



STUDY ON INTERNATIONAL GENERAL AND BUSINESS AVIATION ACCESS TO AIRPORTS

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STUDY ON INTERNATIONAL GENERAL AND BUSINESS AVIATION ACCESS TO AIRPORTS

EXECUTIVE SUMMARY

- i. As a follow-up to the 2000 Conference on the Economics of Airports and Air Navigation Services (ANSCConf 2000), this study has been conducted in order to examine measures that can be taken to ensure that access of international general and business aviation to airports can be maintained, or preferably expanded.
- ii. Increased productivity of top managers and other key staff members is the major benefit claimed by business aviation users, due to the fact that companies utilizing general aviation aircraft for business purposes can control virtually all aspects of their travel plans.
- iii. ICAO policy in the economic field refers to civil aviation in general. Although most of the provisions of this policy are rather tailored to the needs of commercial air carriers and/or providers of facilities and services, some principles of a general nature can also be applied to other users, such as international general and business aviation.
- iv. Current ICAO policy states that airport (and air navigation services) charges levied on international general aviation should be assessed in a reasonable manner, with regard to the cost of the facilities needed and used and the goal of promoting the sound development of international civil aviation as a whole.
- v. Problems experienced by international general and business aviation users in terms of access to airports relate to capacity constraints, measures taken to deal with airport capacity shortage (e.g. congestion charges, schedule coordination and slot allocation), effect of the ownership and management of airports, environmental constraints and security aspects.
- vi. The outlook for the future concerning international general and business aviation's access to airports is examined in terms of economic aspects related to access to major airports, environmental constraints, user fees, slot allocation, consultations between users and providers and new trends related to business aviation.
- vii. Recommendations to improve the situation are made at three levels: global, State, and airport.
- viii. At the global (ICAO) level, it is proposed to expand and strengthen the texts in paragraphs 23 ix) (airports) and 41 viii) (air navigation services) of *ICAO's Policies on Charges for Airports and Air Navigation Services* (Doc 9082/7) in order to give more emphasis to the importance of international general and business aviation as well as to underline the necessity that any cost allocation method applied to this sector of aviation is in line with ICAO policy. It is also recommended that ICAO advise States about the importance of involving international general and business aviation or their representative organizations in the consultation and planning process referred to in paragraphs 31 and 32 (airports) as well as 49 and 50 (air navigation services) of ICAO's Doc 9082/7.
- ix. States, in recognition of the distinct nature of international general and business aviation, and their contribution to the national economy, should endeavour to facilitate business aviation's access to their major international airports and, in case of heavy congestion, to nearby airports.
- x. Airports should consider the optimum use or development of dedicated or reliever runways, where feasible, to meet the needs of international general and business aviation. Similarly the use of dedicated airport areas should be encouraged, where feasible, for the handling of this particular type of traffic. Moreover, airport entities operating several airports in metropolitan areas should encourage the use of reliever airports by international general and business aviation. The relevant authorities concerned could also consider joint use of military airports.

1. INTRODUCTION

1.1 Background

1.1.1 At the ICAO Conference on the Economics of Airports and Air Navigation Services (Montreal, 19-28 June 2000), the International Business Aviation Council (IBAC) presented a working paper characterizing the financial relationships between the providers of airports *vis-a-vis* air carriers and other users. The paper advocated that with increased emphasis on revenue generation, airports with a great number of commercial air carrier movements consider these carriers as their major customers, while other users such as business aviation, whose contribution to aeronautical and non-aeronautical revenue is regarded as minor, are looked at as secondary users and as such are having difficulties in maintaining their access to the airports. IBAC suggested that ICAO undertake a study of the measures which can be taken to ensure that business aviation can establish, maintain and preferably expand its access to airports.

1.1.2 At the same Conference the International Council of Aircraft Owner and Pilot Associations (IAOPA) stated that general aviation and aerial work were marginal users of the air navigation services systems and consequently felt that charges for air navigation services should reflect this situation.

1.1.3 IBAC's suggestion, expanded to cover general aviation as well, was adopted by the Conference (Recommendation 11) and was further approved by the ICAO Council subject to availability of resources.

1.2 Objective of the study and its contents

1.2.1 Based on an analysis of past trends and practices, regulatory constraints and current circumstances, the study is to examine measures that can be taken to ensure that access of international general and business aviation to airports can be maintained or preferably expanded.

1.2.2 The purpose with international general and business aviation is addressed in the first part of the study. It provides for definitions of these two types of aviation and describes the main benefits that can be derived from their use.

1.2.3 The study then analyses ICAO's policies relevant to access to airports, notably with respect to the notions of equitable treatment *vis-à-vis* all users, non-discrimination and the interests of aviation in general.

1.2.4 Problems experienced by international general and business aviation users in terms of access to airports are identified, notably through capacity constraints, measures taken to deal with airport capacity shortage (e.g. congestion charges, slot allocation), effect of the organizational structure of airports, environmental constraints and security aspects.

1.2.5 The next part analyses the present situation and outlook for the future in terms of access to major airports, environmental constraints, user fees, slot allocation, consultation between users and providers, and the new trends through which business aviation is undergoing.

1.2.6 Then conclusions and recommendations on how to improve the situation with regard to aspects mentioned in the previous parts are formulated at different levels (global, State, airport).

2. THE PURPOSE WITH INTERNATIONAL GENERAL AND BUSINESS AVIATION

2.1 Definition and scope of operations

2.1.1 General aviation comprises all aircraft that are not operated by commercial aviation or by the military. Business aviation, one of the components of general aviation, consists of companies and individuals using aircraft as tools in the conduct of their business. It should be noted that the term “business aviation” is not included in the ICAO vocabulary (Doc 9569); and that there is no ICAO definition of business aviation. Other forms of general aviation include aerial work, agriculture, flying schools, tourism, sport, etc.

