawn by the FAA for use by other international operators, were returned or replaced on 30 April 2000.

New York-La Guardia and New York-JFK Airports

(i) Slot rules will be eliminated by 1 January 2007.
(ii) New entrants and limited incumbent carriers will be granted exemptions to bring them up to 20 slots (each carrier at each airport).
(iii) Slots will be provided for all added small aircraft operations or upgrades from turbo-props to regional jets for small hub and non-hub airports.

Reagan Washington National Airport

(i) Twelve new beyond-perimeter slots were created. Domestic network benefits are the primary consideration when selecting routes to be served.
(ii) Twelve new within-perimeter slots were created, whereby four are limited to small hubs or non-hubs.

13 For the full legislative text, see Subtitle C - Competition Section 231.

DEVELOPMENTS IN THE AIR TRANSPORT SECTOR SINCE THE CONCLUSION OF THE URUGUAY ROUND

PART SEVEN

Background Note by the Secretariat

Addendum

This background note provides additional information about developments in the air transport sector since the conclusion of the Uruguay Round. It covers scheduled passenger services, non-scheduled passenger services, cargo services and multimodal operations (see document S/C/W/163/Add.2 paragraph 153).

PART SEVEN

SCHEDULED PASSENGER

NON-SCHEDULED PASSENGER SERVICES

CARGO SERVICES

MULTIMODAL OPERATIONS

I. SCHEDULED PASSENGER SERVICES

1. This section provides a working definition established by the International Civil Aviation Organization (ICAO) and addresses the overall changes in Table and Chart format of scheduled traffic, for both passenger and cargo traffic. Scheduled services make up the largest segment of commercial airline operations. Its growth reflects in large part increased liberalization of the air transport sector, and expansion of world trade. Economic cycles or civil disturbances also affect scheduled traffic. The background economic and regulatory structures of scheduled passenger service are found in S/C/W/59 paragraphs 96-107.

A. DEFINITION

2. A scheduled international service was defined in 1952 by the Council of ICAO, as a flight that possesses all the following characteristics: "it passes through the air space over the territory of more than one state; it is performed by aircraft for the transport of passengers, mail or cargo for remuneration in such a manner that each flight is open to use by members of the public; it is operated so as to serve traffic between the same two points either (i) according to a published timetable, or (ii) with flights so regular or frequent that they constitute a recognisably systemic series."

3. "This definition encompasses a service: (a) which is part of an international network of services, operating according to a published timetable; (b) where the on-demand passenger has a reasonable chance of securing accommodation; (c) which normally operates irrespective of short-term fluctuations in payload; and (d) where stopover and interlining facilities are offered to the user with the appropriate ticket or air waybill, subject to the relevant international agreement, if any. The individual elements are cumulative in their effect. If, for a series of flights, any one of the characteristics (a), (b), (c), or (d) is missing, the series cannot be classified as a scheduled international air service."

B. ECONOMIC DEVELOPMENTS

4. It has been noted that with the recent developments in the airline industry and the introduction of liberal air policies, "the distinction between scheduled and non-scheduled air services has become increasingly blurred". In the case of operations between States within the EU, the "third package" of air transport liberalization measures, approved in 1992, has effectively eliminated the regulatory distinction between the two (by allowing non-scheduled air carriers to operate scheduled service and sell their product directly to the public)."[1]

5. The following Tables and Charts give an overview of scheduled operations in the main geographical regions in aggregate form, and by airline rankings for both passenger and cargo traffic. Table 1 and Table 2 provide information for the years 1988 to 2002 (forecasted) in individual world regions. The common feature that emerges is a strong increase in revenue passenger kilometres (RPKs) for scheduled traffic. However, the overall increase masks significant annual variation, as shown in Chart 1. Charts 2 to 4 trace recent developments from July 1999 to March 2001 for the Asia/Pacific, North American and European carriers. The overall feature, in particular for the Asia/Pacific and North American carriers, is a strong decline in RPKs from March/July 2000. European figures reveal a high degree of stability, possibly reflecting the overall economic cycle.

1 Policy and Guidance Material on the Regulation of International Air Transport, 1992.

TABLE 1
ICAO Scheduled Passenger Traffic Forecast

	Ten Year Traffic Growth (RPK)			Traffic Growth		Traffic Growth Forecast	
	1988 US$ billion	1998 US$ billion	Average annual growth	1999 Preliminary	2000 growth	2001 growth	2002 growth
Africa	38.1	55.7	3.9%	10.8%	5.5%	5.8%	5.7%
Asia-Pacific	309.2	622.7	7.3%	6.9%	7.0%	7.4%	7.2%
Europe	508.2	692.6	3.1%	7.3%	6.8%	5.7%	5.4%
Middle East	45.6	78.4	5.6%	0.9%	5.0%	4.5%	4.6%
North America	725.8	1,042.3	3.7%	6.0%	4.9%	4.1%	4.0%
South America	78.7	136.0	5.6%	0.6%	5.0%	5.9%	6.6%
World	**1,705.6**	**2,627.7**	**4.4%**	**6.2%**	**5.9%**	**5.5%**	**5.3%**

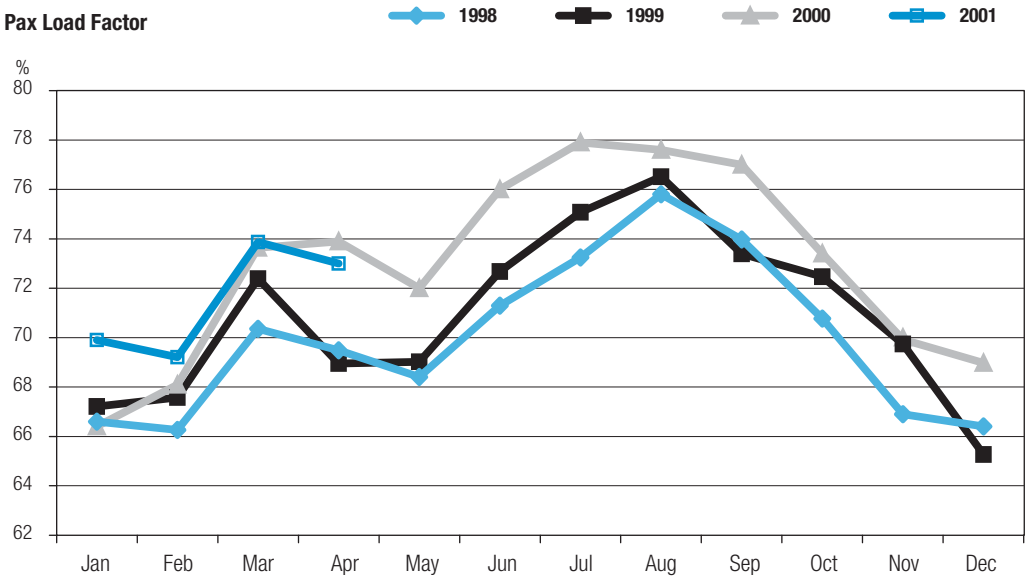
Source: *Airline Business*, September 2000.

TABLE 2
Top 200 Passenger Airline Statistics by Region 1998 -1999

Region	Passenger traffic (RPK)		Load Factors		Passenger numbers		Percentage of Top 200 Airlines		No. of airlines
	US$ Million 1999	Change 98-99	%	Change 98-99	US$ Million 1999	Change 98-99	RPKs	Passenger	
Africa	60,537	10.2%	63.4	-0.3	28	7.9%	2.0%	1.8%	15
Asia-Pacific	684,358	5.5%	69.1	2.4	343	4.5%	22.9%	21.4%	40
South America	118,267	-1.1%	61.8	-1.4	74	2.0%	4.0%	4.6%	21
Europe	882,837	6.3%	72.9	-0.7	442	5.1%	29.5%	27.6%	71
Middle East	84,550	6.6%	67.8	-0.5	40	3.1%	2.8%	2.5%	11
North America	1,157,730	5.5%	71.2	0.1	673	5.0%	38.7%	42.1%	42
Total	**2,988,278**	**5.6%**	**70.5**	**0.3**	**1,600**	**4.7%**	**100%**	**100%**	**200**

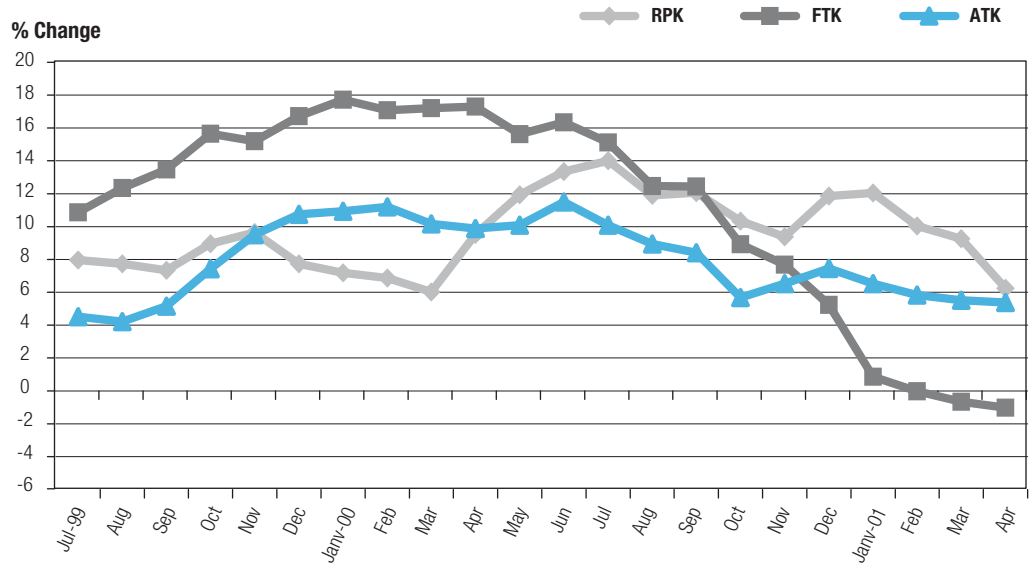
Source: *Airline Business*, September 2000.

CHART 1
Passenger Load Factor – IATA International Scheduled Services



Source: Peter Morris, Senior Economist, Aviation Information and Research, IATA, May 2001.

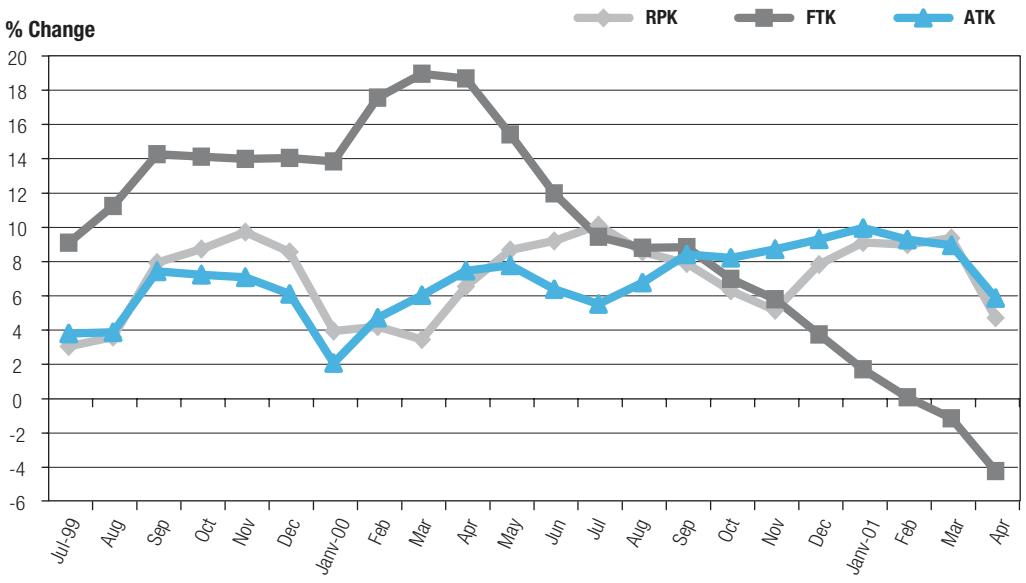
CHART 2
Asia Pacific Carriers: 4 Month Moving Average



Source: Peter Morris, Senior Economist, Aviation Information and Research, IATA, May 2001.

