



WORKING PAPER

TENTH SESSION OF THE STATISTICS DIVISION

Montréal, 23 to 27 November 2009

Agenda Item 1: Civil aviation statistics — ICAO classification and definition

**REVIEW OF THE CLASSIFICATION AND DEFINITIONS USED FOR CIVIL AVIATION
ACTIVITIES**

(Presented by the Secretariat)

SUMMARY

Over the years, ICAO has developed a system of definitions to support the process of preparing and updating the various Annexes to the Chicago Convention and related documents such as manuals and circulars. Definitions were also provided in the framework of ICAO's statistics programme. It has been noted in various analyses involving the use of classification of civil aviation activities (commercial, air transport, general aviation, etc.), that there is a need to review, update and complete the available classifications and definitions.

This paper reviews the current definitions and informal classification and proposes a more comprehensive classification with the corresponding definitions.

Action by the division is in paragraph 6.

1. INTRODUCTION

1.1 Over the years, ICAO has developed a system of definitions to support the process of preparing and updating the various Annexes to the Chicago Convention and related documents such as manuals and circulars. Definitions were also provided in the framework of ICAO's statistics programme. ICAO has however not developed a formal classification of civil aviation activities.

1.2 Outside ICAO, several global, regional and national classifications of economic activities are available. The United Nations developed the International Standard of Industrial Classification (ISIC), which is widely used as a means to standardize data collection and promote international comparability. The original code was adopted in 1948, but has been revised periodically in order to keep it up to date and relevant. The latest version ISIC Rev.4 was officially released on 11 August 2008. Regional classification systems are also available and include, among others, the North American Industry Classification System

(NAICS) and the Statistical Classification of Economic Activities in the European Community (Nomenclature statistique des activités économiques dans la Communauté européenne or NACE). ICAO Circular 292, Economic Contribution of Civil Aviation, Volume 2: Assessment Methodologies, demonstrates the application of the ISIC and the related Central Product Classification (CPC) when classifying commercial civil aviation activities of a given local, regional or national economy in order to apply input-output analyses for an impact assessment. These classifications are however quite complex and do not respond to ICAO's statistical needs.

1.3 The various uses of civil aviation data such as analyses related to safety, security and the efficiency of civil aviation and its environmental impact as well as forecasting and planning require a suitable classification and a clear definition of civil aviation activities. In particular those covered, directly or indirectly, by ICAO Standards and Recommended Practices (SARPs).

1.4 In addition, any data collection requires a clear definition of its related aviation activity. For instance passenger and freight data are critical to analyse commercial aviation growth, while data on aircraft movement numbers are important for all aviation activities. In that context, a differentiated classification gathering a detailed definition list for every civil aviation activity is necessary to ensure a reliable data collection programme.

1.5 In view of the absence of a suitable classification for ICAO's statistical needs, it is proposed that the classification provided in Appendix A, in which civil aviation activities have been broadly classified into commercial air transport services, general aviation, airport services, air navigation services, civil aviation manufacturing, aviation training, maintenance and overhaul, as well as regulatory functions and other activities, be reviewed and adopted.

2. RELATED ICAO DEFINITIONS

2.1 The related definitions are provided in Appendix B.

3. DATA COVERAGE

3.1 Informed decision-making regarding aviation safety, security and environmental protection require the collection, analysis and dissemination of statistical data on the various civil aviation related activities. Consequently, ICAO needs to ensure that its statistics programme has a good coverage of these activities.

4. DISCUSSION AND RECOMMENDATION OF THE FOURTEENTH MEETING OF THE STATISTICS PANEL

4.1 The panel reviewed the draft classification proposed in Appendix A, the related ICAO definitions in Appendix B as well as the International Business Aviation Council (IBAC) definition of business aviation provided in Appendix B and, in particular, the commercial component of this activity.

4.2 It was noted that a proper definition of air taxi would depend on the purpose for which the data are being collected. For instance, in the context of air taxi operations, the presence of passengers, cargo or mail on board may not be enough to determine the related aircraft movements' traffic. The panel was of the view that positioning flights may be, in this case, as important as the actual revenue flights.

4.3 It was also noted that there is no uniform classification for this activity as States classify it either under commercial non-scheduled services or under general aviation. Some concern was raised with respect to the possible extra workload that might be implied for airports and/or aircraft operators.