Definition of business aviation (adopted by IBAC in 1998):

“That sector of aviation which concerns the operation or use of aircraft by companies for the carriage of passengers or goods as an aid to the conduct of their business, flown for purposes generally considered not for public hire and piloted by individuals having, at the minimum, a valid commercial pilot license with an instrument rating.”

2.1.2 Business aircraft are used by a whole range of people, from individuals who often fly rented, single-engine, piston-powered aircraft, to sales or management teams in large corporations, many of which own fleets of multi-engine, turbine-powered aircraft and employ their own flight crews, maintenance technicians and other aviation support personnel.

2.1.3 While the majority of business aircraft missions are conducted on demand, i.e. on a non-scheduled basis, some companies have scheduled operations, known as corporate shuttles, which essentially are private in-house airlines.

2.1.4 Corporations that operate business aircraft use modern, multi-engine, turbine-powered jets, turboprops or turbine helicopters that are certified to the highest applicable standards. Aircraft built specifically for business aviation vary from four-seat, short-range, piston-powered airplanes to two- and three-engine corporate jets that can carry up to 19 passengers nearly 11 000 km non-stop. Some companies even use airline-type jets of bigger capacity.

2.1.5 Although individuals or companies own the majority of business aircraft, business aviation can also use arrangements such as chartering, leasing, fractional ownership, time-sharing, interchange agreements, partnerships and aircraft management contracts.

2.2 Benefits accruing from the use of international general and business aviation

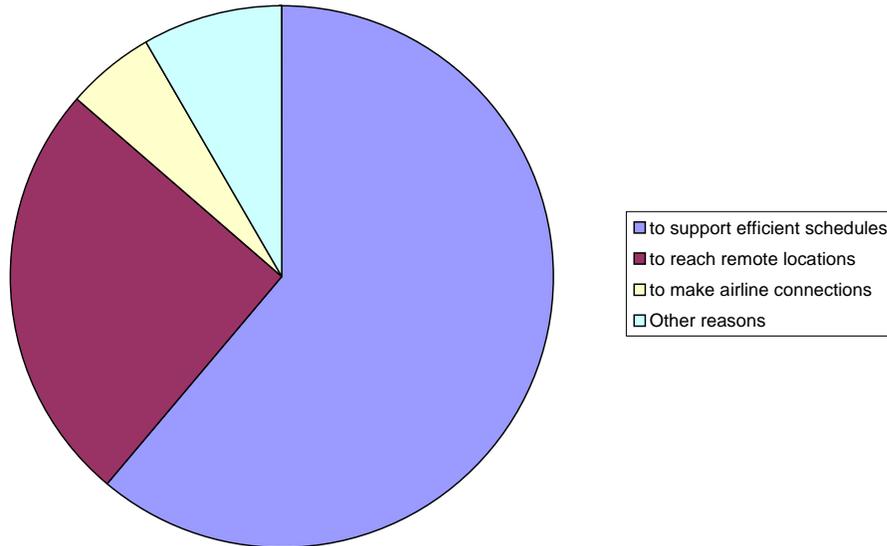
2.2.1 Increased productivity of personnel is the major benefit claimed by business aviation users. This is due to the fact that companies flying general aviation aircraft for business purposes can control virtually all aspects of their travel plans. Itineraries can be changed instantly, and business aircraft can be flown to thousands more destinations than are served by the scheduled airlines. Business aircraft allow passengers to conduct business en-route in complete privacy while reducing the inconvenience and stress associated with travelling on commercial carriers.

2.2.2 Benefits of business aircraft include:

- Saving employee time
- Increasing productivity en-route
- Minimizing non-business hours away from home
- Ensuring industrial security
- Maximizing personal safety and peace of mind
- Exercising management control over efficient, reliable scheduling
- Projecting a positive corporate image
- Charging the entrepreneurial spirit.

2.2.3 Reasons for using business aircraft, according to a survey conducted in 1997 for the National Business Aviation Association (NBAA) in the United States showed the following results:

Figure 1 - Reasons for using business aircraft



Source: NBAA, 1997

2.2.4 As for productivity and efficiency, according to the same survey, passengers felt that they were significantly more productive aboard business aircraft than they would be even in their own offices.

2.2.5 Benefits from other forms of general aviation are linked to the various economic sectors that are involved (e.g. agriculture, construction, tourism, sport, etc.) for which aviation represents a crucial tool.

3. ICAO POLICY

3.1 The ICAO policy in the economic field refers to civil aviation in general. Although most of the provisions of these policies are rather tailored to the needs of commercial air carriers and/or providers of facilities and services, some principles of a general nature can also be applied to other users such as general and business aviation. However, it is only in certain limited parts that specific references are made to international general and business aviation.

3.2 The aim of the *Convention on International Civil Aviation* (Chicago, 1944), as spelled out in its preamble, is to develop the international civil aviation in a safe and orderly manner and that international air transport services may be established on the basis of equality of opportunity and operated soundly and economically. Also the objectives of ICAO stated in Article 44 include *inter alia* to ensure the safe and orderly growth of international civil aviation throughout the world.

3.3 International access to airports is governed, *inter alia*, by Article 15 of the Convention, the first sentence of which provides:

“Every airport in a Contracting State which is open to public use by its national aircraft shall likewise, subject to the provisions of Article 68, be open under uniform conditions to the aircraft of all the other Contracting States.”

3.4 Article 15 includes the basic ICAO policy on airport and air navigation services charges, the main thrust of which is that the charges imposed by a Contracting State for the use of such airports or air navigation facilities shall not be higher for aircraft of other Contracting States than those paid by its national aircraft engaged in similar international operations. Thus Article 15 establishes two main principles; uniformity in condition of use and equity in charging.

3.5 Also ICAO has long established an extensive policy guidance on user charges stemming from Article 15 and published in *ICAO's Policies on Charges for Airports and Air Navigation Services* (Doc 9082/7). Amongst the principles contained therein which are of particular relevance to the objectives of this study are the following:

- Charges should be based on costs of providing the airport and its essential ancillary services;
- Aircraft operators and other airport users should not be charged for facilities and services they do not use;
- The proportion of costs allocable to various categories of users, including State aircraft, should be determined on an equitable basis, so that no users shall be burdened with costs not properly allocable to them according to sound accounting principles;
- The capacity of users to pay should not be taken into account until all costs are fully assessed and distributed on an objective basis;
- Any State or charging authority may recover less than its full costs in recognition of local, regional or national benefits received;
- Charges should not be imposed in such a way as to discourage the use of facilities and services necessary for safety;
- Non-discrimination among users;
- Any under-recovery of costs due to reduction of charges extended to particular users should not be shouldered onto other users;

- Airport (and air navigation services) charges levied on international general aviation should be assessed in a reasonable manner, having regard to the cost of the facilities needed and used and the goal of promoting the sound development of international civil aviation as a whole;
- Landing charges should be based on the weight formula. However, allowance should be made for the use of a fixed charge per aircraft or a combination of a fixed charge with a weight-related element, in certain circumstances such as at congested airports and during peak periods; and
- The importance of consultation by airports with users on charges and airport and air navigation services planning is emphasized.

4. **OBSTACLES RESTRICTING INTERNATIONAL GENERAL AND BUSINESS AVIATION ACCESS TO AIRPORTS**

4.1 As the air transportation infrastructure is principally designed for airlines, international general and business aviation have traditionally operated at the margins of the system, and with airports presently confronted with serious problems ranging from capacity constraints as well as organizational, financial, environmental and security issues, international general and business aviation access to airports is being compromised.

4.2 Faced with these difficulties, business aviation user associations have set up information tools to inform their members of the nature of the existing and potential restrictions to airport access. An example of this, applicable in the United States, is provided in the following box.

Business Aviation Airport Access Program

Airports throughout the country face pressures that may restrict business aviation access. The NBAA Business Aviation Airport Access Program (BAAAP) was created to identify, track and resolve issues that place domestic airport access in the United States in jeopardy.

Artificial constraints that diminish the utility of business aviation aircraft can include runway weight bearing capacity, noise limits, curfews, unjustly discriminatory airport access fees, political regulation, and airport limitations.

The Reports on the BAAAP web site, which is regularly updated, can provide a framework for understanding the political pressures facing airports today and help NBAA Members become more involved in solving airport access problems.

4.3 The following paragraphs discuss the issues identified in paragraph 4.1 above and their possible implications on international general and business aviation. In addition, Appendix 1 presents, in the form of regional tables, non-exhaustive examples of obstacles encountered in some States; some of them being linked to national or local specific legislation.

4.4 Capacity constraints

4.4.1 When the demand at a particular airport exceeds the available supply, the airport can be considered as capacity constrained. However, this situation may occur only at certain days of the week, certain hours of the day, or in certain seasons such as summer (tourist traffic), or in the most severe cases, during all hours the airport is open. Thus, the severity of a capacity constraint can vary widely among airports calling for different measures to deal with it. In some regions the limited capacity available has already led to serious problems, notably in the form of flight delays, with spillover effects worldwide.

4.5 Measures taken to deal with airport capacity shortage

4.5.1 The first response to congestion is to increase capacity to meet the growing demand through constructing new airports or adding new runways to the existing ones. Although the provision of additional capacity is the preferred solution, often it is not always possible to achieve, as such projects involve huge investments and are usually complex and may face environmental, economic and political concerns.

4.5.2 Given the continuing traffic growth, economic and other methods for capacity management have been introduced at many airports, particularly in Europe and North America, which include, *inter alia*, the following:

a) Peak Charges

4.5.2.1 At some airports peak charges consisting of higher landing, passenger and aircraft parking charges are levied. Such charges are designed to stimulate a more efficient use of the peak period capacity by encouraging its use by those who value it most. It is therefore a method for prioritizing the use of scarce capacity among competing users. As illustrated in Table 1, relatively few airports around the world have introduced peak/off-peak charging schemes. However, with the increase in traffic and shortage in airport capacity other airports may also be tempted to introduce such charges not only to regulate traffic but also as an additional source of revenue, a situation which would have adverse effects on business and international general aviation.

Table 1 – Peak and high minimum charges

State	City/Airport	Peak	High minimum	Description of Measures
Austria	Vienna	x		30% surcharge of the landing charges applies to general aviation aircraft at certain hours, also higher parking charges for aircraft up to 15 tonnes.
Bulgaria	Major international	x		10% surcharge for landing or take-off in peak periods, days or hours.
Canada	Toronto/Lester B. Pearson	x		High landing charge during peak hours for aircraft up to 19 tonnes

State	City/Airport	Peak	High minimum	Description of Measures
China	Beijing/Capital, - Shanghai/Pudong and Hongqiao Guangzhou/ Baiyun	x		USD 100 surcharge to the landing charges per movement in peak hours.
Dominican Republic	Major international	x		At certain hours
Finland	Helsinki-Vantaa		x	For landing during peak hours
Greece	Major international airports	x		25% surcharge for landing during peak hours in summer
Germany	Frankfurt		x	For aircraft 6 to 35 tonnes
Haiti	Port-au-Prince	x		50% surcharge for landing during peak hours
India	Mumbai and Delhi	x		5% peak surcharge on international landing
Iran	Major international		x	High minimum charge per landing
Ireland	Dublin, Cork and Shannon	x		Off-peak landing charges less than the regular charges
Israel	Tel Aviv/Ben Gurion	x		Peak hour surcharge per passenger to be added to the Passenger Handling Charge
Japan	Tokyo Haneda and Narita		x	High minimum charge per flight per landing
Mexico	Major international	x		Higher charges for landing, parking, security and for the use of buses and air bridges at certain hours of the day
Republic of Korea	Incheon		x	
Singapore	Singapore/Changi	x		40% off-peak discount to flights arriving and departing at certain hours of the same day provided that the aircraft used meets the noise standards of ICAO Annex 16 Chapter 3
Spain	Madrid-Barajas and Malaga	x		High boarding bridge charges applies at peak hours

