Economics of Airports and Air Navigation Services Statement

Background

General aviation and aerial work (GA/AW) operations form the foundation of the world’s air transportation system. Airline pilots are created through its training, critical care is provided to the populace through emergency medical service aircraft, and business aviation supports national and international commerce; GA/AW forms an essential and significant force in the world of air transportation. The more than 600,000 pilots and 300,000 aircraft engaged in general aviation and aerial work operations throughout the world comprise a majority of aviation operations; they contribute significantly to national and international economies. Their needs must be accommodated when planning and operating the aviation infrastructure.

The great majority of worldwide aviation facilities and systems are designed and operated for the benefit of the airlines. GA/AW generally operates at the margins of this system, taking advantage of capacity unused by air carriers. Therefore, any discussion of funding the aviation infrastructure must realize that GA/AW operations command only a small fraction of all services provided in the total system. Further, the majority of GA/AW operations are able to operate safely without using many air navigation or traffic services.

Airports

Organization. While the organization and control of international airports means little to the general aviation/aerial work operator, several features of that organization tend to have a significant impact. If the airport is a government owned/operated entity, the operations are usually stable and predictable. Yet, these operations may be rigidly structured and unable to respond to user demand. Conversely, while private ownership may lead to more flexible and user-oriented operations, user fees and charges will probably be higher than at a government-run facility. And, as airport operation becomes fully privatized the ability for users to receive funding support from government excise taxes fades rapidly. Therefore, the ability of an organization to
adequately support user needs at a reasonable cost is the key to an effective and efficient airport operation.

**Capacity Management.** As capacity demands increase, airports should first look to operational efficiency and innovative solutions before any artificial allocation or queuing schemes are imposed. Additional runways and taxiways, more efficient air traffic management, land-and-hold-short provisions and land-long techniques for smaller aircraft are examples of what can be done to improve airport capacity without imposing artificial restrictions.

Only after all of these operational enhancements have been explored should artificial capacity constraints be attempted. Of all the economic mechanisms used to control capacity, slot allocations are the least desirable for GA/AW. This is because the concept of equal access is often biased in favor of the air carrier. High minimum fees are also used to effectively restrict GA/AW access to busy international airports, yet these fees tend to exclude both GA/AW and smaller air carrier aircraft even when excess capacity exists. But, peak-hour access fees, if applied equitably, often control demand during an airport's busiest periods.

The ultimate and ideal capacity enhancement tool is additional airports. Strategically located reliever airports with ready access to major metropolitan areas not only relieve capacity pressure on principal international airports, they also create additional economic centers and reduce ground transportation congestion within metropolitan areas. While many governments have effectively discarded the idea of constructing reliever airports because of environmental and land use pressures, others have succeeded in placing additional airports at the periphery of heavy populated areas. To succeed, these new facilities are located near public transportation that provides easy access to city centers.

**Financing.** The fact that an airport is government owned and/or operated implies that its operation is being provided for the public good or advantage. In this case, capital financing should be principally accomplished through the use of excise taxes tied to the operation of the aircraft using the facility. Fuel excise and passenger ticket taxes are an example of this type of tax. Additionally, landing and facility use fees may also be applied to individual aircraft operations to pay for operational expenses.

Privately owned and operated airports may receive capital grants or loans from States in recognition of the value and economic advantage provided by a healthy national and international air transportation system. However, much of the capitalization will be accomplished through facility improvement set-asides derived from the full range of
airport revenues. Finally, airport corporations issuing equities and bonds may provide the ideal means of raising funds for capital improvements.

Assigning aircraft and passenger use fees at airports must recognize that GA/AW operations use but a small fraction of the infrastructure and cause little maintenance-related expense. Essentially, GA/AW operations operate at the margins of the air transportation environment and effectively use only excess capacity and services. Therefore, allocation of airport access and use fees for GA/AW should reflect only the marginal costs for their operations.

The existing guidance provided for Airport Charging Systems contained in ICAO Document 9082/5 provides succinct and appropriate counsel: 

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

**Air Navigation Services**

*Organization.* Governments have an obligation to their citizens and foreign visitors to provide basic services that bring order and safety to the polity in pursuit of legitimate goals. Among these are provision for air navigation services (ANS) that provide for the safe, orderly and efficient flow of air traffic. Whether the government or a private enterprise provides these services is irrelevant; however, the provision for and oversight of these services is the responsibility of the government. (ANS associated services include: navigation and communications infrastructure, air traffic services, meteorological services, search and rescue, and aeronautical information services.)

**Capacity Management.** Again, artificial metering mechanisms, like slot allocation, peak-hour charges and high minimum charges, are viewed as last-resort actions when considering management of air traffic capacity. Innovations such as direct routing through area navigation (RNAV) processes, reduced vertical separation minimums (RVSM and intelligent structuring of airspace to accommodate both VFR and IFR users are examples of creative capacity management.) Only when the absolute capacity of a route segment or terminal sector is reached should queuing methods be used. But, the method used to determine system and segment absolute capacity should be subject to review by both government regulators and users.
Principles of fairness and equity should govern ATM within a State. Efforts to accommodate all types of operators must be made.

Financing. Financing the basic ANS infrastructure should be accomplished by the State, using excise taxes derived from either fuel tax revenues or passenger ticket taxes. And, since basic civic safety and order functions are involved in providing ANS, a portion of the State's general revenues should also be used to create a safe and efficient infrastructure.

Once the capital, research and development, and future improvement costs of operating an ANS system have been accommodated through tax revenues, operational costs may be recovered through similar methods or a system of graduated user charges. The use of tax revenues to fund system operations and maintenance is preferable due to the ease of collection of revenues and the lack of need for a complicated accounting system.

However, if direct user charges are employed, a graduated system of fees should be used that recognizes both value for services received and the obligation for a State to provide basic safety services to the traveling public. For instance, requiring a private pilot to pay a significant fee for a meteorological and NOTAM briefing and for filing a VFR flight plan prior to flight may subvert safe operations. This is because the pilot may choose to avoid these essential safety services in an effort to avoid the charges associated with the services. Therefore, consideration must be given to providing essential services using tax revenues in support of safe operating practices.

Again, the existing guidance provided for air navigation services charging systems contained in ICAO Document 9082/5 provides succinct and appropriate counsel: The charges levied on international general aviation should be assessed in a reasonable manner, having regard to the cost of the facilities needed and used and the goal of promoting the sound development of international civil aviation as a whole.

Regulatory Aspects

All taxes, fees and charges associated with airport and ANS must be established as a cooperative effort between government regulator, service provider and service user. Only a joint effort of this nature will yield a workable, safe and effective aviation infrastructure. Dictated funding systems or those biased for or against any user segment will cause users and providers to subvert the system in an effort to achieve perceived equity. Finally, once planning and use mechanisms are put into place an ongoing dialog is necessary to preserve the system.
Conclusion

Provision for an ideal aviation infrastructure should adhere to international standards and recommended practices, be responsive to user needs and employ cost recovery methods that realistically reflect an equitable assignment to both user and the polity ultimately benefiting from the air transportation system.