4.4 The panel reviewed the revised definition of air taxi revenue flights as submitted by the Secretary in Revision No. 2 to WP/13. After a brief discussion concerning the reference to the number of seats and to the nature of the operator, the panel agreed on the following definition: *Air taxi revenue flights. On-demand, non-scheduled flights on short notice for the carriage by air of passengers, freight or mail, or any combination thereof for remuneration usually performed with smaller aircraft including helicopters (typically no more than 30 seats). This definition includes any positioning flights required for the provision of the service.*

4.5 With this understanding, the panel adopted the following recommendation:

5. **RECOMMENDATION STAP/14-9**

THE PANEL RECOMMENDS:

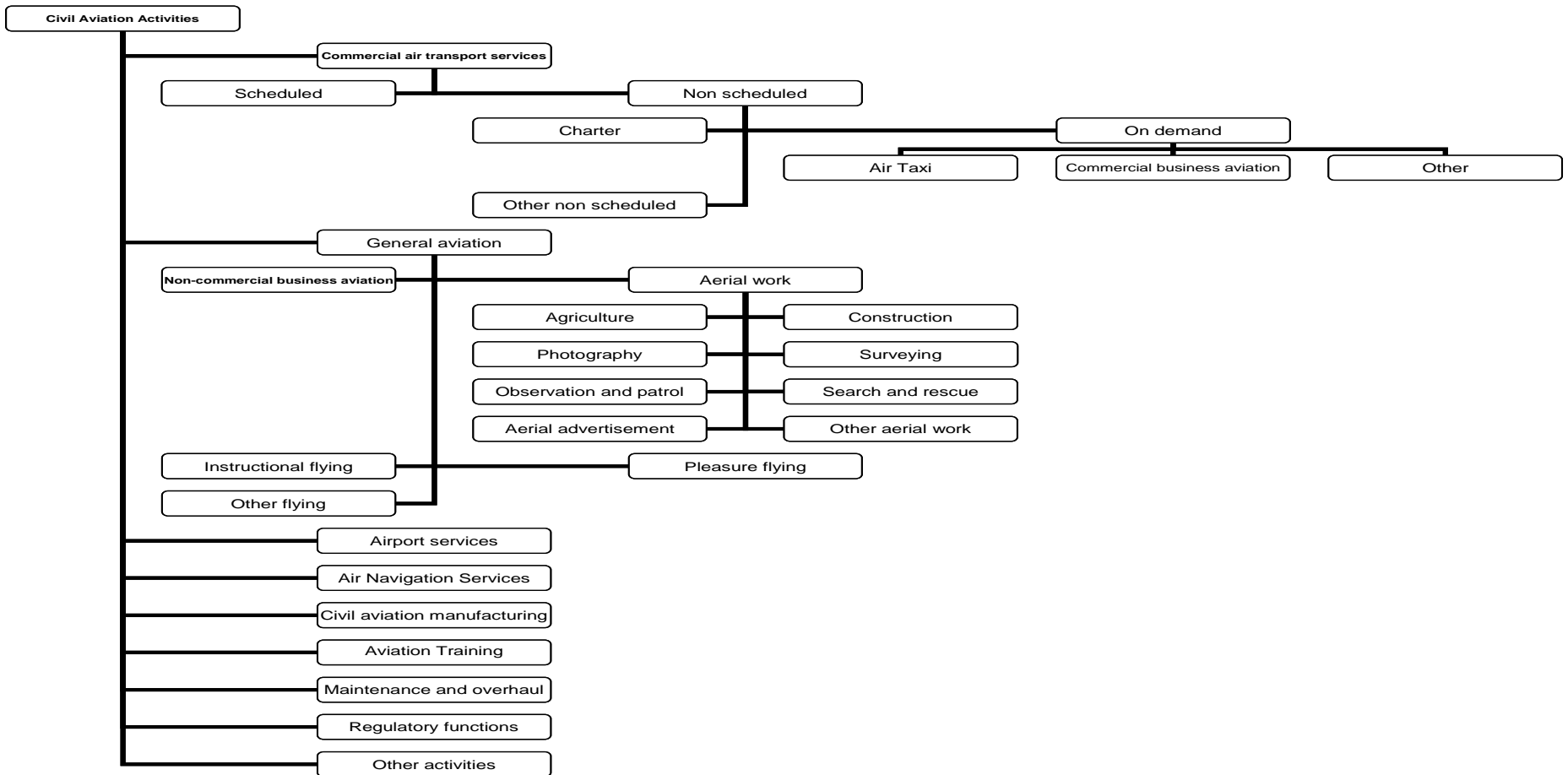
- a) adoption of the proposed classification of civil aviation activities for statistical purposes;
- b) listing of the commercial component of business aviation under on-demand, non-scheduled commercial air transport services along with air taxi activity; and
- c) listing of the non-commercial component of business aviation, including fractional-ownership operations, under general aviation.

6. **ACTION BY THE DIVISION**

6.1 The division is invited to review and adopt the proposed classification of civil aviation activities for statistical purposes.

APPENDIX A

PROPOSED ICAO CLASSIFICATION OF CIVIL AVIATION ACTIVITIES



APPENDIX B

ICAO DEFINITIONS

This section presents the various definitions currently used by ICAO. It will be noted that there are some redundancies and in some cases certain differences.

Commercial air transport

Commercial air transport operation. An aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire (Annex 6, