

PART E

AIR CARGO SERVICES

A. AIR CARGO SERVICES

1. Commercial developments

376. According to IATA, the air freight industry recorded total revenues of US\$55 billion in 2006 (compared with US\$40 billion in 2000), or 12 per cent of the turnover of commercial air transport services. IATA also estimates that the total value of goods transported by air was US\$3.25 trillion in 2006, equivalent to roughly 35 per cent of the goods trade in value terms.

(a) Traffic trends

377. Trends traffic, as measured in freight tonne kilometres (FTK) in the sector were very uneven during the period under review, ranging from double-digit growth to declines in absolute value, as is shown by Table 35.

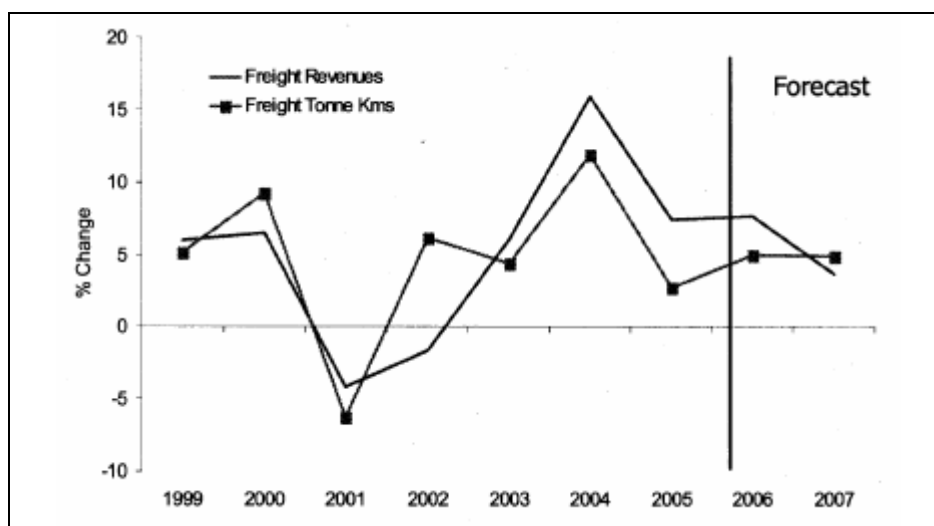
Table 35
Annual growth of air freight in freight tonne kilometres, 2001-2006

Year	2001	2002	2003	2004	2005	2006
Growth rate in relation to previous year	-7%	+5%	+3.5%	+13%	+4%	+4.6%

Source: Aviation Week & Space Technology, 15 April 2007.

378. These trends are illustrated in more detail by Chart 10 which provides revenue and traffic volume data over a slightly longer period.

Chart 10
Freight revenues and traffic growth in tonne kilometres, 1999-2007



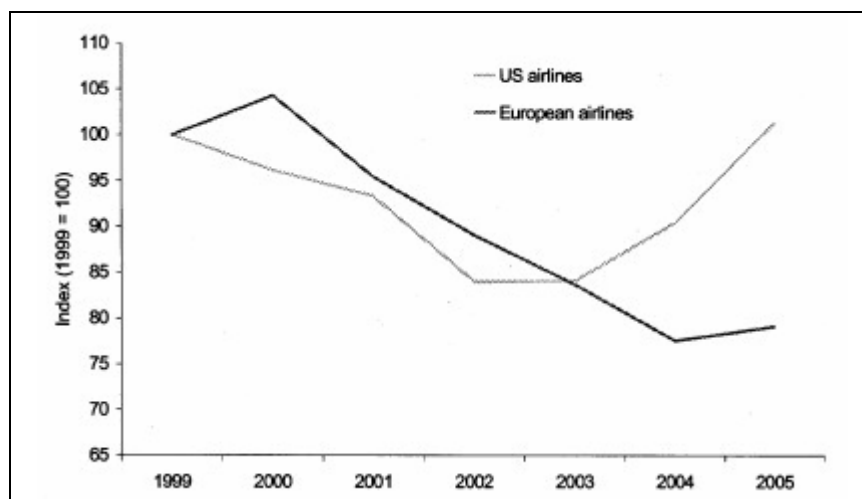
Source: ICAO/IATA.

379. Averaged over five years, the growth rate for the period settled at 5.8 per cent, a figure very close to the 6 per cent predicted by the two main aircraft manufacturers (Boeing and Airbus). It is generally accepted that air freight growth is double that of global GDP, although some observers see this ratio developing unfavourably, mainly because of growing intermodal competition from maritime transport.

380. Like air passenger transport, air cargo transport is extremely sensitive to the economic climate. Any slowdown or downturn in growth can result in a sharp regression in industry revenue and traffic.

381. Again like air passenger transport, the sector suffers from cyclical erosion of freight yields, albeit on a less drastic scale. This erosion is illustrated by Chart 11 in respect of US and European freight carriers.

Chart 11
Airline freight yields, 1999-2005
(revenue per freight tonne kilometre)



Source: ATA, AEA, Airclaims, compiled by IATA.

382. An interesting sidelight from the standpoint of airlines that engage simultaneously in transporting passengers and freight is the fact that the economic cycles for these two activities do not coincide.

383. Thus, during the period under review, freight traffic figures rebounded in 2000 following the decline caused by the Asian crisis of 1997-1998.

384. Traffic had began shrinking in 2001, even before the terrorist attack of 11 September, mainly because of the bursting of the internet and telecom bubbles. The events of 9/11 certainly aggravated the situation by paralysing traffic for several days and generating a multitude of uncertainties regarding the legal regime for security and insurance. Carriers reacted to these developments in different ways: while fleet sizes were reduced in Japan, Chinese Taipei and Korea, all three being important producers of information technology goods hard-hit by the crisis. At the same time, Singapore Airways went on with its investment plans and China Southern ordered its first all-cargo aircraft.

385. Freight traffic growth picked up in 2002, while passenger transport remained in the doldrums. Revenues, however, remained sluggish. The growth in Chinese air cargo exports and in intra-Asian traffic in general was one of the key factors in this revival, as was the renewed growth of computer exports, given that computers purchased in 1999 in anticipation of the year 2000 millennium bug were becoming obsolete.

386. The 2003 SARS epidemic had only a marginal impact on the sector. In fact, it delayed the traffic "peak" by one month, from early September to early October, as North-American and European buyers were obliged to postpone their trips to Asia until the end of the summer. The SARS epidemic even had a paradoxically positive effect on all-cargo air traffic. Freight that could no longer

be carried in the belly of passenger flights because of flight cancellations (the "belly crunch") was transferred to all-cargo flights. Cargo volumes grew by 3.5 per cent in 2003, at a time when, once again, there was a drop in passenger traffic.

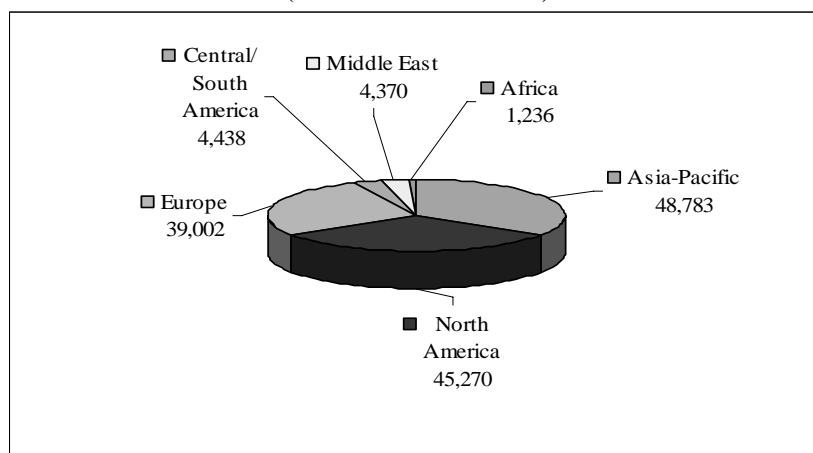
387. Air freight had a banner year in 2004, with traffic volumes up 13 per cent and revenue growth even higher.

388. There was a return to more moderate growth in 2005, and this continued into 2006.

389. However, the overall figures do not clearly reflect the diversity of regional situations. In 2005, for example, Chinese cargo throughput (i.e. traffic from, to and within China) grew by 13.8 per cent, compared with a global growth rate of only 4 per cent.

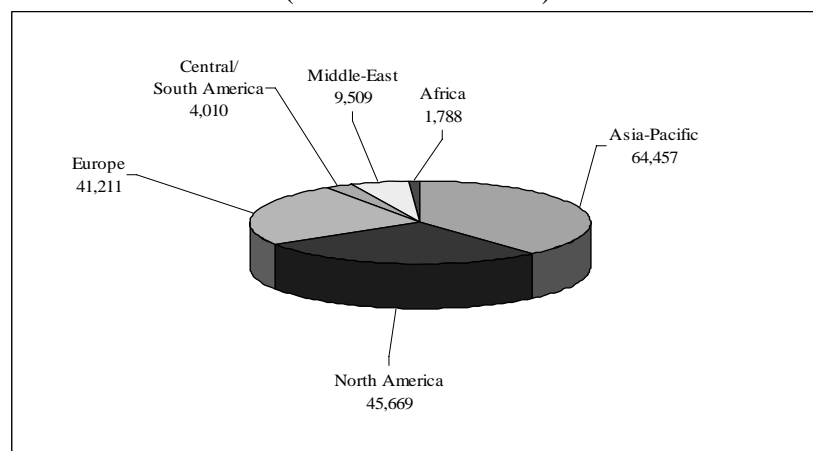
390. Charts 12 to 15 and Table 36 give a comparative breakdown of regional traffic levels at the beginning and end of the period under review, showing the cumulative effects of these divergent patterns of growth.²⁴⁷

Chart 12
Regional breakdown of cargo traffic in 2000
(millions of tonne-km)



Source: Airline Business, November 2001.

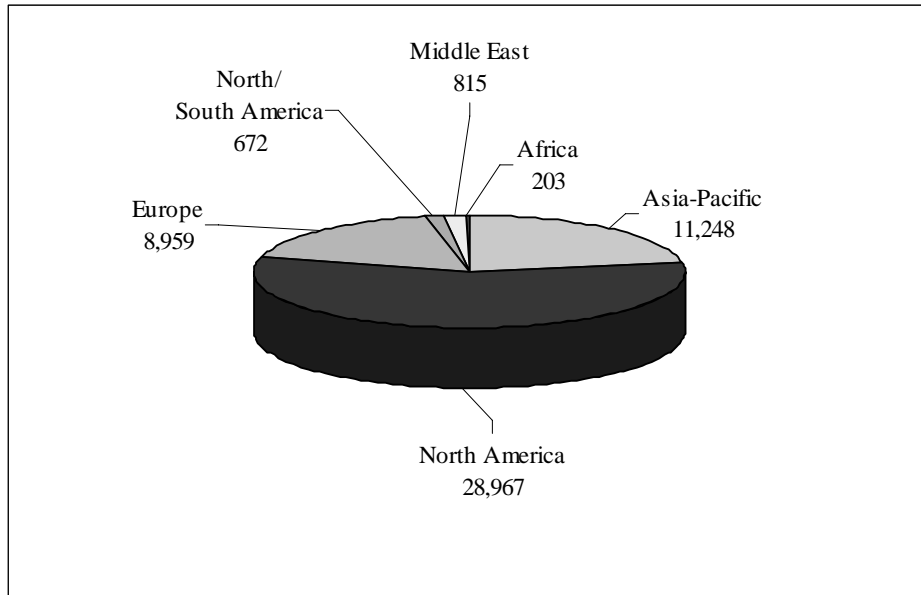
Chart 13
Regional breakdown of cargo traffic in 2004
(millions of tonne-km)



Source: Airline Business, November 2005.

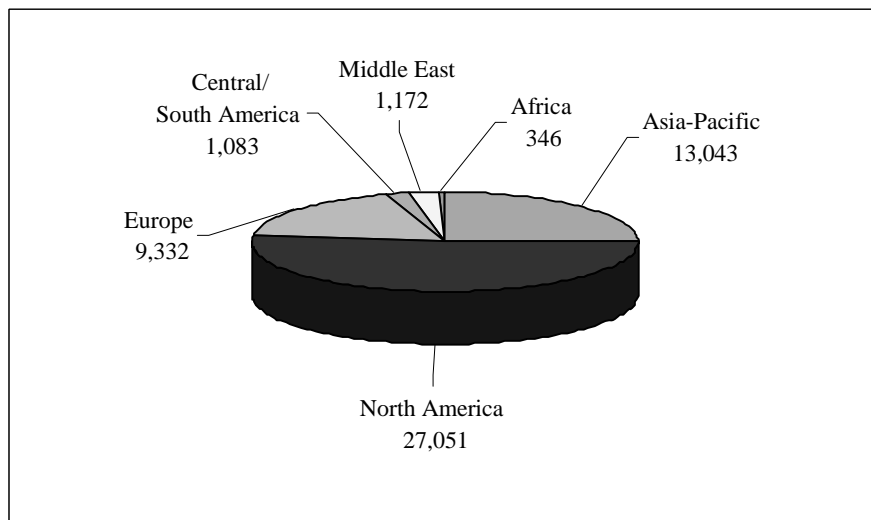
²⁴⁷ No data were available for 2005.

Chart 14
Regional breakdown of cargo revenues in 2000
(US\$ million)



Source: Airline Business, November 2000.

Chart 15
Regional breakdown of cargo revenues in 2004
(US\$ million)



Source: Airline Business, November 2005.

Table 36
Regional breakdown of cargo traffic and revenues, 2000 and 2004
(millions of tonne-km and US\$ million)

Region	2000				2004			
	Cargo traffic (millions of tonne-km)	%	Cargo revenues (US\$ million)	%	Cargo traffic (millions of tonne-km)	%	Cargo revenues (US\$ million)	%
Asia Pacific	48,783	33.9	11,248	22.0	64,457	38.6	13,043	25.0
North America	45,270	31.4	28,967	56.0	45,669	27.3	27,051	52.0
Europe	39,002	27.0	8,959	17.5	41,211	24.7	9,332	18.0
Central/South America	4,438	3.0	672	13.0	4,010	2.4	1,083	2.0
Middle East	4,370	3.0	815	16.0	9,509	5.7	1,172	2.3
Africa	1,236	0.86	203	4.0	1,788	1.0	346	6.6
TOTAL	143,099	100	50,864	100	166,645	100	52,026	100

Source: Airline Business, November 2001 and November 2005

391. Between 2000 and 2004²⁴⁸, freight volumes posted strong growth in two regions (from 33.9 per cent to 38.6 per cent of the world total in Asia-Pacific and from 3 per cent to 5.7 per cent in the Middle East) and marginal growth in a third (from 0.8 per cent to 1 per cent in Africa).

392. On the other hand, declines were recorded in the mature markets of North America (31.4 per cent in 2000, 27.3 per cent in 2004) and Europe (27 per cent in 2000, 24.7 per cent in 2004). Central and South America also showed a downturn (3 per cent in 2000 and 2.4 per cent in 2004).

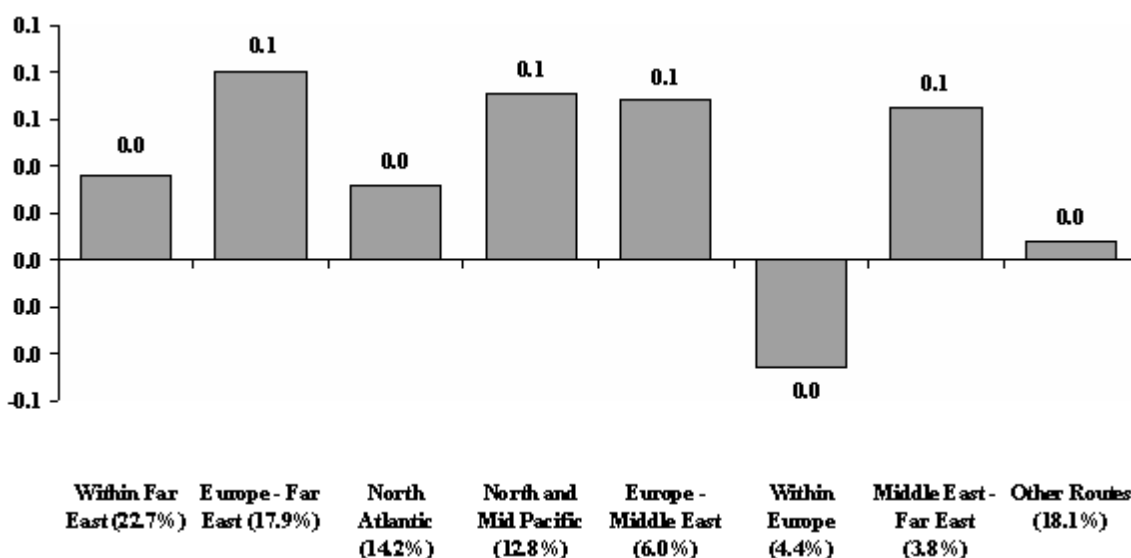
393. The situation is structurally very different with regard to cargo revenues, as such revenues go directly to the carriers, most of which are of North American or European origin. To generalize, one could say that "cargoes are in the east, carriers in the west". This explains the overwhelming dominance of North America in revenue figures (56 per cent in 2000, 52 per cent in 2004), due in large part to the express carriers, although their position is weakening somewhat. Asia-Pacific lies a distant second, but saw a substantial improvement in performance (22 per cent in 2000, 25 per cent in 2004).

394. Europe comes in third with a marginal improvement in performance (17.5 per cent in 2000, 18 per cent in 2004). The Middle East (16 per cent in 2000, 2.3 per cent in 2004) and Central and South America (13 per cent in 2000, 2 per cent in 2004) experienced a collapse in their share of revenues, for which there is no clear explanation. Africa's share, on the other hand, is unexpectedly high (4 per cent in 2000, 6.6 per cent in 2004) and growing.

²⁴⁸ No data were available for 2005.

395. Chart 16 completes this picture by showing growth rates on the different intra- and interregional routes for 2006.

Chart 16
Tonnage growth by route and relative route size, 2006



Source: IATA.

396. China and India are both seen as extremely promising regions. In China, the easing of restrictions on foreign capital holdings in all-cargo air carrier joint ventures in 2003 prompted a veritable joint venture "gold rush". Deals already concluded or under negotiation include:

- Ongoing negotiations between Air France-KLM and China Southern;
- the joint venture between Korean Air (25 per cent), Korean institutional investors (24 per cent) and the Chinese freight forwarder SinoTrans involving five or six Boeing 747 cargo planes;
- the investment by Lufthansa (25 per cent) and a number of German institutional investors (24 per cent) in the new company Jade Cargo, in association with Shenzhen Airlines;
- the investment by China Airlines, a Chinese Taipei carrier (25 per cent), and other Chinese Taipei institutional investors (24 per cent) in Yangtzé-River Express, in association with Hainan Airlines;
- the investment by EVA Air, another Chinese Taipei carrier (25 per cent), in Shanghai International Cargo Airlines;
- the ongoing negotiations between Cathay Pacific and Dragon Air, on the one hand, and Air China, on the other, concerning an all-cargo joint venture based in Shanghai;
- the ongoing negotiations between China Eastern and Singapore Airlines.

397. China is also a prime location for hub establishment by express operators. China alone is thought to account for 30 per cent of growth in the world cargo market²⁴⁹, but its non-costal market is

²⁴⁹ Financial Times, 27 March 2007.

still largely untapped (Air France-KLM cargo for example, has just opened a direct link between Amsterdam and Cheng Du), and much of the regional cargo hub-and-spoke network still has to be established.

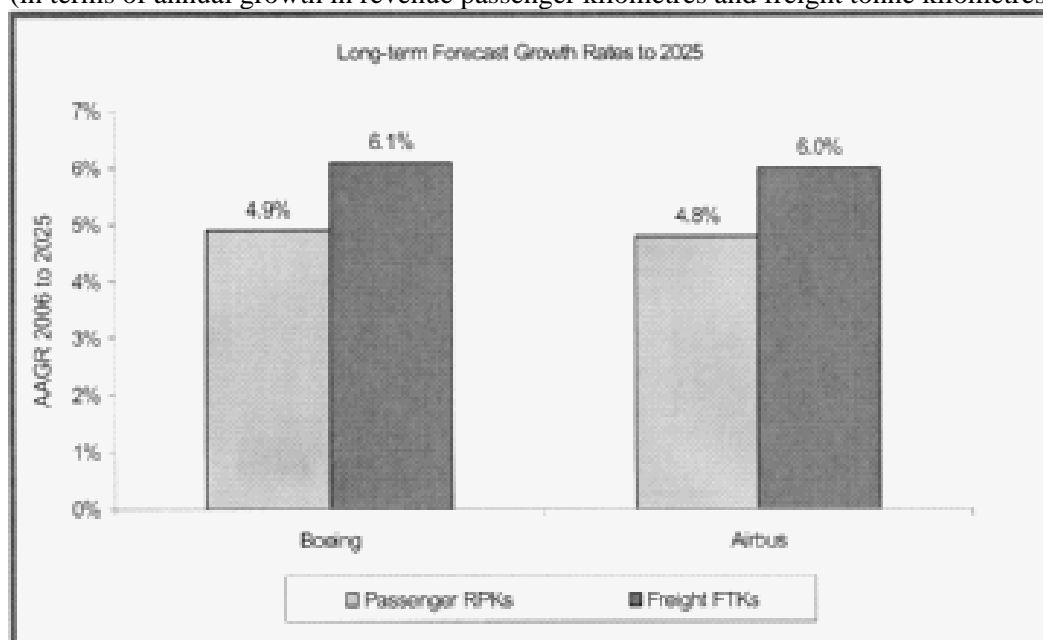
398. In China, 76 per cent of cargo is carried by foreign airlines, and two-thirds of inbound cargo is forwarded via hubs outside the continental territory (Hong Kong, China; Seoul; Tokyo). Chinese airlines, which have had priorities other than freight expansion, look to joint ventures as a means of gaining access to an already established global network.

399. India is also considered a promising, though nascent, market by freight professionals. Currently, there are only nine all-cargo aircraft operating in the country, but Airbus estimates that this figure should rise to 126 by 2015. International freight traffic in India is growing by 12 to 15 per cent a year on average, and domestic traffic by 20 to 25 per cent.

400. All-cargo carriers such as First Flight and Blue Dart (40 per cent owned by DHL) already have Indian operations. The start-up carrier Flyington became India's first widebody freighter operator in 2003, and several major Indian airlines, such as Air India, Jet Airways and GO Air, plan to launch freighter operations. As is indicated below in the regulatory section, India's air freight policy is a liberal one, and the difficulties encountered by operators are linked only to infrastructure and customs constraints.

401. Chart 17 gives comparative forecasts by Boeing and Airbus for passenger and cargo traffic up to the year 2025.

Chart 17
Boeing and Airbus passenger and freight traffic forecasts to 2025
(in terms of annual growth in revenue passenger kilometres and freight tonne kilometres)

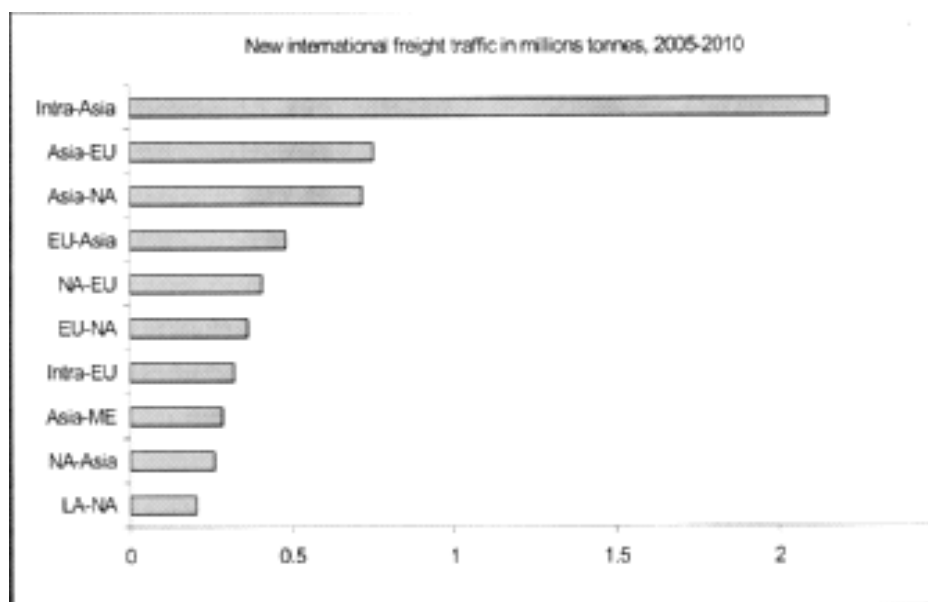


Source: Boeing, Airbus, IATA.

402. As is shown by Chart 17, the growth outlook for the sector remains promising despite economic uncertainties. Both Boeing and Airbus – which admittedly both have an interest in issuing optimistic forecasts – predict a growth rate of roughly 6 per cent a year over the next 20 years, that is to say a tripling of traffic and a doubling of fleet size in unit terms.

403. Chart 18 gives a detailed breakdown of growth rates on the main freight routes within and between regions, as forecasted by IATA.

Chart 18
Forecasted new international freight traffic in millions of tonnes, 2005-2010



Source: IATA.

404. As Chart 18 shows, these forecasted growth rates are geographically uneven, being less optimistic for mature markets and higher for emerging markets. Intra-Asian trade and, to a lesser extent, outbound services from Asia to Europe and North America account for the bulk of anticipated growth in global volumes. For example, according to Airbus, India's freighter fleet should increase from its current level of five aircraft to 126 in 2005. Similarly, IATA expects the intra-Asian market (and Sino-Japanese bilateral links in particular) to become the world market leader, with 26 per cent of total freight volume, by 2010.

(b) Inter-modal competition

405. The various estimates of the size of the intermodal component in air freight transport operations place its volume share at between 0.5 per cent (IATA, 2006)²⁵⁰ and 2 per cent (OECD, 1999)²⁵¹ and its value share at between 33 per cent (OECD, 1999) and 35 per cent (IATA, 2006). The latter figure was revised downwards by IATA from its recent pre-oil price spike level of 40 per cent.

406. According to IATA itself, during the period under review (2000-2005), maritime freight services grew by 9.5 per cent a year, i.e. almost double the growth in air cargo (5.8 per cent) while maritime freight rates fell 20 per cent in real terms over the five-year period, compared with a drop of only 8 per cent for air freight rates, thus intensifying price competition.

407. However, the increasingly frequent comparisons that are made between air cargo and maritime transport by specialized writers and journalists are to some extent misleading. Some goods, particularly perishables such as cut flowers, are only carried by air. Only a limited number of high-tech and other products generate competition between the two modes. When their value per unit falls below a certain threshold, as is now happening with LCD screens, high-tech exports pass directly from the air transport mode to maritime transport one. Moreover, improvements in maritime services productivity (the near doubling of the size of ocean going container ships in ten years over the same routes) cannot for technical reasons be matched by air cargo services (even the cargo version of the

²⁵⁰ IATA Economics Briefings, "The value of air freight", January 2006.

²⁵¹ OECD (1999), "Liberalisation of air cargo transport".

A380 will not achieve such a quantum leap). Given the same value of additional freight, the cost of an additional ship is much lower than that of an extra aircraft. Finally, the increased price of oil, a merchandise which is carried almost exclusively by ship, automatically inflates the value of merchandise carried by sea to the detriment of air transport.

(c) Economic trends affecting actors in the air freight supply chain

408. In addition to the actual carriers, air cargo transportation involves a whole range of actors: freight forwarders, airport operators, ground handlers, customs clearance providers, reservation systems, brokers and service providers specializing in the routing of electronic documents.

(i) *Developments affecting carriers*

409. Table 37 lists the top 50 air freight carriers in 2000 and 2005 in terms of traffic volume, as well as their cargo revenue and the share thereof in total revenues.