CHART 3

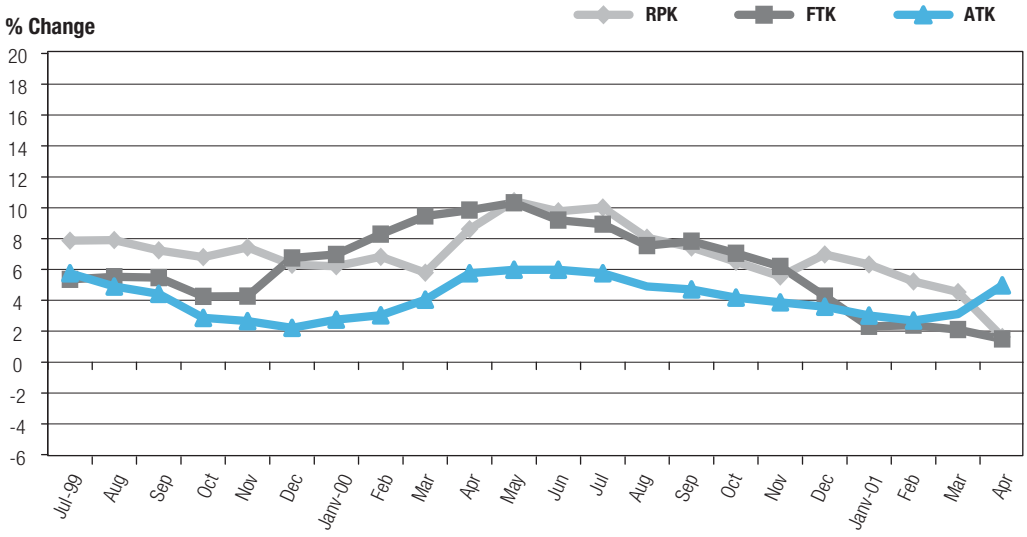
North American Carriers: 4 Month Moving Average



Source: Peter Morris, Senior Economist, Aviation Information and Research, IATA, May 2001.

CHART 4

European Carriers: 4 Month Moving Average



Source: Peter Morris, Senior Economist, Aviation Information and Research, IATA, May 2001.

TABLE 3
Top 50 Airline Ranking by Passenger Traffic (1999)

Ranking: passenger traffic		Ranking: passenger number	Airline	Fleet Size[a]	Country	Passenger Traffic (RPK[b])		Seat Capacity (ASK[c])	Load Factor		Passenger Number	
'99	'98	'99				million	change	change	%	change	million	change
1	1	2	United Airlines	603	USA	201,910	0.7%	1.5%	71.0	-0.6	87.1	0.3%
2	2	3	American Airlines	714	USA	180,144	2.8%	3.8%	69.5	-0.7	84.7	4.1%
3	3	1	Delta Air Lines	600	USA	168,599	1.4%	1.9%	72.4	-0.3	105.5	0.1%
4	5	6	Northwest Airlines	424	USA	119,337	11.1%	8.9%	74.6	1.5	56.1	11.1%
5	4	11	British Airways	268	UK	117,463	-0.7%	0.7%	69.8	-0.9	36.3	-2.0%
6	6	7	Continental	364	USA	96,575	11.3%	9.6%	73.2	1.1	45.5	4.3%
7	8	9	Air France	227	France	85,543	12.1%	11.3%	76.1	0.6	39.8	7.6%
8	7	12	Japan Airlines	135	Japan	84,255	6.1%	3.7%	70.2	1.6	33.0	4.5%
9	9	10	Lufthansa Airlines	233	Germany	81,401	13.2%	13.9%	73.3	-0.4	38.9	7.8%
10	10	4	US Airways	384	USA	66,898	0.5%	4.3%	70.1	-2.6	58.8	1.4%
11	11	27	Singapore Airlines	92	Singapore	65,718	9.0%	5.5%	74.9	2.4	13.8	8.5%
12	12	19	Qantas Airways	104	Australia	59,863	2.1%	0.3%	73.2	1.3	19.2	2.0%
13	13	22	KLM	97	Netherlands	58,903	2.7%	2.6%	77.4	0.1	15.7	4.7%
14	15	5	Southwest Airlines	327	USA	58,695	16.1%	11.2%	69.0	2.9	57.7	9.5%
15	14	8	All Nippon Airways	140	Japan	56,725	4.0%	1.7%	65.1	1.5	42.7	2.2%
16	17	13	TWA[d]	188	USA	41,946	6.5%	3.2%	72.9	2.2	25.8	8.0%
17	16	33	Cathay Pacific	62	China	41,502	2.0%	-3.6%	71.4	3.9	10.5	2.1%
18	18	24	Air Canada	158	Canada	39,005	4.4%	3.8%	71.4	0.5	15.2	2.7%
19	20	21	Thai Airways Int'l	77	Thailand	37,642	14.2%	6.7%	72.7	4.8	16.3	7.4%
20	19	14	Alitalia	146	Italy	36,762	3.5%	5.5%	67.5	-1.3	24.1	-0.2%
21	22	18	Korean Air	11	Korea, Rep of	36,662	13.6%	3.3%	74.05	6.7	20.5	4.1%

Ranking: passenger traffic		Ranking: passenger number	Airline	Fleet Size[a]	Country	Passenger Traffic (RPK[b])		Seat Capacity (ASK[c])	Load Factor		Passenger Number	
'99	'98	'99				million	change	change	%	change	million	change
22	23	23	Malaysia Airlines	93	Malaysia	34,930	14.2%	8.2%	71.3	3.9	15.4	12.1%
23	21	16	Iberia	179	Spain	34,606	6.4%	11.5%	68.9	-2.6	21.9	0.6%
24	24	26	Swissair	74	Switzerland	32,974	15.6%	14.9%	72.7	0.4	13.9	13.6%
25	27	20	America West	132	USA	28,496	8.2%	6.6%	68.4	1.0	18.7	5.1%
26	26	46	Canadian Airlines[e]	80	Canada	26,701	-0.6%	0.5%	71.1	-0.8	7.5	-10.2%
27	32		Virgin Atlantic	28	UK	25,027	21.2%	26.5%	77.0	-3.4	3.6	20.6%
28	25	35	Varig	89	Brazil	23,624	-12.7%	-13.7%	66.6	0.6	10.1	-8.7%
29	30	41	Condor Flugdienst	47	Germany	23,000	10.0%	8.1%	82.4	1.4	8.2	11.7%
30	33		China Airlines	49	Chinese Taipei	22,250	9.4%	3.4%	72.0	3.9	7.9	7.5%
31	28	42	Britannia Airways	33	UK	21,747	-6.7%	-7.2%	90.1	0.4	8.2	-3.2%
32	31	15	SAS	154	Sweden	21,243	1.7%	4.8%	63.8	-1.9	22.2	2.4%
33	29		LTU Int'l Airways	35	Germany	20,250	-10.2%	-7.1%	78.2	-2.7	6.3	-12.2%
34	34		Air New Zealand	37	New Zealand	19,665	0.3%		68.7	0.2	6.5	1.5%
35	35	29	Saudi Arabian Airlines	99	Saudi Arabia	19,619	4.3%	4.5%	63.2	0.2	12.3	4.3%
36	37	28	Alaska Airlines	91	USA	18,949	4.3%	3.2%	67.9	0.8	13.6	4.4%
37	36	25	China Southern Airlines	74	China	18,685	2.3%	5.6%	58.7	-1.9	15.1	0.4%
38	38	17	Japan Air System	82	Japan	18,368	7.7%	3.7%	62.3	2.3	20.9	5.7%
39	40		EVA Air	35	Chinese Taipei	18,151	8.9%	2.0%	74.6	4.7	4.1	12.8%
40	46	36	Sabena	53	Belgium	17,714	15.5%	19.9%	65.6	-2.5	10.0	14.3%
41	44		South African Airways	52	South Africa	17,644	10.6%	15.7%	61.9	-2.8	5.7	11.4%
42	45		American Trans Air	56	USA	16,895	7.9%	3.2%	73.7	3.2	6.8	14.0%
43	41		Aeroflot	110	Russia	16,405	-0.3%	-3.6%	59.4	2.0	4.6	3.5%
44	43		Airtours Int'l	31	UK	16,266	0.1%	0.7%	91.6	-0.6	5.5	-0.9%
45	65		Air 2000	27	UK	16,217	54.2%	54.5%	91.4	1.1	6.0	32.7%

Ranking: passenger traffic		Ranking: passenger number	Airline	Fleet Size[a]	Country	Passenger Traffic (RPK[b])		Seat Capacity (ASK[c])	Load Factor		Passenger Number	
'99	'98	'99				million	change	change	%	change	million	change
46	48		Emirates	32	UAE	16,130	16.0%	20.2%	71.9	-2.6	4.8	12.4%
47	42	30	Ansett Australia	64	Australia	15,822	-3.0%	-8.2%	67.9		11.8	-1.3%
48	47		Air China	65	China	15,735	7.8%	4.8%	61.2	1.7	6.7	3.7%
49	49	34	THY Turkish Airlines	75	Turkey	13,903	0.6%	8.2%	60.0	-4.5	10.4	-0.9%
50	57		Asiana Airlines	51	Korea, Rep of	13,674	21.4%	9.7%	75.6	9.3	11.1	26.5%

a This includes aircraft for passenger, cargo, and combination.

b RPK = Revenue Passenger Km

c ASK = Available Seat Km

d Trans World Airlines (TWA) was purchased by American Airlines in 2001.

e Canadian Airlines was acquired by Air Canada and is now fully incorporated into Air Canada.

Source: *Airline Business*, September 2000.

II. NON-SCHEDULED PASSENGER SERVICES

6. ICAO defines non-scheduled air services as commercial services performed as anything other than a scheduled air service. Charter flights are non-scheduled operations using chartered aircraft. Although the terms are used interchangeably, not all commercial non-scheduled operations are charter flights. States often consider non-scheduled flights to be supplementary to scheduled operations. Non-scheduled services have been instrumental in some regions, notably Europe, in the development of international mass tourism, and have assumed considerable economic and social importance for many developed and developing countries.

A. CHARACTERISTICS OF NON-SCHEDULED AIR SERVICES

7. Non-scheduled air services have a number of elements in common that distinguish them from scheduled services. Non-scheduled services are usually operated: (i) on a point-to-point and often plane-load basis "pursuant to a charter contract (several charterers may share the capacity of an aircraft); (ii) on an *ad hoc* or on a regular, but seasonal basis; (iii) with the financial risk for under-utilized payload being assumed by the charterer rather than the aircraft operator; (iv) without the air carrier maintaining direct control over retail prices (the aircraft capacity is usually sold wholesale by the carrier to tour operators, freight forwarders or other entities); and (v) subject to seeking permission, or giving prior notification, for each flight or series of flights to/from the country of origin or destination or both".[2]

B. ECONOMIC DEVELOPMENTS OF THE SECTOR

8. The international non-scheduled passenger market has grown significantly and is in the process of consolidation. The sector has now become an integral part of a broader travel and leisure industry and is often operated within vertically integrated conglomerates, owning a broad spectrum of companies.[3]

9. The growth of the European leisure market, which has traditionally been a large and dynamic sector, is representative of economic and regulatory changes that have been occurring over the past five years (Table 4). In 1999 the gross revenue of this market amounted to US$37.2 billion, that was generated by six multinational travel corporations.

10. Non-scheduled passenger services are treated in the Annex of bilateral air service agreements and must conform to all Articles in the main body of the agreements, unless specifically excluded. As Table 3 indicates, the non-scheduled passenger sector of air transport is often one part of a larger industry. Although vertically integrated travel and leisure groups own charter airlines, charter travel is also an important aspect of scheduled airline operations. Most scheduled airlines either operate "charters" themselves, or they sell capacity to independent tour operators.

C. REGULATORY DEVELOPMENTS

11. Charter flights are still regulated primarily at the national level as is noted in Article 5 of the Chicago Convention.[4] This Article permits non-scheduled flights to overfly and land without permission, but allows each Contracting State to determine the conditions under which such flights may pick up or discharge passengers, cargo and mail. The relevant ICAO definition, drawn from the ICAO Manual on Regulations reads as follows:

> "For the guidance of States in their interpretation or application of Articles 5 and 6 of the Chicago Convention, the Council of ICAO has developed a definition for the term 'scheduled international air service' which is accompanied by 'Notes on the Application of the Definition and an Analysis of the Rights Conferred by Article 5 of the Convention' (see Scheduled Services). Under a unilateral framework, States of origin and destination regulate independently of each other the non-scheduled/charter services between their territories. In this situation the charterer and carrier must follow rules of both States for the operation to be charter-worthy. These rules generally appear in national laws, government regulations, policy statements dealing with air transport and authorizing the regulation of such operations, or in the licence/permit authorizing the non-scheduled flight or flights (p. 4.6-3)."

2 ICAO Manual of Regulations, Doc 9626, p. 4.6-1.

3 See document on S/C/W/59 paragraphs 108 - 114 and S/C/W/129, paragraphs 19(e) and 19(d).

4 See document S/C/W/59, paragraph 111.

TABLE 3
European Charter and Travel Industry (2000)

	Thomson	Preussag	Preussag Thomson[a]	C&N Touristic	Thomas Cook[b]	Airtours	First Choice	Kuoni Reisen	Total
Home Country	UK	Germany	Germany	Germany	UK		UK	CH	
Revenue US$ million	4,765	6,971	11,736	4,527	2,857	2,084	2,235	2,052	37,227
Operating profit, US$ million	85	331	416	121	60	173	80	68	1,334
Companies worldwide		594						Operates in 20 countries worldwide	
Employees		80,000		28,000	16,000			7,700	
Main travel agents	Lunn Poly; Callers Pegasus; Sibbald Travel; Travel House	TUI; 1-2 Fly; Arke Reizen; Holland Int'l		Terramar; Air Marin; Neckermann; Bucher; Kreutzer; Fischer;	Thomas Cook; Orchid Travel	Going Places; Travel world	Travelchoice; Bakers Dolphin; Holiday Hypermarkets; Hays Travel; Holiday Express	Kuoni; Helvetica Tours	
Agency outlets	1,000	3,000	4,000	1,066	700	2,300	600	----	12,666
Airline	Britannia	Hapag-Lloyd		Condor		Airtours International	Air 2000	Edelweiss Air; Novair	
Fleet size	44	62	106	53	28	45	17	6	361

a Preussag acquired Thomson and was renamed Preussag Thomson

b C&N acquired Thomas Cook, new name to be: Thomas Cook

Sources: *Airline Business*, September 2000; www.preussag.com; www.cn-touristic.de; www.kuoni.com; www.firstchoice.co.uk; www.airtours.com.

III. CARGO SERVICES[5]

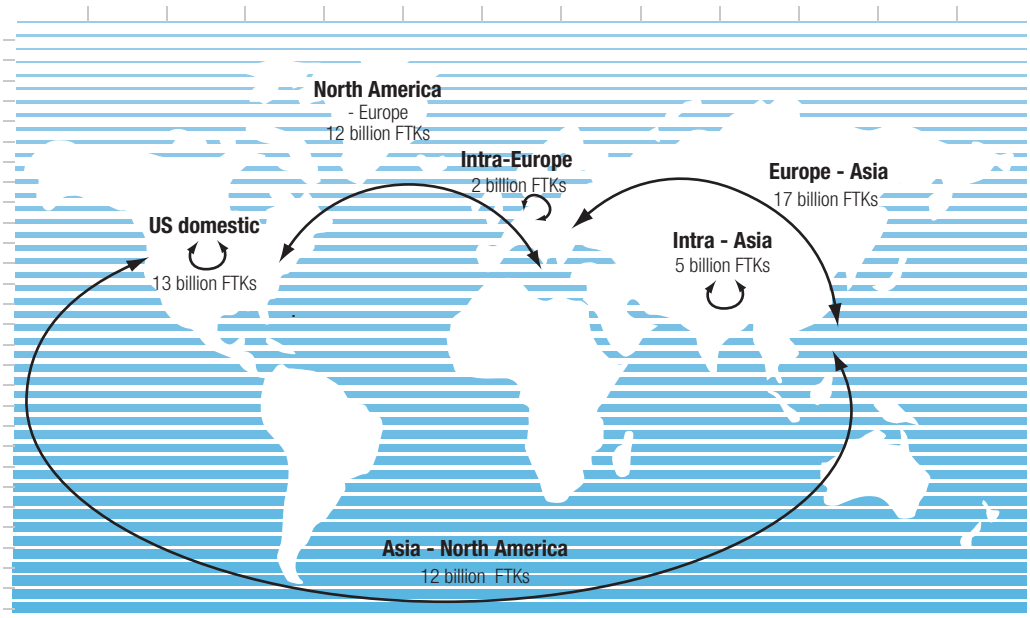
12. The Organization for Economic Cooperation and Development (OECD) notes that, from an economic perspective, air cargo has contributed to and benefited from the recent rapid growth of the world economy and the globalization and internationalization of production. It offers a fast and relatively safe mode of transport for low volume, low weight, but high-value products. For the past decade, air cargo transportation has grown faster than air passenger volumes and, according to industry forecasts, this trend is expected to continue. It accounts at present for about 2% of all cargoes moved world wide in terms of tonnage, but for well over one-third of the value of world trade in merchandise. It provides an important back-up service in terms of meeting demands for spare parts and emergency repair equipment, and it often offers the only viable means of freight transport to remote, peripheral regions where high costs of fixed, tracked transport infrastructures and climate conditions put other modes of transport at a major disadvantage. In global terms, the dominant cargo flows are in three markets: the North Atlantic, Europe/Far East and the Pacific Rim. Air cargo transportation is part of the international logistical chain servicing trade and industry worldwide; it is a mode of transport in its own right.

13. Chart 5 illustrates current freight flows between major economic regions in 1996.

14. From a regulatory point of view the air cargo sector is less affected by national sensitivities, such as the "nationality" of the carrier, recognition of the brand name and "equal sharing" of passenger traffic between two countries.

5 The content of the following pages is drawn to a very large extent from a 1999 OECD Study "Regulatory Reform in Air Cargo Transportation". See also document S/C/W/59, paragraphs 115 - 119, and S/C/W/129, paragraphs 15 - 18, 19(d), and Annex 4.

CHART 5
World Freight Flows
(Billions of RTKs, 1996)

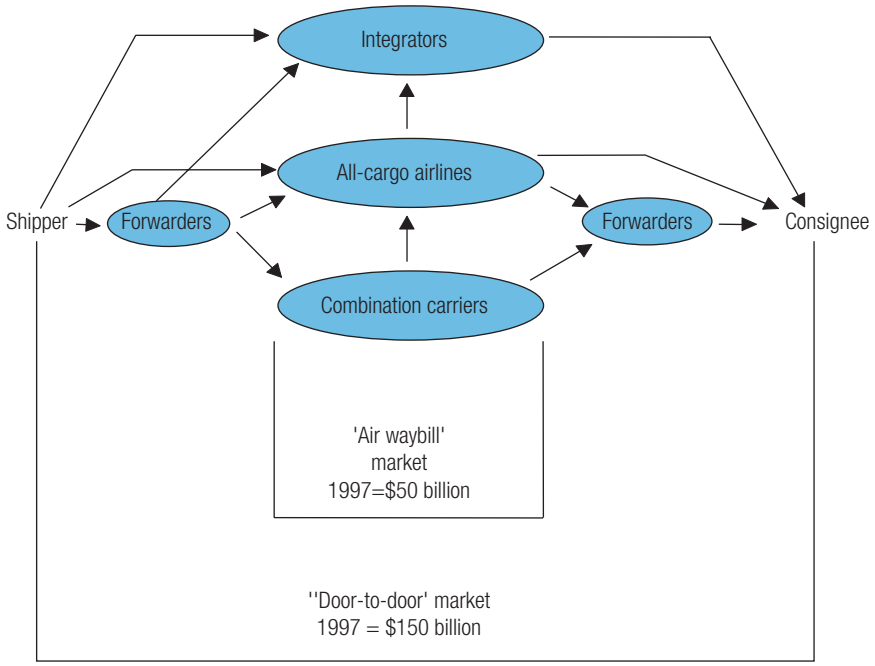


Source: OECD, "Regulatory Reform in Air Cargo Transportation", 1999.

A. ECONOMIC STRUCTURE AND DEVELOPMENTS

15. The sector structure can be outlined as follows:

CHART 6
Air Cargo Services



Source: Airbus / KLM

16. Traditionally, cargo is considered as secondary to passenger services. The so-called combination carriers (scheduled passenger/cargo airlines) such as Lufthansa, Korean Airlines, Air France, JAL, United Airlines, *et cetera*, carry cargo in the belly holds of their passenger aircraft, as well as on board their dedicated freighters. All-cargo airlines, such as Cargolux, Arrow Air, Nippon Cargo, Heavylift, *et cetera*, operate freighters on scheduled and non-scheduled (i.e. niche) operations. Integrated/express carriers, such as FedEx, UPS, DHL, TNT operate their own aircraft on routes they elect to fly, and hire other carriers' services for other destinations. The bulk of the world's air cargo (freight and mail) is carried by combination airlines in scheduled and non-scheduled operations. They carried approximately 75% of the world's total air cargo in 1996 in freight tonne kilometres (FTK).[6]

17. In cargo services, a difference can be made between common carrier operations "hold-out" to the general public at regular schedules, and charter operations catering to *ad hoc* consumer demands according to their specific time and routing needs. There are full own-use charters for hire by individual customers, and shared charters which can consolidate shipments from several customers and third parties. Because of the seasonal character of part of the air cargo, charters play a non-negligible role. Recently, cargo capacity has also become available in the belly holds of tourist charters to and from resort destinations. According to estimations, the majority (80-85%) of air cargo is currently transported on scheduled flights, and charters account for the remaining 15-20%.

18. Table 5 lists the largest air cargo carriers on scheduled international routes, and their market shares. The market structure is relatively concentrated: the 25 carriers listed performed as much as 75% of total international air cargo traffic in 1996; the first 10 accounted for 50% of total traffic.

6 Approximately 50% of this total used belly compartments of passenger aircraft, while an additional 25% was carried on freighter aircraft belonging to combination carriers. Cargo operations on combination carriers are predominantly long-haul, assisted by feeder services. The remaining 25% of the total was carried by specialized all-cargo airlines and integrated express operators.