State	City/Airport	Peak	High minimum	Description of Measures
United Kingdom	London: - Heathrow - Gatwick - Stansted - Manchester	x x x		Peak and off-peak for landing and parking charges Peak and off-peak for landing charges Off-peak charges for landing and passenger facility charges
(Cayman Islands)	- Grand Cayman	x		25% surcharge for landing during peak hours.
United States	- Boston Logan - Dallas/Fort-Worth - New York: JFK, La Guardia and Newark	 x	x x	

Source: *Tariffs for Airports and Air Navigation Services (Doc 7100)* – 2004 Edition

b) Schedule coordination and slot allocation

4.5.2.2 As the problem of airport traffic peaking and congestion is very complex and difficult to solve to the satisfaction of all parties involved, the different measures to deal with it have evolved. Over a long period of time, the International Air Transport Association (IATA) has developed a process for schedules coordination and slot allocation through the IATA Schedule Coordination Conferences. At these conferences, which are held bi-annually, IATA and non-IATA airlines coordinate their planned seasonal schedules with respect to declared airport capacity limitations. Schedule coordination may include, where necessary and agreed by those involved, slot allocation. The latter is a mechanism whereby a certain period of time (usually 15-30 minutes) is allocated by a coordinator on a designated day for an aircraft to arrive at or depart from an airport.

4.5.2.3 To reflect different degrees of capacity constraints, the IATA schedule coordinating procedures have two different levels for resolving scheduling difficulties at an airport. Airports which are designated as “schedules facilitated” are those where demand is approaching capacity and where voluntary cooperation in adjusting schedules can be used to resolve, for example, the problem of an emerging shortage of slots at certain periods during the day. Airports which are designated as “fully coordinated” are those where demand exceeds capacity, with no possibilities of resolving the problem in the short term (e.g. through opening a new runway or terminal), and formal procedures are used to coordinate schedules. Where there are seasonal capacity constraints, both these designations can be used with airports being fully coordinated in the summer period and with schedules facilitated in the winter period.

4.5.2.4 The fully coordinated airports tend to be concentrated in Europe. One major factor contributing to this is the impetus given by the introduction of the 1993 European Union common rules on slot allocation which led to many additional airports being designated as such by national administrations, and hence in the IATA system. There have also been increases in fully coordinated airports in other regions, particularly in Asia/Pacific, reflecting strong traffic growth in that region.

4.5.2.5 Airports can be fully coordinated because of year-round traffic peaking during certain times of the day. In such cases, there is some additional capacity available in terms of unused slots, although this may be at odd hours. Another means of assessing the global trends in capacity constraints using fully coordinated airports is to look at the increase in aircraft movements and passenger traffic at those airports.

4.5.2.6 An airport slot should not be confused with an air traffic control (ATC) slot, the take-off or landing time of an aircraft which is assigned by the relevant ATC authority to make optimum use of available capacity at points en route or at the destination airport by sequencing the air traffic to regulate its flow efficiently. Thus, commercially operated aircraft may not land or take off in the same order as reflected in their respective schedules, but at times which would enable air traffic control to regulate efficiently the flow of aircraft into or out of the airport and the en route system. This may involve, for example, interspersing commercial flights with general aviation flights and varying the order of take-off or landing to take account of greater separation requirements for larger aircraft, late arriving aircraft, etc. This underlies the importance of close coordination between the coordinator assigning the airport slots and the air traffic control authorities.

4.5.2.7 At fully coordinated airports, whereas both arrival and departure slots for a specific aircraft are coordinated for airline operations, such is not the case for slots available for non-scheduled operations. The latter may therefore be granted an arrival slot but be unable to obtain a suitable departure slot.

4.5.2.8 For scheduled airline operations, the integration of airport slots (for departures and arrivals) and air traffic control slots is accomplished through established mechanisms such that the flight is coordinated for departure to destination. In the case of non-scheduled, business aviation operations, this integration is performed on an ad hoc basis, i.e. flight-by-flight, so that it is necessary to iterate the requests for airport slots with those for air traffic control slots in order to synchronize both. Obviously, one without the other is impractical. Unfortunately, there appears to be no practical solution to this impediment for business aviation.

4.6 **Effect of the organizational structure of airports**

4.6.1 Until the late 1970s, virtually all or most international airports were owned and operated by national or local governments. However, the fast development of civil aviation and the increasing demand on air transport placed a heavy burden on States' financial resources. To reduce the financial burden on governments, gradual changes in the ownership and management of airports started to develop and were primarily limited to the establishment of autonomous entities to operate and manage airports while ownership remained in the hands of the government. In the mid 1980s, further changes in favour of private sector involvement in ownership and management of airports emerged. This has ranged from management contracts, to leasing of airports, minority participation in equity or outright sale of airports to investors through stock offerings.

4.6.2 In parallel with these developments, a number of governments espoused commercialisation as an alternative to privatization through establishing a corporation or company to develop and manage the facilities and services at the airport on a commercial and business basis normally without involving the private sector in the ownership or management.