Table 37
Top 50 cargo airlines by tonne kilometres, 2000 and 2005

2000						2005					
Rank	Airline	Country/ Territory	Cargo traffic (millions of tonne-km)	Cargo revenue (US\$ million)	Cargo share of revenue	Rank	Airline	Country/ Territory	Cargo traffic (millions of tonne-km)	Cargo revenue (US\$ million))	Cargo share of Revenue
1	FedEx Express	USA	11,438	15,534	100%	1	FedEx	USA	14,641	21,446	100%
2	Lufthansa Cargo	Germany	7,666	2,363	100%	2	Air France-KLM	France	10,830	3,498	13%
3	Korean Air	South Korea	6,590	1,475	30%	3	United Parcel Service	USA	8,460	3,920	95%
4	UPS	USA	6,336	2,530	100%	4	Korean Air	South Korea	8,139	2,273	31%
5	Singapore Airlines	Singapore	6,075	1,197	21%	5	Singapore Airlines Cargo	Singapore	7,874	1,953	24%
6	Air France	France	5,384	1,180	11%	6	Lufthansa Cargo	Germany	7,829	3,209	14%
7	United Airlines	USA	5,055	931	5%	7	Cathay Pacific	China	6,618	1,653	25%
8	British Airways	UK	4,732	855	6%	8	China Airlines	Chinese Taipei	6,078	1,409	44%
9	Japan Airlines	Japan	4,579	1,534	10%	9	Cargolux Airlines Int'l	Luxembourg	5,292	1,446	100%
10	KLM	Netherlands	4,304	1,007	16%	10	EVA Air	Chinese Taipei	5,285	1,242	45%
11	Cathay Pacific	China	4,161	1,301	29%	11	Japan Airlines	Japan	5,177	2,017	10%
12	China Airlines	Chinese Taipei	4,136	837	36%	12	Air China Cargo	China	5,060		
13	Northwest Airlines	USA	4,024	857	8%	13	British Airways	UK	4,933	884	6%
14	Cargolux	Luxembourg	3,813	722	98%	14	Emirates	UAE	4,451	1,214	19%
15	American Airlines	USA	3,663	721	4%	15	Martinair	Netherlands	3,518	874	63%
16	EVA Air	Chinese Taipei	3,558	752	43%	16	Northwest Airlines	USA	3,335	947	8%
17	Delta Air Lines	USA	2,946	583	3%	17	American Airlines	USA	3,226	622	3%
18	Swissair	Switzerland	2,795	924	27%	18	United Airlines	USA	2,949	729	4%
19	Asiana Airlines	South Korea	2,607	555	30%	19	Asiana Airlines	South Korea	2,857	836	28%
20	Martinair	Netherlands	2,356	360	44%	20	Air China	China	2,763	454	10%
21	Nippon Cargo Airlines	Japan	2,246	552		21	Polar Air Cargo	USA	2,599	556	
22	LanChile	Chile	2,047	594	42%	22	Nippon Cargo Airlines	Japan	2,598	911	100%
23	Malaysia Airlines	Malaysia	1,869	463	20%	23	Malaysia Airlines	Malaysia	2,534	574	18%
24	Air Canada	Canada	1,811	351	6%	24	LAN Airlines	Chile	2,392	910	36%
25	Continental Airlines	USA	1,759	360	4%	25	Qantas	Australia	2,329	572	6%

2000						2005					
Rank	Airline	Country/ Territory	Cargo traffic (millions of tonne-km)	Cargo revenue (US\$ million)	Cargo share of revenue	Rank	Airline	Country/ Territory	Cargo traffic (millions of tonne-km)	Cargo revenue (US\$ million)	Cargo share of Revenue
26	Alitalia	Italy	1,743	502.4	10%	26	China Eastern Airlines	China	2,152	607	18%
27	Qantas Airways	Australia	1,718	340	6%	27	Delta Air Lines	USA	1,987	524	3%
28	Thai Airways Int'l	Thailand	1,690	516	17%	28	Thai Airways	Thailand	1,986	637	16%
29	Air China	China	1,648	378	23%	29	China Southern Airlines	China	1,766	378	8%
30	All Nippon Airways	Japan	1,640	611	6%	30	All Nippon Airways	Japan	1,607	858	9%
31	Emirates	UAE	1,356	303	16%	31	Continental Airlines	USA	1,490	973	9%
32	Varig	Brazil	1,238			32	Dragonair	China	1,409		
33	Polar Air Cargo	USA	1,223	398	100%	33	Alitalia	Italy	1,404	587	10%
34	ABX/Airborne Express	USA	1,170	3,210	98%	34	Air Canada	Canada	1,371	531	6%
35	Evergreen Int'l Airlines	USA	1,169	290	100%	35	Varig Log	Brazil	1,282	569	100%
36	Emery Worldwide	USA	1,092	1,013	100%	36	China Cargo Airlines	China	1,276		
37	Virgin Atlantic Airways	UK	1,016			37	Evergreen Intl's Airlines	USA	1,210	445	96%
38	Saudi Arabian Airlines	Saudi Arabia	1,000	215	7%	38	Virgin Atlantic Airways	UK	1,157		
39	Air Hong Kong	China	912			39	Swiss	Switzerland	1,141	396	14%
40	China Eastern Airlines	China	904	257	19%	40	Volga-Dnepr Airlines	Russia	1,048	340	
41	El Al	Israel	894	242	20%	41	Saudi Arabian Airlines	Saudi Arabia	1,046	363	9%
42	Air New Zealand	New Zealand	821	159	9%	42	ABX Air	USA	1,041	1,464	100%
43	SAS	Sweden	812	279	5%	43	SAS Cargo	Denmark	1,039	429	1%
44	Iberia Airlines	Spain	778	210	5%	44	Iberia Airlines	Spain	1,033	349	6%
45	DHL Airways	USA	717	1,497	100%	45	Southern Air	USA	1,011	81	
46	China Southern Airlines	China	686	175	10%	46	World Airways	USA	992		
47	South African Airways	South Africa	680	160	11%	47	South African Airways	South Africa	911	251	8%
48	Aeroflot	Russia	672			48	Qatar Airways	Qatar	870	144	13%
49	US Airways	USA	575	160	2%	49	Aeroflot Russian Airlines	Russia	833	248	10%
50	Gulf Air	Bahrain	557			50	Air New Zealand	New Zealand	799	159	8%

Source: Airline Business, November 2001 and November 2006.

410. The top six carriers (FedEx, Air France-KLM, UPS, Korean Air, Singapore Airlines Cargo and Lufthansa Cargo) remain the same, but their order is slightly changed as a result of Air France's merger with KLM, which propelled this group into second place ahead of Lufthansa Cargo, relegated to sixth place. Two Asian carriers, namely EVA Air (Chinese Taipei) and Air China Cargo (China), make their appearance in the top twelve, in addition to the five already in that group, and the strong progression of Emirates is also noteworthy.

411. Apart from the two express operators (FedEx, first in 2000 and 2005, UPS, fourth in 2000, third in 2005), the top US carrier, Northwest, dropped four places to sixteenth in 2005. Differences in investment strategy explain the fallback of British Airways and Swiss, and the rise of the Luxembourg all-cargo carrier CargoLux. Apart from Emirates, the top carriers from countries not belonging to the three main traffic poles (Asia, North America and Western Europe) are Lan Chile, Qantas, Varig Log (once a candidate to take over its parent company), followed by the specialized Russian carrier Volga-Dnepr, and Saudi Arabian Airlines. The top African carrier is South African Airways.

412. Table 37 groups together an extremely heterogeneous set of companies. They can roughly be divided into six categories:

- Low-cost carriers and leisure carriers, which regard freight as more of an impediment to their operational efficiency than a revenue opportunity (typically AirAsia and Condor);
- "belly carriers" which do not operate all-cargo planes and regard freight as a marginal income source (typically the US majors);
- "mixed fleet" carriers operating both belly-cargo passenger aircraft and dedicated freighters (typically Korean Air, Air France-KLM and Lufthansa);
- all-cargo carriers operating only freighters (typically CargoLux, Air Foyle and Polar Air). This category also includes niche operators such as outsized shipment carriers (typically Volga-Dnepr) and the Aircraft Crew Maintenance and Insurance (ACMI) operators (typically Atlas Air before it filed for bankruptcy or the Icelandic carrier Air Atlanta);
- express carriers which operate their own fleets but also have leased or franchised capacity to transport parcels and a limited amount of freight within a hub-and-spoke system where trucking complements, and sometimes takes the place of, air transport services (typically FedEx, UPS and, to a lesser extent, ASTAR, the air carrier arm of DHL, but with a capital structure different from that of DHL to take account of US airline ownership rules);
- lastly, for the sake of completeness, mention could additionally be made of the virtual airlines operated by certain freight forwarders, which wet-lease aircraft on a seasonal basis over certain routes from ACMI or other operators (typically ASB Air, the airline affiliate of Panalpina from Atlas Air and Swiss Cargo, or Danzas AEI from the Turkish operator MNG).

413. During the period under review, developments affecting each of these types of carrier varied.

(a) Low-cost carriers and leisure carriers

414. The period under review was extremely profitable for low-cost carriers and more uncertain for leisure carriers. In the area of freight, however, both types of carrier were confronted with the same difficulties: on the one hand, the lack of sales platforms, ground handling facilities, warehousing and interlining necessary for the operation of economically viable freight services, and

on the other hand the operational inconvenience of unloading freight, which may delay the rapid turnaround of aircraft, a key parameter of the low-cost model.

415. In view of these constraints, many carriers in this category have abandoned freight services and confined themselves to transporting baggage for their passengers. Others have attempted to convert this handicap into a source of profit by subcontracting management of their belly space to a third company. Lufthansa, for example, set up a specialized subsidiary, Cargo Counts, in October 2003, which has already signed contracts with AirAsia, Condor, Spanair, Hapag Lloyd and the charter operators SunExpress of Turkey and Luxor of Portugal. For the same services, other airlines have turned to general sales agents (GSA) (see also S/C/W/270, page 47, paragraph 201). These include SN Brussels which outsourced the management of its belly space on African routes to the GSA European Cargo Services. Third companies managing the belly cargo operations of airlines are now called cargo management companies.

Members may wish to consider whether or not the activities of these cargo management companies fall within the scope of the GATS and, if so, what sui generis definition and/or what CPC item(s) could be assigned to them.

(b) Belly carriers

416. Cargo revenues made a marginal but useful contribution to the balance sheet of belly carriers, requiring no particular investment. Economic developments over the period under review gave such revenues more critical importance than before, and at the same time contributed to a weakening of belly carriers' economic position in the area of freight transport.

417. The growth of freight services (roughly 6 per cent per year in the medium term) is structurally greater than that of passenger transport (4 per cent per year). Subject to technical developments affecting the belly capacity of passenger aircraft²⁵², the market share of belly carriers will automatically decrease to the benefit of carriers operating dedicated freighters. For the same customer/freight forwarder, they will therefore be carrying proportionally smaller loads, whereas a significant trend among freight forwarders is their growing consolidation and their tendency to group capacity purchases to the benefit of certain preferred carriers. Generally speaking, infrastructure costs became too high for small and medium-sized carriers during the period.

418. In the face of this squeeze on their operations, belly carriers have several options: to accept the situation, to try to concentrate their marketing efforts on a few high volume customers, to form alliances with a variety of partners in the air transport supply chain, to subcontract management of their belly space to third parties, to purchase dedicated freighters, or finally to get out of the freight business.

419. A number of examples serve to illustrate these different strategies. Air Lingus stopped carrying cargo on its European routes in 2004; British Airways and Emirates moved in the opposite direction by purchasing dedicated freighters; and SN Brussels and US Airways subcontracted management of some of their belly cargo operations on long-haul routes.

(c) Mixed fleet carriers

420. "Mixed fleet carrier", a term not universally accepted, is used here to mean carriers operating both the cargo holds of passenger planes and dedicated all-cargo aircraft, such as Air France-KLM, Lufthansa, or Korean Air.

²⁵² Specialized journals contain contradictory information on future belly capacity of new models of planes, some affirming that they will be higher, others that they will be lower.

421. One of the main developments in this subsector is the appearance of cargo alliances. These are not the exact equivalent of passenger alliances, since they are fewer in number (two global alliances instead of three) and have fewer members. In practice, however, the members of a cargo alliance have hitherto always been members of the corresponding passenger alliance.

422. The first of these alliances, New Global Cargo, was set up in May 2000 and was renamed WOW in September 2001. Its members are Lufthansa Cargo, Singapore Airlines Cargo and SAS Cargo, all members of Star Alliance. They were joined in 2004 by Japan Airlines. The second alliance, Sky Team Cargo, was launched in September 2000 with a membership comprising Delta Airlines, Air France, Korean Air and AeroMexico, which were later joined by Alitalia and Czech Airlines, and by KLM in 2003.

423. As is shown by a comparison of Table 38, with the left-hand section of Table 37 listing the top 50 freight carriers, the appearance of these alliances has drastically altered the competitive landscape.

Table 38
Top five air freight carriers including alliances, 2000

Rank	Alliance	Cargo traffic (billions of tonne-km)	Freighters/combis
1	Sky Team	16.8	50
2	WOW	14.6	32
3	FedEx	11.4	331
4	KLM-Northwest	8.3	34
5	UPS	8.3	245

Source: Airline Business, November 2001

424. Unfortunately, no comparable data are available for the end of the period. In the meantime, the fourth alliance, KLM-Northwest, has ceased to exist, having largely been absorbed by Sky Team, while WOW has undergone considerable expansion.

425. It would appear, however, that the alliances are having only a limited impact at this stage. It is difficult to speculate about the degree of actual integration in each alliance. They have already harmonized their product portfolios. Sky Team Cargo has integrated its sales teams and practises joint ground handling, while WOW members are required to reserve 10 per cent of capacity on each of their flights for their partners' express products. But neither of the two alliances coordinates fleet utilization in terms of capacity, scheduling, tariffs and procedures, so as to establish a harmonized global network capable of competing with the express carriers. Each continues to fly to the markets of its partners. True integration appears to materialise only on a very small scale, for example within the Air France-KLM Group or under the Air France-Delta joint venture for North American sales.

426. The strategy of cooperative linkage between mixed fleet carriers is not limited to the alliances of such carriers. It may also take the form of investment in dedicated freight joint ventures such as Lufthansa Cargo's 25 per cent stake in the new Chinese all-cargo carrier, Jade Airlines, with German institutional investors holding a 24 per cent stake and with Shenzhen Airlines as local partner. Similarly, Lufthansa Cargo launched a cooperative venture with DHL on five long-haul routes, with more tightly integrated modalities than in the case of WOW, as they extend to the joint planning of available capacity and it is planned to use traffic rights owned by the two companies for flights. The logistical affiliate of Swiss (SAIR Logistics) has also set up the Swiss Global Cargo joint venture with the freight forwarder Panalpina. DHL's 40 per cent stake in Air Hong Kong, the cargo affiliate of Cathay Pacific, is another example, especially as it is combined with an agreement under which belly space on Cathay's passenger aircraft is sold to DHL on certain flights.

427. Some mixed fleet carriers have spun-off their freight operations within a specific affiliate, as in the case of Lufthansa, Singapore Airlines, SAS and Air Canada. Others envisaged this step but then gave up the idea (Korean Air). Yet others have retained an integrated structure (Swiss).

428. Generally speaking, the mixed fleet carriers, in the same ways as the all-cargo carriers, increasingly have recourse to leasing contracts that are flexible – and hence more costly – to cope with sudden spikes in traffic or restrictions on cargo hold carrier capacity (belly crunch) linked to events affecting air transport (9/11, SARS, second Gulf War, etc.).

429. At the same time, divergent expansion strategies were followed by the mixed fleet carriers during the period under review: internal growth (Emirates) and/or external growth (Lufthansa), or redeployment to niche markets by carriers like Swiss for premium products such as pharmaceuticals that require temperature-controlled transportation.

430. A major difficulty faced by mixed fleet carriers, and even more by all-cargo carriers, is structural route imbalance. Thus, two to four times more goods are carried from China to North America and Europe than from Europe and North America to China.

431. The considerable imbalance in volumes is even more pronounced in value terms. For example, Airline Business cited differences of nine to one in freight rates for China in November 2005: US\$0.25 per kilo on the Europe-China leg, and US\$2.2 to 2.3 per kilo on the China-Europe leg (excluding fuel and security surcharges in both directions). It is crucially important to offset these imbalances, even if only partially, by negotiating fifth and seventh freedom rights.

432. The situation is however less difficult for European carriers, which have the possibility of taking on cargo at an intermediate stop in the Middle East (fifth freedom) than it is for North American carriers which have to cross the North Pacific with no possibility of a profitable extra stop.

(d) All-cargo carriers

433. Paradoxically, little is available in the way of data or documentation on these carriers, which are not very visible. Apart from some well-known names, the majority of these companies specialize in niche markets and do not therefore appear in the list of the top 50 freight carriers from all categories. Among those that do appear on the list, some have been bought by express carriers, such as ABX-Airborne Express in 2003, then Polar Air in 2006, by DHL Deutsche Post. ABX-Airborne's operations also include freight forwarding. Deutsche Post has copied the capital structure of Astar by splitting off the air branch renamed ABX Air and scaling back its holding. Between 2000 and 2005, ABX fell from 34th to 42nd place. Polar Air, on the other hand, rose from 33rd to 21st place, and MartinAir and Cargo Lux also moved up. Emery Worldwide has disappeared from the list, while Volga-Dnepr has been included.

434. Boeing and Airbus concur in foreseeing a bright future for this segment using all-cargo aircraft. The increase in the number of joint ventures purely involved in cargo operations in China is another indicator of this trend, even though some observers consider that the main hub in Shanghai is reaching its capacity limit.

(e) Express carriers

435. The review of the Annex on Air Transport Services is probably not the right place to describe in detail the developments that have affected express services inasmuch as this activity goes well beyond air transport alone and involves logistics and road transport in particular. Only some developments, that concern solely the air transport aspects, will be described here.

436. One major development has been the buy-out of the US express services company DHL by the Deutsche Post Network group, which then acquired the air freight forwarder AEI (Air Express International) and 45 per cent of Polar Air, an all-cargo carrier, in 2006. Air transport ownership

regulations obliged Deutsche Post to split DHL's US operations into two, with the air transport component renamed Astar, in which Deutsche Post has only a 25 per cent holding. The two other express services, UPS and FedEx, contested this restructuring because Deutsche Post exercised effective control of Astar, but their complaints were rejected in succession by the US Department of Transportation and by the US courts.

437. Virtually in parallel, Deutsche Post lodged a complaint with the European Commission because UPS had de facto control of the Danish carrier Star Air by bringing to it the totality of its turnover. There has been no follow-up to this complaint.

438. It is the express carriers which, because of the structure of their networks, have taken the concept of hubs furthest and have invested massively, more than freight companies, in special facilities or even dedicated airports abroad. This is the case, for example, with UPS in Shanghai, Hong Kong, Manila and Cologne, in addition to Louisville; FedEx in Beijing, Shanghai, Guangzhou, Subic Bay and Roissy, in addition to Memphis; and DHL in Sydney, Leipzig, Hong Kong and Shanghai, in addition to Cincinnati. This worldwide expansion, particularly in China²⁵³, represents a growth factor in a market in which the North American parcel service has reached maturity and expedited trucking competes increasingly strongly, so that domestic air transport volumes are stagnating. Likewise, express operators are increasingly tending to transport freight and no longer only parcels weighing less than 30 kg.

(ii) *Trends affecting other actors in the air freight supply chain*

(a) Freight forwarders

439. In the case of air transport, these service providers play a key role as intermediaries between airlines and the end customer. Unlike maritime transport, where the end customer is frequently in contact with the carrier, it is nearly always the freight forwarder who buys the air carrier's capacity and not the end customer. Exceptions to this rule are confined to niche areas (for example, British Airways with British supermarkets for the import of tropical fruit), so much so that a KLM manager created an uproar at one of the industry's congresses by envisaging the possibility of direct contacts between airlines and end customers.

440. When they make use of third parties' capacity for regulatory economic reasons, express operators are in the same position as freight forwarders. They are large buyers of capacity with considerable negotiating power.

441. During the period under review, there was a marked increase in the concentration of freight forwarders and air transport customers in general, to the extent that since 2004 the five leading buyers alone control 55 per cent of total volume, as can be seen from Table 39.

²⁵³ Where cargo traffic rights to and from the United States have been totally liberalized through two successive bilateral negotiations during the period under review.

Table 39
Leading air freight customers, 2004

Company	Total revenue (US\$ million)	Express services turnover (US\$ million)	Logistics/forwarding (US\$ million)
Deutsche Post	49,772	19,021	7,311
UPS	36,582	33,372	3,210
FedEx	24,710	19,485	-
TNT	15,715	5,846	5,100
Exel	11,617	-	11,377
Schenker	10,002	-	5,193
Kuehne + Nagel	9,320	-	9,320
Panalpina	6,006	-	6,006

Source: Airline Business, November 2005

442. Since this table was drawn up, the pace of concentration has accelerated: Deutsche Post, at the top of the table, has bought Exel, in fifth place; TNT has bought Wilson; Schenker has bought BAX Global; and UPS has bought Menlo.

443. These freight forwarders or express operators, as air freight transport customers, are increasingly tending to use hubs and group their purchase of capacity, reserving it for a dozen or so "preferred carriers" in exchange for ever more complex arrangements that imply a guarantee of capacity on the part of the carrier, paid by the freight forwarder whether or not it is used ("take or pay"), and a commitment by the freight forwarder to use the holds of mixed-fleet carriers throughout their network for goods whose volume does not justify the use of an all-cargo plane.

444. Airlines themselves cannot practise consolidation because of the rules governing airline ownership and therefore see their negotiating power eroded as the disproportion in size between them and their customers grows wider.

445. Some freight forwarders now even have airlines at their disposal, wet-leasing aircraft for a whole season on some routes, either from ACMI carriers or from mixed-fleet or all-cargo operators. This is the case for the examples already cited: Panalpina with its affiliate ASB Air leasing capacity from Atlas Air and Swiss; Danzas AEI from MNR; and DHL from Lufthansa Cargo. These "virtual" companies allow freight forwarders to exert closer control over the supply chain, particularly for "just in time" deliveries. This is one of the reasons why the forecasts of Airbus and Boeing concur in predicting stronger growth for all-cargo aircraft, utilized by these virtual companies, than for aircraft used to carry passengers.

446. Airlines are particularly concerned at the buy-out of freight forwarders by express operators, fearing not only their negotiating power but also that freight could be diverted to other carriers or to the express operators' own air freight networks. Up until now, these fears do not seem to have materialized and forwarding operations, which are structurally different from express services, have not been integrated or merged with the latter.

(b) Airports

447. In Europe at least, environmental constraints have become even more acute during the period under review and have led several major airports either to ban night flights (Frankfurt as of 2006 in return for building a fourth runway) or to limit them (Paris, Brussels).

448. Cargo carriers, whether express or mixed-fleet, use night flights in passenger hubs because this allows them to interline with belly services and thus to "hub-and-spoke" cargo operations, and also because long-haul flights can arrive in the morning.

449. Two factors at least tend to keep freight carriers away from these hubs: one is general congestion and the other is restrictions on night flights, which are justified by the fact that a large part of the cargo fleet is made up of fairly old passenger aircraft retrofitted as all-cargo aircraft, which are thus generally noisier, or even extremely noisy in the case of the former Soviet bombers used to transport heavy loads. As indicated in the section on slots, for these reasons DHL abandoned its hub in Brussels and fell back on Leipzig, which offered 24-hour service.

450. In this context, efforts to develop all-cargo airports – situated in areas that are not densely populated²⁵⁴ and offering 24-hour service with motorway connections – are going forward with varying degrees of success, because cargo carriers do not want to give up the interlining afforded by passenger hubs. While Vatry, near Rheims, and Hahn, close to Frankfurt, are finding it difficult to develop, Glasgow Prestwick, supported by the presence of the "Silicon Glen" electronics industries, Vittoria in Spain, specializing in stopovers to and from South America and maritime products, and Midlands-Manchester and Liège, which both have liberal policies as regards noise pollution, are reasonably successful. At this stage, these developments appear to be confined to Europe.

451. One other significant development as far as airports are concerned is the creation of hubs by carriers outside their own countries, a development that is still extremely rare for passenger traffic. These hubs have mainly, but not exclusively, been created by express operators, and much of the investment in joint ventures in China by Lufthansa, Air France, Korean Air, Singapore Airlines, etc., can be explained by the desire to establish such hubs in China.

452. Table 40 shows the 50 leading freight airports classified according to volume of traffic at the beginning (2000) and end (2005) of the period under review.

²⁵⁴ These are often former military bases: Chateauroux, Vatry and Hahn, for example.

Table 40
The 50 cargo airports by traffic volume, 2000-2005

2000					2005				
Rank	City	Airport	Country/ territory	Tonne/km (thousands)	Rank	City	Airport	Country/ territory	Tonne/km (thousands)
1	Memphis	International	US	2,489	1	Memphis	International	US	3,599
2	Hong Kong	Chek Lap Kok	China	2,267	2	Hong Kong	Chek Lap Kok	China	3,433
3	Los Angeles	International	US	1,933	3	Tokyo	Narita	Japan	2,291
4	Tokyo	Narita	Japan	1,933	4	Seoul	Incheon International	S. Korea	2,150
5	Seoul	Kimpo	South Korea	1,874	5	Paris	Charles de Gaulle	France	2,010
6	New York	Kennedy	US	1,826	6	Frankfurt	International	Germany	1,963
7	Frankfurt	Rhein-Main	Germany	1,710	7	Los Angeles	International	US	1,938
8	Singapore	Changi	Singapore	1,705	8	Shanghai	Pu Dong	China	1,857
9	Miami	International	US	1,642	9	Singapore	Changi	Singapore	1,855
10	Louisville	Standiford Field	US	1,520	10	Louisville	International	US	1,815
11	Chicago	O'Hare International	US	1,464	11	Miami	International	US	1,755
12	London	Heathrow	UK	1,402	12	Taipei	Chiang Kai Shek Int'l	Chinese Taipei	1,705
13	Paris	Charles de Gaulle	France	1,380	13	New York	JFK	US	1,661
14	Amsterdam	Schipol	Netherlands	1,267	14	Chicago	O'Hare International	US	1,546
15	Taipei	Chiang Kai Shek Int'l	Chinese Taipei	1,209	15	Amsterdam	Schipol	Netherlands	1,496
16	Indianapolis	International	US	1,174	16	London	Heathrow	UK	1,390
17	New York	Newark	US	1,083	17	Dubai	International	UAE	1,315
18	Osaka	Kansai	Japan	1,001	18	Bangkok	International	Thailand	1,141
19	Dallas/Fort Worth	International	US	905	19	Indianapolis	International	US	985
20	Atlanta	Hartsfield Int'l	US	872	20	Newark	Liberty Int'l	US	950
21	Bangkok	International	Thailand	871	21	Osaka	Kansai International	Japan	869
22	San Francisco	International	US	870	22	Tokyo	Haneda	Japan	799
23	Dayton	International	US	832	23	Beijing	Capital	China	782
24	Tokyo	Haneda	Japan	770	24	Atlanta	Hartsfield Int'l	US	768
25	Oakland	International	US	703	25	Guangzhou	Baiyun	China	751
26	Sydney	Kingsford Smith	Australia	665	26	Luxembourg		Luxembourg	743
27	Brussels	Zaventum	Belgium	634	27	Dallas/Fort Worth	International	US	742
28	Dubai	International	UAE	582	28	Oakland	International	US	673
29	Philadelphia	International	US	563	29	Brussels	National	Belgium	661
30	Beijing	Capital	China	555	30	Kuala Lumpur	International	Malaysia	657
31	Kuala Lumpur	Subang-KL Int'l	Malaysia	524	31	Cologne/Bonn	Konrad-Adenauer	Germany	644
32	Shanghai	Hongqiao	China	492	32	San Francisco	International	US	591

2000					2005				
Rank	City	Airport	Country/ territory	Tonne/km (thousands)	Rank	City	Airport	Country/ territory	Tonne/km (thousands)
33	Honolulu	International	US	482	33	Bogota	El Dorado International	Colombia	561
34	Sharjah		UAE	475	34	Philadelphia	International	US	548
35	Denver	International	US	470	35	Ontario	International	US	522
36	Boston	Logan International	US	466	36	Sao Paulo	Guarulhos Int'l	Brazil	497
37	Ontario		US	464	37	Shenzhen	Baoan Int'l	China	466
38	Cologne		Germany	442	38	Honolulu	International	US	457
39	Seattle/Tacoma	International	US	441	39	Mumbai	Chaprati Shivaji Int'l	India	435
40	Toledo		US	427	40	Manila	Ninoy Aquino Int'l	Philippines	412
41	Sao Paulo	Guarulhos Int'l	Brazil	422	41	Toronto	Lester B Pearson	Canada	410
42	Copenhagen	Copenhagen	Denmark	419	42	New Delhi	Indira Gandhi Int'l	India	389
43	Zurich	Zurich	Switzerland	417	43	Houston	George Bush	US	388
44	Manila	Ninoy Aquino	Philippines	390	44	Milan	Malpensa	Italy	385
45	Washington	Dulles International	US	384	45	Mexico City	Benito Juarez Int'l	Mexico	380
46	Cincinnati	Northern Kentucky	US	381	46	Madrid	Barajas	Spain	365
47	Minneapolis/St Paul		US	370	47	Shanghai	Hongqiao	China	360
48	Houston	George Bush	US	368	48	Boston	Logan Int'l	US	356
49	Tel-Aviv	Ben Gurion	Israel	344	49	Copenhagen	Kastrup	Denmark	355
50	Phoenix	Sky Harbor	US	339	50	Toledo	Express	US	352

Source: Airline Business, November 2001, and November 2006.