TABLE 5

Major International Air Cargo Carriers

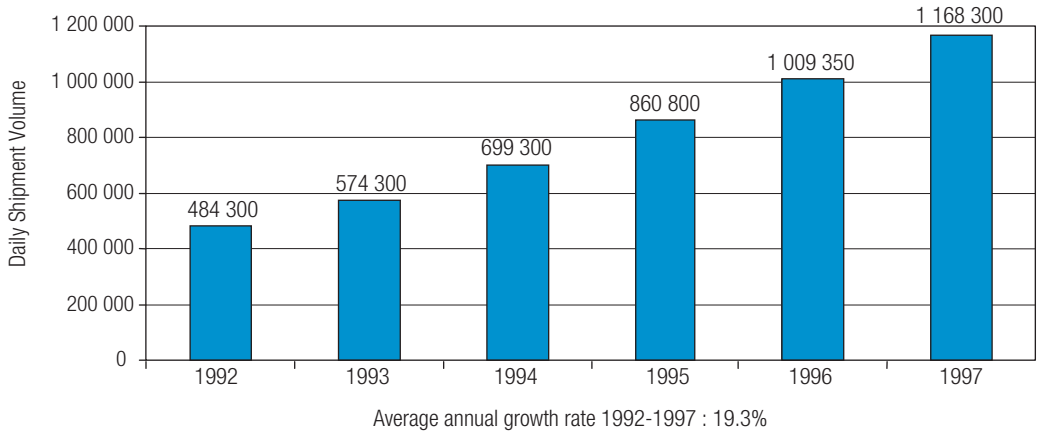
(Tonne-kilometres performed in scheduled international services, 1996)

Airline	International Freight Tonne Kilometres (FTKs) (billion)	World International Market Share (%)	Share of Carrier's Total FTKs which are International (%)
Lufthansa	5.99	7.3	99.6
Korean Airlines	4.74	5.8	98.4
Air France	4.65	5.7	100
Singapore Airlines	4.12	5.0	100
KLM	3.78	4.6	100
Japan Airlines	3.61	4.4	92.7
British Airways	3.44	4.2	98.5
Cathay Pacific	3.18	3.9	100
Federal Express	2.95	3.6	37.7
China Airlines	2.40	2.9	~90
Cargolux	2.02	2.5	100
EVA Air	1.93	2.3	~90
United Airlines	1.90	2.3	73.0
Northwest Airlines	1.85	2.2	66.3
American Airlines	1.66	2.0	70.5
Swissair	1.62	2.0	99.6
Nippon Cargo Airlines	1.61	2.0	100
Martinair Holland	1.52	1.8	100
Qantas	1.47	1.8	92.4
Alitalia	1.43	1.7	98.1
Malaysia Airlines	1.36	1.6	95.9
Asiana Airlines	1.32	1.6	~90
Thai Airways	1.32	1.6	97.6
United Parcel Service	1.18	1.4	21.6
El Al	1.11	1.4	100
Top 25 Scheduled Airlines	62.16	73.4	
Other IATA Airlines	22.49	26.6	
Total Scheduled International	84.65		

Source: International Air Transport Association, 1997.

19. Among the airlines listed above, express carriers constitute a specific and particularly dynamic segment (Chart 7 and Table 6).

CHART 7
International Air Express Market



Source: Air Cargo Management Group (ACMG), 1997.

TABLE 6
Concentration in the International Express Sector
(Daily shipments volume, 1997)

Company	Market share (%)	Growth 1996-1997 (%)
DHL	39.9	15.4
TNT	12.0	16.7
Federal Express	21.1	17.8
United Parcel Service (UPS)	14.6	10.0
Airborne Express	1.8	19.5
Other	10.6	20.0

Source: ACMG, 1997.

20. Freight forwarders play an essential role in the cargo industry. The freight forwarding industry handled 60 million shipments worldwide in 1996 and generated combined annual revenues of around US$45 billion. The top 20 forwarders, including Air Express International (AEI), Schenker, Kuehne&Nagel, Panalpina, Airborne Express, and Burlington handle nearly half of total forwarding traffic.

21. On the regulatory side, the forwarders are seen as agents of the airlines.[7] On the operational side, the situation is becoming more ambiguous. Through leasing, and sometimes operating aircraft, the forwarders are acting as virtual air carriers. To their respective customers, they promote their "own flights" with their own schedules. Through consolidating shipments themselves and offering these consolidations to carriers, the forwarders appear as shippers on the air waybill. In the US, the consolidating forwarders are referred to as "indirect air carriers"; they act in competition with the "direct air carriers". So-called virtual air carriers are not constrained by traffic rights.[8]

22. The world air cargo market is forecast to increase three-fold over the next fifteen years. However, there is a significant degree of variation between regions (Table 7).

7 See document S/C/W/163, paragraphs 136 to 142.

8 Such considerations may have influenced Deutsche Post's decision to purchase Air Express International (an innovator in international freight forwarding) and Danzas.

TABLE 7

Projections for Major Regional Markets, 1996-2016

(Combined Boeing, Airbus and McDonnell Douglas forecasts, in RTKs)

Region	Total Freight Tonne Kilometres (millions of RTKs) 1996	Total Freight Tonne Kilometres (millions of RTKs) 2016	20 Year Growth Forecast (annual growth in %)	World Market Share - 1996 (%)	World Market Share - 2016 (%)
US Domestic	13.06	37.40	5.4	16.8	12.6
Europe-Asia	14.62	64.47	7.7	18.8	21.7
Europe-North	12.31	34.60	5.3	15.8	11.6
America	12.06	62.40	8.6	15.5	21.0
Asia-North America	5.36	34.77	9.8	6.9	11.7
Intra-Asia	20.46	63.96	5.9	26.3	21.5
World Market	77.87	297.60	6.9	100	100

Source: ACMG, 1997.

23. The maturation of the market went hand-in-hand with the development of three main types of products:

(a) standard air cargo services: freight rates are relatively low (typically US$ 5-6 per kilo on a transatlantic flight) and are tending to diminish, delays are relatively long (three to six days);

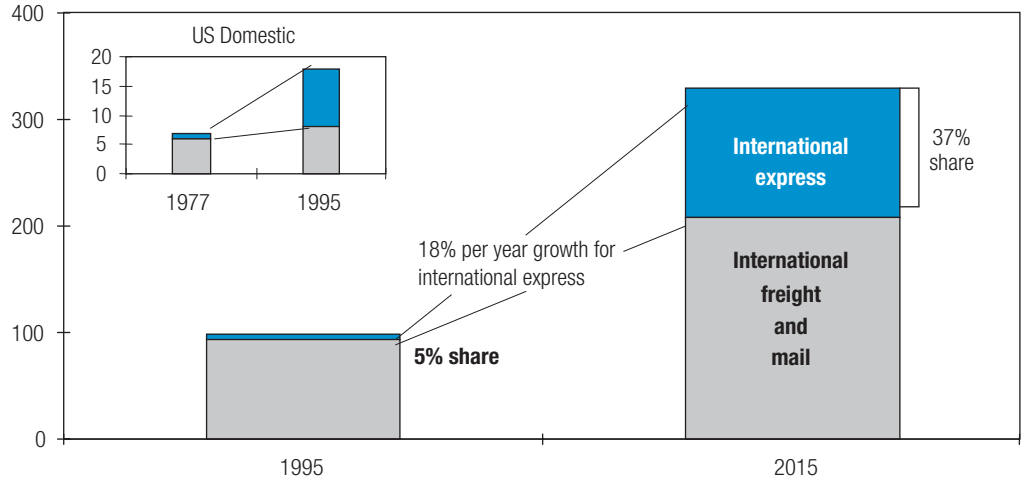
(b) express, time-definite services: freight rates are higher (typically US$ 20-25 per kilo for a transatlantic flight), delivery time is shorter (half a day or a day for most destinations) and guaranteed contractually; and

(c) Value-adding, logistics services: the logistics chain (the transport mode/storage point/delivery time/delivery cost selections) is optimized according to shippers' needs and market circumstances. Transportation is an element of a wider service. Providers offer inventory management and handle storage points and buffer stocks on behalf of shippers. The logistics industry draws on longer-term contracts between shippers and carriers. Here the definition of services and rates is not comparable to traditional spot markets. Information on rates for this type of services is not currently available.

24. International Express Delivery services are expected to grow significantly in the medium term. Although accurate data is unavailable, value-adding logistic services are likely to follow this trend, however, from a lower starting-point (Chart 8).

CHART 8

Forecast Growth of International Express Delivery Services
(US domestic and international market, billions of RTKs)



Source: Boeing, 1997.

25. One of the main reasons for growth and diversification of the air cargo industry is an expanding clientele. The industry no longer offers just exclusive/premium services benefitting from postal system deficiencies and the specific transportation needs of perishable, urgent or precious goods. In the late 1990s, the range of air transported products has diversified, reflecting increasingly liberal and dynamic trading market. The most important air cargo commodities are measured by weight: machinery parts, electronics, high-tech instruments, cut flowers, live trees/plants, fish, crustaceans, vehicle parts, plastic, consumer durables, apparel, and footwear.

26. The majority of cargo airlines are also involved in mail transportation. Mail is treated separately from cargo under the Warsaw Convention. It is subject to two sets of rules: postal and cargo. Government authorization is needed to carry ordinary mail in most countries; the relevant rules are defined by the Universal Postal Union (UPU).

27. Very few postal operators own or operate their own aircraft. In Europe, this is found only in Sweden and France (domestic services only).

28. Mail by air has priority over general cargo and passengers under the established rules of the UPU Convention.[9] The Convention also established lower priority for second class mail, and specified maximum ceilings on tariffs. This is intended to ensure that on low-profitability routes, and city-pairs served by a monopoly, the tariffs charged remain reasonable. On competitive city-pairs (e.g. Paris-New York), real tariffs tend to be much lower than UPU tariffs. The International Air Transport Association (IATA) is reportedly challenging this system of priority allocation and tariff ceilings. The intent is for mail to be included in the common regime and subjected to rates comparable to those for express delivery cargo. Discussions are underway between UPU and IATA.

29. There are also certain customs preferences for mail. For example, business mail is duty exempt, while printed material and unaddressed direct mail may be excised if they exceed a certain threshold, which varies between countries. In comparison, normal cargo uses an air waybill, which is costly (US$14-70), has to be declared (exempted goods included) and cleared in a customs zone. The resulting inter-operability problems are subject to debate within the UPU.

9 This is stipulated in the 1948 Agreement between IATA and the UPU and is reflected in Articles 52 and 53 of the UPU Convention.

B. REGULATORY STRUCTURE AND DEVELOPMENTS

30. This section describes the specificity of cargo services against the background of traditional regulatory elements: routes, tariffs, capacity, designation, charter regime, predatory practices, competition policy, slots, and ownership. There is also reference to experiences with deregulation.

1. Routes

31. From an operational point of view, a hub-and-spoke system is the most efficient way to run a network; this includes express cargo services. However, route development by carriers in scheduled services is constrained by independently negotiated bilateral agreements. Thus carriers find it difficult to adjust to market developments. There is therefore an incentive to co-operate with third carriers authorized on a given route. However, this is a sub-optimal strategy in terms of costs and quality control.

32. Obtaining authorization for new routes may require considerable lobbying efforts in certain countries. This has caused some carriers to call for a multilateral system subject to reciprocity. Some carriers such as FedEx feel comfortable with the current system. Others, such as UPS, do not, and are pleading for a multilateral system which would open all routes with the only safeguard being mirror reciprocity.[10]

33. Nevertheless, the present cargo carrier regime tends to be more liberal than that for passenger carriers. Liberalization of cargo, starting with routes, has been used as a test case for a wider bilateral liberalization, notably by the US. This distinction between passenger and cargo operations is not, however, widespread in Air Service Agreements (ASA). It is promoted predominantly by countries having a strong interest in developing the air cargo sector without nationality considerations. Cases in point are Australia's 'Open Skies' cargo policy, Canada's 'open airport' policy for cargo at Montreal's Mirabel airport, and liberal cargo policies practised by Mexico and India.

34. Certain types of routes and Freedoms (notably Fifth and Seventh), while rarely given for passenger services, have been included in recent open skies agreements for cargo.[11] Seventh Freedom rights authorize companies to carry freight and passengers between two foreign countries without a direct link to their home country. They are particularly important for small country carriers developing cargo routes outside their home base, and global airlines developing international hub-and-spoke networks. In both instances, carriers have to operate services between overseas airports, without necessarily having departure or arrival links in the home country (in this latter case, they would need only Fifth Freedoms). Seventh Freedom rights are seldom granted in ASAs, thereby obliging many carriers to subcontract operations to local carriers.

35. This liberalization trend is limited by the fact that 60% of cargo remains carried in the belly hold of passenger aircraft, which are subject to more route restrictions. These "combi-carriers" have an incentive to oppose route liberalization for cargo carriers (the former carry higher economic and political weight than the latter). The combi-carriers consider that the playing field is level, since they offer lower prices but less frequencies than all-cargo carriers.