4.6.3 With the rapidly growing autonomy in the provision and operation of airports and air navigation services, and given their monopolistic characteristics, the ICAO Council accepted an ANS Conf 2000 Recommendation to States to establish an independent mechanism for the economic regulation of airports and air navigation services to oversee economic, commercial and financial practices. The objectives of such mechanism would include, *inter alia*, ensuring transparency and non-discrimination in the application

of charges and that user views are adequately taken into account; as well as to ensure that there is no overcharging or other anti-competitive practices or abuse of dominant position.

4.7 **Environmental constraints**

4.7.1 Another factor contributing to the issue of business and international general aviation access to airports is the regulatory measures taken by governments to alleviate aircraft noise in the vicinity of the airport. This can take the form of banning or restricting the operation of aircraft that do not meet certain noise standards (stage 3), or imposing night curfews and/or noise abatements procedures designed to minimize the adverse effect on adjacent communities. Economic measures are also used to deal with aircraft noise by levying noise-related charges at airports experiencing noise problems possibly by means of rebates to promote quieter aircraft or surcharges to discourage noisy aircraft.

4.7.2 Noise-related charges are levied in the following 15 States which might involve more than one airport of the same State: Australia, Belgium, Czech Republic, Finland, France, Germany, Iran, Italy, Japan, Luxembourg, Netherlands, Sweden, Switzerland, the Former Yugoslav Republic of Macedonia and the United Kingdom. Two States (Sweden and Switzerland) levy an aircraft emission charge to address local air quality problems in addition to the noise-related charges. Out of the 15 States, 12 are in Europe and three in the Asia/Pacific region. The charge is usually based on the noise level of the aircraft in accordance with the appropriate Chapter of ICAO Annex 16.

4.7.3 When an airport expansion project is planned, most likely it will face opposition from local community groups because of the additional noise. If that does not seriously hinder the project, it will result in additional costs to compensate the residents and property owners or for the additional spending on measures and equipments which might be required to reduce the noise effect. If the airport is located in a densely populated area, the cost of acquiring the land to lengthen a runway, handle larger aircraft, add a new runway, or to expand terminal capacity, may well be prohibitively expensive, even if environmental concerns could be met.

4.8 **Security aspects**

4.8.1 Following the events of 11 September 2001, States reacted immediately to improve aviation security by implementing increased security measures to protect their airports and aircraft against acts of unlawful interference, at the same time introducing additional new security provisions. In February 2002, ICAO held a High-level Ministerial Conference on Aviation Security to consider several actions for strengthening aviation security. The Conference recognized, *inter alia*, that Annex 17 to the Chicago Convention does not differentiate between air transport on the one hand, and general aviation and aerial work operations on the other. Also, the ongoing work of the Aviation Security Panel (AVSECP) includes the incorporation in Annex 17 of provisions for general aviation, including business aviation.

4.8.2 As to the recovery of security costs from the users, ICAO policy guidance provides that the authorities concerned may recover the costs of security measures at airports from the users in a fair and equitable manner, subject to consultation; that any charges or transfers of security costs should be directly related to the costs of providing the security services concerned and should be designed to recover no more than the relevant costs involved; that civil aviation should not be charged for any costs that would be incurred for more general security functions performed by States such as general policing, intelligence gathering and national security; and that no discrimination should be exercised between the various categories of users when charging for the level of security provided.

4.8.3 With respect to air navigation services, ICAO policy specifies that the costs for certain security measures of a preventive nature, which are specifically related to civil aviation and performed on a routine basis, may be included in the cost basis for air navigation services charges to the extent that they have not already been considered in the context of safety-related measures.

5. ANALYSIS OF THE PRESENT SITUATION AND OUTLOOK FOR THE FUTURE

5.1 Although international general and business aviation operations at most airports in the world can still be performed in a relatively satisfactory manner, their access to congested and capacity-constrained airports is becoming more and more difficult. It should be noted, however, that international general and business aviation representative associations support the development and encourage the use of reliever airports in major metropolitan areas, as well as the joint use of military airports, wherever feasible.

5.2 Growing congestion at major airports creates a situation that may seriously inhibit the operations of international general and business aviation at such airports. Operations at major airports are needed by business aviation, for example, in order to be able to make connections to scheduled flights, or for activities that take place on major airports sites or in their close vicinity. Table 2 lists the top 50 airports worldwide in terms of total commercial aircraft movements in 2003. As shown in the table these airports tend to be concentrated in North America (USA 25; Canada 2; Mexico 1), Europe (17) and Asia/Pacific (5). The table illustrates only the volume of traffic at these airports and it should not be assumed that all of them are congested as this depends on the size and facilities at the airport and on its ability to handle the high volume of traffic. Current ICAO forecasts indicate an increase in the global demand in terms of passenger-kilometres performed at an annual rate of 4.4 per cent for the period 2002-2015, with aircraft movements growing at an average annual growth rate of 4.2 per cent for the same period. This means that airports and air traffic management systems will be expected to accommodate almost a 1.7 fold increase (in both passenger traffic and aircraft movements) by the year 2015. With the steady growth of traffic every year, and without adding sufficient infrastructure and capacity to handle the demand, it is expected that more airports will be included in the list of congested/capacity-constrained airports potentially resulting in more restrictions on business aviation operations in the future.