453. This highly informative table shows more far-reaching changes than the corresponding table on carriers.

454. The airports which have lost ground include Los Angeles, Tokyo, New York JFK, Chicago, London and San Francisco. Among those which have moved up, there have been spectacular, but hardly surprising, performances by Shanghai and Dubai, as well as Paris, Taipei, Bangkok and Beijing. The arrival of Mumbai and New Delhi on this list, in 39th and 42nd place respectively, after being absent from the previous list, is worthy of note, as is that of Luxembourg, also not among the previous leaders, but now in 26th place with a volume that is almost double that of New Delhi or Mumbai, which gives some idea of the potential for growth in India.

455. Lastly, there has been little or no change in the ranking of certain airports on the list: Memphis, Hong Kong, Seoul, Frankfurt, Singapore and Louisville. Overall, Asia moved from 12 to 17 rankings in the top 50, North America from 24 to 18 and Europe from 8 to 9; in 2000, as in 2005, these three regions accounted for 44 of the top 50 airports.

(c) Other service providers involved in the air transport chain

456. The air transport chain includes many other service providers:

- Airport ground handling services, which have already been mentioned in the documentation (see document S/C/W/270, pages 88-104, paragraphs 291-375);
- customs agents (customs clearance providers), some of which specialize in air freight exclusively, whereas others clear goods for all modes of transport;
- cargo reservation systems, which have already been mentioned in the documentation (see document S/C/W/270, page 41, paragraphs 178 and 179);
- brokers such as Chapman Freeborn, Air Partner and Star Broker, whose role is similar to that of their maritime counterparts ("Ship for cargo, cargo for ship"), but on which there is virtually no documentation;
- firms specializing in forwarding the electronic documentation accompanying freight, such as Traxon;
- providers of automated ready-to-use air cargo solutions, such as the joint subsidiary of SITA Cargo and Cargolux, Champ Cargosystem.

Members may wish to consider whether or not the activities of these various service providers fall within the scope of the GATS and, if so, what sui generis definition and/or CPC item(s) could be assigned to them.

(d) Other economic developments

457. Outsourcing has started to appear in air freight, spreading beyond the example of cargo management companies, whose scope is still fairly limited. In 2003, for example, the employees of SwissPort Cargo Services and Worldwide Flight Services Inc. replaced 1,500 warehouse and cargo call centre employees at 17 warehouses owned by United Airlines.

458. Some analysts, for example, Christopher Shawdon of Unisys, forecast the imminent emergence of low-cost freight carriers because they consider that the "low-cost" model (simplified pricing, highly productive teams, and high rate of aircraft utilization) can be transposed to freight. To date, however, there are no concrete examples.

459. *Pro memoria*, the growing role of electronic transactions in cargo transport has been dealt with in detail in the section concerning distribution of air transport services in document S/C/W/270 (page 41, paragraphs 178 and 179). This is the case in particular for IATA's "e-freight" initiative (S/C/W/270, page 55, paragraphs 243 and 244) and the Cargo Accounts Settlement System (CASS) also administered by IATA (S/C/W/270, page 56, paragraphs 245 to 248).

460. As is the case for baggage handling, widespread use of radio frequency identification (RFID) tags is seen as the next major development in the actual handling of freight, the ultimate goal being to track each shipment individually, an area in which express operators have opened up a strong lead.

461. In a joint effort aimed at catching up on the technical and organizational lead held by express operators, 15 traditional freight carriers and nine freight forwarders, together accounting for 65 per cent of traffic, have joined forces in an IATA-led initiative entitled "Cargo 2000". The origin of this initiative is a study by the company Unisys in 1996, which showed that, on average, a shipment by air took six days to complete and involved 40 separate processes.

462. The aim of Cargo 2000 is to halve the number of processes, and to create a "route map" for each shipment, showing what phases it must pass through and when, in order to alert the shipper whenever a phase has been missed or delayed. Another objective is to compile statistics to measure performance, identify any problems and resolve them.

463. The initiative got off to a difficult start because those involved feared that they would be called on to invest in a common IT platform when they had already invested heavily in their own systems. Cargo 2000 was thus given a boost in 2003 when the idea of a common IT platform was abandoned and replaced by the definition of standards. Cargo 2000 is designed in three phases: phase 1 from airport to airport, phase 2 from door to door, in both cases tracking the consolidated shipment under a single master air waybill, and phase 3 allowing each individual shipment with a separate air waybill to be monitored. At the end of 2005, only one member out of 25 had implemented phase 2, but the indicators generated by phase 1 were unanimously deemed extremely useful.

2. Regulatory Developments

(a) Aspects directly related to market access

(i) *Bilateral developments*

464. According to IATA, carriers operating passenger flights with freight in their holds ("belly carriers") carried 48 per cent²⁵⁵ of the total volume of air freight in 2006. This share is forecast to decline to 40 per cent in 2020.²⁵⁶

465. By definition, these flights are governed by the same regime as passenger flights, except for any additional restrictions only applicable to freight that are not codified in detail in the ICAO World's Air Services Agreement database. Consequently, QUASAR already describes the regulatory regime applicable to around 50 per cent of the volume of freight.

466. However, for the remaining 50 per cent, i.e. all-cargo flights including express services, there is no set of publicly accessible regulatory data on which to build the equivalent of QUASAR, i.e. a detailed study of the regulations specific to all-cargo flights and their correlation to the corresponding traffic data.

²⁵⁵ Quoted in Aviation Week & Space Technology, 7 May 2007.

²⁵⁶ *Idem*.

467. Indeed, the WASA database, which served as the regulatory basis for QUASAR, only deals very summarily with the cargo and express service aspects of bilateral agreements. It simply uses a "yes/no" option regarding the existence of provisions specific to cargo and express flights, without going into any further detail.

468. Another ICAO database, the Database of Aeronautical Agreements and Arrangements (DAGMAR), which contains the full texts²⁵⁷ of 1,836 bilateral agreements, could no doubt be used as the regulatory basis for such a study. However, the WTO Secretariat has not yet been able to obtain from the ICAO Secretariat access to this database.

469. The QUASAR methodology can easily be transposed to the problem area of express and all-cargo flights subject to some minor alterations, such as the identification and weighting of obstacles specific to such flights and the elimination of factors specific to passenger flights that would be meaningless in respect of freight (controlling fares, for example).

470. Subject to Members' approval and the availability of regulatory data, the Secretariat is planning to expand the scope of the QUASAR study to cargo and express flights in the medium to long term.

471. Although it is impossible to give a detailed account of the structure and development of the all-cargo and express service aspects of bilateral agreements during the period under review, a picture of the kind contained in the first review (see compilation, pages 268-284) can be drawn up on the basis of information available from disparate public sources.

472. The resulting table is markedly more liberal than that for passenger transport. For example, there are "round-the-world" services whose existence implies the granting of a combination of seventh freedom traffic rights, a system that has no equivalent in the area of passenger transport, where it is largely unthinkable.

473. Likewise, as there is frequently no national flag to defend, the application of ownership and control criteria is much more flexible and there are even 100 per cent foreign-owned subsidiaries operating on and from national markets, such as Tampa Cargo, the Colombian affiliate of the Netherlands carrier MartinAir, which would be highly exceptional in the case of passenger transport. Joint ventures are very rare in passenger transport but relatively common for freight, particularly in China.

474. According to the Aero-Accords consultancy's December 2005 study on the liberalization of air freight, liberalization has gathered significant momentum since 2001. For example, negotiations including discussion of clauses specific to all-cargo flights accounted for only a small percentage of cases in the 1980s, but for over 50 per cent today, as can be seen from Table 41.

²⁵⁷ With the exception of confidential memoranda.

Table 41
Air Services Agreements containing "all-cargo" provisions

Period	Number of agreements signed	With cargo routings		Granting "equal and separate rights"	
		Number	Share	Number	Share
2001-2005	234	107	46%	68	29%
1996-2000	294	98	33%	133	45%
1991-1995	678	36	5%	98	14%
1986-1990	477	9	2%	38	8%
1981-1985	294	10	3%	13	4%
1976-1980	538	12	2%	33	6%

Notes: - "Number of agreements signed" = the number of finalized negotiations during each period;
 - "With cargo routings" = negotiations with special all-cargo routes;
 - "Granting equal and separate rights" = cases without special routes but which contain all-cargo clauses/articles.

Source: Airline Business, January 2006

475. Over the same period, fifth freedom rights concerning both passengers and freight were granted on a fairly wide scale. Sixth freedom rights were also granted, although they do not need legislative approval before they can be exercised. In 10 per cent of the negotiations, seventh freedom rights were granted, whereas for passenger traffic such rights are virtually non-existent. Table 42 gives a rundown of all beyond-fourth-freedom rights recently granted.

Table 42
Air Services Agreements containing beyond-fourth-freedom traffic rights

Period	Number of agreements signed	With general fifth freedom		With general sixth freedom		All-cargo seventh freedom	
		Number	Share	Number	Share	Number	Share
2001-2005	234	52	22%	37	16%	24	10%
1996-2000	294	177	60%	51	17%	29	10%
1991-1995	678	130	19%	15	2%	0	0%
1986-1990	477	117	25%	1	0.2%	0	0%
1981-1985	294	53	18%	0	0%	0	0%
1976-1980	538	162	30%	0	0%	0	0%

Note: "Number of agreements signed": the number of finalized negotiations during each period.

Source: Airline Business, January 2006

476. The possibility of making intermediate stops guaranteed by fifth and seventh freedoms is crucial for cargo transport. There is often an imbalance between the flows in both directions over the same route whereas for passengers they almost balance out. This directional imbalance can be found in maritime transport on virtually the same routes (Asia-Europe, Asia-North America, Europe-Africa) and creates a problem of returning virtually empty, thereby affecting the profitability of flights. The possibility of making an intermediate stop, which is seen as a constraint by passengers, is on the contrary an opportunity for freight carriers because it enables them to load other cargo and create triangular traffic.

477. Some examples show the advantages of these fifth and seventh freedoms: Cargolux derives 12 per cent of its revenue from fifth freedom rights, particularly on the routes (fifth freedom segments underlined) Luxembourg – United States - Mexico, Luxembourg – Malaysia - Australia, and Luxembourg – Chinese Taipei -Hong Kong, China; British Airways uses fifth freedom rights from the airports at Porto and Athens; European carriers frequently stop over in the Middle East on the way to China or on the return leg.

478. For seventh freedom, MartinAir, a Netherlands company, and AviaLeasing, an Uzbek company, have their operational bases in the United States and enjoy seventh freedom rights from these bases. Singapore Airlines has seventh freedom rights to fly to the United States from its Chinese hubs of Xiamen and Nanjing.

479. In order to follow up the expansion of traffic, carriers have acquired more wide-bodied aircraft – 245 in 1994, 852 in 2004 – but in return the profitable operation of these wide-bodied aircraft means a large number of stops (provided by fifth, sixth and seventh freedom rights) and organization as a network. Aero-Accords considers that by 2015 around half of the agreements will have specific all-cargo clauses but that seventh freedom rights should peak at most at 15 to 20 per cent of agreements by the same date.

(ii) *Discussions at ICAO*

480. The references to liberalization of freight traffic at the Fifth Worldwide Air Transport Conference provide a glimpse of the progress of liberalization in recent years.

481. The discussions appear to point to the emergence of a degree of consensus on the special nature of freight transport and the objective to be pursued: its separate and accelerated liberalization. On the other hand, the participants differed significantly as to the ways of achieving this objective.

482. In its own contribution to the Conference on freight, "Liberalizing air cargo services" (ATConf/5-WP/10), the **ICAO Secretariat** came out more clearly in favour of liberalization than it had done in respect of passenger traffic. For passengers, ICAO proposed three distinct optional approaches for a model air transport agreement (Template Air Services Agreement)²⁵⁸: traditional, transitional and full liberalization. On the other hand, ICAO considered that freight could be the subject of special regulatory treatment.

483. ICAO first of all notes that freight traffic is distinguished from passenger traffic by a number of special features: goods are less sensitive to elapsed time, they can be moved along different routes and make numerous stops. They only move in one direction and there is usually an imbalance in their flow. Air transport is frequently combined with other modes, so more remote and less congested airports can be used.

484. ICAO then indicates that one of the major problems facing all-cargo operators is the lack of flexibility in market access rights under air services agreements. The limitations usually imposed on passenger service in respect of routes, traffic rights, frequency, etc. may also apply to all-cargo services. As there are limited synergies between passenger and cargo operations (different customers, different departure/arrival time requirements, directional imbalance of traffic movement), it is often difficult for air carriers to sustain an economically viable all-cargo service because of the regulatory restrictions.

485. All-cargo operators are also constrained by a range of other rules affecting operational and "doing business" opportunities, for example, national ownership and control requirements, restrictions

²⁵⁸ For further details concerning this model agreement, see the observations pertaining to it in document S/C/W/270/Add.1, pages I.37-39, paragraphs 82-86, and Annex B-I, pages 66-80.

on the use of leased aircraft, ground handling, and commercial cooperative arrangements such as blocked space and code-sharing.

486. Other regulatory problems facing all-cargo operators are airport curfews, which often limit flexibility in flight scheduling, particularly for express services, and in some cases limitations on airport slots that can be used by cargo flights, especially at congested airports where all-cargo operations are often given lower priority than passenger services.

487. ICAO recognizes that there are two main obstacles to separate and accelerated liberalization of freight transport. The first is the concern of States that they will lose leverage in aviation negotiations, the second is the fear of "belly carriers" that they will see their competitive situation deteriorate in comparison with all-cargo carriers, which have greater freedom.

488. ICAO nevertheless considers that the disadvantages need to be weighed against the general economic benefits in terms of trade and development that can be expected from liberalization of air freight transport.

489. This is why ICAO suggests that States:

- Either consider the possibility of unilateral liberalization of market access for all-cargo services without the requirement for bilateral reciprocity or negotiation;
- or consider measures to liberalize all-cargo operations in their existing and future air services negotiations and regulatory treatment.

490. ICAO therefore suggests that States negotiate the following provisions for all-cargo carriers:

- Granting of fifth and seventh freedom traffic rights;
- measures to allow the following in particular:
 - (a) operation of flights in either or both directions, combination of different flight numbers within one aircraft operation and omission of stops at any point or points;
 - (b) unrestricted frequency, type of aircraft and capacity to be used;
 - (c) conclusion of commercial agreements with other carriers such as blocked space, code-sharing and interline arrangements;
 - (d) combination on the same aircraft of traffic originating in the territories of the parties concerned, as well as from that of third parties;
- liberalization of ownership and control requirements;
- authorization to lease aircraft, including crew, subject to observance of safety requirements;
- more liberal arrangements for other aspects specific to all-cargo operations, including pricing freedoms, intermodal transport, ground handling and warehousing (but in the latter two cases with priority given to safety and security considerations), as well as customs clearance and other facilitation.

491. ICAO suggests that States should formalize these various proposals by incorporating an "Annex on air cargo services" in their bilateral ASAs. The text proposed by ICAO for this annex appears in Box 3.

Box 3
Annex on air cargo services proposed by ICAO

"The Parties agree that:

1. Every designated airline when engaged in the international transport of air cargo

- (a) Shall be accorded non-discriminatory treatment with respect to access to facilities for cargo clearance, handling, storage, and facilitation;
- (b) may use and/or operate directly other modes of transport;
- (c) may use leased aircraft, provided that such operation complies with the safety and security standards applied to other aircraft of designated airlines;
- (d) may enter into cooperative arrangements with other air carriers including, but not limited to, code-sharing, blocked space, and interlining;
- (e) may determine its own cargo tariffs which shall not be required to be filed with the aeronautical authorities of either (any) Party.

2. In addition to the rights in paragraph 1 above, every designated airline when engaged in all-cargo transportation as scheduled or non-scheduled services may provide such services to and from the territory of each (any) Party, without restriction as to frequency, capacity, routing, type of aircraft, and origin or destination of cargo."

492. At the same conference, the **International Chamber of Commerce (ICC)**, which to a large extent represents the interests of shippers, introduced a paper (ATConf/5-WP/36) entitled "Air cargo and the World Trade Organization (WTO)". Following an analysis of the special features of air cargo fairly similar to that made by ICAO, the ICC discusses the feasibility of applying the common legal framework for services, the GATS. The ICC indicates in particular that:²⁵⁹

"The GATS framework has frequently been dismissed as unsuited to the special features of the air transport industry because the two basic GATS disciplines, MFN and national treatment, are extended to all parties regardless of reciprocity.

While recognizing that the application of the reciprocity principle/conditional MFN is not common within the WTO framework, ICC would like to point out that applications of conditional MFN can be found in the appendices to the WTO Agreement on Government Procurement signed in Marrakesh on 15 April 1994.

The MFN principle ought therefore to apply to the most favourable equal exchange of inbound and outbound access to transborder markets which a country is prepared to make. In other words, the MFN principle would be applied in such a way that every WTO Member should be required to offer to all Members the elements of its most favourable bilateral agreement, on the basis of mirror reciprocity.

For example, a Member prepared to enter into liberal arrangements might offer to all other Members all points, multiple destination, double disapproval pricing and unrestricted capacity in exchange for the same. A more restrictive Member might, for example, offer only one point, single destination, double approval pricing, and specified capacity in return for the

²⁵⁹ Rather than awkwardly paraphrasing the ICC's thinking in a matter that concerns it directly, the WTO Secretariat has preferred to quote the principal elements of the ICC paper.

same. Each Member would have to identify in its market access schedule the most liberal terms upon which it is currently prepared to enter into equal exchange of rights.

To achieve this, the Annex on Air Transport Services could be amended to include a definition of 'hard rights' incorporating the notion of reciprocal exchange of equal access. This approach would therefore combine existing bilateralism with the MFN principle, thereby meeting the main objection against inclusion of hard rights within the GATS.

Under the GATS, the MFN principle would be coupled with market access commitments establishing a threshold of liberalization beneath which a Member could not go in the future. Over time, this would evolve into a true multilateral arrangement. Similarly to the Bermuda agreement, which became a model for international bilateral arrangements, a pattern of liberal market access schedules would emerge, which in subsequent GATS rounds could form the basis of a unified regime. For example, if practices of all point to all point, unrestricted capacity and frequency were to appear, those principles could be codified in the Annex on Air Transport Services."

493. The ideas expressed by the ICC are fairly similar to those set out in a draft amendment to the GATS and its formal Annex, contained in one of the rare reference works on this subject, "International Air Cargo Transport Services: Economic Regulation and Policy"²⁶⁰ by R.J. Fennes, the text of which is reproduced for consideration in Annex II.

494. The paper presented by **The International Air Cargo Association** (TIACA) in document ATConf/5-WP/83, "The case for all-cargo liberalization", takes as its starting point an extremely clear position of principle: "The current rules don't suit the air cargo business".

495. TIACA points out that all-cargo carriers are governed by the same bilateral agreements as belly carriers and in general are subject to the same restrictions. There are, however, two essential differences between belly and all-cargo carriers: on the one hand, the fact that all-cargo carriers have to meet all their costs whereas belly carriers can sell at marginal prices and, on the other, the structural imbalance in flows and the need to find a return load whereas passenger flights are more or less balanced in both directions. Consequently, many freight carriers have to fly to a third destination to find a load and avoid empty legs. With the current bilateral system, this is very difficult for all-cargo operators and is one reason why TIACA is calling for the separation of traffic rights for all-cargo operators.

496. The bilateral system as it stands also aggravates the overcapacity problem in the market because it provides a form of protection for inefficient carriers against more efficient competitors. An array of artificial devices such as slots, fuel, and ground handling can then be used to give the favoured operator an edge. This often encourages such operators to acquire capacity that they could never justify in an open market. The system dictates that if there is no fourth freedom to take return cargo, the return flight is empty unless the operator is fortunate enough to find a fifth, sixth or seventh freedom opportunity.

497. In order to take into account the interests of belly carriers as well, TIACA considers that when traffic rights are granted to a passenger carrier, they should automatically include the right to carry cargo, whereas some – unspecified – countries refuse this right. TIACA also considers that all-cargo liberalization would permit the optimal use of scarce airport capacity. It believes that the ultimate goal is to achieve total liberalization of access to all markets for all-cargo operations and, in order to do this, recommends that ICAO Contracting States implement as soon as possible the reduction or

²⁶⁰ "International Air Cargo Transport Services: Economic Regulation and Policy", doctoral thesis, University of Leyden, January 1997. This work is not purely academic inasmuch as Mr Fennes belonged to the Air Transport Unit of the European Commission's Directorate General for Energy and Transport before moving to the Association of European Airlines (AEA).

elimination of constraints imposed on all-cargo carriers by the current regime of bilateral agreements. Contracting States should, as a minimum first step, separate all-cargo from passenger and cargo rights, leading to a multilateral approach for like-minded States.

498. In its paper ATConf/5-WP/94 on "Air cargo liberalization", **Airports Council International** (ACI), another important player in the air transport logistics chain, in general shares the views expressed by ICAO and TIACA. It considers, in particular, that ICAO provides a cogent and convincing argument for liberalizing all-cargo international services where they have not already been liberalized.

499. One extremely interesting fact is that ACI's cargo forecasts are much lower (4.4 per cent growth annually up to 2020) than the concordant forecasts of Boeing and Airbus (6 per cent per annum). ACI's forecasts were compiled from a sample of 300 airports, many of which are capacity-constrained. ACI considers that in a more liberalized international cargo environment, currently under-utilized secondary airports could accommodate higher growth rates of all-cargo traffic, and overall growth rates could be even higher. Moreover, ACI believes that liberalization of cargo traffic rights could reduce diversion to other modes of transport by opening up new, more direct services between secondary airports and bypassing costly transfers from hubs to secondary airports, thus helping to keep air transport competitive. ACI concludes that cargo liberalization would open up new opportunities for secondary airports, relieve pressure on capacity-constrained hubs, lead to more efficient use of scarce airport capacity in general, and provide a stimulus for world trade and job creation.

500. The ICAO Contracting Parties which presented papers on the cargo issue (Singapore, the Republic of Korea, the United States and India) are all in agreement on the special nature of cargo and the ultimate goal of its liberalization. Nevertheless, their positions differ quite considerably regarding the nature of the instruments to be implemented in order to achieve this goal.

501. **Singapore**, in its paper ATConf/5-WP/38, "Liberalization of air freight on a multilateral basis", considers that liberalization of air freight services could be achieved within the framework of bilateral, plurilateral or multilateral agreements. Possible measures for liberalization include de-linking freight provisions from those concerning passenger services, having an open route schedule, and lifting restrictions on third, fourth and fifth freedom traffic rights. Singapore notes that in the WTO, several countries have proposed including air freight services in the Annex on Air Transport Services to the GATS. The Asia-Pacific Economic Cooperation Conference (APEC) economies have also highlighted air freight for priority action among eight options for the liberalization of international aviation. The European Common Aviation Area, which came into effect in 1997, allows any European Union carrier (passenger or cargo) to operate anywhere it wishes in the European Union, including on the domestic routes of any other Member State.

502. Singapore's proposal for the liberalization of air freight services, first presented during the fourth Association of South-East Asian Nations (ASEAN) Transport Ministers meeting in September 1998, was positively received by the ASEAN Transport Ministers and culminated in the adoption by the ASEAN air transport authorities of the ASEAN Memorandum of Understanding on Air Freight Services on 19 September 2002 in Jakarta (Indonesia). This Memorandum of Understanding is seen as a significant milestone in ASEAN as it is the first ASEAN multilateral agreement on air services jointly accepted and adopted by all ASEAN members.

503. Singapore therefore proposes that ICAO Contracting States accelerate the pace of liberalization of air freight, particularly all-cargo services, multilaterally or plurilaterally and on a reciprocal basis to the greatest extent possible. Such multilateral or plurilateral air freight liberalization could comprise the following elements:

- Phased approach to allowing the designated carriers of member countries to exercise third to seventh freedoms of the air for all-cargo services operated on a scheduled or non-scheduled basis with maximum operational flexibility;

- non-discriminatory treatment of carriers with respect to access to ground facilities, clearance and other services; possibilities for cooperative arrangements such as code-sharing to take place among carriers; and
- a definitive time-line for the phased and progressive multilateral liberalization of air freight, taking into account the varying circumstances and levels of development of various economies.

504. In its paper ATConf/5-WP/86 on "Liberalizing air cargo and tourist charter operations", **India** emphasizes that for over a decade it has applied a unilateral open-skies policy for air cargo operations. Any cargo airline, including any foreign one, can operate any number of flights by any type of aircraft to any airport having customs and immigration facilities without any bilateral agreement. The operators are free to charge rates according to the supply and demand situation. There is no requirement of compliance by the operator with the national ownership criterion. According to India, the benefits of this policy are that exporters and importers are assured of the capacity available at competitive prices, that cargo movement has been facilitated as there are no bottlenecks in the system, that growth in exports has thus been helped and administrative procedures facilitated.

505. In view of the success of this policy, India recommends that States follow its example by unilaterally liberalizing market access for all-cargo services without the requirement of bilateral reciprocity, which will set the pace for liberalization of other areas of the air transport sector.

506. The **United States**, in its paper ATConf/5-WP/49, "Liberalizing air cargo services", notes that many air services agreements in force today are not open-skies agreements and therefore lack the commercial and operational flexibility necessary to allow air cargo carriers to meet user demand as efficiently, economically and expeditiously as possible. The rights granted in the US model open-skies and similar agreements provide that flexibility and furnish the basis upon which the air cargo industry can best flourish. While preferring full open-skies agreements, the United States believes that pursuit of air cargo liberalization separately from passenger liberalization is appropriate where it does not inhibit liberalization of the passenger sector.

507. In addition to the negotiation of market access, States should consider the effect on the air cargo industry of regulatory restrictions that fall outside air services agreements. The imposition of restrictions such as night curfews and their effect on air cargo carriers is of particular concern. States should not impose operating restrictions, including those on night flights, as a first resort, but should implement the balanced approach to noise management contained in ICAO Assembly Resolution A33-7.

508. In its brief paper ATConf/5-WP-100, "Liberalization of air cargo services", the **Republic of Korea** expresses the view that the liberalization of air cargo services should be given priority over that of the passenger sector and that a separate air cargo framework should be adopted to ensure stable operation of such services, both all-cargo and combined.

509. On the other hand, it considers that the liberalization of air cargo services should preferably be limited to third and fourth freedom traffic rights in order to maintain a balance among the States involved. In its view, eighth freedom traffic should also be included in order to keep a balance between/among States involved if the fifth and seventh freedom traffic rights are to be liberalized in air cargo services.

510. These discussions at ICAO's Fifth Worldwide Air Transport Conference led to the adoption of a "Declaration of Global Principles for the Liberalization of International Air Transport", adopted by acclamation by **all ICAO's Contracting States**. Paragraph 4.7 of this Declaration prescribes that:

"States should give consideration to liberalizing the regulatory treatment of international air cargo services on an accelerated basis, provided that clear responsibility and control of regulatory, safety and security oversight is maintained."

(iii) *Regional developments*

(a) Andean Pact

511. In its working paper on "Liberalizing air cargo services", ICAO noted that the Andean Pact provided full freedom for all-cargo non-scheduled flights of member country airlines within the region and between member countries and third countries.

(b) ASEAN Memorandum of Understanding on Air Freight Services

512. This Memorandum of Understanding has already been mentioned in connection with Singapore's contribution to discussions at ICAO's Fifth Worldwide Air Transport Conference. It is also analysed in detail in the section of this document on bilateral agreements.

(c) OECD

513. In order to complete its work begun in 1997 on air freight (the analytical part of that work was described in detail in the compilation, pages 268-284, paragraphs 12 to 58, and the regulatory part is the subject of a separate document: S/C/W/181, "Excerpts from the OECD document 'Principles for the liberalisation of air cargo'", dated 27 November 2000), in 2002 the OECD Secretariat made available on its web site a set of documents entitled "Liberalisation of air cargo transport". This "package" is structured around two alternative approaches: a bilateral protocol or a draft multilateral agreement on air cargo transport. The bilateral protocol focuses on the liberalization of traffic rights for air cargo services on a bilateral basis, ancillary services and other specific air cargo transportation issues that can be dealt with separately under existing bilateral air services agreements. The draft multilateral agreement is intended to provide a means for liberalizing existing market restrictions and restrictions on operational and commercial flexibility on a multilateral basis, without compromising safety and security.

514. The references concerning the original texts of the bilateral protocol and the draft multilateral agreement envisaged by the OECD were circulated to Members, at the time of the first review. There were only minor alterations to these texts in the 2002 version.²⁶¹ On the other hand, the 2002 "package" adds new analysis to the OECD's previous ideas regarding the way in which a plurilateral agreement on air cargo traffic could function under the GATS. This analysis is reproduced in full in Box 4.

Box 4

Functioning of a plurilateral agreement under the GATS, as seen by the OECD

"Another possibility would be to seek a gradual transition, whose aim would be to allow substantial liberalisation between a core group of like-minded WTO Members first, with a view towards the fuller application of GATS at a later stage. As part of this process, it has been proposed to break up the aviation sector into two parts. The first would deal with the so called "hard traffic rights", which essentially encompasses the seven air transport freedoms that are the principal subject matter of all bilateral agreements. It is here that concerns have been most widely expressed. The second part would comprise all other components of air transport, including for example ownership and control, ground handling services etc. While still important, these activities are not quite so jealously guarded, and could conceivably be subject to GATS disciplines.

Under this scenario, it would be possible to deal with the issue of hard traffic rights in a sectoral Understanding, open only to those WTO Members who would be willing to open up those rights to others who subscribed to that Understanding. There are already some precedents in the WTO for such an approach, for example in the field of government procurement, and plurilateral (or variable geometry) approaches have been advocated by some WTO Members as one possible means of addressing the "new" issues of investment and competition policy.

²⁶¹ These texts are available at the following link: <http://www.oecd.org/dataoecd/44/2/2086192.pdf>

The creation of such an Understanding amongst like-minded WTO Members would mean that the liberalisation of hard rights could be undertaken in a more controlled manner within this limited group, safe in the knowledge that carriers from illiberal countries would not be able to enter the open markets. Such an Understanding would specify limitations on market access and limitations on national treatment.

WTO Members who chose not to join the Understanding would likely be required to take an MFN exemption for their various bilateral agreements (which many have already done), so that they were not obliged to offer MFN treatment in the sector.

This approach would introduce hard traffic rights into the WTO structure for limited liberalisation, without hindering the possible coverage and more extensive liberalisation of arguably less sensitive soft rights by the GATS.

Under such a scenario (as with the previous one) the core provisions of the GATS would then apply to air transport, opening up foreseen benefits such as use of WTO dispute settlement procedures, disciplines on domestic regulation, legal certainty in foreign markets and fair and equal treatment for all service providers. Only in respect of the most sensitive of issues, that of traffic rights, would there be some additional protection for those Members seeking to move ahead towards greater freedom to provide services.

A special GATS Understanding on Air Transport would thus give those Members who participated a secure environment in which to make progress until such time as there is a broader global consensus. Such a restricted and controlled introduction of air services to the GATS may well appeal to a sufficient number of governments who would like to see some liberalisation, without exposing the entire aviation sector to greater competitive pressures.

Opponents of this approach contend that it would set up a false dichotomy between "hard" and "soft" rights, both of which are in fact essential for the provision of air services, and that applying different regimes to them would create less, not more legal certainty, especially in dispute settlement. They are also sceptical of the prospects for assembling a significant number of countries prepared to cover hard rights in this manner and to make market access and national treatment commitments.

A GATS Understanding on Air Transport and Possible "Conditional MFN"

An orthodox approach would, if it were strictly followed, be offset by a reduction of liberalisation previously achieved bilaterally. Liberal bilaterals bind national treatment for international services, whereas this is altogether discretionary in GATS. Preserving bilateral liberalisation already achieved would require parties to take MFN exemptions under GATS, and MFN exemptions are in turn deemed illiberal and must, if maintained, be periodically defended.

Although MFN as it stands appears difficult to implement and apply to air transport, the special position of air transport may lead negotiators to create an innovative solution. One option would be to combine existing bilateralism with "Conditional MFN". To achieve this, the Annex on Air Transport Services would have to be amended to include a definition of "hard rights", incorporating the notion of reciprocal exchange of access. In practice, this would mean that a Member of the WTO would offer to all other WTO Members the elements of its most favourable bilateral agreement. Under such an approach, the commitment would only become operational for those Members that in return offer the same elements.²⁶²

The advantage of such an innovative approach would be that, whenever a more liberal bilateral agreement is concluded, it will be automatically offered to all other Members, provided that they offer the same market access level in return. Again this is a measured way of gradually opening up the aviation sector within the WTO umbrella, but in practical terms this approach could be somewhat cumbersome.

It is probably fair to note that because the aviation industry has been so tightly regulated for so long, and because national governments have been used to participating directly in both the regulation and operation of air services, a GATS-centric approach may represent too great a change. One needs to look no further than the extremely limited Air Services Annex concluded at the end of the Uruguay round to see evidence of this reluctance. Therefore at this stage it may be prudent to set sights on something more modest, but with perhaps a greater chance of success."

²⁶² This approach can best be illustrated by the following example: country A and country B have very liberal air service agreements while country A and country C have a less liberal agreement. Under the proposed model, country C would be entitled to the same liberal access to country A that country B gets if country C becomes as open as country B. For country A, this would also signify that if country C were to sign a liberal agreement with country X the elements of that agreement would be immediately available to country A and all other countries on the basis of reciprocity.

(iv) *National developments*

515. Apart from India's maintenance of its open-skies policy already mentioned in connection with discussions at ICAO and the opening up to as much as 49 per cent foreign capital of all-cargo joint ventures in China, also referred to above, the specialized press does not mention any particular developments at the national level.

516. This silence could nevertheless be deceptive. Only the questionnaires sent to Members as suggested in paragraph 9 of document S/C/W/270 or those sent by ICAO or professional organizations such as TIACA or IATA would allow a systematic appraisal of the situation to be made.

517. Such a systematic appraisal is, however, available for one of the areas of air freight, namely, express services, for which the Global Express Association (GEA) has put on-line an extremely comprehensive inventory²⁶³, country by country, type of restriction by type of restriction. Table 43 summarizes those restrictions that may affect the air services of express delivery operators.

²⁶³ <http://www.global-express.org/flags.php>.

Table 43
Global Express Association's inventory of restrictions that have an impact on the air services of express delivery operators

Country	Entry restrictions in the express delivery sector	Restrictions on foreign investment that relate to express delivery services	Requirements for or restrictions on the use of local services	Restrictions on the weight, price, etc. of express shipments	Discriminatory licensing requirements, or taxes or fees	Discriminatory restrictions on slots and ground handling	Restrictions on transport and delivery operations	Other significant restrictions
Albania								
Algeria	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Andorra		X					X	X
Angola			N/A	N/A	N/A	N/A	N/A	N/A
Antigua & Barbuda					X			
Argentina	X ¹		X ²	X ³				
Armenia	X		X		X	X	X	
Australia					X ⁴			
Austria					X			
Bahamas		X ⁵						
Bahrain	X ⁶							
Bangladesh	X ⁷		X	X				
Barbados								
Belarus	X				X	X	X	X
Belgium					X		X	X
Belize			X ⁸					
Benin								
Bermuda	X ⁹	X ¹⁰			X ¹¹			

¹ Requirement to be licensed as a postal operator. Also required to obtain an import and export licence and a customs transport agent number.

² Requirement to use an external broker for shipments above 50 kg. or US\$1,000 or when another government agency intervention or certification is needed.

³ 50 kg, US\$1,000.

⁴ Express companies are subject to unit-based entry fees that do not apply to mail.

⁵ Foreign investors are required to have local partners.

⁶ Restrictive licensing.

⁷ Restrictive licensing.

⁸ Use of a local broker is required.

⁹ Restrictive licensing.

¹⁰ Companies must be at least 60 per cent Bermudan-owned.

Country	Entry restrictions in the express delivery sector	Restrictions on foreign investment that relate to express delivery services	Requirements for or restrictions on the use of local services	Restrictions on the weight, price, etc. of express shipments	Discriminatory licensing requirements, or taxes or fees	Discriminatory restrictions on slots and ground handling	Restrictions on transport and delivery operations	Other significant restrictions
Bhutan								
Bolivia	X ¹²		X ¹³	X ¹⁴	X ¹⁵			
Bosnia and Herzegovina				X		X		
Brazil	X ¹⁶			X	X			X
Brunei Darussalam			X ¹⁷					
Bulgaria	X				X ¹⁸		X	
Burkina Faso								
Cambodia								
Cameroon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Canada		X ¹⁹		X ²⁰				
Central African Republic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chile								
China	X	X		X	X			
Chinese Taipei	X ²¹	X ²²		X ²³	X			
Colombia	X ²⁴			X ²⁵				

¹¹ Bermuda imposes a US\$1.75 tax per package not applicable to similar postal packages.

¹² Restrictive licensing.

¹³ Ban on using an in-house broker.

¹⁴ 40 kg. and US\$1,000.

¹⁵ Certificate from the Ministry of Transport required, annual payment of US\$1,000 to the Bolivian postal service.

¹⁶ Restrictive licensing and taxes (new law under consideration).

¹⁷ All cargo required to be transferred to the Brunei International Air Cargo Warehouse prior to release.

¹⁸ Fees for express shipments required to be priced at five times an equivalent postal shipment.

¹⁹ All courier/LVS programme participants must be Canadian-based companies in order to obtain the appropriate licences and certificates.

²⁰ Couriers may not deliver urgent letters unless they charge a fee at least equal to an amount that is three times the regular rate of postage payable for delivery in Canada of similarly addressed letters weighing 50 g; shipments valued in excess of C\$1,600 are not eligible for treatment as express shipments.

²¹ Multiple licensing requirements; US\$1,200 air freight forwarder service permit.

²² Domestic express services prohibited to foreign-owned companies.

²³ 70 kg.

²⁴ Restrictive fees, newly-expanded postal monopoly.

²⁵ 20 kg. and US\$1,000.

Country	Entry restrictions in the express delivery sector	Restrictions on foreign investment that relate to express delivery services	Requirements for or restrictions on the use of local services	Restrictions on the weight, price, etc. of express shipments	Discriminatory licensing requirements, or taxes or fees	Discriminatory restrictions on slots and ground handling	Restrictions on transport and delivery operations	Other significant restrictions
Comoros								
Cook Islands	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Costa Rica								
Côte d'Ivoire								
Croatia	X			X		X		
Cyprus	X	X ²⁶						
Cuba	X	X	X	X			X	
Czech Republic				X				
Democratic Republic of the Congo								
Denmark								
Djibouti	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dominica								
Dominican Republic								
Egypt	X ²⁷	X ²⁸		X ²⁹	X ³⁰			
Ecuador				X				
El Salvador	X ³¹							
Eritrea								
Estonia								
Ethiopia								
Fiji		X ³²	X					
France			X		X		X	

²⁶ For non-EU countries.

²⁷ Restrictive licensing and special taxes.

²⁸ Requirement for Egyptian partner or manager.

²⁹ 100 kg. per delivery and 30kg. per unit.

³⁰ Special licensing requirements for all express operators.

³¹ 20 per cent tax on gross receipts from international operations.

³² Local partner or shareholder is required for a necessary customs brokers' licence.

Country	Entry restrictions in the express delivery sector	Restrictions on foreign investment that relate to express delivery services	Requirements for or restrictions on the use of local services	Restrictions on the weight, price, etc. of express shipments	Discriminatory licensing requirements, or taxes or fees	Discriminatory restrictions on slots and ground handling	Restrictions on transport and delivery operations	Other significant restrictions
Gabon								
Gambia								
Georgia					X	X		
Germany								X ³³
Ghana								
Greece	X			X ³⁴	X ³⁵			X ³⁶
Guatemala								
Guinea								
Guyana								
Haiti			N/A	X ³⁷				
Honduras	X ³⁸			X ³⁹				
Hong Kong, China				X ⁴⁰				
Hungary	X ⁴¹							
Iceland								
India		X ⁴²	X ⁴³	X ⁴⁴	X	X ⁴⁵		
Indonesia	X ⁴⁶	X ⁴⁷	X ⁴⁸	X ⁴⁹				

³³ Restrictions on evening operations at several airports.

³⁴ 20 kg. per package.

³⁵ Postal «authorization» fee based on gross receipts of express operators.

³⁶ Express delivery vehicles are subject to traffic restrictions from which the postal services are exempt.

³⁷ 22 kg.

³⁸ Customs permit required.

³⁹ 300 kg.

⁴⁰ Ban on transporting letters weighing less than 2 kg.

⁴¹ Special tax of up to 0.2 per cent of revenue.

⁴² Local partner required.

⁴³ Domestic pick-up and delivery must be performed by a majority locally-owned entity.

⁴⁴ US\$1,000 per shipment; trade samples only, no commercial shipments; no electronic articles or pharmaceuticals.

⁴⁵ Prohibition on self handling.

⁴⁶ Restrictive licensing.

⁴⁷ Foreign ownership limited to 49 per cent.

⁴⁸ Customs brokerage and warehousing required to be locally owned.

Country	Entry restrictions in the express delivery sector	Restrictions on foreign investment that relate to express delivery services	Requirements for or restrictions on the use of local services	Restrictions on the weight, price, etc. of express shipments	Discriminatory licensing requirements, or taxes or fees	Discriminatory restrictions on slots and ground handling	Restrictions on transport and delivery operations	Other significant restrictions
Islamic Republic of Iran	X ⁵⁰	X	X	X	X	X		X
Ireland	X ⁵¹							X ⁵²
Israel	X ⁵³						X	
Italy	X ⁵⁴					X ⁵⁵		
Jamaica								
Japan							X ⁵⁶	
Jordan	X	X						
Kazakhstan								
Kenya	X			X				
Kiribati	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Kuwait	X ⁵⁷	X ⁵⁸						
Kyrgyzstan	X ⁵⁹							
Latvia	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lebanon	X	X			X	X	X	
Lesotho								
Liberia								
Libyan Arab Jamahiriya		X		X ⁶⁰				
Liechtenstein				X ⁶¹			X ⁶²	

⁴⁹ Less than 110 kg, 274 cm length and less than US\$500 in value.

⁵⁰ Restrictive licensing.

⁵¹ €15,000 fee.

⁵² Postal operator exempt from VAT and receives preferential customs treatment.

⁵³ Restrictive fees.

⁵⁴ Requirement to obtain postal licence and pay a levy to the postal service.

⁵⁵ Requirement to use local ground handling service.

⁵⁶ Express delivery operators are required to have a licence from the Ministry of Infrastructure and Transport; postal vehicles are exempt from this requirement.

⁵⁷ Restrictive licensing.

⁵⁸ Requirement to operate under the umbrella of a local sponsor.

⁵⁹ Restrictive licensing requirements and taxes.

⁶⁰ 30 kg.

Country	Entry restrictions in the express delivery sector	Restrictions on foreign investment that relate to express delivery services	Requirements for or restrictions on the use of local services	Restrictions on the weight, price, etc. of express shipments	Discriminatory licensing requirements, or taxes or fees	Discriminatory restrictions on slots and ground handling	Restrictions on transport and delivery operations	Other significant restrictions
Lithuania	X ⁶³							
Luxembourg	X ⁶⁴	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Madagascar	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Malaysia	X ⁶⁵	X ⁶⁶				X ⁶⁷		
Maldives	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mali								
Malta	X ⁶⁸	X ⁶⁹			X ⁷⁰			
Mauritius	X ⁷¹							
Mexico		X ⁷²	X ⁷³			X		
Monaco	X ⁷⁴		X		X		X	
Morocco	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Myanmar								
Namibia								
Nepal	X ⁷⁵	X ⁷⁶		X ⁷⁷	X			
Netherlands							X ⁷⁸	

⁶¹ Less than 1 kg.

⁶² Restrictions on parking and night movement of trucks over 3.5 tonnes apply to express delivery operators but State postal operator is exempt.

⁶³ Restrictive licensing.

⁶⁴ Information on freight rates must be communicated.

⁶⁵ Restrictive licensing and special fees US\$4,000 per year.

⁶⁶ Foreign ownership limited to 49 per cent.

⁶⁷ Ground handling must be performed by a specific local company.

⁶⁸ Special taxes and licences.

⁶⁹ Maltese shareholder required.

⁷⁰ Express delivery companies, but not the post, required to pay VAT on documents.

⁷¹ Restrictive licensing.

⁷² Only domestic applicants may obtain the requisite licences to allow trucks to operate on highways.

⁷³ Required to use external broker for shipments above US\$5,000.

⁷⁴ Restrictive licensing.

⁷⁵ Licensing, special taxes.

⁷⁶ 25 per cent local partnership requirement.

⁷⁷ 35 kg., width 70 cm, height 90 cm.

Country	Entry restrictions in the express delivery sector	Restrictions on foreign investment that relate to express delivery services	Requirements for or restrictions on the use of local services	Restrictions on the weight, price, etc. of express shipments	Discriminatory licensing requirements, or taxes or fees	Discriminatory restrictions on slots and ground handling	Restrictions on transport and delivery operations	Other significant restrictions
Nicaragua	X		X	X			X	
Niger								
Nigeria	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Norway						X ⁷⁹		
New Zealand			X ⁸⁰					
Oman	X	X ⁸¹			X ⁸²			
Pakistan	X ⁸³			X ⁸⁴	X ⁸⁵			
Panama	X ⁸⁶							
Papua-New Guinea								
Paraguay	X ⁸⁷	X ⁸⁸	X ⁸⁹					
Peru				X ⁹⁰				
Philippines	X ⁹¹	X ⁹²	X ⁹³				X ⁹⁴	
Poland				X				
Portugal	X ⁹⁵							

⁷⁸ Restrictions on vehicle entry to shopping/pedestrian areas that do not apply to postal deliveries.

⁷⁹ Only registered airlines may undertake the first preliminary customs registration of arriving cargo.

⁸⁰ The data must be sent to the New Zealand customs through a third party, ECN.

⁸¹ Local partner requirement.

⁸² 10 per cent tax, from which the public postal operator is exempt.

⁸³ Licence required to be approved, *inter alia*, by the postal authority.

⁸⁴ Letters weighing less than 100 g. subject to a monopoly.

⁸⁵ No separation of postal regulatory and operational functions.

⁸⁶ Restrictive licensing and special taxes.

⁸⁷ Restrictive licensing and fees.

⁸⁸ Affiliates of foreign companies are subject to taxes that do not apply to local companies.

⁸⁹ Restrictions on hiring internal customs brokers.

⁹⁰ US\$2,000, 50 kg.

⁹¹ Two licences required from one ministry.

⁹² Foreign ownership limited to a maximum of 40 per cent.

⁹³ Moratorium on new bonded warehouses forces use of existing, locally-owned warehouses.

⁹⁴ Movement restrictions.

⁹⁵ Restrictive licensing.

Country	Entry restrictions in the express delivery sector	Restrictions on foreign investment that relate to express delivery services	Requirements for or restrictions on the use of local services	Restrictions on the weight, price, etc. of express shipments	Discriminatory licensing requirements, or taxes or fees	Discriminatory restrictions on slots and ground handling	Restrictions on transport and delivery operations	Other significant restrictions
Qatar	X ⁹⁶	X ⁹⁷	X ⁹⁸		X ⁹⁹	X ¹⁰⁰	X	
Republic of Korea	X ¹⁰¹							
Republic of the Congo								
Romania								
Russia								
Saint Vincent & the Grenadines								
Saint Lucia								
Saudi Arabia	X ¹⁰²	X ¹⁰³	X ¹⁰⁴	X ¹⁰⁵	X ¹⁰⁶	X ¹⁰⁷	X ¹⁰⁸	X
Senegal								
Serbia and Montenegro							X	
Seychelles	X	X						
Sierra Leone								
Singapore			X			X ¹⁰⁹		
Slovakia	X ¹¹⁰				X			
Slovenia								

⁹⁶ Chamber of Commerce licensing.

⁹⁷ Local partner requirement.

⁹⁸ Qatar national required to manage customs operations.

⁹⁹ 10 per cent tax on gross receipts.

¹⁰⁰ Only Qatar Aviation Services is allowed to handle equipment.

¹⁰¹ Applicants for air express delivery licences must have a worldwide network covering over 50 countries.

¹⁰² Licensing by the postal authority.

¹⁰³ Local sponsor requirement.

¹⁰⁴ All customs brokers and customs clearance staff required to be Saudis.

¹⁰⁵ 20 kg.

¹⁰⁶ 15 per cent tax on gross revenue must be paid to the postal authority.

¹⁰⁷ Government monopoly of ground handling.

¹⁰⁸ Curfew on heavy vehicles.

¹⁰⁹ Ground handling limited to two local companies.

¹¹⁰ Restrictive licensing.

Country	Entry restrictions in the express delivery sector	Restrictions on foreign investment that relate to express delivery services	Requirements for or restrictions on the use of local services	Restrictions on the weight, price, etc. of express shipments	Discriminatory licensing requirements, or taxes or fees	Discriminatory restrictions on slots and ground handling	Restrictions on transport and delivery operations	Other significant restrictions
Solomon Islands								
South Africa								
Spain	X ¹¹¹		X ¹¹²	X			X ¹¹³	
Sri Lanka	X ¹¹⁴	X ¹¹⁵		X ¹¹⁶		X ¹¹⁷		
Sweden								
Switzerland				X ¹¹⁸			X ¹¹⁹	
Suriname								
Syrian Arab Republic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tajikistan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Thailand	X ¹²⁰	X ¹²¹	X ¹²²	X ¹²³	X	X ¹²⁴		
FYROM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Trinidad and Tobago					X		X	
Turkey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Turkmenistan	X	X ¹²⁵						
Uganda	X ¹²⁶				X ¹²⁷			

¹¹¹ Postal authorization required for packages of up to 20 kg.

¹¹² Ban on subcontracting some transport activities.

¹¹³ Several cities have traffic restrictions from which postal vehicles are exempt.

¹¹⁴ Restrictions by postal authority on the registration of new express delivery companies.

¹¹⁵ Local partner requirement.

¹¹⁶ Thirty units per shipment.

¹¹⁷ Sri Lankan Airlines monopoly of ground handling.

¹¹⁸ Monopoly of domestic shipments of 1 kg. or less.

¹¹⁹ Restrictions on parking and night movement of trucks weighing over 3.5 tonnes apply to express delivery operators but the State postal operator is exempt.

¹²⁰ Restrictive licensing.

¹²¹ Local partner requirement.

¹²² Requirement to use locally-owned warehouses.

¹²³ Deliveries of a value of less than B 40,000.

¹²⁴ Ground handling must be performed by TAGS.

¹²⁵ Total ban on operations by express delivery companies.

¹²⁶ Restrictive licensing.

Country	Entry restrictions in the express delivery sector	Restrictions on foreign investment that relate to express delivery services	Requirements for or restrictions on the use of local services	Restrictions on the weight, price, etc. of express shipments	Discriminatory licensing requirements, or taxes or fees	Discriminatory restrictions on slots and ground handling	Restrictions on transport and delivery operations	Other significant restrictions
Ukraine								
United Arab Emirates	X	X		X				X
United Kingdom							X ¹²⁸	X ¹²⁹
United Republic of Tanzania								
United States of America		X ¹³⁰			X ¹³¹			
Uruguay	X	X ¹³²						
Uzbekistan								
Bolivarian Republic of Venezuela	X ¹³³	X		X ¹³⁴	X			
Yemen	X ¹³⁵		X			X ¹³⁶		

¹²⁷ Licence costing US\$10,000.

¹²⁸ Express delivery companies are subject to VAT and to parking restrictions from which State operator competitors are exempt.

¹²⁹ Limitations on night flights and congestion charges that express delivery vehicles cannot avoid.

¹³⁰ Foreign-owned companies may not engage in domestic transport operations.

¹³¹ Foreign-owned companies must obtain a foreign air freight forwarders' licence.

¹³² 20 kg.

¹³³ Restrictive licensing and fees.

¹³⁴ US\$2,000.

¹³⁵ Mandatory licence can only be obtained through a local partner.

¹³⁶ Ground handling services must be performed by the national carrier.

Country	Entry restrictions in the express delivery sector	Restrictions on foreign investment that relate to express delivery services	Requirements for or restrictions on the use of local services	Restrictions on the weight, price, etc. of express shipments	Discriminatory licensing requirements, or taxes or fees	Discriminatory restrictions on slots and ground handling	Restrictions on transport and delivery operations	Other significant restrictions
Zambia								
Zimbabwe								

Source: Global Express Association, 2007.

(v) *Recent studies*

518. Important econometric work has been carried out by two researchers from the Inter-American Development Bank and the World Bank, Mr Micco and Mr Serebrisky. Their 2004 paper entitled "Infrastructure, competition regimes and air transport costs: cross-country evidence"²⁶⁴ focuses on the role of these elements in boosting the growth in air transport and lowering its costs. Based on the example of the United States in the 1990s, when air transport's share of imports rose from 24 per cent in 1990 to 35 per cent in 2000, while open-skies agreements liberalizing freight transport were signed, the study finds that infrastructure policy, quality of regulation and competition – in the commercial sense of the term – have a real impact.

519. By reconstituting freight rates, weighting them by the volume of goods and correlating them to developments in the regulatory regime, the authors come to the conclusion that the long-term effect of signing an open-skies agreement is a reduction of 8 per cent in the cost of air transport. Furthermore, short-term effects are felt almost immediately (a 1 per cent fall in prices the year the agreement is signed and 3 to 4 per cent three years later). At the same time, because of the elasticity between transport costs and trade, estimated to be 1.3 in a recent study²⁶⁵ an open-skies agreement that lowers transport costs by 8 per cent implies an increase in trade of around 10 per cent.

520. In an unpublished draft²⁶⁶ prepared for publication by the World Bank in its "Global Economic Prospects 2004", a World Bank researcher, Mr Carsten Fink, undertook an econometric analysis of the determinants of air freight rates on the basis of a sample of 139 city-pairs in the western hemisphere. His conclusions were that:

- "...distance is a key determinant of international air cargo freight rates – most likely due to the cost of fuel and the capital cost of operating aircraft. Across the sample, a one-percentage-point increase in city-pair distance leads to a 0.72 per cent increase in prices.
- ...there are sizeable economies of scale in the provision of air transport. On average, a 10 per cent increase in city-pair traffic volumes leads to a drop of slightly more than 1 per cent in the observed freight rate. In view of the wide variance in freight traffic volumes, the scale effect can be quite large – and in most cases it works against poorer nations.
- ...competition among airlines is found to exert downward pressure on freight rates. City-pair routes on which more than two passenger airlines or dedicated freight airlines operate enjoy, on average, 10.7 per cent lower prices."

521. Although the first factor, distance, cannot be controlled by means of public policies, aviation authorities can directly influence the third factor, competition, by liberalizing their regimes and, by doing so, indirectly have an impact on the second factor, namely, increased volume and economies of scale.

(b) *Security-related regulatory aspects*

522. These aspects have been largely dealt with in the part of the documentation relating to airports (see document S/C/W/270, pages 116-118, paragraphs 409-417), although cargo and express services have some special features in this respect.

²⁶⁴ World Bank Policy Research Working Paper No. 3355, available at SSRN: <http://ssrn.com/abstract=610399>.

²⁶⁵ Clarke, Dollar, Micco "Port Efficiency, Maritime Transport Costs and Bilateral Trade", National Bureau of Economic Research, Working Paper 10353, 2004.

²⁶⁶ Available from the WTO Secretariat upon request.

523. The definition of rules for belly cargo has been more rapid than for all-cargo flights, where regulations are to a large extent still provisional or evolving. Since September 2001, all belly cargo in the United States must either be from a "known shipper" or systematically X-rayed. The Transport Security Administration (TSA) also tightened the rules for the professional database of known shippers that had been created following the Lockerbie crash and the TWA explosion in flight. Furthermore, postal packages weighing more than 450 g. have been banned from the hold of passenger planes. In the case of Northwest Airlines, for example, this led to a 20 per cent decrease in domestic freight volumes and for all carriers in the US Air Transport Association the volume of postal freight fell by 67 per cent.

524. In April 2004, for all-cargo flights, following a long process of consultation, the United States customs administration started to apply its new Advanced Manifest Rules, largely based on the rules applicable to maritime transport but including deadlines adapted to air transport. An electronic message containing all the details on a shipment must reach the US customs four hours before the flight reaches US territory.

525. In November 2003, the TSA presented an outline of a "multi-layer" approach combining the known shipper programme, X-ray screening of all cargo not coming from a known shipper, and random screening of 10 per cent of cargo. The Notice of Public Rule Making relating to these rules has been delayed several times.

526. In a recent development, the TSA deferred application of the new rules for freight security until mid-2007 in order to give the industry the time to adapt. The new rules include, *inter alia*, Security Threat Assessments, which carriers must submit to the TSA, as well as background checks and proof of credentials for certain employees. The database of 4,000 known shippers currently administered collectively by the industry will become centralized and government-administered and 300 new inspectors will be posted to 102 US airports. For its part, Congress is still discussing several bills on the extent of the screening to be applied to cargo carried in the belly of passenger aircraft. The TSA has expressed its opposition to 100 per cent screening, which it deems "not feasible without impeding commerce and imposing unreasonable cost on the government" and is advocating a layered approach with random screening and extension of the known shipper concept. The industry estimates the cost of 100 per cent screening at US\$3.6 billion over ten years.

527. The European Parliament is examining draft regulations establishing common rules for security controls in airports and aircraft. According to the specialized press, other countries such as Canada, Indonesia and South Africa are also examining proposals to tighten security measures for freight.

(c) Other regulatory aspects

528. Competition policy in the area of freight evolved significantly during the period under review, with the launching of a simultaneous investigation by the anti-trust unit of the US Department of Transportation and the European Commission into anti-competitive practices on fuel surcharges and freight insurance. This investigation involves over 20 carriers from Asia, Europe and North America (including Air France-KLM, British Airways, Lufthansa, Cargolux, United Airlines, Air Canada, Cathay Pacific, JAL, Singapore Airlines and Korean Air). The investigation has been extended to freight forwarders in the United States. The competition authorities in the Republic of Korea have also joined the investigation. In September 2006, Lufthansa sought leniency from the authorities and offered an amicable settlement of US\$85 million to put an end to the civil proceedings. American and United Airlines did the same, as did British Airways very recently (May 2007).

Annex II
Example of a "code" or separate agreement on air cargo under the GATS

According to R.J. Fennes in his book titled:
"International Air Cargo Transport Services: Economic Regulation and Policy"

"I. CONTENT OF THE ARRANGEMENT

1. The current Annex on Air Transport Services to the GATS is a compromise text which has not proven to be very effective. The best option would be to completely re-draft the Annex and to replace it with a more precise and expanded text. However, in the Context of the GATS that would be a time consuming and uncertain process. For those countries which would like to achieve progress in the field of air cargo, it could be more rewarding to try to achieve that progress in a separate framework. This does not mean that discussions on a new Annex should be avoided, but rather, that for the sake of progress, focusing on a separate plurilateral agreement would be more worthwhile. The negotiations under the Annex on Air Transport Services certainly could Continue for those GATS Members that would desire progress at a more limited pace.

2. The proposed Code is in fact simply a plurilateral arrangement, which can either be phrased as an outright agreement, or be gradually developed into an international agreement. It represents a plurilateral agreement on air cargo that leaves intact the existing bilateral and multilateral agreements that exist between the signatories for air transport services, but only insofar as these apply to passenger transportation. All cargo elements in these bilateral and multilateral agreements would be replaced by the proposed Code.

3. This would imply that on passenger/combination services, cargo is free, but that the ability to operate frequencies and routes etc, is dependent on the market access awarded to passenger services. But all-cargo services and ancillary cargo services would have complete market access without such "indirect" constraints.

4. Regarding passenger services signatories of the proposed Code would thus be free to conclude bilateral agreements with each other, to the extent that they have not yet covered such services either by expanding the proposed Code or by increasing their commitments made under the GATS.

5. The proposed Code would be open for accession. But there are conditions which would need to be fulfilled. First of all, applicants must be Members of the WTO organization, and thus signatories to the GATS. Furthermore, they need to be party to the Chicago Convention, except in the case of the ED, for which a specific provision is provided, which could be extended to other regional integration arrangements. Applicants need to have made a substantial commitment under the GATS Annex on Air Transport Services. They also must accept and commit themselves to the gradual liberalization of all air transport services. Finally, they must accept an eventual inclusion of the proposed Code under the GATS. The idea of these conditions is that signatories have the same basic approach and policy or are at least like minded enough to make progress in the future.

II. ANNOTATED TEXT OF THE CODE

A. CODE ON AIR CARGO TRANSPORT SERVICES²⁶⁷

The Parties,

Recognizing the growing importance of trade in international air transport services in general and air cargo services in particular for the growth and development of the world economy;

Intending to establish a multilateral framework of principles and rules for trade in air transport services with a view to expansion and development of such services under conditions of transparency and progressive liberalization, and as a means of promoting the economic growth of all trading partners and the development of developing countries;

Desiring through the liberalization of air cargo transport services to take a first substantial step in the process towards progressively higher levels of liberalization of trade in air transport services;

Notwithstanding the applicability of already very open bilateral air services agreements in force between the Parties and wishing to supplement, further expand, and fully open these agreements as far as cargo air transport services are concerned²⁶⁸;

Acknowledging that the existing open bilateral air services agreements in force between the Parties shall remain in force insofar as passenger air transport services are concerned. And, *acknowledging* that the air cargo services performed in connection or in combination with these passenger air services will be covered by this agreement;

Being Parties to the Convention on International Civil Aviation, done at Chicago on December 7, 1944²⁶⁹ and in the case of the European Communities, its Member-States being Parties to the Convention on International Civil Aviation, done at Chicago on December 7, 1944;

Being Parties to the Agreement Establishing the World Trade Organization, done at Marrakesh on 15 April 1994²⁷⁰;

Hereby agree as follows:

B. COMMITMENTS IN THE NATIONAL SCHEDULE

The Parties agree with regard to the services listed in Article 3, paragraphs (a), (b) and (c) of the Annex on Air Transport Services of the General Agreement on Trade in Services, that they shall make full commitments on Market Access and National Treatment in their national schedules, without

²⁶⁷ The Preamble is adapted from the Preamble to the GATS, see MTN/FA II-AIB at 3.

²⁶⁸ This paragraph acknowledges the earlier conclusion that an agreement like this is attainable only between fairly like-minded states. Furthermore, these states must already have reasonably open air transport agreements, in order for a cargo agreement to be acceptable in view of the competitive position of combination carriers.

²⁶⁹ The agreement should fully conform to the Convention and a clear link should be established between the Convention and the GATS.

²⁷⁰ In the proposed approach signatories to this agreement should be both signatories to the Convention and to the WTO/GATS. The approach would furthermore need to accommodate economic integration like the EU. This will enhance the attractiveness of the GATS and it emphasizes the basic political commitment of signatories to progressive liberalization.

any reservations being applicable, except horizontal reservations on the movement of natural persons.²⁷¹ Parties will, with regard to Article 3, paragraphs (b) and (c) be permitted to leave intact any exemption they may have made with regard to Article II of the General Agreement on Trade in Services.

C. COMMITMENTS WITH REGARD TO SIGNATORIES

The Parties agree that with regard to air cargo services provided by service providers that are not covered by Part C of this Code, they shall extend to each other full Market Access and National Treatment in accordance with the provisions of the General Agreement on Trade in Services.²⁷² In addition, Parties undertake to accord to such service providers treatment no less favourable than has been awarded to airlines and air cargo service providers under Part C.

D. AGREEMENT ON AIR CARGO TRANSPORT SERVICES

1. General Provisions

In accordance with Article 2 of the Annex on Air Transport Services of the Agreement and without prejudicing the Parties' commitments in their respective national Schedules under the Agreement, Parties agreed on this Agreement on Air Cargo Transport Services. Parties further agreed to continue discussions on the eventual inclusion of this Agreement on Air Cargo transport Services under the General Agreement on Trade in Services.

The Parties agree that this Agreement on Air Cargo Transport Services shall not reduce or affect a Party's obligations to any other Party, signatory to this Agreement on Air Cargo Transport Services, under bilateral or multilateral agreements with regard to passenger air services, but only insofar as these obligations apply to passenger air services.²⁷³

The Parties agree to meet every two years to discuss the expansion of the Air Cargo Services Agreement to include passenger air transport services or to agree on a separate text for an Agreement on Passenger Air Transport Services. Furthermore, the Parties will consider the full, or partial, inclusion of this Agreement as a commitment under the General Agreement on Trade in Services.

The Text of this Agreement on Air Cargo Transport Services is as follows:

²⁷¹ Thus most horizontal reservations, i.e. reservations applicable to all services sectors, are also lifted. It will be necessary to except reservations on the movement of natural persons, because most countries would not accept such an unlimited opening for the foreseeable future. The reservations are strictly limited to horizontal reservations, so only generally applicable measures may be left intact.

²⁷² This provision aims to cover a full commitment on all air cargo services which are not provided by air carriers in order to ensure all air cargo service providers can compete in the open market environment of the Code. But the applicability is only valid for signatories of the Code, at least at this stage.

²⁷³ This means that the content of any applicable air transport agreement remains unaffected, except for and insofar as they relate to air cargo transport services.

2. Articles of the Agreement on Air Cargo Transport Services

Article 1.

Grant of Rights²⁷⁴

1. Each Party shall enjoy the following rights²⁷⁵ for the conduct of international air cargo transport services:

- (a) The right to fly across the territory of any other Party without landing;
- (b) the right to land on the territory of any other Party for non-traffic purposes;
- (c) the right to take on cargo destined for the territory of any other Party and the right to put down cargo coming from any such territory;
- (d) the rights otherwise specified in this Agreement.

2. Notwithstanding paragraph 1, a Party shall not be required to authorize cabotage traffic rights within its territory by a designated airline of another Party, unless these traffic rights are exercised on a service which constitutes an extension of a service from, or as a preliminary of a service to the territory of another Party.²⁷⁶

3. For the purpose of carrying cargo by air, the airline(s) designated by a Party shall be entitled to operate any route open²⁷⁷ to international air transport and serve any airport open to international air transport, without geographical or directional limitation, may operate such routes one-way or vice-versa, and may omit or add airports on routes or operate to these airports in any order or sequence, unless and insofar as this Agreement expressly determines otherwise. Such routes shall be operated in accordance with the provisions of this Agreement.²⁷⁸

4. The airline(s) designated by a Party shall be entitled to operate any type of aircraft certificated to carry cargo alone or in combination with passengers, and in any configuration, unless and insofar as this Agreement expressly determines otherwise.

5. The rights specified in this Agreement shall not be applicable with respect to routes and/or airports utilized for military purposes to the exclusion of any international air services. In areas of active hostilities or of military occupation, in time of war and in case of a declared national

²⁷⁴ This Article is primarily based on Article I Section 1 of the International Air Transport Agreement Annex to the Chicago Convention (ATA).

²⁷⁵ The rights are awarded to Parties, not individual airlines. This follows closely the system of the bilateral regime. The word "airlines" is used because this is the wording used in most current bilateral agreements. But other descriptions like "air carriers" could also be used.

²⁷⁶ This means the inclusion of so-called consecutive cabotage, as used in Regulation 2408/92 (EC) Article 3(2).

²⁷⁷ "Open" signifies routes that are navigable by international traffic because of the available navigational, technical and infrastructural provisions, open to all international traffic under non-discriminatory provisions.

²⁷⁸ Normally, under bilateral agreements, routes are described in the annex to the agreement. Since the intention in this plurilateral agreement is to fully liberalize air cargo services with only specific exemptions, in this case the annex only needs to describe these exemptions and not determine routes. Routes are open, and traffic rights may be limited. That is why in this respect a departure is proposed from the normal approach. But a standard description of routes also can be followed should this be deemed more desirable.

emergency, the exercise of these rights shall be subject to the approval of the competent national authorities of the Party or Parties concerned.²⁷⁹

Article 2.

Designation and Authorization²⁸⁰

1. Each Party shall have the right to designate any number of airlines for the conduct of international air cargo transport services pursuant to this Agreement and to withdraw or alter such designations. Such designation shall be transmitted in writing through diplomatic channels to all Parties or by such other mechanisms as may be agreed between Parties.²⁸¹

2. On receipt of such notification of designation, the competent authorities of each Party shall, without delay, grant to the airline(s) so designated by a Party the appropriate operating authorizations or permissions with a minimum of procedural delay.

3. Upon receipt of the operating authorization of paragraph 2 of this Article the designated airline(s) may at any time begin to operate the agreed services, in part or in whole, provided that the provisions of this Agreement are complied with.

4. Each Party reserves the right to withhold, revoke, limit or set conditions to the authorizations referred to above, with respect to an airline or airlines designated by another Party, but only:

- (a) In the event that it is not satisfied that substantial ownership and effective control of that designated airline are vested in nationals of a Party or Parties to this Agreement²⁸²;

²⁷⁹ This clause is adapted from Article I, Section 1, paragraph 5, third provision of the ATA. In the author's view, a true plurilateral agreement must as strictly as possible define the special circumstances that could make it necessary to suspend the rights in the agreement.

²⁸⁰ In order to follow as much as possible the approach in bilateral agreements, the notion of "designation" has been maintained in this proposal. Another approach could also be feasible, like the one in the ATA, where no designation is required, although operating authorizations to airlines may be refused if the ownership and control requirements are not met. However, see Article I, Section 1, of the ATA, where the privilege to take on traffic is linked to "the State whose nationality the aircraft possesses". As more states become party to such an agreement it may well be advisable to follow the approach of the ATA to avoid increasing amounts of red tape.

The open designation and its flexible application is particularly important for developing nations. Many countries do not have strong and viable international cargo carriers, but have nevertheless an interest in having such carriers operating to and from their territories. If a country has the possibility to allow cargo carriers from other nations to operate under its traffic rights, then its economic position would be enhanced, and the agreement would be more attractive.

The approach makes no distinction between scheduled and non-scheduled (charter) services. For a truly open and competitive market the approach of the EU Internal market, to make no distinction whatsoever, provides the best solution.

²⁸¹ For paragraphs 1 and 2, see the Air Transport Agreement between the US and Canada of 24 February 1995, Article 2.

²⁸² A first attempt is made to gradually abandon the classic ownership and control requirements. It is just an example, but one based on an already existing international agreement. See Article I, Section 6 of the ATA, which also takes this approach. Through accession to this agreement, ownership and control are gradually made obsolete. Ultimately, true international air cargo transport companies would be made possible. It is important to note that under this proposed approach, designation of the same airline by more than one Party is possible.

- (b) in the event of failure by such designated airline to satisfy the conditions prescribed under the laws and regulations which the Party considering the application normally applies to the conduct of air transportation, provided such laws and regulations are not inconsistent with this Agreement and are in conformity with the Convention;
- (c) in case the airline does not hold a valid operating license and air operator's certificate of the Party designating the airline²⁸³;
- (d) in case the designated airline otherwise fails to operate in accordance with the conditions prescribed under this Agreement.

Unless immediate action is essential on safety or security grounds or to prevent further infringement of the laws and regulations referred to above, the rights enumerated in paragraph 4 of this Article shall be exercised only after consultations with the Party or Parties designating the airline.²⁸⁴

Article 3.

Operational Flexibility²⁸⁵

For the operations and rights mentioned under Article 1, each designated airline may, at its discretion:

- (a) Change aircraft in the territory of any other Party or at any point along the specified routes without limitation as to change in type or numbers of aircraft operated;
- (b) use its own equipment and leased equipment, under any type or form of lease agreement, and may operate under commercial arrangements (including but not limited to, blocked space agreements²⁸⁶, code-sharing and inter-line agreements) with any other designated airline²⁸⁷;

²⁸³ This proposal follows the spirit of Regulation 2407/92 (EC) of 23 July 1992 of the Community. It must be read in connection with Article 7 on Safety. The idea is that a Party designating an airline must give an adequate guarantee that the airline in question is financially fit and operationally safe. The approach means to ensure that the designating State thus assumes responsibility and does not carelessly designate an airline. In all probability this approach would mean that a number of possible signatories would have to amend their national regulations on this issue, e.g. on registration and ownership.

It must be noted that an even more open approach would also be possible if the need for "designating responsibility" is not felt to be so compelling. In that case it would suffice if the airline holds a valid operating license and aircraft operators' certificate issued by one of the Parties to the Agreement.

²⁸⁴ (b) and (c) as well as the final sentence are standard clauses in The Netherlands' bilateral agreements. But many other wordings are possible.

²⁸⁵ The operational flexibility article is mainly derived from the change of aircraft article (also known as "change of gauge") which can be found in the US-Netherlands (1992) and US-Canada (1995) bilateral agreements and is adapted to incorporate Regulation 2407/92 (EC) particularly regarding the leasing of aircraft.

²⁸⁶ See Article 8 of Regulation (EC) 2407/92 of 1992, which for Community air carriers no longer requires ownership of aircraft.

²⁸⁷ Commercial cooperation is thus limited to designated airlines of contracting parties. Admittedly, this could be a too significant limitation, and can be left out if desired. This limitation was inserted to encourage accession to this plurilateral agreement. Note that this approach can lead to problems if a bilateral agreement is in existence that allows more liberal cooperative arrangements. In that case, under this approach, these extra possibilities are superseded by this agreement. This is done this in order to obtain uniformity, but Parties could adapt the plurilateral agreement so as to leave more liberal rights intact.

- (c) in the case of leasing, the aircraft leased shall be registered in a Party in accordance with Chapter II of the Convention. The leased aircraft and, in the case of wet-lease or similar arrangements, its crew and personnel, shall conform to the requirements set out in Article 7 of this Agreement²⁸⁸;
- (d) commercial agreements and arrangements with other designated airlines shall conform to the requirements and conditions set out in Article 6;
- (e) use different or identical flight numbers for the sectors of its change of aircraft operations;
- (f) position aircraft in the territory of any Party at the airports of their choice;
- (g) use other modes of cargo transport for any, all, or part of the specified routes in accordance with the provisions of this Agreement.

Article 4.

Cargo Rates²⁸⁹

1. Each Party shall allow rates for air cargo transportation, including inter-modal transportation and ancillary services, to be established by each designated airline based upon commercial considerations in the market place.²⁹⁰ Intervention by Parties shall be limited to:

- (a) Prevention of unreasonably discriminatory rates or practices;
- (b) protection of consumers and shippers from rates which are unreasonably high or restrictive or otherwise predatory because of the abuse of a dominant position in the market or because of an agreement which has the aim to reduce competition or which is otherwise contrary to applicable competition laws²⁹¹;
- (c) protection of airlines from rates that are artificially low because of direct or indirect government subsidy or support.

2. Each Party may, without discrimination on grounds of nationality or identity of designated airlines, require notification to its aeronautical authorities of rates to be charged to or from its territory by the designated airlines of the other Parties.²⁹² A proposed rate of a designated airline becomes effective upon receipt of such notification.²⁹³

²⁸⁸ For air cargo carriers leasing is very important. The clause proposed aims to take away some safety concerns in order that as many countries as possible can accept leasing. The wording "similar arrangements" aims to cover those countries that consider "wet-lease" to be equivalent to "sub-charter".

²⁸⁹ This article is based on the tariff clauses proposed in the multilateral agreement discussed between the Dutch and the US in 1980, the preliminary work done for the Dutch-US Open Skies Agreement, the applicable clause in the US-Dutch bilateral air services agreement of 1957 and the US-Germany bilateral interim agreement of May 1994.

²⁹⁰ See Art. 11 of the Memorandum of Understanding of 1987, between the US and the Netherlands.

²⁹¹ This possible approach aims to incorporate the most important motives for intervention under the competition laws of the US and the EU. Any more substantive or less substantive description would depend on the particular states involved.

²⁹² This clause and its approach has been modelled on Regulation 2409/92 (EC) Article 5.

²⁹³ See US-Germany interim bilateral agreement of 24 May 1994, Article 4D.

3. If a Party is dissatisfied with any rate proposed or charged:
 - (a) By a designated airline for air cargo transportation, including intermodal transportation for one-through rate, between the territory of the dissatisfied Party and the territory of any other Party and/or a third country; or
 - (b) by an airline designated by the dissatisfied Party for air cargo transportation, including inter-modal transportation for one-through rate, between the territories of any other Parties and/or a third country,

it shall notify in writing such other Parties and the other Party or Parties designating the airline(s) and the designated airline(s) concerned. Such notification shall state the reasons why the Party considers such rate to be inconsistent with the considerations set forth in Paragraph 1 of this Article. Within ten days of this notification, copies of the notification shall be sent to all Parties. The Parties receiving the notice of dissatisfaction shall acknowledge the notice, including an indication of their agreement or disagreement with it, within 10 days of receipt of notice. If all notified Parties agree that the price in question is inconsistent with the considerations set forth in Paragraph 1 of this Article, they shall put their agreement into effect and remedy the situation. If all notified Parties do not agree, the rate may go into effect or continue to be in effect.

Any Party that nevertheless remains dissatisfied with a rate proposed or charged by a designated airline, may submit this issue to arbitration in accordance with Part D.²⁹⁴

4. No Party shall require the approval or notification of prices proposed or charged by indirect providers of cargo air transportation between the territories of the Parties.²⁹⁵

Article 5.

Commercial Opportunities

1. Each designated airline shall be allowed to freely establish in the territory of any Party offices for the promotion of air cargo transport services and sale of air cargo transport services, as well as all other facilities required for the provision of air cargo transport and ancillary services, including, but not limited to, forwarding services, cargo service centres, warehousing and storage, agency services, consolidation, expedition and intermodal transportation.²⁹⁶

2. Each designated airline shall be allowed, in the territory of any Party, to engage directly and, at that airline's discretion, through its agents, or any authorized agents, in the sale, marketing and promotion of air cargo transport services and ancillary services, including, but not limited to, forwarding services, cargo service centres, warehousing and storage, agency services, consolidation, expedition and intermodal transportation.²⁹⁷

²⁹⁴ The shortest possible procedure has been put forward, in accordance with the open market approach. The reasons why a rate may not be in accordance with this agreement are limited and clearly set. Of course they may lead to differing points of view, but chances are that in extreme cases-and the system has been devised only for extreme cases-relevant parties will agree. No provision on consultation has been included. Parties can use the general consultation article, but in view of the constant changing character of rates, any lengthy procedure will prove ineffective. On points of principle or interpretation of the Article, arbitration will form the best solution.

²⁹⁵ See US-Germany bilateral agreement of 24 May 1994, Article 4E.

²⁹⁶ Modelled on the standard bilateral agreement of The Netherlands.

²⁹⁷ Paragraphs 1 and 2 complement each other, paragraph 1 giving the right of commercial presence and paragraph 2 giving the right of actual sale and marketing. It is very difficult if not impossible to give an

3. Parties shall not limit or prohibit any designated airline from issuing and using its own air waybills, as well as using and issuing air waybills of other designated airlines and indirect air carriers if so authorized. Neither shall Parties limit or prohibit the use of own, and combined, flight numbers or designator codes²⁹⁸ by any designated airline for cargo air transportation or intermodal transportation under this Agreement. Nor shall Parties limit or prohibit the use by any designated airline of any brand name or corporate identity available to that designated airline under applicable national and international law.²⁹⁹

4. Each designated airline shall have the right to perform any in-terminal airport cargo ground handling services or use any authorized ground handling service provider or agent. Each designated airline shall have the right to provide its own cargo ramp handling services and cargo ramp handling services for other designated airlines under this Agreement. Restrictions on the provision of in-terminal or ramp services shall only be permitted for security reasons or infrastructural constraints, and shall be applied on a fair and non-discriminatory basis. Designated airlines shall have the right to use any authorized in-terminal or ramp service provider or agent.

Each Party concerned shall use its best efforts to see to it that designated airlines are treated by airports and ground services providers at the airports in a fair and non-discriminatory manner.³⁰⁰

5. Notwithstanding any other provisions of this Agreement, designated airlines shall be permitted, without restriction, to employ in connection with international air cargo transport services³⁰¹, or as a substitute for international cargo air transportation services, any surface transport for cargo to or from any points in the territories of the Parties or third countries, including transport to and from all airports with customs facilities, and including, where applicable, the right to transport cargo in bond under applicable laws and regulations. Such cargo, whether moving by surface or by air, shall have access to airport customs processing and facilities during hours of operation normally provided and where services are available. Designated airlines may elect to perform their own surface transport or provide it through arrangements with other surface carriers, including surface

exhaustive description of all the possibilities and services, because the industry constantly tends to create new ones. But the proposed wording is fairly broad and should encompass many novel contractual arrangements. For instance, it also encompasses franchising.

²⁹⁸ IATA assigns designator codes under IATA resolution 762, see IATA JPSC/14 PSC 15 cited in J.E. de Groot, Code-sharing, Air and Space Law, Vol. XIX, 2 (April 1994) at 62.

²⁹⁹ This is a novel clause aimed at accommodating the many guises and identities that are today assumed by air cargo carriers. The aim is to enable designated airlines to operate under the same circumstances as other cargo service providers which are not necessarily bound to one name or identity.

³⁰⁰ Roughly two types of ground-handling can be distinguished. The first type is the "air side" or "ramp" handling, i.e. the physical presence around the aircraft on the tarmac at the airport, providing loading, maintenance and technical services. In many, if not most, cases this type of handling is restricted because of security and infrastructural constraints, which can be quite logical and acceptable. However, they should not be used to restrict commercial opportunities. The article therefore aims at non-discriminatory treatment.

The second type of ground handling is the in-terminal facility. The ability to receive and expedite goods, to perform administrative functions and to palletize goods. Here too, constraints might be unavoidable. Constraints based on security grounds on this issue are acceptable in exceptional cases. There might be instances where this also might be necessary, e.g. for infrastructural reasons.

Observe that the ramp handling approach in principle contains the possibility of third party handling, albeit that this is restricted to designated airlines under this Agreement. The limitation to designated airlines is there to make the Agreement more attractive (or alternatively, increases the pressure) for countries to join. But it is up to the Parties to choose this approach. Third party handling could also more in general be included, i.e. on a non-discriminatory basis.

³⁰¹ Another option would be to allow only road or maritime transport incidental to air cargo transport. The air waybill could be given an extra evidentiary function in this respect.

transportation operated by other airlines and indirect providers of cargo air transport services. Such intermodal cargo services may be offered at a single through price for the air and surface transport combined, and carried under one air waybill, provided that shippers are not misled as to the facts concerning such transport.³⁰²

6. The designated airlines of each Party shall be entitled, in accordance with the laws and regulations of the Party concerned relating to entry, residence, and employment, to bring in and maintain in the territory of any other Party managerial, sales, commercial, technical, operational, and specialist staff required for the provision of air cargo transportation.³⁰³

7. Each designated airline shall have the right to convert and remit to a country, Party to this Agreement, on demand, funds obtained in the normal course of its operations. Conversion and remittance shall be permitted promptly without restrictions or taxation in respect thereof, at the market rate of exchange applicable to current transactions and remittance on the date the designated airline makes the initial application for remittance, and shall not be subject to any charges except normal service charges collected by banks for such transactions.³⁰⁴

8. With regard to the assignment, allocation, use and availability of airport slots or ramp space each Party shall see to it that rules regarding such assignment, allocation, use and availability shall be applied and be implemented on a fair and non-discriminatory basis, either by themselves or by the airport authorities concerned.³⁰⁵

Article 6.

Fair Competition³⁰⁶

1. There shall be fair and equal opportunity for the designated airlines of all Parties to compete in providing the services covered by this Agreement.

2. Each Party shall take all appropriate action within its jurisdiction to eliminate all forms of discrimination or unfair competitive practices adversely affecting the competitive position of the designated airlines of the other Parties.

3. No Party shall unilaterally limit, restrict or condition, the rights contained in this Agreement as regards the volume of cargo traffic, type of cargo traffic, capacity, frequency or regularity of service, or the type or types of aircraft operated by the designated airlines of the other Parties, except

³⁰² This clause is based on Art. 10 *bis* of the US-Netherlands Bilateral Air Services Agreement of 3 April 1957 as amended on 29 January 1992, and conforms to the "open skies" definition of the US Government, and Section 6, Annex I of the US-Canada Air Transport Agreement of 24 February 1995.

³⁰³ Modelled on Article 10 of the US-Canada Air Transport Agreement of 24 February 1995. Many other alternatives are possible, but this one covers what is generally acceptable.

³⁰⁴ Modelled on Article 10 of the US-Canada Air Transport Agreement of 24 February 1995.

³⁰⁵ There are cases where the availability of proper slots can be vital to a cargo operation. One example is the express service where it is important to make an onward connection in as short as possible a time. Another example is the specialized carrier of goods like perishables and flowers, which needs to bring in or take out the goods in such a way that they can be put on the market at the proper time (for instance the early city-market or the auction). So there is a clear rationale to provide for the non discriminatory availability of slots and ramp space.

³⁰⁶ This Article has been modelled on most open type bilateral agreements (see for example Article 4 the US-Canada Air Transport Agreement of 24 February 1995), but has been amended slightly to accommodate the aims and purposes of the plurilateral. In particular competition law issues and cooperative arrangements have been included.

as may be required for customs, technical, operational, safety, security or environmental reasons under uniform conditions applied in a non-discriminatory way and consistent with Article 15 of the Convention.

4. The competition authorities and air transport authorities of the Parties shall consult regularly with each other in order to prevent conflicts on applicable national competition laws with regard to the services governed by this Agreement. Where and if possible, they shall endeavour to achieve harmonization of such laws, coordinate policy in the execution of those laws and consult each other on specific action taken under those laws, when issues are involved that concern the application of this Agreement.

5. Designated airlines shall have the right to enter into commercial agreements or arrangements including, but not limited to, blocked-space agreements, franchising agreements, code-sharing agreements, leasing agreements, multimodal and intermodal arrangements, with any designated airline or indirect air carrier authorized by a Party to operate to, from, via and within its territory, for the transportation of cargo, ancillary services as well as other services required for such transport, provided that such agreements or arrangements are in conformity with the applicable national competition laws applied in conformity with this Agreement and in particular paragraph 4 above.³⁰⁷

Article 7.

Safety

1. Each Party shall recognize as valid, for the purpose of operating the air cargo transportation provided for in this Agreement, certificates of airworthiness, certificates of competency, and licenses issued or validated by the other Parties and still in force, provided that the requirements for such certificates or licenses at least equal the minimum standards established pursuant to the Convention. Each Party may, however, refuse to recognize as valid for the purpose of flight above its own territory, certificates of competency and licenses granted to or validated for its own nationals by the other Parties.

2. Each Party or its aeronautical authorities may request technical discussion concerning the safety standards maintained and administered by any other Party or Parties relating to aeronautical facilities, aircrews, aircraft, technical supervision and operation of the designated airlines. If, following such technical discussions, one Party finds that the other Party or Parties does not or do not effectively maintain and administer safety standards and requirements in these areas that at least equal the minimum standards established pursuant to the Convention, the other Party or Parties shall be notified of such findings and the steps considered necessary to conform with these minimum standards, and the other Party shall take appropriate corrective action. Each Party reserves the right to immediately implement the rights in Article 2, paragraph 4 with regard to the designated airline or airlines concerned in the event the other Party or Parties does not or do not take such appropriate corrective action within a reasonable time.³⁰⁸

³⁰⁷ This does not necessarily have to be part of any arrangement. Since authorities other than aeronautical authorities are often involved in applying competition laws, e.g. DG IV of the European Commission in Europe, and the Justice Department in the US, it could be done in a separate arrangement prepared by the competition authorities, very much like the way tax agreements are arranged through negotiations between finance departments. This in no way prejudices the possibility of including a limited clause on competition in any arrangement if its desired so, provided the competent authorities can agree on the text to be included. See Patricia M. Barlow, *Aviation Antitrust* at 89-131. See also P.J. Slot and E. Grabandt, *Extraterritoriality and Jurisdiction* in *Common Market Law Review* Vol. 23 (1986) at 545-563.

³⁰⁸ See Article 13 of the US-Canada Agreement of 24 February 1995.

Article 8.

Application of Laws³⁰⁹

1. While entering, within, or leaving the territory of one Party, its laws and regulations relating to the operations and navigation of aircraft shall be complied with by the other Parties' designated airlines.
2. While entering, within, or leaving the territory of one Party, its laws and regulations relating to the admission to or departure from its territory of crew, staff and cargo on aircraft (including regulations relating to entry, clearance, aviation security, immigration, passports, customs and quarantine) shall be complied with by, or on behalf of, such crew, staff or cargo of the other Parties' designated airlines.
3. Cargo in direct transit across the territory of a Party and not leaving the area of the airport reserved for such purpose, or any other area reserved for such purposes, or carried in bond, under the laws and regulations of that Party applied in a non-discriminatory manner, shall, except in respect of security measures against violence and air piracy, be subject to no more than a simplified control. Cargo in direct transit or carried in bond shall be exempt from customs duties and other similar charges.
4. In the application of its laws and regulations, no Party shall give preference to its own or any other airline over a designated airline of any other Party engaged in similar international air cargo transportation.

GENERAL PROVISIONS

Article 1.

Consultation and Amendment

1. Any Party may, at any time, request consultations with any other Party or Parties with the purpose of discussing the interpretation and application of this Code. Prior to the commencement of such consultations the Parties shall inform any Party not participating therein of the nature and date of such consultations and any such Party shall have the right to attend such consultations as an observer or participant, at its discretion.

Any Party may, at any time, request consultations with the other Parties with the purpose of discussing the amendment of this Code. Such consultations shall begin at the earliest possible date, but no later than 60 days from the date of the receipt of the request by the other Parties, unless otherwise agreed.

Amendments to the Code can only be agreed between all Parties, by unanimous decision and through a written agreement, confirmed through the exchange of Diplomatic Notes.

2. Parties shall meet at least once every three years to discuss the application of this Code with the aim of further reducing any barriers still contained therein and to discuss and agree on extending and amending the Agreement to apply to all air transport services.

³⁰⁹ Paragraphs 1, 2 and 4 are modelled on the US-Canada Bilateral Air Transport Agreement of 24 February 1995; paragraph 3 is modelled on the Netherlands' standard bilateral agreement (not published).

3. Parties shall institute a coordination group consisting of two representatives of each Party to monitor the application of this Code and to perform all other work the Parties instruct them to do in connection with this Code. The coordination group shall commence by agreeing on procedures for its functioning and on a work program, both of which shall be submitted for approval to the Parties.

Article 2.

Dispute Settlement³¹⁰

1. If any dispute arises between two or more Parties relating to the interpretation or application of this Code, these Parties shall in the first place endeavour to settle it by way of consultation between themselves.

2. If these Parties fail to reach a settlement within two months after consultations have started, the dispute may at the request of a Party be submitted for decision to a Panel of Arbitrators. This Panel of Arbitrators shall be composed by one representative of each Party to the Code and, three arbitrators appointed by the Secretary-General of ICAO.³¹¹

3. The Panel of Arbitrators shall endeavour to settle and resolve the dispute in the spirit of this Code. Decisions shall be taken by at least two-thirds majority. If the arbitrators are unable to settle and resolve the dispute, the Dispute Settlement and Enforcement mechanism of Article XXIII of the General Agreement on Trade in Services shall apply.

4. The Parties undertake to comply with any decision given under paragraph 3 of this Article. An equal proportion of the expenses of the arbitral tribunal shall be borne by each Party directly involved in the dispute.

Article 3.

Registration with ICAO and the WTO

This Code and any amendment thereto shall be registered with the International Civil Aviation Organisation and the World Trade Organization.

Article 4.

Accession and Withdrawal

1. This Code shall be open for accession by any State, and/or Organization of States, provided such State or Organization of States, is a Party to the World Trade Organization and a Member to the General Agreement on Trade in Services, and Party to the Convention, or in the case of an Organization of States, each individual Member State being Party to the Convention.³¹²

³¹⁰ This is a very simple example. It is to be noted that this will hardly be acceptable to many states and that much more elaborate schemes will have to be devised. See for instance the huge Article 17 of the US-Canada Air Transport Agreement of 24 February 1994. Also see the complex WTO Understanding on Rules and Procedures Governing the Settlement of Disputes, at MTN/FA II-A2.

³¹¹ The three arbitrators would be needed to balance the disputing parties. Many types of arbitration clauses are possible, but this is a fairly simple one. Instead of, or supplemental to, the Secretary-General of ICAO, the Director-General of the WTO could also be used.

³¹² Organizations like the EU can thus become Party to the Agreement, provided they are recognized by the WTO and the GATS. Both Member States *and* the Community can become a Party.

2. Any State and/or Organization of States wishing to accede to this Code shall deposit, through diplomatic channels, a notification requesting accession with the Secretary General of ICAO.³¹³

Within 90 days of receiving such notification the Secretary General shall convene all Parties and the State wishing to accede to discuss possible terms of accession. A State, and/or organization of States, may only accede to this Code if all the Parties so agree by unanimous decision.³¹⁴

3. Any Party may at any time withdraw from this Code by depositing a notification of withdrawal with the Secretary General of ICAO. A Party depositing such notification shall cease to be a Party to this Code two years³¹⁵ after the date of receipt thereof by the Secretary General of ICAO.

4. The Secretary General shall immediately inform all Parties and the Council on Trade in Services of the GATS of the date of receipt of any notification deposited with that Government pursuant to paragraphs 2 and 3 of this Article.

Article 5.

Definitions³¹⁶

The definitions of the Convention and the GATS shall also apply to this Agreement. In addition the following definitions will apply:

- (a) The term "the Convention" means the Convention on International Civil Aviation, opened for signature at Chicago on 7 December 1944, and includes any Annex adopted under Article 90 of that Convention and any amendment of the Annexes or the Convention under Articles 90 and 94 thereof, insofar as those Annexes and amendments have become effective for, or have been ratified by the Parties;
- (b) the term "the GATS" means the General Agreement on Trade in Services, which is an integral part of the Agreement Establishing the World Trade Organization, opened for signature at Marrakesh, 15 April 1994;

³¹³ It would be in line with current international air transport practice and the multilateral aim of this agreement, for the Secretary General of ICAO to perform this task. But also one Government may be custodian of this agreement, or even the WTO. But since ICAO and the WTO/GATS cooperate with each other, see Article XXVI of the GATS, there is all the reason to use the specialized air transport agency which ICAO is.

³¹⁴ This is a suggestion, to speed up the decision making process. The first parties to such an agreement should consider whether they would be willing to accept such a clause. It is important that the Agreement must be accepted by the applicant *as is*, but also that the acceding Party's commitments under GATS or on a bilateral level with one or more of the Parties should be deemed sufficient. Sufficient commitment under GATS and sufficient market access for combination air transport services *must* be a condition of accession!

³¹⁵ Two years has been chosen instead of the usual one year to prevent as much as possible the misuse of the possibility of withdrawal as a negotiating instrument.

³¹⁶ In most bilateral agreements, definitions can be found in Article 1. The approach has been followed of most multilateral agreements, like the Convention and GATS, which conclude with definitions. In this example for a Code, States wishing to participate in the Code need to be signatories to GATS and the Convention. The definitions in these Agreements will apply to them. The definitions are broad and reflect the idea that exhaustive definitions are not possible and will of necessity leave some items not-covered or in doubt. A good example is "selling and marketing". The broader the concept, the better that concept is able to include new items, variants and derivatives. But it remains up to the states involved to decide.

- (c) the term "designated airline" means an airline which has been designated and authorized in accordance with Article 2 of Part C of this Code;
- (d) the term "rate" means any amount charged or proposed to be charged by designated airlines, directly or through their agents and/or representatives, for the carriage of cargo (excluding mail) in air transportation, intramodal transportation and surface transportation substituting air transportation, including:
 - (i) the conditions governing the availability and applicability of a rate; and
 - (ii) the charges and conditions for any services ancillary to such carriage which are offered by designated airlines;
- (e) the term "operating license" means an authorization granted by a Party to an airline permitting it to carry out carriage by air of cargo, as stated in the operating license, for remuneration and/or hire³¹⁷;
- (f) the term "air operator's certificate" (AOC) means a document issued to an airline by the competent authorities of a Party which affirms that the airline in question has the professional ability and organization to secure the safe operation of aircraft for the aviation activities specified by the certificate.³¹⁸

Done at (place) on (date), in a single copy, in the (...) languages, each text being authentic.
In the event of any inconsistencies the English version shall prevail.

Signatures to the Agreement,
The Governments of:
The United States of America
The Member States of the European Union
Canada
The United Mexican States
The Republic of Singapore
And ... ?"

³¹⁷ See Article 2, paragraph (c) of Regulation (EC) 2407/92.

³¹⁸ See Article 2, paragraph (d) of Regulation (EC) 2407/92.

PART F

SLOTS

F. SLOTS

529. Three main regulatory regimes exist for slot allocation: US regulations, EC regulations, and, in almost all other countries, the self-regulated IATA system. While the IATA system has remained relatively stable (for a detailed description, see compilation, pages 251-253), both the US and the EC regulations have been the subject of changes, experiments and consultations, and are in many respects a work in progress. Multilateral discussions have also taken place at ICAO.

530. From the commercial standpoint, the strategic importance of slots was enhanced during the period under review on account of three main factors: growing environmental constraints, liberalization, and increased traffic. There was also an increase in occasional trading in slots, which in turn explains the regulatory discussions under way.

1. Regulatory developments

531. Any allocation of scarce resources involving a large number of stakeholders is liable to create tensions between conflicting interests. The allocation and, where applicable, the sale of slots is no exception. Tensions may arise:

- Between airlines, airports and States with regard to ownership and rules of allocation;
- between the objective of maximizing capacity and that of environmental protection;
- between carriers operating small aircraft and/or short and medium-haul flights, and carriers operating large aircraft and/or long-haul flights (a large aircraft and a small aircraft occupy the same slot but do not produce the same revenue, either for the airline or the airport, and the same is true for short and medium-haul flights, on the one hand, and long-haul flights on the other);
- for long-haul carriers dominating a hub, which have a conflicting interest between, on the one hand, obtaining or purchasing slots assigned to short and medium-haul links in order to transform them into long-haul slots, and, on the other, retaining short and medium-haul slots to feed long-haul flights with regional customers;
- for non-dominant long-haul carriers when deciding whether to resell their slots, as the immediate added value must be weighed against the loss of regular income, new services potential and potentially strengthened position of the dominant carrier;
- for short and medium haul carriers, which must also assess, when deciding whether to resell their slots, immediate added value against the cost of exile to a secondary airport of less practical advantage because of the lack of direct connection potential;
- between beneficiaries of grandfather rights and new entrants;
- between airlines that have the financial resources to purchase slots and those that do not;

- between bilateral agreements under which States consent to opening up flight destinations and frequencies, and national regulations or self-administered trans-national rules on slot allocation;
- and in consequence, between international and domestic flights.

532. These various tensions were particularly apparent in the discussions held at ICAO on this subject during the period under review.

(a) Discussions at ICAO

533. In 1999-2000, the **ICAO Secretariat** produced a study on the allocation of slots at international airports.³¹⁹ The study was examined by the ICAO Air Transport Committee in February 2000 and by the Conference on the Economics of Airports and Air Navigation Services (ANSCConf 2000) in June 2000, and it was eventually updated and published as ICAO Circular No. 283.

534. The study describes trends in airport capacity constraints and existing regulatory regimes, and assesses existing measures and possible improvements or alternatives to them. Its main conclusions are that more and more States will be faced with slot allocation decisions, and that such decisions are particularly difficult in the international arena as they are essential to the actual exercising of market access concessions. According to ICAO, increasing capacity through the construction or enlargement of existing airports is still the best method for eliminating congestion. Clearly, however, this solution cannot be transposed to a number of airports where physical, environmental or other constraints prevent such construction or enlargement.

535. ICAO acknowledges that capacity management measures are likely to improve the short-term situation and prevent bilateral disputes related to slot allocation for international services. ICAO notes that public policy objectives other than merely maximizing capacity may be at work here, such as competition and market access policy. ICAO considers that liberalization has an ambivalent impact on capacity constraint: for one thing, through the extensive granting of traffic rights and multiple designations, liberalization creates additional demand for slots; at the same time, however, it relieves the pressure on those same slots by offering the possibility of using alternative airports and cities capable of accommodating these new or increased services.

536. ICAO concludes that a number of States will be faced with the task, in the medium to long term, of balancing conflicting objectives in order to determine which international carriers will be able to use their capacity-constrained airports. In so doing, these States will have to take account of the existing legal framework provided in particular by the Chicago Convention, their bilateral agreements, regional³²⁰ and national slot allocation rules and existing self-regulated mechanisms. According to ICAO, the specific situation of each individual airport concerned will have to be taken into account, and no overall solution can be recommended.

537. Regarding the proposed alternative(s) to the current IATA system, it is significant that the ICAO study is extremely cautious about "secondary slot trading".³²¹ The latter option, which is supported by the Organisation for Economic Co-operation and Development (OECD), has been a

³¹⁹ A summary of the study is available at the following electronic address: http://www.icao.int/icao/fr/atb/ecp/C283_fr.pdf. The full text of the initial study in English is available on request from the WTO Secretariat.

³²⁰ Likely reference to the rules of the European Union.

³²¹ Secondary slot trading is the trading of slots between airlines, in which monetary compensation is involved.

recurrent theme over the last 15 years and is legally available on the domestic market in the United States, as well as in Europe, at least at Heathrow, albeit in a somewhat ambiguous legal context (see below). ICAO notes the instability of the slots market at the end of the 1990s, and considers that a strict reading of Article 15 of the Chicago Convention (obligation of national treatment for airport charges³²²) could imply a single price for a slot. ICAO also notes that the question of the ownership of slots (potentially claimable by airlines, airports and the State) remains open and that such secondary trading could, in certain – unspecified – circumstances, strengthen dominant positions. ICAO thus concludes that secondary slot trading would require further study and analysis.

538. Regarding improvements to the current system, ICAO notes three possible approaches.

- The first, which is not exclusive of the two others, would consist in appointing independent coordinators to prevent conflicts of interest that could be created by assigning the role of coordinator to national carriers (27 cases out of 45 in the IATA system at the date of drafting of the report).
- The second proposal, which excludes the third, would be to give preference to international long-haul flights which have less slot flexibility than other flights.
- The third proposal would be to give preference to all long-haul flights. The advantages and drawbacks of these proposals vary between individual airports, depending on their traffic mix. ICAO does not, therefore, make precise recommendations on the subject.

539. At the Fifth Worldwide Air Transport Conference³²³ held in March 2003, IATA presented a working document (ATConf/5-WP/27) entitled "Ensuring an effective and globally compatible slot allocation system". In this document, IATA expresses opposition to the proliferation of national government regulations on the basis of the following arguments.

540. First, IATA considers that government rules are intrinsically inflexible and complex and are paradoxically likely to increase congestion, compared with the extreme flexibility of its own system.

541. Second, the airlines' association is of the view that national government rules add to its own traditional guidelines (maximizing capacity and distributing it fairly, on the basis of predictability and continuity, relying on grandfather rights and the concept of "waiting one's turn", while ensuring that new entrants are given a fair share of slots) political objectives that are praiseworthy in themselves, such as competition and environmental protection, but which would disrupt the system and could be achieved by other means. Moreover, these objectives sometimes conflict with one another³²⁴.

542. Lastly, IATA considers that, having regard to the extra-territorial consequences of slot allocation (every take-off or landing slot allocated in country A must be matched by a take-off or

³²² Article 15 of the Chicago Convention reads: "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: (a) 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 (b) 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."

³²³ All the documents of the conference referred to in this section may be consulted at the following electronic address: <http://www.icao.int/icao/en/atb/atconf5/>.

³²⁴ Although IATA does not say so explicitly, this is undoubtedly a reference to the conflict between the objective of maximizing capacity and the objective of environmental protection, which is frequently reflected in night curfews and limitations on the total number of flights or the volume of noise emissions.

landing slot in country B), government rules tend to exacerbate the fragmentation of the system at the risk of endangering its viability.

543. IATA therefore suggests in its working document that every slot allocation system should:

- be globally compatible;
- be market driven and have as its sole objective the maximum effective use of airport capacity;
- be transparent, fair and non-discriminatory;
- be simple, practical and economically sustainable.

544. At the same conference, **Airports Council International** presented a working document (ATConf/5-WP/91), in which it expressed the view that airlines have only usage rights to slots, not property rights. ACI considers that, although the IATA system has to a large extent maintained a high degree of coherence and stability, it is still dominated mostly by the interests of airlines. ACI proposes the establishment of "coordination committees" in which airports would fully participate, alongside airlines, in the establishment of slot allocation rules. Airports also wish to participate, at least with observer status, in the biannual IATA Schedule Coordination Conferences. The appointment of independent coordinators, the improvement of penalty mechanisms in the event of non-use of slots, and the deliberate restriction of slot allocation to certain types of flights (small aircraft, noisy aircraft, flights of a specific stage length) are further measures advocated by ACI.

545. ACI acknowledges, however, that its US members do not share its enthusiasm for coordination committees, which they consider to be potentially anti-competitive and the use of which, in their view, should be limited to emergency situations or in response to weather disruptions. ACI considers that airlines should not be authorized to engage in secondary trading³²⁵ of usage rights except on condition that regulations and effective safeguards be applied and that these exchanges:

- Reflect the allocation principles of airports;
- are not anti-competitive;
- do not exceed the airport's capacity limits;
- maintain the efficient use of airport capacity;
- are subject to "use it or lose it" rules³²⁶;
- are overseen by or carried out in close cooperation with the airport operator, when an independent coordinator is appointed.

546. At the same Fifth Worldwide Air Transport Conference, the member States of **ACAC**³²⁷ reiterated in a working document (ATConf/5-WP/64) their commitment to the IATA self-regulated

³²⁵ Indeed, while in Europe the status of selling remains uncertain, slot exchanges are permitted. As a result, in certain instances slot sales are "disguised" as exchanges, where a worthless slot is "exchanged" for a valuable slot, subject to hidden financial compensation. The terms "artificial exchanges" or, more colourfully, "junk slots" are also used in such instances. See discussion later in the main text.

³²⁶ Precisely in order to avoid artificial exchanges of slots.

system as endorsed by the Fourth Worldwide Air Transport Conference. In the same document, they explicitly oppose one of the possible measures for relieving congestion: the peak hours surcharge (see also compilation, paragraph 137, page 107). On the other hand, their opposition to secondary slot trading remains implicit.

547. One interesting aspect of this contribution is the fact that it highlights traditionally discreet practices linking slot allocation to traffic rights. The bilateral agreements do not deal with slot allocation, at least in the parts thereof available to the public. Thus, ICAO's WASA database, which codifies some 40 provisions commonly found in bilateral agreements, does not include a heading devoted to slot allocation. However, the effective exercise of international traffic rights presupposes slot allocation. This explains, for example, why US legislation empowers the Federal Aviation Administration *ex officio* to allocate slots for international flights, where appropriate, to the detriment of domestic flights. Other States, not mentioned by name in the ACAC working document, have resolved this conflict by implementing one or more of the following policies:

- Refraining from negotiating new or extended traffic rights unless they can be fulfilled;
- negotiating advance access to slots on a bilateral basis before the new capacity becomes available in the form of a new airport or the extension of an already existing one;
- applying the principle of reciprocity in slot allocation at airports.

548. The conflict between the objectives of maximizing capacity, on the one hand, and environmental protection, on the other, is very clearly illustrated by the contributions of India (ATConf/5-WP/85) and France (ATConf/5-WP/88).

549. **India's** contribution highlights the problem of imbalance in the provision of air transport services caused by non-availability of slots at some airports, thereby adversely affecting the growth of air transport operations and market access. India also sees this as going against the basic principle of reciprocity of opportunity in the bilateral process. The situation is compounded by the night curfews imposed by some States. To overcome the problem, India recommends that the preferential treatment granted to new entrant operators to give them their fair share of slots should also be extended to airlines from countries that are not able to balance their services as per their bilateral agreements, because of non-availability of slots. The paper also suggests removal of night curfews, given the low noise level of present-day aircraft, and adherence to ICAO Standards and Recommended Practices for laying down national regulations to increase slot availability.

550. The contribution of **France** takes stock of the liberalization started in 1986 under the auspices of the European Community and notes that it resulted in a considerable increase in the number of movements, a decrease in the size of aircraft, at least on the domestic market, and an increase in the quality of services (choice of operators, greater number of flights, reduced waiting time). On the other hand, noise nuisances were aggravated, as the reduction of flight noise impact was more than offset by the increased number and repetition of take-offs and landings. Similarly, airport congestion problems increased, particularly at the most attractive times from the commercial point of view and in the hubs, which also grew in number. France therefore placed four of its airports under the coordination regime provided for by Community Regulation No. 95/93, placed an upper limit on the number of slots available at Paris Orly airport, located in a dense urban fabric, imposed a minimum

³²⁷ Bahrain, Egypt, Iraq, Jordan, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Emirates and Yemen.

capacity per flight at the same airport, related to the traffic of the service in question, and lastly developed infrastructures at Paris Charles de Gaulle airport and introduced measures to contain noise nuisances, particularly at night.

551. Apart from the particular case of France, these developments were echoed, *mutatis mutandis*, in all the developed countries and, increasingly, in the emerging countries during the period under review.

552. These issues are far from being theoretical. They even caused political problems in Belgium when DHL shifted its hub from Brussels Zaventem to Leipzig and laid off a number of workers because of opposition by local residents to the reduced curfew hours requested by DHL.

(b) European Union

553. On two occasions, in September 2001 and in June 2003 after the start of the war in Iraq and the onset of the SARS epidemic, the Community authorities temporarily relaxed the "use or lose" rule so that airlines would not lose slots on account of the cancellation of flights due to *force majeure*. At the same time, the Association of European Airlines, supported by its sister associations in Asia and the United States, managed to have this technical issue of abolition of the 80/20 rule dissociated from the broader issue of the reform of the slot allocation mechanisms which the Commission had originally intended to deal with in a single package.

554. Following numerous discussions and consultations, Council Regulation No. 95/93 was eventually amended by Council Regulation No. 793/2004³²⁸ of 30 April 2004. These amendments are mainly of a technical nature, actual revision of the allocation mechanisms being reserved for a second stage which is still under way. These modifications relate to enforcement, clearer definitions, better monitoring tools and stricter sanctions for abuse or non-compliance.