2. Designation

36. To offer services a carrier must be designated under the bilateral agreements.[12] While multiple-designations offer more flexibility, they remain subject to the same bilateral conditions. Under the bilateral regime, limited multi-designation restricts the number of carriers on a given route, which as noted above may pose particular difficulties for all-cargo and express companies.[13]

3. Capacity

37. Capacity constraints in air services agreements, either *ex ante* or *ex post*, constrain market- based adjustment. However, not all ASAs are equally restrictive. In some cases it is possible to accommodate the competitive performance of carriers. In recent years, several ASAs incorporated more flexible capacity regimes, in particular for the cargo sector. Global incremental capacity increases are negotiated over multi-year periods, minimum capacity levels are specified with automatic increases, or increases are linked to achieving certain load factors. However, the limited

10 This point of view has been endorsed by the International Chamber of Commerce (ICC), Document No.322-3/5 Rev 3, 25 September 1998, "Policy Statement: Air Cargo and the WTO", circulated to the Council for Trade in Services as a room document, 18 May 1999.

11 See document S/C/W/163/Add.2, 10 November 2000, Table 23, pages 55-56, available from the WTO secretariat. For a description of the Freedoms of the Air, see S/C/W/163/Add.3, Chart 1, paragraph 4.

12 See document S/C/W/163 Add.3, paragraphs 62-67.

13 The designation of UPS in the recent US-China Agreement, despite an application by a major passenger airline, may be considered an exception.

number of route designations in certain agreements has remained an important operational limitation.

4. Tariffs

38. Tariffs in cargo services follow, in principle, the same pattern as for passengers. Thus there are the following cases:

(i) Total rate freedom: on certain routes and for certain types of services, carriers are completely free to set their own rates with little or no government intervention. This is the case, for instance, of express/courier services and of the so-called unilateral tariffs, which are only valid on routes between two States and for which, in some cases (such as Germany/United States) no approval but only a publication requirement exists. In many instances, the filing of official tariffs is not required, not even for information purposes.

(ii) Regulatory approval of rates: most standard cargo rates are nevertheless governed by regulatory mechanisms, especially outside the US and the EU. This is common where bilateral air service agreements include price-setting provisions and where carriers are free to set their own prices. In these cases the cargo tariffs are agreed by the designated airlines, either bilaterally or multilaterally, through the Tariff Conferences of IATA[14] and filed for approval with governments. If not disapproved, the filed rates become applicable to all other carriers. A few governments do monitor or enforce the application of these approved tariffs.

(iii) On routes to and from the US and within the EU, government approval for IATA agreements is usually associated with the requirement that the tariffs must be in the form of maximum prices and that every carrier is free to apply lower tariffs. As a result, overcharging compared with the published IATA tariffs does not occur. If a tariff has to be increased, this is made known by the carrier on a multilateral basis via IATA. If no objection is made, the higher tariff is included in the multilateral tariff agreement upon expiry of a certain period and is applicable to all carriers engaged in interline operations.

14 For more information on the IATA tariff conferences, see S/C/W/163/Add.3, Chart 2, paragraphs 104-105.

39. An important aspect of rate regulations is "mandatory filing". Certain governments require the official disclosure of carriers' tariffs as a measure against preferential or discriminatory pricing. Other governments do not prohibit rate differentiation, and consider rate-filing as a potential source of rigidity and collusion in pricing. They tend to consider companies' marketing documentation as a sufficient source of rate information. Large discrepancies have occurred between filed IATA rates and tariffs actually practiced by air carriers.

40. Market considerations prevail in the setting of air cargo rates.[15] Supply and demand balances vary by routes and types of services, and market rates reflect these differences.

5. Other elements of bilateral Air Services Agreements impacting on the cargo sector

(a) Change of gauge

41. Some ASAs still contain provisions on change of gauge operations, which refer to aircraft changes. Such changes are critical for express carriers implementing hub operations, because they feed cargo to, or distribute cargo from a hub. ASAs generally state that change of gauge "cannot be construed in such a way as to provide a 'separate' service", i.e. for going beyond the rights exchanged under these agreements. These are significant restrictions, which are considered by express carriers as operational impediments.

(b) Non-scheduled cargo services

42. Concerns about passenger charters undermining scheduled flights also exists on the cargo side, revolving around split charters (i.e. planes where space can be resold to third-parties). They are discouraged by most since they are seen as a competitor to scheduled flights.

15 The freight rates correspond to a continuum of products with different valuations (notably delivery times) by consignors and consignees, and different operation costs (notably volume and frequency of shipments) by carriers. An example of how the market determines service/price is the development of consolidation cargo using the High Weight Breaks of the General Commodity Rate (GCR) on the trans-Pacific routes. Consolidated cargo has expanded quickly since the 1970s, when carriers introduced the Bulk Utilisation Charge, a rate structure that offered greater profit for large consolidators. This rate structure created a wider gap between the contract rate for consolidators and the retail rate that consolidators charge their customers (it is the tariff applied by the consolidator, not the carrier's tariff, which is the consumer price for cargo services). Important gaps can therefore appear between wholesale and retail prices, and between rates available to different customers. Such discrepancies do not usually exist in express services. Express rates do differ, but according to weight and speed requirements (and the market power of carriers on individual routes), and consumer parcels are handled under individual air waybills.

Cargo carriage in the belly holds of tourist charters is also frequently prohibited, generating economic inefficiencies, in particular on North-South routes. In contrast, "own-charters" (which service one single client), are considered a different market segment by many governments and treated more liberally.

(c) Ownership

43. Cargo services follow the general ownership rules described above. Current rules generally extend from ownership and control of companies to the ownership and control of the aircraft they operate. In certain instances the nationality of personnel is also specified. To obtain a licence as an air carrier, a company may need to "own and operate" its own aircraft, and employ national citizens as crew. This may restrain the use of an important commercial practice: "leasing" and especially "wet leasing" (hiring with flying personnel) of foreign cargo aircraft. The practice is an important source of flexibility in the air transport industry, in responding to seasonal peakloads, and in developing cargo operations with limited capital. The regulatory and safety issues potentially involved have been described elsewhere.[16]

(d) Slots

44. Airport congestion and night curfews inhibit passenger, cargo and combination operations. Approximately 130 of the world's major airports are officially "congested", which means that access is difficult to acquire. Many of the world's major cargo facilities are in this situation today. A growing number of all-cargo and new entrant passenger airlines have thus been developing operations out of "secondary" uncongested airports.[17] They may thus have a temporary advantage over established express and combined carriers, which have already structured their networks and operations around main airports.

(e) Predatory pricing

45. Predatory pricing is considered a significant threat to competition in the air sector, notably due to opportunities for cross-subsidization between routes and markets. Moreover, the high share of fixed costs in an airlines' cost structure allows for significant departures from sustainable pricing practices, relying only on marginal cost, with a view to deterring competitors. However, distinguishing between such predatory conduct and aggressive pricing remains very difficult. Predatory pricing may take place in both passenger and cargo markets. So far, discussion has focused on passenger ticketing, although freight rates are not immune.

(f) Competition policy

46. Similarly, major competition cases have involved only passenger operators and revolved around mergers, acquisitions, co-operative alliances, major airport hubs and computer reservation systems (CRSs). The impact of distortions on the cargo market seems to have attracted far less attention.

(g) Deregulation of the cargo sector (national and international)

(i) United States

47. The US deregulation of cargo services pre-dates the period under review (1993-2000). It served as a model for passenger deregulation in the US and has, to some degree, influenced the internal deregulation of cargo services in the EU. The most relevant liberalization measures under the 1977 Air Cargo Act and the Air Deregulation Act of 1978 for cargo operations include:

The liberalization of licencing: Both all-cargo and combined passenger-cargo licences are accessible to all "fit, able and willing" entrants. Licencing is not subject to market capacity considerations. Technical fitness is checked by the Federal Aviation Administration (FAA) via separate passenger-cargo (FAA 401) and all-cargo (FAA 418) licences. All-cargo licences are not subject to aircraft type and size limits, hence wide-bodied jets can be used for freight transportation. Financial and managerial fitness is checked by the Department of Transportation (DOT). Market entries by indirect carriers which do not operate their aircraft (freight forwarders and co-operative shippers which were previously heavily regulated) are fully liberalized, subject only to adequate private liability insurance.

The opening of routes: Domestic routes are no longer part of carrier certificates, and licensed carriers can operate on all US routes. Access to international routes continues to depend on bilateral ASAs, which are awarded by the DOT according to public benefits. In case of conflicting multiple demands on international routes, US public benefits are determined in public proceedings held before the DOT. The abandonment (exit) of routes, which previously needed Civil Aeronautics Board (CAB) authorization establishing that the abandonment was in the public interest,

16 See document S/C/W/163.

17 see document S/C/W/163Add.5, paragraphs 2-6.

is liberalized. The only time that a carrier needs to give prior notice is if it plans to discontinue service to an airport served as part of the Essential Air Service Programme (EAS).

The liberalization of rates: International tariffs continue to be settled through IATA tariff conferences, with the exception of fares offered by carriers enjoying US antitrust immunity in US "open skies" bilateral markets.

The ending of cross-subsidies: With carriers free to abandon services and unable to cross-subsidize non-profitable routes with profitable operations, an Essential Air Service Program was enacted. The DOT administers the program, determines subsidy levels for public service obligations, and solicits bids from carriers for these services.

A transition period: A grace period is awarded to incumbent carriers to adjust to the new regulatory framework before full exposure to competition. In air cargo, this transition period is set at one year and during that year only previously certified direct carriers are allowed to operate.

48. This regulatory framework has not changed substantially. Its results are well known; they favoured the emergence of the express carriers.[18]

(ii) European Union (EU)

49. The European equivalent to the US Cargo Act, Council Regulation No. 294/91, is commonly known as "The 1991 Air Cargo Deregulation". It followed a cargo-specific Commission proposal submitted to Member States in 1990. In many respects the Regulation pre-empts the Third Package, for which it has been a test case.[19] Its main provisions are:

Liberalization of ownership rules: The national ownership and control requirements as a condition for access to internal European routes (as previously prescribed in intra-European air service bilaterals) were removed. Airlines were provided access to all international routes as long as their ownership and control remained in Community hands. Cargo licences granted in one European country were made valid in other European Community countries. This was the first application of the European Communities' carrier principle, which applies "when a carrier has, and continues to have, its principle place of business, its majority ownership, and its effective control in the hands of the nationals of the Community".

An *ad hoc* solution was found for the case of non-European cargo carriers established for several years and which were considered as *de facto* European companies. The European Council found a solution to this problem by including in the relevant regulation a list of non-European airlines which were granted Community carrier status for the purposes of the regulation. The solution was not dissimilar to the *ad hoc* "determination" of the US citizenship of carriers via the interpretative powers of the DOT.

Opening of routes and traffic rights: Third, Fourth and Fifth Freedom traffic rights were provided to all Community cargo carriers on all internal routes. Seventh and Eighth Freedom Rights were given later in the Third Package (1993).

Operational flexibility: Full operational flexibility was guaranteed to carriers in the form of unlimited frequency of service, adjustment of capacity, type of aircraft, and change of gauge. The European Parliament added considerations on customs clearances as an important 'doing business' requirement. Certain operational restrictions by national regulators were permitted, such as airport capacity constraints, slot scarcity, environmental issues and safety objectives.

The Commission began subjecting European carriers to competition policy scrutiny.[20]

Rate freedom: The 1991 deregulation provided total rate freedom to European cargo carriers. The principle rule of the Commission to disapprove fares considered 'excessively high or low' was waived for cargo rates starting in 1991. Cargo carriers were left with an obligation to disclose their standard rates to the general public upon request. The Commission retained, in the context of its general competition policy, the right to

18 For more details on the economic result of the US cargo deregulation see OECD document DSTI/DOT(99)1, "Regulatory reform in international air cargo transportation", 6 April 1999, paragraphs 292-310, pages 81-84.