Table 2 – Total Commercial Aircraft Movements in 2003

Rank	State	City	Airport	Total Aircraft Movement for 2002
1	United States	Chicago, IL	O'Hare	928 691
2	United States	Atlanta, GA	Hartsfield	911 723
3	United States	Dallas/Fort Worth, TX	Dallas - Fort Worth	765 296
4	United States	Los Angeles, CA	Los Angeles	622 378
5	United States	Phoenix, AZ	Sky Harbor	541 771
6	France	Paris	Charles De Gaulle	524 416
7	United States	Minneapolis, MN	Minneapolis - St. Paul	512 350
8	United States	Denver, CO	Denver	510 275
9	United States	Las Vegas, NV	McCarran	501 029
10	United States	Detroit, MI	Wayne County	491 073
11	United States	Houston, TX	George Bush Intercontinental	474 913

Rank	State	City	Airport	Total Aircraft Movement for 2002
12	United Kingdom	London	Heathrow	463 650
13	Germany	Frankfurt	Frankfurt	458 865
14	United States	Philadelphia, PA	Philadelphia	446 829
15	United States	Miami, FL	Miami	417 423
16	Netherlands	Amsterdam	Schiphol	408 300
17	United States	New York, NY	Newark - Liberty	405 808
18	United States	Memphis	Memphis	402 258
19	United States	St Louis, MO	St Louis	379 772
20	Spain	Madrid	Barajas	379 344
21	United States	New York, NY	La Guardia	374 952
22	United States	Boston, MA	Logan	373 304
23	Canada	Toronto, ON	Lester B. Pearson	370 996
24	Germany	Munich	Franz Josef Strauss	355 606
25	United States	Seattle, WA	Seattle - Tacoma	354 770
26	United States	Washington, DC	Dulles	335 397
27	United States	San Francisco, CA	San Francisco	334 515
28	United States	Honolulu, HI	Honolulu	319 989
29	Mexico	Mexico City	Benito Juarez	311 182
30	Japan	Tokyo	Haneda	298 912
31	United States	Orlando, FL	Orlando	295 542
32	Italy	Rome	Fiumicino - L. da Vinci	293 790
33	Switzerland	Zurich	Kloten	289 095
34	Canada	Vancouver, BC	Vancouver	288 800
35	United States	New York, NY	John F. Kennedy	280 302
36	United States	Anchorage, AK	Anchorage	277 358
37	Spain	Barcelona	Prat	276 214
38	Denmark	Copenhagen	Kastrup	259 002
39	Belgium	Brussels	National	252 255
40	United States	Washington, DC	Ronald Reagan National	250 802
41	United Kingdom	London	Gatwick	242 731
42	China	Beijing	Capital	233 766
43	Sweden	Stockholm	Arlanda	231 483
44	Austria	Vienna	Schwechat	216 631
45	Thailand	Bangkok	Don Muang	214 139
46	Italy	Milan	Malpensa	213 554
47	France	Paris	Orly	210 640
48	United Kingdom	Manchester	Ringway	207 118
49	Hong Kong SAR	Hong Kong	Hong Kong	198 509
50	Indonesia	Jakarta	Soekarno-Hatta	186 686

Source: ICAO Statistical Programme

5.3 In the general issue of international general and business aviation access to congested and capacity-constrained airports, one should not lose sight of the fact that the opportunity cost associated with flights operating at such airports should be considered. Giving access to international general and business aviation at the expense of other flights might penalize the effective capacity of the airport. Indeed, allowing small aircraft with a seating capacity of a maximum 19 passengers to operate in place of a larger aircraft would result in less business passengers being carried. In addition, there could well be a capacity penalty associated with allowing small aircraft to operate in the same time period as much larger aircraft because of safety operational constraints (greater intervals may be needed between aircraft that vary in size).

5.4 With regard to the environmental constraints, some United States airports could be following Europe either by levying high noise-related charges on older aircraft types, including business jets, that do not meet certain noise standards (Chapter 3, or even Chapter 4) or banning them altogether. This situation will place operators of such aircraft with two options: either to go through an expensive hushkitting process or to retire such aircraft.

5.5 Peak pricing has proven to be of limited effectiveness for capacity management and redistribution of traffic, partly because of schedule constraints and because large savings are needed for airlines to accept the commercial and operating disadvantages of off-peak arrivals or departures. An additional factor is that airport and en route charges make a relatively small contribution to airline operating costs (4 per cent and 2.4 per cent respectively in 2003) and hence are relatively price inelastic. Peak charges have only permitted recovery of airport costs attributable to traffic peaking. However, minimum charges have been relatively effective in moving general aviation traffic from congested major airports principally serving commercial traffic, to secondary airports primarily catering to general aviation. Where general aviation movements account for a relatively high share of total movements, airports use different approaches to regulate traffic by setting minimum landing charges at such a level as to encourage the operators concerned to use other airports. However, charging structures to regulate traffic can, if not carefully designed, also raise issues of cost relationship and equity and should be chosen in accordance with Article 15 of the Chicago Convention and the principles contained in *ICAO's Policies on Charges for Airports and Air Navigation Services* (Doc 9082/7).

5.6 In the year 2003, IATA Scheduling Conferences were arranging slot allocation on a global basis at 215 coordinated airports worldwide. Given that slot allocation is only required at airports where there is insufficient capacity to meet demand, the magnitude and the size of the problem of congestion and accessibility to airports should not be underestimated. This situation is further compounded for business and international general aviation by the fact that the procedures and process of slot allocation are dominated by the interests of airlines with very few exceptions, while in a few slot allocation regimes, there can be commuter slots, air carrier slots, new entrant slots, and slots for general aviation, military, domestic or international flights.

5.7 With growing private participation and privatization in the provision of airports and air navigation services, international general and business aviation are concerned that charges would eventually increase as a result of increases in airports cost bases and be the principal determinant of access to these airports which are usually the major international airports serving main cities.