555. More specifically, the Regulation defines a slot as a "permission given by a coordinator ... to use the full range of airport infrastructure ... for the purpose of landing or take-off". Carriers operating non-stop services from and to international airports now have the status of "new entrant", so as to give them the benefit of mechanisms for reallocating slots from the pool in order to promote competition on intra-Community routes. Business aviation is now explicitly included in the allocation process. Regular capacity analyses are to be carried out in a transparent manner by airport managers. On the basis of these studies, carriers representing at least half of movements, or the European Commission, may request the Member State concerned to place the airport in question under a facilitation or coordination regime. The coordinators must be fully independent and they bear sole responsibility for the allocation of slots.

556. It is now explicitly provided that the coordination committee must be open, *inter alia*, to all airlines, including general aviation companies, which regularly serve the airport, as well as to the managing body of the airport and the authorities responsible for managing air traffic. Local guidelines may be established by the coordination committee. The reasons for slots not having to be reallocated below an 80 per cent usage rate are spelled out: grounding of the aircraft type generally used for the air service in question, closure of an airport or airspace, and serious disturbance of operations at the airports concerned. The coordinator is explicitly given full control of operations and monitoring of operations. The airlines are required to provide him with all necessary information and false or incomplete information may be sanctioned by non-allocation of a slot. A range of penalties is provided for, including withdrawal of slots in case of non-compliance with the established rules. Lastly, a reciprocity clause with regard to third countries is introduced.

³²⁸ Official Journal L138 of 30 April 2004, page 52 *et seq.*

557. Over and above these technical or cyclical regulatory developments, the question which affects reform of the European regulations on slot allocation is that of the legality or otherwise of secondary trading. As is indicated in the Mott MacDonald study commissioned by the Commission in November 2006 on "The impact of the introduction of secondary trading at Community airports"³²⁹, "currently, such unilateral slot transfers [against payment] are not regarded by the Commission as compatible with the EC Regulation, although the English High Court has ruled they were legal under Regulation 95/93".³³⁰

558. The Mott MacDonald report goes on to say that "following that case, what is often described as a "grey market" has achieved a greater legitimacy in the United Kingdom, at least so that it can be said that an open market in airport slots now operates at certain of its airports, and there are some indications that such a grey market may have operated elsewhere in the Community".

559. In accordance with that position, the Commission, in July 2004, instituted infringement proceedings against the United Kingdom, arguing that the existence of the grey market was in breach of Community allocation rules. However, these proceedings do not appear to have resulted, as yet, in a decision.

560. Indeed, it would appear that the Mott MacDonald report, which reiterates the Commission's traditionally sceptical position on secondary trading, portrays that position simplistically or, at least, does not reflect its latest status. Indeed, earlier press cuttings³³¹ (March 2005, July 2006) refer to working documents of the Commission and to public pronouncements by the latter in favour of the introduction of a market mechanism to maximise the use of slots provided that certain safeguards to prevent abuses of dominant position on the part of major hub carriers are established. This would involve, first, the *ex post* publication of all the characteristics of the transaction, including the prices paid, and secondly, validation of the transaction only if no other carrier is prepared to pay a higher price. The latter potential requirement is contested by the airlines, which prefer to sell slots to their alliance partners rather than to their competitors, even if this means earning a little less revenue than planned.

561. In a consultation document of September 2004, the Commission also referred to a whole series of schemes, one of which, involving the partial reallocation of slots (a scheme also found in the rules proposed by the FAA for New York La Guardia; see the section on the United States) provoked the wrath of the airlines which saw it as a form of "confiscation".

562. To clarify its options, the Commission commissioned two reports in succession, one in January 2004 and the other in November 2006, on the possible reform of its slot allocation regime. The first study by the NERA consultancy is entitled "Study to assess the effects of different slot allocation schemes". Its main conclusions are summarized in Table 44.

³²⁹ http://ec.europa.eu/transport/air_portal/airports/doc/2006_slots_final_report.pdf, page 2-7, paragraph 44.

³³⁰ "The court held that the exchanges were exchanges in the ordinary meaning of language and this meaning was not qualified by the provisions of the Regulation; and that ... incidentally ... there was nothing [in the Regulation] to prohibit monetary consideration", Mott MacDonald, *op cit*, page 4-6, paragraph 41.

³³¹ La Tribune, 16 March 2005; Aviation Week & Space Technology, 10 July 2006.

Table 44
Summary of main properties of market mechanisms for slot allocation

	Secondary trading	Higher posted prices	Higher posted prices and secondary trading	Auction of pool slots and secondary trading	Auction of 10% of slots and secondary trading
Approximate estimate of impact on passenger numbers					
Low case	2.2%	3.8%	4.1%	2.4%	0.4%
Central case	4.0%	4.3%	5.0%	4.2%	4.1%
High case	4.8%	5.2%	5.8%	5.0%	4.6%
Implementation costs	very low	low	moderate	moderate	very high
Other factors					
Potential for instability in airline schedules	very low	low	low	low	high
Likelihood of increased concentration at hub airports	moderately high	moderately high	moderately high	high	very high
Consistency with existing scheduling procedures	good	moderately good	moderately good	moderately good	poor
Risk of international disputes, challenges and retaliation	low	high	high	low	very high

Notes: Higher posted prices = A mechanism whereby slot prices are increased in order to reduce the extent of excess demand and ensure that sought-after slots are not allocated to low value services. Auction of pool slots = A simultaneous ascending auction, where all lots of slots are sold (either individually or in combination) in a single auction with repeated rounds. Auction of 10% of slots = An auction of 10 per cent of existing slots each year, in a rolling programme such that each slot came up for auction every 10 years.

Source: NERA Economic Consultancy (2004), "Study to assess the effects of different slot allocation schemes".

563. The second study, cited earlier, was entrusted to the Mott McDonald consultancy and relates to a more specific subject, namely "The impact of the introduction of secondary trading at Community airports". After analysing the US market in secondary trading and going on to the "artificial" market in slot sales at London Heathrow and London Gatwick, the study concludes that in both cases the secondary trading mechanism has led to a liquid and flexible market in slots, that it has been effective in fostering new entry, that it is supported by the industry, that it has facilitated slot leasing, and that direct competitors are prepared to trade slots with each other freely.

564. In Europe, the main purchasers have, generally speaking, been long-haul carriers (British Airways in particular) and the main sellers have been short-haul carriers that have transferred their operations to airports on the outskirts of London, resulting in improved efficiency in the use of slots, as expressed in available seat-kilometres.

565. On this basis, and after conducting numerous regime simulations on the basis of all available traffic forecasts for the eight most congested airports (currently or prospectively) in the EC (London Heathrow, London Gatwick, Paris Orly, Paris Charles de Gaulle, Amsterdam, Düsseldorf, Frankfurt and Milan Linate), the report concludes that the introduction of a secondary trading mechanism would make it possible by 2025 to increase the total number of passengers by 7.2 per cent per year, i.e. 51 million additional passengers in 2025, and to increase the number of available seat kilometres by 17 per cent at the end of the period, as a result of the replacement of small medium- and short-haul aircraft by wide-bodied long-haul aircraft.

566. This would improve consumer welfare by an annual amount of €31 billion in 2025 (at current rates) and producer welfare by €1.2 billion at the same date. Airport finances would be improved by 7 per cent, not counting the indirect effects on neighbouring areas. New entrants, especially intercontinental carriers – an important point at a time when low-cost intercontinental carriers are increasing their operations – will find it easier to gain access to congested hubs. However, existing dominant hub carriers will see a slight increase in their dominant position, from an average 47 per cent to 49 per cent. Competition between hubs as well as between long-haul carriers is likely to increase. Competition on intra-Community flights, on the other hand, is likely to be weaker. Routes to peripheral regional airports and to the more peripheral Member States could be forced out of the major airports to less convenient secondary airports, unless they are protected by public service obligations. The impact on carbon dioxide emissions is likely to be considerable (€6.7 billion) although much of this will derive from geographical displacement of flights between airports rather than an absolute increase for Europe as a whole. Noise impacts in congested airports would be minimal, reflecting the replacement of short-haul aircraft by more modern long-haul aircraft.

567. The study concludes that no amendment to the existing community slot regulations could simultaneously meet the following public policy objectives:

- Maximizing the use of airport capacity;
- maintaining links to the Union's peripheral regions;
- enhancing competition, particularly on intra-Community routes; and
- minimizing the impact on the environment.

568. The report goes on to examine a number of additional regulatory constraints that could be imposed on secondary trading as practised on the grey market, but eventually selects only one: the requirement for post-trade transparency.

569. Finally, with regard to primary slot allocation, the report examines three options suggested by the Commission: raising the threshold of the "use it or lose it" rule from the current level of 80 per cent to 90 per cent; auctioning newly created slots; and withdrawing slots from incumbent operators so that they can be reallocated.

570. The report rejects raising the "use it or lose it" threshold as a solution that would create too many operational difficulties. Instead, it favours the auctioning of new slots, while noting airlines' opposition to this system. Its greatest merit would be to prevent windfall profits being made by airlines. However, the report considers that the effectiveness of this practice is relative and that secondary trading could suffice to achieve the same objective.

571. As regards the forced withdrawal of slots for subsequent reallocation, either by administrative procedure or by auction, the report notes that, although such withdrawal is practised in the United States under certain conditions³³², it would be contrary to IATA guidelines. It would also be difficult, for diplomatic reasons, to withdraw slots from non-Community carriers that use them for intercontinental services. The withdrawal procedure would therefore have to be limited to slots used for intra-Community routes, which would give rise to two difficulties: the first is that a distinction between intra-Community and extra-Community slots does not exist in European legislation as it stands at present; the second is that this would prevent the reallocation of short and medium-haul

³³² By the FAA for the benefit of international flights, at the present time; by reallocation for ten-year periods at La Guardia if the proposed rules are accepted.

(mainly intra-Community) slots to long-haul flights, whereas such reallocation is the primary objective of secondary trading. The report therefore rejects this suggestion.

572. Consultations on the basis of the report are ongoing. IATA, which had not explicitly come out in favour of the legalization of secondary trading in its contribution to the Fifth Worldwide Air Transport Conference in 2003 (see above), now clearly endorses such legalization. It suggests that, instead of overhauling existing legislation, the Commission should maintain the regulatory *status quo* and change its interpretation of the concept of exchange in order to include monetary compensation.

573. The European Union Airport Coordinators Association, for its part, wants no change in the current interpretation and considers that any legalization of secondary trading could have adverse consequences.

574. The European Regions Airline Association (ERA) points to three potential losers from the possible introduction of a secondary trading mechanism:

- Customers on routes hitherto served by slot sellers;
- certain destination areas if remaining service is inadequate to meet local business and social needs;
- airlines that cannot afford to buy slots.

575. The ERA also considers that this mechanism will create difficulties for regional carriers, while its effectiveness in improving the overall allocation of slots remains to be proved. Lastly, the ERA is of the view that the efficient use of slots cannot be measured solely by reference to available seat kilometres.

(c) United States

576. The AIR 21 Act³³³, signed into law by President Clinton in April 2000, provided for the abolition of the High Density Rule (HDR)³³⁴ in three of the four airports affected by this slot allocation rule since 1969: in the case of Chicago O'Hare from 1 July 2002, and in the case of New York JFK and New York La Guardia from 1 January 2007. Thus, only Washington National Airport remains concerned by the HDR.

577. The new legislation also provided for exemptions to the HDR during the transitional period in the case of the three first mentioned airports and *ad aeternam* for Washington National, in order to encourage services to smaller communities (defined as routes with fewer than one million passengers a year). These exemptions which, in certain circumstances, made it possible to obtain "free" slots, reduced the size of the secondary market.

(i) *La Guardia*

578. Liberalization measures resulted in an increase in services of more than 50 per cent over existing capacity at La Guardia in November 2000. Given the accumulated delays, the Port Authority of New York and New Jersey imposed a moratorium on the number of new flights and requested the FAA to intervene on the basis of its powers under the 1958 Air Transport Act in order to maintain

³³³ Official title: Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (49 USC sections 41714-41718).

³³⁴ The rule is described in detail in the compilation, pages 290-291, paragraphs 24-29.

safety and the movement of air traffic. The FAA then imposed a temporary cap of 75 operations per hour and allocated slots under the AIR 21 legislation by means of a lottery nicknamed the "slottery". These temporary measures were extended on several occasions and are still in force today.

579. At the same time, in June 2001, the FAA requested comments from interested parties on five slot allocation options for this airport: two options based on market mechanisms – landing charges adapted to congestion levels, on the one hand, and primary slot auctions, on the other – as well as three "administrative" mechanisms: establishment of a minimum aircraft size, reservation of slots for new entrants and for carriers serving smaller communities, and periodic reallocation of slots.

580. The FAA suspended the request for comments after the tragic events of September 2001 which resulted in a decline in traffic and a consequent easing of congestion, but it revived the procedure in March 2002. In October 2002, noting the complexity of the problems at issue, the FAA postponed the deadline for comments until 30 October 2004, which is the date of expiry of the lottery slot allocation systems introduced in April 2000. Observers consider significant the fact that the Department of Justice, in its comments, advocated an auction system. The airlines represented by the Air Transport Association (ATA) have on the contrary protested against the introduction of such a system which, in their view, would bring no improvement in operations or waiting times but would increase airline costs.

581. The FAA finally presented a slot reallocation bill in September 2006, for which it will request congressional authorization under the FAA reauthorization bill of 2007. The time-limit for comments on this draft regulation (Notice of Public Rule Making) expires on 30 October 2007.

582. The number of operations was to remain limited to 75 per hour. Slots, which at present are virtually owned by the airlines under grandfather rights, would be reallocated or at least made available for reallocation every ten years. The sale and leasing of slots would cease to be a private matter between two airlines, but would in future be carried out by means of a "blind auction" process administered by the FAA, in which the identity of the seller/lessor on the one hand and the buyer on the other, would not be known, even between interested parties, until the transaction was concluded. Airlines could lose slots if the average number of seats per departure fell below a target number linked to the airport's capacity and the number of exemptions to this rule granted for services to smaller communities. The averages would be calculated annually. Airlines that fell below the target number would lose their lowest-density slots, that is those used by small aircraft. For 2008, depending on the number of exemptions granted for services to smaller communities, the target number could be 105, 116 or 122 seats whereas flights from La Guardia currently average 98 seats. Initial slots, renamed "operating authorizations", would be allocated in 2007 on the basis of grandfather rights, with expiry dates between 2010 and 2019. These expiry dates would be staggered so that 10 per cent of slots become due for reallocation every year. Reallocation would take place either by blind auction or under the congestion pricing system, but the FAA has not yet decided which solution to present to Congress in this regard. Newly allocated slots would have a life span of ten years.

583. The purpose of all these rules is to avoid the practice of "babysitting", whereby large airlines use their regional affiliates to occupy an allocated slot with a small aircraft in order to avoid application of the "use or lose" rule to a slot which would otherwise be returned to the pool and could therefore be reallocated by lottery to another airline. The FAA considers that, through this practice, airlines increase flight frequencies using small aircraft beyond market requirements (services to smaller communities) and is seeking to encourage the use of larger aircraft, at the cost of slightly lower frequencies, in order to make better use of capacity.

584. The ATA and the Regional Airlines Association have already commented on the FAA proposals, expressing disapproval of the ten-year reallocation scheme (whether based on a blind auction mechanism or congestion pricing) and the establishment of a minimum threshold for flight

size. The ATA also considers that the ten-year reallocation, on account of the uncertainty it would generate, would discourage long-term investment by airlines in airports.

585. IATA has expressed opposition³³⁵, in principle, to the introduction of any traffic distribution formula, including at airports like La Guardia which have limited international operations. IATA is afraid that the formulas proposed by the FAA for La Guardia might set a precedent that departs excessively from its own allocation rules, and that a general extension of those rules might lead to disputes between governments to the detriment of airlines and their customers. Secondly, IATA expresses the fear that these rules may lead to less flexibility and affect the long-term investments of airlines at La Guardia. IATA also criticizes the operational disruptions for airlines that would be caused by reassigning larger aircraft to serve that airport. Lastly, it considers that the ten-year reallocation of slots would be equivalent to confiscation, contrary to the well-established principle of historical preference ("grandfathering").

(ii) *Chicago O'Hare*

586. Congestion problems at Chicago O'Hare were also exacerbated by the abolition of the HDR in July 2002, culminating in on-time arrivals of only 57 per cent and on-time departures of 67 per cent in 2003. Taking note of this situation, Congress adopted legislation (49 USC 41722) aimed at providing a mechanism to reduce delays. In the meantime, the FAA convinced the two main carriers operating at this airport (American Airlines and United Airlines) to reduce the number of their flights, and in August 2004 imposed a maximum limit of 88 flights per hour between 7 a.m. and 8 p.m. This measure has been extended on several occasions.

587. In August 2006, the FAA published a proposed rule at the same time as its proposed rule for La Guardia. However, there are significant differences between the two proposals. First of all, the cap on the number of flights would be temporary, since new investment will considerably enhance capacity at Chicago in the near future. Secondly, the slots or "operating authorizations" would not have a finite time-limit prior to re-allocation. Thirdly, no minimum aircraft limit would be imposed. A lottery system would make it possible to allocate capacity created by the new investment.

(iii) *New York JFK and Washington National*

588. These two airports were not subject to regulatory intervention during the period under review.

(d) *Other countries*

589. Although the airports of Japan, China, India and Brazil are increasingly congested, according to IATA scheduling rules have thus far worked smoothly in these countries.

590. In Japan, the only major development that occurred during the period under review regarding slots concerns the airport of Tokyo Haneda, which is mainly used for domestic purposes. In 2004, the Ministry of Land Infrastructure and Transport, after an enquiry, withdrew 40 slots from the two major carriers (22 from the JAL Group and 18 from the ANA Group) and reallocated them. Of the 20 slots reallocated to new entrants, 14 went to actual new entrants such as SkyMark, AirDo, and SkynetAsia, and 6 to potential new entrants. The 20 remaining slots were reallocated between the two major carriers under a scoring methodology based on the following criteria: improvements in customer convenience (effort towards lower fares, safety records, comprehensiveness of the network throughout

³³⁵ Comments of IATA before the US Department of Transportation, Federal Aviation Administration on the Notice of Proposed Rulemaking Concerning Congestion Management Rule for LaGuardia airport Airline delays and cancellations (14 CFRPart93) , Docket N° FAA-2006-25709

Japan, number of airports where night stays are carried out, current ratio of local flights to all flights from Haneda and past ratio for the flights previously allocated), business efficiency (rate of decrease of the operating cost per passenger kilometre over the last five years, rate of increase of operating profit per employee over the last five years), slot efficiency measured in available seat kilometres over the last five years and absence of penalties imposed by the authority over the last five years. As a result of this process, JAL was allocated 11 slots and ANA 9. The complete results of the reallocation are summarized in Table 45.

Table 45
Slot reallocation at Haneda airport

	Before	After
JAL	182	171
ANA	158	149
New entrants	47	67

Source: Japanese Ministry of Land, Infrastructure and Transport
(available at: http://www.mlit.go.jp/kisha/kisha04/12/120907_.html).

591. There were no developments regarding international airports (Narita, Kansai and Chubu).

592. In China, the slot allocation mechanism derives from IATA scheduling procedures. Domestic airlines are required to apply for slots to the regional offices of the Civil Aviation Administration of China (CAAC). These regional offices then allocate slots according to traffic flow and all the results are reported to the CAAC air traffic management office which is responsible for reviewing them and taking the final decision. Foreign airlines apply directly to the CAAC air traffic management office, which coordinates with the regional offices for purposes of slot allocation. The principles of fairness, justice and non-discrimination are applied to both domestic and foreign airlines. The following sequence of criteria is applied: historical slots; changes to historical slots; flights from new airports or new routes; continuation of the previous season's schedules; schedules that have operated for a longer period of time, subject to priority being given to slots for international flights over slots for Hong Kong, China and Macao, China; priority for Hong Kong, China and Macao, China slots over domestic trunk route slots; and priority for domestic trunk route slots over domestic regional route slots. The CAAC recently began amending its Regulation of Civil Flights Schedules.

(e) IATA regime

593. The World Scheduling Guidelines are currently in their twelfth edition (December 2005). However, according to IATA itself, no significant or noteworthy changes have been made since the last review.

594. Table 46 illustrates the developments in the number of fully coordinated airports³³⁶ and their geographical distribution during the period under review.

³³⁶ As opposed to "facilitated airports", where airlines must notify in advance their landing and take off requirements, and to airports subject to coordination only during the IATA "summer season".

Table 46
Fully coordinated airports by region, 2000-2006

Region	2000	2001	2002	2003	2004	2005	2006	Percentage increase 2000-2006
North America	3	3	3	3	3	4	4	33.3%
South America	2	0	0	0	0	0	0	-100.0%
Europe	80	81	83	87	88	91	92	15.0%
Middle East	6	6	6	6	6	6	4	-33.3%
Africa	14	14	14	14	5	5	5	-64.3%
Asia-Pacific	31	31	31	31	31	33	34	9.7%
Total	136	135	137	141	133	139	139	2.2%

Source: IATA.

595. Table 46 shows that Europe accounts for the majority of fully coordinated airports and that its relative share has increased over the period under review (from 58.8 per cent to 66.1 per cent). Moreover, the number of European fully coordinated airports has constantly grown during the period (from 80 to 92, a 15 per cent increase in total). Asia-Pacific comes a distant second in relative terms (22.7 per cent of the total in 2000 and 24.4 per cent in 2006), and has also exhibited an increase, though less pronounced than the one in Europe. Africa comes third, but there the number of fully coordinated airports has drastically fallen in 2004, from 14 to 5. The Middle East exhibits also a recent improvement in congestion levels (from 6 to 4 coordinated airports in 2006). Since 2001, there no longer are fully coordinated airports in Latin America, while in North America they remain a marginal feature.

596. Lastly, Table 47 outlines the trends in the number and type of coordinators.

Table 47
Types of coordinators, 2000-2006

	2000	2001	2002	2003	2004	2005	2006
Independent	25	24	25	28	28	28	28
Other (airports or airlines)	111	111	112	113	105	115	115
Total	136	135	137	141	133	139	139

Source: IATA.

597. The proportion of independent coordinators appears remarkably stable across the period, at around 20 per cent.

2. Commercial developments

(a) United States

598. Although secondary trading has been legal in the United States since 1986, very few statistics on this trade are available. One reason is that the amounts and the conditions of sales between the two

parties concerned remain secret. This could change in the future if the "blind auction"³³⁷ mechanism envisaged by the FAA is eventually adopted.

599. The Mott MacDonald study commissioned by the European Commission and published in November 2006³³⁸ contains a detailed consideration of the recent characteristics of this trade. Its main conclusions are that certain transactions are governed by very short-term operational considerations and that monetary considerations are not always involved. Such trading is conducted either through regular sessions organized by the Air Transport Association (in which case it mainly involves one-for-one slot transactions) or privately between two airlines. There is an active slot leasing market. These slots are sometimes held by financial institutions, but their status is that of loan guarantees rather than investments as such. The crisis in the sector following the tragic events of September 2001 led to an increase in the number of slots held by financial operators.

(b) European Union

600. Given the legally uncertain status of secondary trading in the European Union, the only available data are more akin to market rumours than reliable information and relate only to Heathrow Airport (see below). Despite these limitations, the information concerned is extremely interesting because it appears to demonstrate a continuous rise in the price of slots. Thus, the price of a pair of daily slots is said to have doubled between 2001 and 2006, to a level of £8 to 12 million, or US\$15 to 22 million.

601. Operations concluded over the last five years at Heathrow include the sale by Flybe and Air France of six pairs of daily slots to Qantas and Virgin Atlantic for £40 million (US\$73.2 million on the day of the transaction), the purchase by British Airways of two slot pairs from United Airlines for GB£12 million and of 8 pairs from Swiss for GB£35 million, as well as other transactions of unknown amounts with SN Brussels and small carriers (Adria Airways, Balkan Bulgarian Airlines, Lithuanian Airlines and Avianca).

602. The signing of the First-Phase US-EU Air Transport Agreement on 30 April 2007, an agreement which will enter into force in the summer of 2008, seems to have triggered a further spiking of prices at Heathrow. Hitherto, only two US carriers (American Airlines and United Airlines) and two British carriers (British Airways and Virgin Atlantic) have been allowed to serve the United States from Heathrow. The new agreement opens the Heathrow link not only to all US carriers but also to all European carriers, subject to their having obtained or purchased slots for the purpose. The price of a slot pair usable for transatlantic flights has recently soared to GB£20 million, or US\$40 million.

603. Observers expect alliances to play a key role in this process. European alliance partners could cede or sell slots previously used for medium-haul flights to their US partner or partners in order for the latter to launch (Air France, KLM/Delta, Northwest, Continental for Skyteam, BMI, Lufthansa/US Airways for Star Alliance) or improve (BMI, Lufthansa/United for Star Alliance and British Airways/American for One World) their transatlantic services to and from Heathrow.

604. Even more interesting are the structural effects on "grey market" traffic. A recent study³³⁹ shows that at Heathrow, since the introduction of the "grey market", the average size of aircraft has

³³⁷ In blind auctions the bidders and the auctioneer do not know any bid ranking until after the blind auction has closed. At closing, the highest bidder is revealed and that is the bidder which wins the auction.

³³⁸ "<http://www.iata.org/nr/contentconnector/cs2000/siteinterface/sites/whatwedo/scheduling/file/fdc/wsg-12thed.pdf>"

³³⁹ As reported, without further detail, by Aviation Week & Space Technology, 10 July 2006.

risen from 135 to 255 seats, the average sector length from 575 to 6800 kilometres and available seat kilometres from 77,625 to 1,734,000.

605. Lastly, when India and the United Kingdom liberalized their bilateral relationship and quadrupled their weekly frequencies, 34 per cent of the necessary slots were provided by secondary trades, 37 per cent by existing slots reassigned from other destinations and 29 per cent by slots from the airport coordination pool. Fifty per cent of the slots operated by Virgin are thought to derive from secondary trading.

606. The Secretariat has found no information concerning the price of transactions carried out in any European Union country other than the United Kingdom, despite the existence of such information being mentioned in the Mott MacDonald Report.

PART G

ALLIANCES AND COOPERATION AMONGST AIRLINES

G. ALLIANCES AND COOPERATION AMONGST AIRLINES

607. Airline alliances are voluntary unions of airlines held together by various commercial cooperative arrangements.³⁴⁰

608. The ICAO Secretariat estimates that, as of September 2006 there were over 600 such alliance agreements in the world which contained a variety of elements, such as code-sharing, blocked space, cooperation in marketing, pricing, inventory control and frequent flyer programmes, coordination in scheduling, sharing of offices and airport facilities, joint ventures and franchising. Always according to the ICAO Secretariat, the steady expansion of trans-national alliances, for strategic purposes and to achieve market access and synergies, is a consequence of airlines' response to, *inter alia*, perceived regulatory constraints (for example, bilateral restrictions on market access, ownership and control); a need to reduce their costs through economies of scope and scale; and a more globalised and increasingly competitive environment.³⁴¹

609. The documentation produced by the WTO Secretariat for the first air review had given a general, though impressionistic, description of the various forms of cooperation amongst airlines (see compilation, pages 223-229, 240-247). For the second review³⁴², the Secretariat has decided to focus on pure market access issues, i.e., in the case at hand, on the types of cooperation amongst airlines that require formal approval – be it unilateral, bilateral, or plurilateral – by public authorities. This section will thus only deal with global alliances and code-share.

1. Global alliances

(a) Economic developments

610. Global airline alliances are a relatively recent, but rapidly evolving, global phenomenon.³⁴³ The Star Alliance, which is the oldest grouping, dates only from 1997.

(i) *Restructuring and membership of global alliances*

611. The documentation produced for the first review had dealt with five "global alliances", i.e. groupings made up of some major airline members having different geographical coverage with fairly extensive networks, notably: Star Alliance, oneworld, SkyTeam, Wings and Qualiflyer. (See compilation of the documentation produced for the first review, page 228). Of those, only the first three have survived the industry turmoil of the past five years.