19 For details of the provisions of these packages see document S/C/W/163/Add.2, 10 November 2000, table 26, page 65.

20 A joint cargo agreement between Lufthansa and Aer Lingus needed Commission clearance, as did the introduction of a joint computer system for cargo logistics (the Global Logistics System) by Air France, Lufthansa, JAL and Cathay Pacific. The latter carriers were required to operate their joint computer systems in such a way that would "respect the conditions of the CRS block exemptions applicable in passenger services".

intervene if market rates were found to be predatory or anti-competitive.

The block exemption from European competition law that allowed consultation on intra-EU cargo rates expired in 1997. IATA has applied, on behalf of its members, for individual exemptions.

Scheduled vs. non-scheduled services: The European Council decided to apply the 1991 Cargo Deregulation to both scheduled and non-scheduled services.[21] In order to promote a genuinely European express industry, the Council decided to exclude 'non-scheduled services chartered by integrated carriers' (they are foreign-owned) from the scope of the new regulation.

50. This regulatory framework was partially superceded by the more liberal Third Package in 1993. It has not changed substantially.

51. The results of the European air cargo liberalization have remained limited, relative to the US, according to the OECD. This may be due to its relatively small size and constraints imposed by heavy congestion and environmental restrictions.[22] No major structural changes have occurred within the European air cargo sector immediately after deregulation as a result of these factors. There have been no new entrants and no major developments or restructuring in traffic and network structures. However, these reforms helped carriers to adjust to the Third Package of air transport liberalization several years in advance.

(iii) Open skies policies for cargo

52. The US open skies policy has always included cargo related elements. For example, open Skies agreements had two specific provisions for all-cargo services: competitive ground support (self-handling, intermodal rights, user charges) and liberal treatment of non-scheduled cargo services.

53. The first open skies agreement, the US-Netherlands Agreement (1992) contained several innovative elements. It extended to surface transportation and included multimodal pricing.[23] These provisions are similar to those included for multimodal transport in the GATS maritime model schedule. A memorandum in 1996 removed cargo tariff filing requirements. The anti-trust immunity granted to the KLM-Northwest alliance in parallel to this agreement also allowed for the creation of a joint-cargo service, cargo codesharing, and the coordination of rates.

54. In the case of Germany, an agreement with the US in 1994 on cargo preceded a comprehensive agreement in 1996. The 1994 cargo agreement was limited to scheduled cargo operators and introduced Seventh Freedom rights (provided that bilateral ASAs with third countries granted the traffic rights). Intermodal rights of cargo carriers were covered in this Agreement, "subject to the relevant laws and on the basis of reciprocity". This allowed for the granting of a freight forwarding licence to Lufthansa Cargo for US inter-state surface transportation.

55. Similarly, the US-Japan all-cargo Agreement in 1996 preceded a comprehensive bilateral agreement in 1998. This was not an open skies agreement since it still relied on the pre-determined capacity. Nevertheless, it permitted additional Third, Fourth and Fifth Freedom rights.[24] A comprehensive agreement between the US and France grants Fifth Freedom rights to all-cargo operators.

56. Other countries have also pursued open skies policies regarding all-cargo operations. Cases in point are agreements between Luxembourg and India, and between the Netherlands and Malaysia. The latter includes Third, Fourth and Fifth Freedom rights, liberal provisions for 'change of gauge', pricing, 'doing business' and intermodal provisions. The recent Asia Pacific Economic Cooperation (APEC) Agreement (signed on 1 May 2001 between five Member States) is more liberal for cargo than for passengers. It includes Seventh Freedom rights for cargo for all signatories, and leaves Seventh Freedom rights for passengers as an option.

57. Despite liberalization under open skies agreements regarding cargo, a variety of issues remain to be resolved. Table 8, prepared by the OECD Secretariat, lists constraints and concerns.

21 Until 1991 the European market was divided into a scheduled sector, which was serviced by established flag airlines under restrictive ASAs, and a non-scheduled segment (particularly present in the UK and Belgium), which was more competitive and dynamic. The non-scheduled segment of the industry formed the basis of express services in Europe.

22 For example, the share of European freight in the total freight carried by KLM is less than 20%.

23 The relevant provision reads: "airlines may elect to perform their own surface transportation or to provide it through arrangements with other surface carriers including surface transportation operated by other airlines and indirect providers of cargo transportation. Such intermodal cargo services may be offered at a single through-price for the air and surface transportation combined provided that shippers are not mislead as to the facts concerning transportation".

24 For specific details on this agreement details on this agreement see OECD document DSTI/DOT (99) 1, 6 April 1999, paragraphs 369-377, pages 96-97.

Table 8
Remaining Problems in Open Skies Agreements for Cargo

Cargo Issues	Status under Open Skies	Market and Competition Impacts
Designation of Carriers	Carriers nominally designated by their regulatory authorities	This becomes a direct barrier to entry if market access (designation) is not guaranteed to all certified carriers
Ownership and Control	Open skies agreements do not contain provisions on ownership and control matters	Restrictions on ownership and control impair the optimisation of firm boundaries and access to capital
Point-to-point vs. Multiple-point traffic rights	In the phase-in period of most agreements, only given (designated) bilateral and beyond routes are open to competition	Airlines cannot design and optimize their networks freely, on the basis of unaltered technical and economic considerations
Mirroring (Third Country) 5th Freedom Rights	On a stand-alone basis, a bilateral open skies only guarantees 5th Freedom rights granted between two partner countries	These 5th Freedom rights have no practical value if potential 'beyond' countries do not also grant mirroring 5th Freedom rights
7th Freedom Rights	Most open skies agreements do not include 7th Freedom rights	Limitations on traffic between third countries impairs carriers' network optimization
8th Freedom Rights	Consecutive cabotage is not included in open skies	Overseas carriers' market access and network optimization in large domestic and regional markets is impaired
Non-scheduled services	Unequal treatment with scheduled services. Only the least restrictive of the two countries' charter regulations apply	Different treatment distorts competition and complementarity between two types of services, and companies (in benefit of either)
Airport and Infrastructure Access	Airport infrastructure access is not included in most open skies (concerning neither peak combined nor all-cargo curfew periods)	Slot discrimination and scarcity may erode the granted traffic rights
Multimodal (Surface) Licencing	Road access provisions are negotiated case-by-case in each agreement	Restrictions on surface deliveries may impair international carriers' market access and service quality
Customs Facilitation	Customs facilitation is not dealt with in most open skies	Delays and/or discriminations in customs clearances/preclearances may hamper market access and competition
Strategic Alliances and Competition Policy	Open skies do not contain competition policy provisions. International business alliances are frequently granted antitrust immunity as compensation	There are no standard competition rules on international routes. Case-by-case-antitrust immunities may distort competition between alliances

Source : OECD (1999)

58. A further source of information concerning restrictions and impediments faced by cargo operators is the 1996 survey conducted by the US General Accounting Office (GAO).[25] The 22 US all-cargo airlines that responded to the questionnaire reported problems at 81 foreign airports (Tables A2-A5). It could be possible to address some of the concerns raised, in particular those reflected in Table A5, within the existing GATS framework.

25 GAO/RCED 97-13 "Report to Congressional Requesters: DOT's Efforts to Promote US Air Cargo Carrier's Interest", October 1996.

TABLE A1
Top 50 Airlines by Cargo Traffic (1999)

Ranking		Airline	Fleet Size	Country	Cargo Traffic (RTK)		Total Traffic (RTK)		Employees
'99	'98				million	change	million	change	
1	1	United Airlines	603	USA	4,475	-6.1%	22,648	1.2%	100,001
2	2	American Airlines	714	USA	3,325	4.7%	19,538	3.1%	101,740
3	3	Delta Air Lines	600	USA	2,554	-7.6%	17,727		72,000
4	5	Northwest Airlines	424	USA	3,758	19.5%	14,498	13.2%	52,000
5	4	British Airways	268	UK	4,536	6.1%	16,256	1.1%	65,640
6	6	Continental Airlines	364	USA	1,606	4.7%	10,298	10.3%	
7	8	Air France	227	France	5,237	6.9%	12,781	11.2%	59,000
8	7	Japan Airline	135	Japan	4,538	11.0%	12,738	7.1%	18,974
9	9	Lufthansa Airlines	233	Germany	7,072	5.6%	8,059	13.2%	
10	10	US Airways	384	USA	482	-5.1%	6,503	0.1%	43,028
11	11	Singapore Airlines	92	Singapore	5,668	15.2%	12,038	11.8%	27,386
12	12	Qantas Airways	104	Australia	1,783	-2.5%	8,912	0.3%	28,226
13	13	KLM Royal Dutch	97	Netherlands	4,149	6.8%	10,070	4.4%	27,302
14	15	Southwest Airlines	327	USA	216	-0.1%	5,283	16.1%	27,653
15	14	All Nippon Airways	140	Japan	1,510	12.5%	6,615	12.0%	14,639
16	17	TWA[a]	188	USA	834	2.0%	4,609	5.6%	
17	16	Cathay Pacific	62	China	3,817	15.8%	7,768	7.7%	13,159
18	18	Air Canada	158	Canada	1,389	3.6%	4,899	4.2%	
19	20	Thai Airways Int'l	77	Thailand	1,644	6.2%	5,097	11.2%	
20	19	Alitalia	146	Italy	1,637	7.6%	5,277	4.7%	20,770
21	22	Korean Air	111	Korea, Rep. of	5,962	14.1%	9,422	14.0%	14,107
22	23	Malaysia Airlines	93	Malaysia	1,670	12.9%	4,856	20.5%	21,687
23	21	Iberia	179	Spain	778	-4.3%	3,893	4.1%	26,935
24	24	Swissair	74	Switzerland	1,724	7.5%	4,955	12.6%	
25	27	America West	132	USA	138	-7.1%	2,723	8.1%	13,370
26	26	Canadian Airlines Int'l[b]	80	Canada	744	9.3%	3,131	1.1%	16,807
27	32	Virgin Atlantic Airways	28	UK	901	19.8%	3,304	13.3%	6,500
28	25	Varig	89	Brazil	927	-28.2%	3,274	-14.0%	15,605
29	30	Condor Flugdienst	47	Germany			2,070	10.0%	2,701
30	33	China Airlines	49	Chinese Taipei	3,381	17.8%	5,440	15.7%	8,999
31	28	Britannia Airways	33	UK	44	-12.6%	1,850	-6.8%	
32	31	SAS	154	Sweden	793	-1.3%	2,835	5.8%	28,863
33	29	LTU Int'l Airways	35	Germany	160	-7.3%	1,982	-10.0%	5,400
34	34	Air New Zealand	37	New Zealand	833	-2.1%	2,675	2.4%	9,177
35	35	Saudi Arabian Airlines	99	Saudi Arabia	1,017	8.9%	2,783	5.2%	
36	37	Alaska Airlines	91	USA	105	-6.3%	1,827	23.7%	
37	36	China Southern Airlines	74	China	616	10.4%	2,003	4.6%	

Ranking		Airline	Fleet Size	Country	Cargo Traffic (RTK)		Total Traffic (RTK)		Employees
'99	'98				million	change	million	change	
38	38	Japan Air System	82	Japan	193	27.1%	1,244	-6.5%	5,667
39	40	EVA Air	35	Chinese Taipei	3,150	23.9%	4,783	18.3%	
40	46	Sabena	53	Belgium			1,594	15.5%	12,717
41	44	South African Airways	52	South Africa	689	88.8%	2,244	26.9%	9,014
42	45	American Trans Air	56	USA			1,533	8.8%	
43	41	Aeroflot	110	Russia	584	13.9%	2,061	3.4%	
44	43	Airtours Int'l	31	UK	44	-6.2%	1,421	-0.4%	
45	65	Air 2000	27	UK	14	880.3%	1,437	44.7%	2,345
46	48	Emirates	32	UAE	1,074	29.4%	2,613	21.1%	4,978
47	42	Ansett Australia	64	Australia	102	-63.7%	1,559	-13.0%	14,876
48	47	Air China	65	China	1,526	42.6%	2,934	23.5%	12,900
49	49	THY Turkish Airlines	75	Turkey	313	20.3%	1,578	6.6%	9,527
50	57	Asiana Airlines	51	Korea, Rep. of	2,252	26.7%	14,312	22.1%	5,835
Total			**7,481**		**89,964**	**24.4% Average**	**309,950**	**8.6% Average**	**+1 Million[c]**

a TWA has been acquired by American Airlines

b Canadian Airlines was acquired by Air Canada and is now fully incorporated into Air Canada.

c This is an approximation as unknown figures have been estimated.