5.8 Consultations with users regarding charges are addressed in the *ICAO's Policies on Charges for Airports and Air Navigation Services* (Doc 9082/7) in paragraph 31 (airports), and paragraph 49 (air navigation services). It is recommended there that when a revision of charges or the imposition of new charges is contemplated, appropriate notice should normally be given to users or their representative bodies at least four months in advance and they be given the opportunity to submit their views and enter into consultation; and that such users also be provided with reasonable advance notice of the final decision on any revision of charges or imposition of new charges. The purpose is to ensure that the providers give sufficient information to users relating to the proposed change and give proper consideration to the views of users and the effects the charges will have on them. The aim should be that, wherever possible, changes should be made in agreement between users and providers.

5.9 Closely related to consultation concerning charges is the Council recommendation in Doc 9082/7 (paragraphs 32 and 50) addressing the desirability of users of airports and/or air navigation services or their representative organizations being consulted, when new airports or major airport developments and/or new or expanded air navigation services projects are being planned, before the finalization of plans for projects. The purpose of such consultation is to ensure that, wherever possible, the developments concerned meet the needs of users and that users are aware of the financial implications in terms of the charges that would be paid by them.

5.10 Partly because of access restrictions to airports or for other reasons, including increased security measures and congestion of commercial air transport, business aviation has, over the recent past years, undergone a profound mutation. Once reserved to a narrow clientele of the wealthy industry tycoons or multinational companies, it is steadily evolving as a business tool for smaller size companies and is at the disposal of middle managers. It is widely recognized that the cost is more than offset by the time saved and the increased efficiency that tailor-made aviation can bring. It has been observed that the users of private jets are more often intermediary executives than in the past and that demand for private long-haul flights has been expanding steadily.

5.11 Based on this evolution of the market some companies and airlines have been offering new commercial air service products, such as:

- transatlantic flights at a fixed price between a European city and a city on the US West coast, with aircraft jets that can accommodate 10 to 18 passengers;
- similar products to co-owners of shared business aviation, with tariffs varying with distance;
- scheduled services on large size business jets offering 48 business class seats (three routes are presently operated between Germany and the United States);
- in order to replace defunct supersonic services, projects are under consideration with smaller (subsonic) jets offering 4 to 5 daily transatlantic flights;

- intra-European connections on business aircraft to long-haul passengers from Munich airport.

6. CONCLUSION AND RECOMMENDATIONS

6.1 There is indeed some concern for international general and business aviation's continuing operations at many airports around the world, because of a series of factors that have been examined in this study.

6.2 Capacity constraints at many airports, noise restrictions, including night curfews which reduce the operational hours at airports, peak charges, and privatization and commercialization of airports are all contributing barriers to maintaining, let alone expanding international general and business aviation access to many airports serving major cities. Even the smaller reliever airports usually used by international general and business aviation are attracting more and more airlines, especially new start-up low cost airlines due to their relatively low charges. There is also sometimes the risk that some of these airports may disappear especially those which are close to cities either for environmental reasons or for the high value that the land could have for commercial or housing projects.

6.3 The forecasted increase in traffic, which is often not met with a corresponding increase in airport capacity, is likely to force airports to put more restrictions on certain categories of users. Since international general and business aviation are not "regular" users as air carriers, airports may be compelled to curtail their operations to make room for the increasing demand from the air carriers, their main customers, and at whom most infrastructure investments are directed.

6.4 Taking the preceding factors into account, measures to safeguard the interests of this important sector of civil aviation and secure its accessibility to airports should be considered at the global, State and airport level.

6.5 At the global level

6.5.1 Taking into account the challenges business aviation may be facing in the future regarding their continuing operations, ICAO as the custodian of the development of international civil aviation throughout the world may wish to consider the following:

1) Regarding airport and air navigation services charging systems

To expand and strengthen the texts in paragraphs 23 ix) (airports) and 41 viii) (air navigation services) of *ICAO's Policies on Charges for Airports and Air Navigation Services* (Doc 9082/7) in order to give more emphasis to the importance of international general and business aviation as well as to underline the necessity that any costs allocation method applied to this sector of aviation is in line with ICAO policy:

"Airport (and air navigation services) charges levied on international general aviation, *including business aviation*, should be assessed in a reasonable manner, having regard to the cost of the facilities needed and used, *properly allocated to them*, and the goal of promoting *this category of users and* the sound development of international civil aviation as a whole."

2) Regarding consultations with users

Although ICAO's policy on charges for airports and air navigation services stresses the importance of consultations between the providers and the users or their representative organizations, in practice only airlines or their representative organizations are involved and other users are usually ignored. The inclusion of international general and business aviation in the consultation process would enable them to present their points of view regarding any new or revision of charges. It is also of utmost importance that they be consulted when new or major airport development projects are planned so as to ensure that their future needs are being taken into account, which would ease their future access to airports.

6.5.2 On the basis of these considerations, it is recommended that ICAO advise States about the importance of involving international general and business aviation or their representative organizations in the consultation and planning process referred to in paragraphs 31 and 32 (airports) as well as 49 and 50 (air navigation services) of ICAO's Doc 9082/7.

6.6 At the level of States

6.6.1 With the changes taking place in various parts of the world in ownership and management of airports and air navigation services, States in recognition of the distinct nature of international general and business aviation and their contribution to the national economy should endeavour to facilitate business aviation access to their major international airports, and in the case of heavy congestion, to nearby airports. Accordingly, it is recommended that States should, as far as possible, ensure smooth and flexible access of international general and business aviation to their airports, especially privatized and/or autonomously managed airports, and oversee their practices in that respect. Moreover, they should encourage service providers to coordinate, wherever possible, the allocation of airport and air traffic control slots to non-scheduled operators, including general and business aviation, in order to ensure smooth and efficient flows of traffic.

6.7 At the level of airports

6.7.1 Privatized, commercialized and/or autonomous airport entities should be aware that their charging practices should comply with ICAO policies and practices and, as far as possible, provide airport access to all users without discrimination.