612. **Qualiflyer**, an initiative of Swissair, fell subsequent to the demise of the Swiss carrier and of Sabena, its other largest participant. Following the example of Austrian Airlines, which switched to Star Alliance prior to the demise of Qualiflyer, the surviving members of the alliance which have sought alliance membership subsequently have turned to Star Alliance. Swiss International Airlines, successor of Swissair, was integrated into Star Alliance in 2006, due largely to its ownership by

³⁴⁰ ICAO Secretariat, "Regulatory and Industry Overview", Information Paper presented at the Global Symposium on Air Transport Liberalization, 18-19 September 2006. Available online at:

<http://www.icao.int/icao/en/atb/ecp/dubai2006/RegulatoryIndustryOverview.pdf>

³⁴¹ *Ibid.*

³⁴² This is also in accordance with the direction suggested in paragraph 7 of document S/C/W/270 (dated 18 July 2006) and endorsed by Members at the review meeting of 12 September 2006.

³⁴³ ICAO Secretariat, "Regulatory and Industry Overview", Information Paper presented at the Global Symposium on Air Transport Liberalization, 18-19 September 2006. Available online at:
<http://www.icao.int/icao/en/atb/ecp/dubai2006/RegulatoryIndustryOverview.pdf>

Lufthansa. LOT Polish joined Star in 2003 and TAP Portugal in 2005. Turkish Airlines, another founder member of Qualiflyer, is also in the process of joining Star.³⁴⁴

613. The **Wings Alliance**, based primarily around the KLM-Northwest joint venture and the US domestic Northwest-Continental cooperation, was not a formal alliance at the time of the first review owing to ongoing antitrust investigations. By the time these were concluded in 2002, the momentum for creating an alliance had been lost as Alitalia had already departed for SkyTeam and KLM was searching for a European partner. The three surviving airlines all ultimately joined SkyTeam after the merger between KLM and Air France, which rendered the Wings initiative defunct.

614. Of the three currently existing global alliance grouping, **Star Alliance** has remained the largest, by continued expansion since 2000. There were then fifteen members³⁴⁵; there are now seventeen full members, with Tyrolean Airways and Lauda Air, while remaining Star Alliance members, are included under the Austrian Airlines' umbrella.

615. There have been three departures from Star Alliance. First, Mexicana, which opted to leave the alliance in April 2004, choosing to undertake code-shares with American Airlines (oneworld) instead of maintaining its linkage with Star by code-sharing with United Airlines. Second, Ansett Australia, which collapsed in 2001. Third, Varig, which left the alliance in December 2006 following its restructuring and reduced flight schedule.

616. New joining members have been, in chronological order: Asiana, Spanair and LOT (2003); US Airways (2004); TAP (2005); Swiss International and South African Airways (2006). The Star alliance has also strongly sought out partners within China, and is expected to be boosted in 2007 by the anticipated adhesion of Air China and Shanghai Airways. Ethiopian Airlines is also reportedly considering joining the alliance.³⁴⁶

617. **SkyTeam** has surpassed oneworld as the second largest alliance since the time of the first review³⁴⁷, due mainly to the merging of KLM and Air France and the subsequent incorporation of KLM and its partners in the United States, Northwest and Continental, into the alliance. In addition, Alitalia joined in late 2001 and Aeroflot in 2006. In this same year, an official agreement was concluded with a Chinese carrier, China Southern Airlines, which will formally join SkyTeam in the course of 2007. Other major prospective members are Malaysia Airlines, which has extensive code-shares with Air France and KLM and which has stated that it intends to join SkyTeam by 2008-2009, and Chinese Taipei's China Airlines, which will be submitting an application for membership in the course of 2007.³⁴⁸

618. **Oneworld**³⁴⁹ had been the least active alliance in seeking out new members, having focused on deepening integration amongst its members. However, under pressure from the expansion of the other two alliances, oneworld has also started to actively recruit new associates in 2005 and 2006. The alliance has announced three new full members in early 2007: Royal Jordanian Airlines, Malev Hungarian Airlines and Japan Airlines, with the latter the only one of the ten leading IATA worldwide

³⁴⁴http://www.thy.com/en-NT/corporate/news/press_room/press_releases/press_release.aspx?pid=1410

³⁴⁵ Members at the time of the first review were: Air Canada, United Airlines, Lufthansa, Thai Airways, SAS (founding members), plus Air New Zealand, All Nippon Airways, Ansett Australia, Austrian Airlines, British Midland, Lauda Air, Mexicana, Singapore Airlines, Tyrolean and Varig.

³⁴⁶ Airline Business, July 2007.

³⁴⁷ Members at the time of the first review were: Air France, Aeromexico, Delta Airlines, Korean Air (founding members), plus CSA Czech Airlines.

³⁴⁸ Aviation Week & Space Technology, 13 March 2006; Airline Business, June 2007.

³⁴⁹ Members at the time of the first review were: American Airlines, British Airways, Qantas, Cathay Pacific (founding members), plus Finnair, Aer Lingus, LAN and Iberia.

airlines which had not been affiliated to an alliance until then. This increase was offset by the departure from the alliance, in April 2007, of Aer Lingus.

619. Table 48 shows the key data available on the operations of the three global airline alliances in mid-2007.

Table 48
Service data on the three global alliances, mid-2007

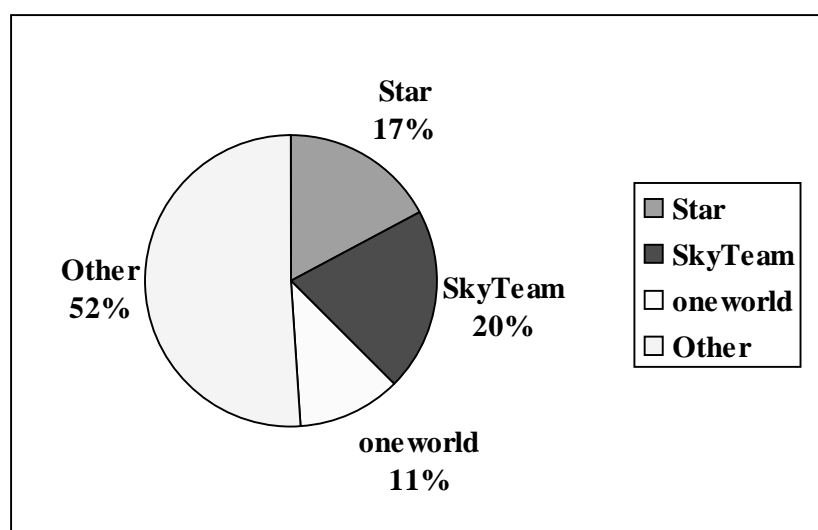
	Star	SkyTeam	oneworld
Annual passengers (millions)	405.7	364.49	321.3
Daily departures	> 16,000	14,711	9,297
Employees	351,761	279,133	263,350
Countries served	155	151	142
Airports served	855	744	688
Fleet	2777	2189	2339

Notes: Fleets do not include second tier carriers' aircraft.
Star Alliance data for full members at May 2007 (17 airlines).
SkyTeam data for full members at summer 2007 (10 airlines), except for data on annual passengers (2006), employees and fleet (January 2007).
oneworld data for full members at July 2007 (10 airlines).

Sources: Alliances' websites (www.staralliance.com; www.skyteam.com; www.oneworld.com).

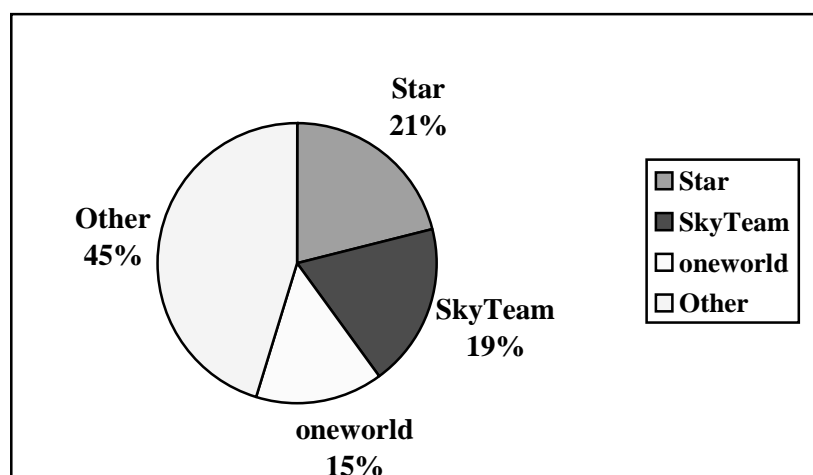
620. Charts 19 to 21 show the respective market shares of the three global alliances in terms of passenger numbers and revenue passenger-kilometres travelled. Data is charted for the alliances as they currently stand (Charts 19 and 20) and as they will be after their confirmed members join them (Chart 21). Data on market share are often conflicting, especially when the source of the data is the alliances themselves. Charts 19 to 21 have therefore been constructed on the basis of the data reported in the annual alliance review published by Airline Business.

Chart 19
Distribution of world passengers by alliance, 2006



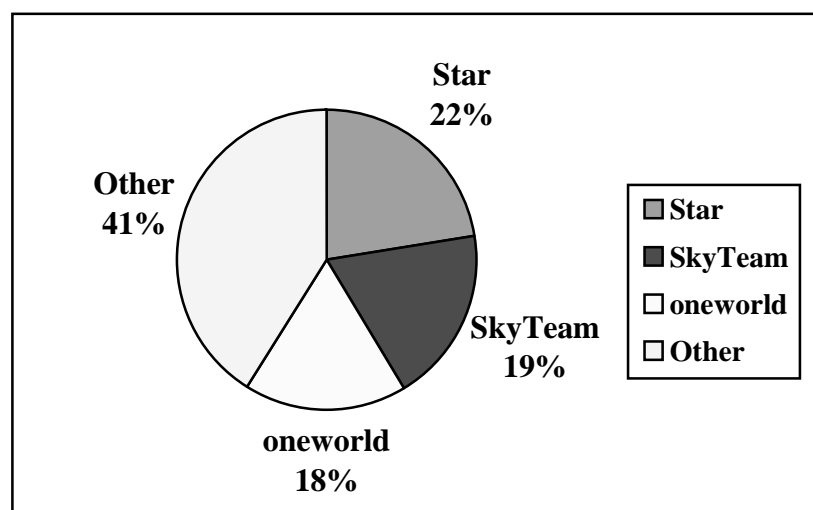
Source: Airline Business, September 2006.

Chart 20
Distribution of world revenue passenger-kilometres by alliance, 2006



Source: Airline Business, September 2006.

Chart 21
Distribution of world revenue passenger-kilometres by alliance post confirmed changes to membership



Source: Airline Business, September 2006.

621. As the alliances approach global coverage, there remain only a couple of important geographical areas which are under-represented.

622. First, the Middle East, where airlines have largely refrained from alliance membership until the recent joining of oneworld by Royal Jordanian and where, furthermore, the prospects for expansion by global alliances have been dimmed by the recent establishment of Arabesk, a Pan-Arab airline alliance. Arabesk, which was set up in October 2006, provides for the coordination of scheduling and code-sharing amongst Egyptair, Gulf Air, Middle East Airlines, Royal Jordanian, Saudi Arabian, Tunisair and Yemenia.

623. Second, India, where all three alliances are reported to be seeking partners. However, the ongoing developments in the Indian market, arising from the proposed mergers of Air India with Indian Airlines and Jet Airways with Sahara Airlines, make these carriers difficult targets and may result in there being only two potential new partners for the three alliances.

624. In terms of carriers, the most important ones which currently remain unaligned are Malaysia Airlines, Emirates and Virgin Atlantic. The former is the only one known to be in discussions with an alliance, namely SkyTeam.

(ii) *Second tier membership*

625. Conscious of the difficulties involved in maintaining an expanding alliance, both Star and SkyTeam have each recently introduced a second tier of membership for smaller or regional airlines. The programmes see full members sponsor the admission of smaller airlines. These smaller members then have to integrate their frequent flyer programmes with those of a member of the alliance, usually the sponsoring member, and are represented by this sponsor in alliance decisions. This structure allows alliances to gain additional network coverage without adding organizational complexity.

626. SkyTeam has enrolled in the capacity of associate members: Kenya Airways, Air Europa, Middle East Airways, TAROM, and COPA. Hungarian flag carrier Malev, which had been sponsored by CSA Czech Airlines to also join SkyTeam as an associate member, ultimately opted to become a full member of oneworld. Star Alliance, which refers to its second tier members as "regional members", has adopted Blue 1, Adria Airways and Croatia Airlines under this status to date.

(iii) *Alliance initiatives*

627. On its founding, Star Alliance declared that 90 per cent of its activity would consist of revenue generation and only ten per cent of cost reductions. However, particularly following the industry downturn which resulted from the events of 11 September 2001, the focus of alliances has changed and they are now also seeking possible means to jointly reduce costs.

Revenue generation

628. Alliances have tried to find new ways to create brand recognition, loyalty and improve overall customer experience. Alliance-wide advertising is a common feature. Aircraft carry small alliance logos, reference is made to the alliance at the beginning and end of each flight and advertising programmes have been launched for alliances specifically. Star Alliance has taken this further by requiring members to paint a small percentage of its aeroplanes in Star livery as opposed to their traditional design.

629. Alliances have also created new ticketing options which allow flexibility on the alliance network at favourable prices. Regional and round-the-world tickets have continued to expand in all three alliances with added options and destinations. New initiatives have developed particularly to attract business travel: oneworld has offered special rates to conference and event organizers to transport all participants by oneworld carriers, and to small and medium-sized enterprises for large orders, and SkyTeam has announced similar projects.

630. To improve passenger satisfaction, alliances have sought to facilitate the "airport experience" and to reduce transfer times. All of the groupings have sought to have their members grouped in close proximity to each other at airport terminals and progress has been made in this regard. In Japan, Narita airport has been rearranged to group the partners of Star and oneworld and to allow a limited number of domestic transfers at what was an exclusively international terminal. Oneworld has also

managed to reduce the number of terminals used at Heathrow by its operators from four to two and has made similar improvements at the redeveloped Madrid airport.

631. Alliance-wide ticketing kiosks and check-in facilities at airports are other new features which represent not only a tool to reduce costs, but also to generate greater alliance recognition. In 2006, for instance, Star Alliance introduced alliance-wide self-service check-in kiosks at Charles de Gaulle airport.

632. The development of common information technology systems allows alliances to better serve customers. Major investments have been made by airlines to ensure that alliance members are as informed as possible about the operations of their partners. Star Alliance pioneered this with the launch of StarNet in 2000, which allowed computer systems to interact with each other whilst retaining their individuality. The main benefits of integrating IT compatibility are to allow information on fellow partners' flights and facilitate transfers between alliance members, mutual acceptance of frequent flyer points and interline e-ticketing.

633. Star has remained at the forefront of developing new technologies with the launch, in late 2005, of its common IT platform. This will eventually allow all Star carriers to work from the same system and be able to handle passengers from partners exactly as their own. Services and products will be implemented more quickly and will also reduce costs for the airlines since, for example, transaction fees will only be paid on a complete journey rather than on individual legs. The new system is expected to be used in the short term by Lufthansa and by new member South African Airways, with United, a co-founder with Lufthansa, changing more slowly in 2007-2008 due to the more complex migration from its Apollo reservation system. Additional members will gradually migrate to the new system, but with StarNet, their cross-system communication tool, remaining an important tool in the interim period.

634. SkyTeam has preferred to retain an inter-carrier communication system which sees carriers able to mutually access existing systems but without changing over to a common IT platform. Oneworld, on the other hand, has not even developed a multilateral communication tool, preferring instead that IT communication remain a bilateral undertaking between carriers. However, as most of oneworld's major carriers use Amadeus systems, oneworld was the first alliance able to offer interline e-ticketing on all of its routes, in 2005.

Cost reduction

635. Alliances have come to recognize that their joint purchasing power could be used to reduce costs, even if some of the most ambitious plans have had to be eliminated or scaled down. The mass purchase of aircraft proved to be a difficult pilot project for Star Alliance members Lufthansa, Austrian Airlines, SAS and Air Canada. However other, simpler, projects have succeeded in realizing important economies for airlines. Star members, for instance, have exerted their collective pressure to try to reduce airport charges. Common specifications for aircraft to be delivered have been introduced within alliances, or between smaller groups of members of an alliance, to enable savings with maintenance charges and, in the future, to allow alliance members to be able to easily lease aircraft from each other to respond to seasonal demand variations.

636. Star Alliance, as the largest of the groupings, has forged the way in bulk-buying. It has set up its own independent fuel buying company to extract the best possible prices, in addition to an array of other joint purchase orders. SkyTeam has also seen its members work on a more informal basis to jointly purchase fuel as well as engineering services and parts. Oneworld, on the other hand, had chosen not to resort to joint fuel purchasing on the grounds that transaction costs are elevated and that each of its members has considerable purchasing power in its own right. The alliance has however undertaken joint purchase of some commodities and service agreements.

637. The mutual support of alliance members has been a less tangible but highly important feature of alliance development. Star Alliance has continued to see its members lend assistance to fellow airlines during difficulties. Air Canada, for instance, benefited from members' support when faced with bankruptcy. United, Air New Zealand and Varig have also been helped in similar circumstances. Korean Air was given important support and assistance from its fellow SkyTeam partners in 2001 when a series of incidents had raised safety concerns.³⁵⁰

(iv) *Management structure*

638. The three global alliances differ in the management structure which they have adopted. Star Alliance is centrally managed with a dedicated staff of over seventy working solely for the alliance. Despite its rapid growth in recent years, SkyTeam continues to work as an extension of its members. As such, it is only employees of the airlines who manage the alliance and, furthermore, no person spends more than half of their time on alliance matters. Although there have been indications that some changes may be introduced as the alliance grows and becomes more difficult to manage on a relatively informal basis, no such changes have been implemented to date. Oneworld meanwhile operates as an intermediate of these two regimes: it has a small management, based in Vancouver, but also depends heavily on work accomplished by the airlines.

(b) *Regulatory issues*

639. At the time of the first review, oneworld was the most disadvantaged of the alliances owing to its lack of antitrust immunity. Whilst the Lufthansa-United, Air France-Delta and KLM-Northwest pairings all benefited from antitrust immunity, which allowed capacity and price coordination, British Airways and American had to continue to compete at arm's length owing to competition concerns at Heathrow, where the number of US carriers was restricted and there are severe slot constraints.

640. Although there is no transatlantic antitrust immunity for oneworld, it has benefited from some positive developments with regard to antitrust issues over the past five years. In return for the liberation of slots to allow competition on some key routes, Iberia and British Airways were freed in December 2003 by the European Commission to operate as a joint venture within Europe. British Airways has also gained limited antitrust immunity from the US DOT to coordinate with American Airlines. The decision, of mid-2003, permits the two carriers to code-share on American connections within the United States and on British Airways connections beyond the United Kingdom. However, code-shares can only be operated between the United Kingdom and the United States on a limited number of routes, involving secondary UK airports in Manchester and Glasgow. The recent signing of the First Phase US-EU Agreement may open the way to new developments in this regard. Besides developments in the transatlantic market, one may also note that, in 2005, the Qantas-British Airways joint operations were validated by competition authorities for a further five years.³⁵¹

641. Other alliances have also experienced problems with antitrust bodies as they have expanded. In 2005, SkyTeam filed an application to extend transatlantic immunity to KLM, Northwest, Air France, Delta, CSA Czech Airlines and Alitalia. Continental, which had joined SkyTeam in 2004 and which had domestic antitrust immunity with both Delta and Northwest, was excluded from the application.³⁵² However, American Airlines criticized Continental's exclusion, arguing that it was a move only intended to secure approval and that Continental would de facto join the immunized carriers. American therefore requested that Continental prove to the DOT how it would operate

³⁵⁰ Airline Business, September 2004.

³⁵¹ Airline Business, October 2004.

³⁵² Airline Business, February 2005.

within SkyTeam without the immunity enjoyed by other partners and how the US partners planned to segregate domestic competition from international cooperation.³⁵³

642. The US Department of Justice voiced its concerns over the suggested link-up, in particular in relation to the risk of colluding on domestic US routes and on transpacific routes as a result of negotiating and coordinating transatlantic schedules. Despite changes to the wording of the application subsequent to these concerns, in 2006 the request was still rejected by the DOT. The European Commission has further expressed concerns about an extensive link-up including all three US carriers.

643. In June 2007, KLM, Northwest, Air France, CSA Czech Airlines and Alitalia re-filed for antitrust immunity from the DOT, and included a request for a joint-venture between Air France, KLM, Northwest and Delta. The airlines' hope is that the increased potential competition stemming from the First Phase US-EU Agreement of March 2007 will facilitate the approval of their request.³⁵⁴

644. Star Alliance was also having difficulties in obtaining approval to extend its five partner transatlantic coordination program to three further members. On 19 December 2006, however, the US DOT extended antitrust immunity to Star's new three European partners, Swiss, TAP and LOT.³⁵⁵

3. Code-sharing agreements

(a) Regulatory aspects

645. As explained in the compilation (paragraph 21, page 224), code-sharing 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".

646. While the regulatory framework for code-sharing agreements has not undergone any major development during the period under review, code-sharing deserves, in light of its quasi-universality, a more detailed and structured examination than that contained in the relevant section of the documentation for the first review (see compilation, pages 223-227).

647. Originally, code-sharing was a "trick" used by a few developed country carriers in order to appear in the first pages of the CRS displays. Over the years, however, code-sharing agreements have become a very widespread practice, promoted by alliances and by the concrete financial benefits they have brought to both marketing and operating carriers, as described in Table 49.

³⁵³ Aviation Daily, 3 March 2005.

³⁵⁴ Financial Times, 29 June 2007.

³⁵⁵ Aviation Daily, 20 December 2006.

Table 49
Benefits and risks of code-sharing for marketing and operating carriers

	Benefits	Risks
Marketing carrier	Retaining or attracting customers by offering a "worldwide network" without needing to make the necessary investment or run the operating risks and with minimal financial investment (a lump sum paid for the seats bought from the operating carrier). Making a small, but quasi-guaranteed profit.	Damaged reputation if the plane of the operating carrier crashes. ³⁵⁶ Bankruptcy of the partner threatening the existence of the world wide network. ³⁵⁷ Inability to sell all the seats bought or to sell them at a profit. ³⁵⁸
Operating carrier	Attracting new customers, channelled by the partner from a geographical area where the operating carriers' commercial network may not be very developed (e.g. Air France, whose commercial network in the US is not very developed, will benefit from Delta's passengers wanting to prolong their trip from Paris). ³⁵⁹ In case of a bilateral and reciprocal code-sharing agreement (e.g. British Airways-Qantas on all their flights, both ways, on the "Kangaroo route") offering an artificially higher frequency to their own customers while retaining part of the profits.	Being undercut by the marketing carrier (which charges a lower fare than the operating carrier would have) with customers ending up going to the marketing carrier rather than to the operating one. ³⁶⁰

Source: WTO Secretariat

648. While code-sharing agreements are commercial in essence and do not imply the physical exercise of traffic rights by the marketing carrier (for developments on the selling and marketing aspects of code-sharing agreement, see also document S/C/W/270, paragraph 198, page 46 and Table A1 on page 57), they are still subject to governmental approval, for historical reasons, safety considerations and competition-related concerns.

649. This governmental approval can be either bilateral or "doubly unilateral".

650. Bilateral approval may take the form of a clause allowing cooperative arrangements within the respective bilateral ASAs. This clauses have been analysed in detail in QUASAR (see document S/C/W/270/Add.1, paragraphs 71-72 on page I.35, paragraph 144 on page I.46, and Chart 4 on page I.51). Bilateral approval may also be included in a confidential memorandum of understanding, in

³⁵⁶ Hence, the existence in some countries, such as the United States, of legislation requiring a safety assessment, failing which no governmental agreement will be granted.

³⁵⁷ For example, Lufthansa and Air France were facing a similar threat when United Airlines and Delta were under Chapter 11 bankruptcy protection. Paradoxically, code-sharing agreements, and even more so alliances, can trigger solidarity and support for airlines in financial difficulties, precisely with the aim of ensuring the survival of the network.

³⁵⁸ Hence, the multiplication of flexible formulae (e.g. blocked seat agreements, free sales agreements), allowing the marketing carrier to adjust the number of seats bought to demand.

³⁵⁹ Hence, the importance of the choice of the partner and the race to get major unaligned carriers (e.g. from India, China, Japan, Russia) into alliances and code-sharing agreements.

³⁶⁰ Hence, the importance of being able to coordinate schedules and prices, ability which requires securing approval from competition authorities.

which a case it escapes the purview of the WASA database, and, hence, that of QUASAR. Finally, bilateral approval may also be granted through a simple reference in the records of the relevant meeting between the aeronautical authorities of the parties concerned.

651. A code-sharing approval can also be "doubly unilateral". In this case, each party approves separately the request for code-share, and the agreement can enter into force only once the two approvals have been secured.

652. There are two main kinds of code-sharing arrangements.

653. First, a **bilateral code-sharing agreement**, i.e. an agreement between a carrier from party A and a carrier from party B to code-share on a flight between the territory of party A and the territory of party B. In this case, regulatory approval is required from party A and party B. Such a bilateral code-sharing agreement amounts to a "virtual" exercise of third and/or fourth freedom traffic rights. Since it is also possible to code-share on domestic destinations (e.g. Lufthansa on a Chicago to Dallas flight or, symmetrically, United Airlines on a Frankfurt to Berlin flight) bilateral code-sharing agreements may include a cabotage segment, be it consecutive ("virtual eighth freedom") or stand alone ("virtual ninth freedom").

654. Second, a third country code-sharing agreement (TCCS). In this case, a carrier from party A code-shares as a marketing carrier on a flight of a carrier from party B:

- Between the territory of party B and the territory of party C as a continuation of a flight originating in A ("virtual fifth freedom"); or
- between the territory of party B and the territory of party C without any link to the territory of party A ("virtual seventh freedom").

655. The governments from which approval is required in the case of a TCCS agreement are the same as those involved for the granting of the physical exercise of fifth and seventh freedoms, as explained by Tables 50 and 51.

Table 50
Agreements required to exercise fifth freedom traffic rights

	Segment involved	Agreements required	Agreement not required
Carrier from party A	A - B - > C	AB (5 th with B as intermediary point) AC (5 th with C as beyond point)	BC

Source: WTO Secretariat.

Table 51
Agreements required to exercise seventh freedom traffic rights

	Segment involved	Agreement required	Agreement not required
Carrier from party A	B - > C	AB (with carrier from A designated by A for the segment BC) AC (with carrier from A designated by A for the segment BC)	BC

Source: WTO Secretariat.

656. As explained in the compilation (pages 225-227, paragraphs 28-36), there is no universal agreement on the need to have the underlying traffic rights in order to exercise a TCCS agreement. ICAO notes that "it has now become a **general practice** [*emphasis added*] that [...] underlying traffic rights are required for international code-sharing services".³⁶¹

(b) Commercial aspects

657. ICAO no longer collects information on the conclusion of code-sharing agreements, thereby rendering impossible the updating of tables A4(a) and A4(b) on pages 240 to 243 of the compilation. A comprehensive and consistent set of data on code-sharing covering the period under review nevertheless exists: it is the annual special report on alliances contained in Airline Business.

658. Subject to Members' agreement, the Secretariat is planning to fully integrate code-sharing agreements in a revised future version of QUASAR. For each bilateral ASA, it would indicate the existence or absence of bilateral and TCCS agreements, as well as the city-pairs concerned, and hence the type of freedom "virtually" exercised. This would complete the mapping of the physical exercise of fifth, seventh, eighth and ninth freedoms that the Secretariat is also planning to undertake.

³⁶¹ ICAO Secretariat, "Regulatory and Industry Overview", Information Paper presented at the Global Symposium on Air Transport Liberalization, 18-19 September 2006. Available online at: <http://www.icao.int/icao/en/atb/ecp/dubai2006/RegulatoryIndustryOverview.pdf>