Source: *Airline Business*, September 2000.

TABLE A2

Difficulties Associated with Government Regulations at Foreign Airports
(reported by US all-cargo carriers)

Problem	No. of airline respondents	Number of Airports					
		No. of Airports Cited	Latin America	Europe	Middle East/ Africa	Asia/ Pacific Region	Canada
Burdensome legal and administrative requirements[a]	6	25	13	0	1	11	0
Denial of traffic rights[b]	4	17	8	1	0	3	5
Difficulty obtaining flight authorization/permits	8	15	6	2	1	6	0
Restricted intermodal rights[c]	3	12	3	0	0	8	1
Difficulties or delays clearing cargo through customs	5	10	6	1	1	2	0
Prohibitions against flying during certain hours	7	10	2	3	0	4	1
Insufficient take-off or landing slots at congested airports	7	7	1	1	0	5	0
Operations restricted to less desirable airport	4	7	2	1	0	2	2
Discriminatory taxes	2	5	1	1	0	3	0
Excessive fines for violations of regulations	1	3	3	0	0	0	0
Problems converting or remitting currency[d]	2	3	3	0	0	0	0
Excessive taxes	2	3	1	0	0	2	0
Excessive customs duties	1	1	0	0	0	1	0
Other problems[e]	1	1	0	0	0	1	0
Totals[f]	**13**	**50**	**19**	**6**	**3**	**16**	**6**

Note: This survey defined discriminatory charges as different charges for, or taxes on the same goods or services, and excessive charges as those substantially exceeding the cost of the goods, services, or use of facilities after providing for a reasonable return on assets.

a Requirements that place a significant burden on airlines in terms of costs or management oversight.

b Prohibition against operating on routes authorized under bilateral agreements.

c Restrictions on the ability to operate trucks to provide pickup and delivery services.

d Difficulty converting revenue earned in local currency into dollars or sending revenue to the United States.

e Includes fees for operations above specified levels of aircraft noise or emissions.

f For Tables A2-A5 inclusive, the Total indicated at the bottom of the first column ("No. of airline respondents") denotes the number of airlines which responded to the survey. Likewise, the Totals indicated at the bottom of columns 2-7 (columns from "No. of airports cited", to "Canada") denote the number of individual airports cited in survey responses. It is for this reason that the columns do not numerically add up to the Totals indicated on the bottom row of Tables A2-A5.

Source: US all-cargo airlines' responses to GAO's questionnaire, (Page 53, GAO/RCED-97-13 International Aviation).

TABLE A3

Difficulties Associated with Policies and Services at Foreign Airports,
(reported by US all-cargo carriers)

Problem	No. of airline respondents	Number of Airports					
		No. of Airports Cited	Latin America	Europe	Middle East/Africa	Asia/ Pacific Region	Canada
Excessive landing fees	8	15	4	2	0	8	1
Discriminatory landing fees	5	13	5	0	0	8	0
Discriminatory payment terms[a]	5	12	5	6	0	1	0
Excessive fuel prices	7	11	7	1	0	3	0
Other problems with user fees[b]	3	9	4	2	0	3	0
Discriminatory fuel prices	4	7	6	0	1	0	0
Problems with maintenance and technical support[c]	3	6	3	1	0	2	0
Other problems with airport and aircraft services[d]	2	5	0	0	0	5	0
Totals	**14**	**48**	**20**	**10**	**1**	**16**	**1**

Note: This survey defines discriminatory charges as different charges for, or taxes on the same goods or service, and excessive charges as ones substantially exceeding the cost of the goods, services, or use of facilities after providing for a reasonable return on assets.

a For example, foreign airlines must pay for services in US dollars, while national carriers can pay for services in local currency.

b Other problems with user fees cited by respondents included the assessment of charges with little or no associated service provided.

c Inability to secure the maintenance and technical support necessary to operate efficiently or restrictions on an airline's ability to perform its own maintenance and technical support.

d Includes discriminatory value added taxes and enroute fees.

Source: US all-cargo airlines' responses to GAO's questionnaire, (Page 54, GAOIRCED-97-13 International Aviation).

TABLE A4

Difficulties Associated with Groundhandling at Foreign Airports
(reported by US all-cargo carriers)

Problem	No. of airline respondents	Number of airports					
		No. of Airports Cited	Latin America	Europe	Middle East/Africa	Asia/ Pacific Region	Canada
Cargo handling restrictions	6	16	4	2	0	10	0
Excessive cargo handling fees	8	14	7	3	0	4	0
Inadequate warehouse facilities	2	12	1	2	0	9	0
Ramp handling restrictions	5	11	3	1	0	7	0
Discriminatory cargo handling fees	4	8	3	0	0	5	0
Excessive ramp handling fees	4	8	3	3	0	2	0
Other problems with groundhandling[a]	2	7	0	0	0	4	3
Discriminatory ramp handling fees	2	7	2	0	0	5	0
Totals	**13**	**31**	**9**	**7**	**0**	**12**	**3**

Note: This survey defined discriminatory charges as different charges for, or taxes on the same goods or services, and excessive charges as those substantially exceeding the cost of the goods, services, or use of facilities after providing for a reasonable return on assets.

a Other such problems cited by respondents included inadequate cargo apron space.

Source: US all-cargo airlines' responses to GAO's questionnaire.

TABLE A5

Significant Problems Associated With Restrictions on Local Marketing and Distribution at Foreign Airports, as Reported by US All-Cargo Airlines, by Region

Problem	No. of airline respondents	Number of airports					
		No. of Airports Cited	Latin America	Europe	Middle East/Africa	Asia/ Pacific Region	Canada
Restrictions of local distribution networks[a]	3	12	3	0	0	9	0
Restrictions on number of sales offices, personnel, and types of personnel	2	2	1	0	0	1	0
Restrictions on local advertising	1	2	0	0	0	2	0
Totals	**4**	**13**	**4**	**0**	**0**	**9**	**0**

a Local distribution networks are the methods by which an airline distributes cargo to its final destination after it is unloaded from the aircraft.

Source: US all-cargo airlines' responses to GAO's questionnaire. (Page 55, GAOIRCED-97-13 International Aviation)

IV. MULTIMODAL OPERATIONS[26]

1. Multimodal operations for air cargo

(a) Air-trucking

59. There are two main forms of cargo multimodal operations: air-trucking and air-sea movements. The term air-trucking denotes combination and express carriers making a wider use of surface trucking for freight transportation. Air-trucking was intended to overcome restrictions on Fifth Freedom operations. Air-trucking is not only more efficient and cheaper, but it benefits from additional factors such as: (i) lack of available airspace on scheduled flights; (ii) inability of the aircraft operator to handle some (oversized, heavy etc.) consignments; (iii) impediments preventing an operator from achieving carriage within 12 hours of acceptance (this applies mainly to express services); (iv) missed connections; and (v) airport congestion. Air-trucking provides surface deliveries to gateway airports (a feeder service for air carriers). In Europe, air-trucking can only be carried out under an air waybill and the waybill of the Convention on the Contract for the International Carriage of Goods by Road (CMR).

60. US air-trucking is estimated to serve approximately 1,000 city-pairs at a frequency of 16,000 per week. The comparable figures for Europe are 400 and 7,000 respectively. For example in 1997, the percentage of air-trucking in total German air cargo volume amounted to about one-quarter, or 767,000 tonnes out of a total of 2.88 million tonnes. Owing to European geography, and eased by the permissiveness of regulations, "air-trucking" has developed well in the European market.[27]

(b) Air-sea transportation

61. Generally, air-sea transportation is carried out if the carrier has no traffic rights in the country of origin of the goods. In these cases the merchandise is shipped to destinations where such rights are available. Air-sea transportation is particularly relevant for shipments between Asia/Pacific and Europe, via the Gulf, and on some trans-Pacific routes.

62. Air-sea transportation requires a special licence. Historically, transport licences were mode specific and linked to policies restricting access (notably in air and road transport). While these restrictions have largely disappeared, traces of the modal character have remained. For instance, the EU licencing policy stipulates that "the air carrier should have as its main activity air transportation, exclusively or in conjunction with a commercial activity which implies the operation, repair or maintenance of aircraft". This "air only" tendency in licencing is mirrored by similar rules in other modes. In several countries, licences necessary for road and rail haulage are sector-specific. Such exclusive sectoral licencing is costly and poses challenges for multimodal transportation.

(c) General observations

63. The economic impact of restrictions on intermodal licencing was eased in the past by transporters (express carriers and freight forwarders) contracting out to specialized carriers. However, the ensuing costs have tended to increase as multimodal transportation has become more technically demanding and challenging to manage. The OECD considers it desirable to make formal licencing rules clearer, more predictable, and fully enabling for multimodal services.

64. The OECD's view is largely corroborated by major carriers. As background information for the GATS 2000 negotiations, two large integrators have identified obstacles they face in their activities. Some of these obstacles could be qualified as multimodal, since they do not relate to air transport and are closely linked to land transport or to services auxiliary to all modes of transport.[28]

26 The following presentation complements the information contained in document S/C/W/129, paragraph 15(a).

27 According to the OECD, European airlines' developing and operating truck transport may conflict, however, with Community air carrier licences under present law.

28 For FedEx those obstacles were: (i) discriminatory or non-transparent approvals of customs brokerage licences; (ii) restrictions on the ability of express companies to own and operate their own ground vehicles and trucking operations; (iii) prohibition of wholly foreign-owned integrated services comprising freight forwarding, trucking, warehousing and customs brokerage, mandatory joint venture requirements, and limitations on freedom to contract for services provisions; (iv) requirement for separate authorization for the various services provided (e.g. freight forwarding, customs clearance, warehousing, pick up and deliveries, sale of express services); (v) prohibition for air carriers from obtaining freight forwarder licences and operating their own ground vehicles; (vi) restrictions on the right to provide ground vehicle services to collect international shipments for another air carrier; (vii) limitation on the value of shipment that can be transported by express companies; and (viii) limitations on access to radio frequencies necessary for tracking and tracing of dispatches and deliveries. For UPS, these obstacles were: (i) the duplication frequently required to issue a trucking waybill in addition to the air waybill; (ii) the prohibition in certain countries to use large feeder vehicles (over four tonnes for example) which forces the express carrier to use several vans instead, thereby multiplying the costs and risks; (iii) restrictions on the right of establishment of airfreight firms into related services such as trucking, ground handling and freight forwarding; (iv) restrictions imposing that airlines and indirect carriers can only employ surface transportation in connection with an international air transportation; and (v) restrictions on the ability to operate surface transportation between any points in the territories to the parties of an air services bilateral agreement or to third countries including restrictions on the kind or type of equipment.

65. From the GATS perspective, intermodal restrictions could not be dealt with in a way similar to the treatment of multimodal restrictions in the maritime modal schedules. In the latter case, commitments facilitating multimodal operations may take two forms. First, they could consist of additional commitments relating to the ability to rent, hire, charter, or otherwise utilize trucks, railway carriage, barges, and related equipment for the onward forwarding of international cargo. Such additional commitments would depend on the inclusion of maritime transport in the schedule. Second, an attempt could be made to liberalize modality activities head-on, implying a reference to maritime transport including multimodal activities in the sector column of the schedule.[29] However, these possibilities do not exist for air transport.