6.7.2 Airports should consider the optimum use or development of dedicated or reliever runways, where feasible, to meet the needs of international general and business aviation. Such runways would accommodate business aircraft and other aircraft with take-off and landing performances that allow the use of such (shorter) runways when such development would result in improved overall capacity for the airport. Similarly, the use of dedicated airport areas should be encouraged, where feasible, for the handling of this particular type of traffic.

6.7.3 Airport entities operating several airports in a metropolitan area should encourage the use of reliever airports by general and business aviation. The relevant authorities concerned could also consider joint use of military facilities.

APPENDIX 1 – LIST OF REPORTED RESTRICTIONS (NOT EXHAUSTIVE)

Introductory Notes

The following three tables contain examples of airport access restrictions affecting business aviation which have been compiled by the International Business Aviation Council (IBAC) and collate information provided by IBAC Member Associations. The information was submitted to IBAC during 2004.

Some four years have elapsed since the Conference on the Economics of Airports and Air Navigation Services was convened. The Conference adopted a Recommendation calling for a study of airport access restrictions impacting general aviation, notably business aviation. In the interregnum, the 9/11 terrorist attacks in the USA and, thereafter, the SARS epidemic successively resulted in a major downturn in the demand for scheduled air services. Indeed demand is only now returning to the levels of the year 2000. As a consequence, there has been an easing of many of the previously existing access restrictions affecting business aviation. This clearly emerges in some of the reports, e.g. in the case of Brazil. This is also reflected in the content and by the number of other reports. It may therefore be argued that the time frame for the data collection has had the effect of ‘distorting’ the significance of the access restrictions.

However, with the expected resumption of growth in scheduled passenger services airport access restrictions affecting business aviation will undoubtedly reappear.

Historically one of the key catalysts for the establishment of national and regional business aviation associations was the need for a representative body to preserve access to airspace and airports. This is well documented by the cases of the National Business Aviation Association (NBAA), British Business & General Aviation Association (BBGA, formerly BAUA), European Business Aviation Association (EBAA), EBAA-France and Japan Business Aviation Association (JBAA). These and other IBAC Member Associations, such as the Brazilian Association of General Aviation (ABAG) and the Canadian Business Aviation Association (CBAA) report that they continue to devote a considerable amount of time and resources annually to preserving airport access for business aviation.

It is to be noted that slot allocation and slot allocation mechanisms particularly, but not exclusively, in Europe features significantly in the information provided. What the information provided fails to reveal is the insidious overall nature of the effect on business aviation of these restrictions. Examples are:

1. arrival and departure slots at the same airport not being coordinated may result in that availability of a departure slot may be many hours (and in some cases a day or more) after the required time of departure, alternatively there may be no departure slot available.
2. no coordination of a departure slot at the airport of origin with a landing slot at the destination airport and also with the en route slot.

Americas

State	Airport	Nature of restriction						Comment
		Capacity	Slot alloc.	Landing fees	Envir.	Security	Other	
Argentina	Buenos-Aires						X	GA ops constraints
Brazil	Congonhas						X	GA ops constraints
Brazil	Congonhas						X	Priority to airlines for land use/allocation
Brazil	S. Dumont						X	
Brazil	Pampulha						X	
Canada	Toronto-Pearson		X					
Mexico	Mexico-B. Juarez						X	Closed to GA
USA	Bedford, MA				X			
USA	Torrance, CA						X	Hours of operation, type of aircraft
USA	San Diego, CA						X	Curfew
USA	Sta Monica, CA			X	X			
USA	Teterboro, NJ						X	Weight restriction
USA	Washington-Reagan, DC						X	Ban on GA
USA	Chicago-O'Hare		X					

Asia/Pacific

State	Airport	Nature of restriction						Comment
		Capacity	Slot alloc.	Landing fees	Envir.	Security	Other	
Australia	Sydney						X	List of approved aircraft during curfew not updated
Australia	Adelaide						X	
Australia	Essendon						X	
Australia	Gold Coast						X	
China	Shanghai-Hongqiao						X	Closed to GA
China	Yichang						X	Closed to GA
Japan	Narita	X	X		X		X	Curfew, parking spots limitations
Japan	Haneda	X	X					Parking spots and stage length limitations
Japan	Kansai		X					
Japan	Nagoya		X				X	Curfew

Japan	Chitose		X		X		X	Curfew
Japan	Sendai		X		X		X	Curfew
Japan	14 regional airports						X	Depends on CIO availability
Mongolia	Ulan Bator						X	Fuel uplift restrictions
Thailand	Bangkok						X	Parking

Europe

State	Airport	Nature of restriction						Comment
		Capacity	Slot alloc.	Landing fees	Envir.	Security	Other	
France	Paris-Ch. De Gaulle						X	Connection with commercial traffic requested
France	Nice						X	Parking
France	Lyon-Bron						X	RWY length
France	Le Castellet	X						
Germany	Berlin-Tempelhof						X	Threat of closure
Germany	Frankfurt	X	X					
Germany	Munich		X					
Italy	Rome-Fiumicino						X	GA ops constraints
Italy	Naples						X	Reduced hours of operation, parking
Italy	Florence		X	X	X			
Netherlands	Amsterdam		X					
Norway	Oslo						X	Required use of Gardermoen
Portugal	Lisbon						X	Parking
Russian Federation	Petropavlovsk						X	Weight restriction
Spain	Madrid-Torrejon						X	Parking
Spain	Madrid-Barajas	X	X				X	Parking
Switzerland	Geneva		X					
Switzerland	Zurich		X					
UK	Fairoaks				X			
UK	Northolt		X					
UK	Heathrow	X	X					
UK	Gatwick		X					
UK	Stansted		X					
UK	London City				X			
UK	Farnborough		X					
UK	Manchester		X					