2. Multimodal operations for passenger traffic

66. Multimodal operations for passenger traffic differ from cargo, reflecting the specific economic and regulatory environment of the sector. Multimodal activities regarding passengers seem to have been limited to two types of activities. First, these are equity and management participation of airlines in land transport operators serving an airport. The relevant activities, which fall under CPC 71112, CPC 71212, and CPC 71214, would be covered by the GATS. For example, CPC 71212 includes "scheduled transportation between an urban centre and airports … by motor bus and multi-passenger airport limousine, with driver", while CPC 71214 covers the same service between one and another urban centre. A second case is railway and airline codesharing. It is a substitute for an air transport operation and submitted to a regulatory regime similar to airlines' codesharing and has so far been limited mainly to Europe.

67. Initially, airlines viewed high-speed trains as rivals on the short-haul markets. For example, the French TGV has captured a significant part of intercity traffic. Similar developments are discernable on intra-European routes, such as Paris-London (Eurostar), Paris-Brussels-Amsterdam (Thalys), and Paris-Cologne. However, recently airlines have recognized the advantages of cooperating with rail networks. Relevant considerations include growing congestion at airports, the development of global alliances, hub-and-spoke operations, and convergence of the respective booking systems.[30] Co-operation agreements may be considered as classical codesharing for selected destinations. To date, the railways involved continue to conclude agreements with various airlines and alliances. The SNCF, for example, has agreements with Air France (Skyteam), and United Airlines and Lufthansa (Star). However, traffic volumes have remained extremely limited when compared with total rail traffic.

68. Co-operation may help to reduce congestion and provide space for more profitable long-haul operations. This also encourages secondary hub growth. The French and Belgian railways are reported to be considering the connection of three major hubs, Schiphol, Zaventem and Frankfurt. In a similar manner, the two rail operators and British Airways jointly manage Eurostar-UK, the British section of the Eurostar route. Questions have arisen concerning the regulatory status of intermodal codesharing. Reportedly, France and the US are in the process of negotiating clauses covering this type of codesharing.

29 There are the following modal schedule: Maritime International Freight Transport INCLUDING multimodal transport services: transportation of international freight by sea-going vessels from the port of loading in one country to the port of discharge in another country. This transportation may be combined with [Maritime Storage and Warehousing services/Container Station and Depot services/Freight Forwarding services] and [road/rail/inland waterway] freight services from the point of loading in one country by a multimodal transport operator to the point of delivery in another country under a multimodal contract to provide a multimodal transport service. Multimodal transport services: The carriage of goods by at least two different modes of transport by the multimodal transport operator on the basis of a single through multimodal transport contract from a point of loading in one country to a point of delivery in another country. Multimodal transport operator or supplier of international maritime transport services: Any person who, on his own behalf or through another person acting on his behalf, executes a single through multimodal transport contract and who acts as principal, not as an agent or on behalf of the consignor or of the carriers participating in the delivery of multimodal transport services, and who assumes responsibility for the performance of the contract.

30 For instance *Socrate*, the French railways' booking system, is based on the airlines' CRS. The Communities' CRS regulation also covers railways.

LIST OF DOCUMENTS SUBMITTED DURING THE FIRST REVIEW MANDATED BY PARAGRAPH 5 OF THE ANNEX ON AIR TRANSPORT SERVICES

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LIST OF DOCUMENTS SUBMITTED DURING THE FIRST REVIEW MANDATED BY PARAGRAPH 5 OF THE ANNEX ON AIR TRANSPORT SERVICES

I. Documents produced for and discussed during the four dedicated meetings of the review

A. DOCUMENTS PREPARED BY THE SECRETARIAT

1. S/C/W/163 dated 3 August 2000: "Developments in the air transport sector since the conclusion of the Uruguay Round part one (aircraft repair and maintenance, computer reservation services, selling and marketing, franchising, rental and leasing ,catering)", Note by the Secretariat.

2. S/C/W/163/Add.1 dated 25 October 2000: "Developments in the air transport sector since the conclusion of the Uruguay Round, part two (fuelling, ground handling and airport services)", Note by the Secretariat.

3. S/C/W/163/Add.2 dated 10 November 2000: "Developments in the air transport sector since the conclusion of the Uruguay Round, part three (air traffic control services including charging systems, general aviation and aerial work and commercial air transport services)", Note by the Secretariat, and S/C/W/163/Add.2/Corr.1 dated 18 December 2000.

4. S/C/W/163/Add.3 dated 13 August 2001: "Developments in the air transport sector since the conclusion of the Uruguay Round, part four (Freedoms of the Air, bilateral, plurilateral and multilateral agreements), Note by the Secretariat.

5. S/C/W/163/Add.4 dated 15 August 2001: "Developments in the air transport sector since the conclusion of the Uruguay Round, part five (ownership and co-operation among airlines - including alliances and codesharing)", Note by the Secretariat, and S/C/W/163/Add.4/Corr.1 dated 8 January 2002.

6. S/C/W/163/Add.5 dated 13 August 2001: "Developments in the air transport sector since the conclusion of the Uruguay Round, part six (slot allocation)", Note by the Secretariat.

7. S/C/W/163/Add.6 dated 16 August 2001: "Developments in the air transport sector since the conclusion of the Uruguay Round, part seven (scheduled passenger services, non-scheduled passenger services, cargo services and multimodal operations)", Note by the Secretariat.

8. S/C/M/49 dated 1 December 2000: "Report of the first session of the review mandated under paragraph 5 of the air transport annex held on 28-29 September 2000", Note by the Secretariat, and S/C/M/49/Corr.1 dated 5 March 2001.

9. S/C/M/50 dated 5 March 2001: "Report of the second session of the review mandated under paragraph 5 of the air transport annex held on 4 December 2000", Note by the Secretariat.

10. S/C/M/57 dated 13 February 2002: "Report of the third session of the review mandated under paragraph 5 of the air transport annex held on 9 October 2001", Note by the Secretariat.

11. S/C/M/62 dated 17 October 2002: "Report of the fourth session of the review mandated under paragraph 5 of the air transport annex held on 18 march 2002", Note by the Secretariat.

12. S/C/W/181 dated 27 November 2000: excerpts from the OECD document "Principles for the liberalization of air cargo", Note by the Secretariat, and S/C/W/181/Corr.1 dated 29 November 2000.

13. S/C/W/182 dated 30 November 2000: "Typology of the bilateral air services agreements containing leasing provisions", Note by the Secretariat.

14. S/C/W/200 dated 3 October 2001: "Executive summary of the documentation prepared for the first two sessions of the review mandated under paragraph 5 of the air transport services annex", Note by the Secretariat.

15. S/C/W/200/Add.1 dated 28 February 2002: "Executive summary of the documentation prepared for the third session of the review mandated under paragraph 5 of the air transport services annex", Note by the Secretariat.

B. SUBMISSIONS BY DELEGATIONS

16. Job 1430 dated 8 March 2000: Communication from the Republic of Poland, "The review of Air Transport", informal paper.

17. S/C/W/165 dated 15 September 2000: Communication from New Zealand "Developments in the air transport services sector".

18. S/C/W/166 dated 15 September 2000: Communication from Chile "The evolution of air transport in Chile" and S/C/W/166/Corr.1 dated 6 November 2000.

19. S/C/W/167 dated 18 September 2000: Communication from Australia, "The mandated review of the GATS annex on air transport services" and S/C/W/167/Corr.1 dated 28 November 2000.

20. S/C/W/168 dated 26 September 2000: Communication from the European Communities and their Member States "The Review of the GATS Annex on Air Transport Services".

21. S/C/W/179 dated 14 November 2000: Communication from Australia "The GATS Review: An Opportunity for Phased Reform of Air Transport Services".

22. S/C/W/185 dated 1 December 2000: Communication from New Zealand "The Review of the GATS Annex on Air Transport Services".

23. S/C/W 186 dated 4 December 2000: Communication from the European Communities and their Member States "The Review of the GATS Annex on Air Transport Services".

24. S/C/W198 dated 3 October 2001: Communication from the United States "Review of the GATS Annex on Air Transport Services" and S/C/W/ 198/Corr.1 dated 18 March 2002.

25. S/C/W/201 dated 4 October 2001: Communication from Brazil "Review of the GATS Annex on Air Transport Services" and S/C/W/201/Corr.1 dated 18 March 2002.

26. S/C/W/206 dated 18 March 2002: Communication from Australia, Chile and New Zealand "Review of the GATS annex on Air Transport Services".

27. Job(01)/153 dated 17 October 2001: "Air transport review under the GATS annex on Air Transport Services", Questions by Chile.

28. Job(02)/27 dated 12 March 2002: Communication from Brazil "Review under the GATS annex on Air Transport Services" (responses to questions raised in Job (01)/153).

C. SUBMISSIONS BY OBSERVERS

29. Job N° 7769 dated 30 November 2000: Communication from the International Civil Aviation Organization "ICAO's role in facilitating Air Transport Liberalization".

30. S/C/W/188 dated 7 February 2001: Communication from the International Civil Aviation Organization "ICAO's Policies on Charges for Airports and Air Navigation Services".

II. Documents related to the review and anterior or posterior to the four dedicated meetings of the review

A. DOCUMENTS PREPARED BY THE SECRETARIAT

31. S/C/M/38 dated 13 September 1999: Report of the meeting of the Council for Trade in Services held on 19-20 July 1999, Note by the Secretariat, point E, paragraphs 53 to 62.

32. S/C/M/39 dated 15 October 1999: Report of the meeting of the Council for Trade in Service held on 21 September 1999, Note by the Secretariat, point E, paragraphs 70 to 77.

33. S/C/M/40 dated 5 January 2000: Report of the meeting of the Council for Trade in Services held on 18 October 1999, Note by the Secretariat, point C, paragraphs 23 to 44.

34. S/C/M/41 dated 3 April 2000: Report of the meeting of the Council for Trade in Service held on 25 February 2000, Note by the Secretariat, point C, paragraphs 49-76.

35. S/C/M/42 dated 9 May 2000: Report of the meeting of the Council for Trade in Services held on 14 April 2000, Note by the Secretariat, point B, paragraphs 16 to 37.

36. S/C/M/43 dated 28 June 2000: Report of the meeting of the Council for Trade in Services held on 26 May 2000, Note by the Secretariat, point A, paragraphs 4 to 18.

37. S/C/W/129 dated 15 October 1999: "Recent trade-related activities of international intergovernmental organizations in the field of air transport", Note by the Secretariat.

38. S/C/M/68 dated 28 November 2003: Report of the meeting of the Council for Trade in Services held 2, 9 and 24 October 2003, paragraphs 12 to 116.

39. Job No. 2451 dated 19 April 2000: "Issues for possible consideration in the review of air transport", Informal Note by the Secretariat.

B. SUBMISSIONS BY DELEGATIONS

40. S/C/W/113 dated 15 July 1999: Communication from New Zealand, Chile and Singapore "Air Transport Services, Discussion Paper".

41. S/C/W/134 dated 10 February 2000: Communication from Japan "Work Programme on Review of Air Transport Services".

42. Job No. 753 dated 10 February 2000: Communication from New Zealand "Review of the Air Transport Annex", Informal Paper.

43. Job No. 3203 dated 19 May 2000: Communication from Australia "Implementing the Eight Recommendations for more Competitive Air Services", circulated for Information.

44. Job (03)/193 dated 2 October 2003: Communication from Australia and New Zealand "Review of the Annex on Air Transport Services and the Timing of the Next Review".

C. SUBMISSIONS BY OBSERVERS

45. Job No. 679 dated 8 February 2000: Communication from the International Civil Aviation Organization (ICAO resolutions of 31 October 1998 and 22 November 1999).

46. Job (03)/117 dated 20 June 2003: Communication from the International Civil Aviation Organization "Consolidated Conclusions, Model Clauses, Recommendations and Declaration approved by the Worldwide Air Transport Conference".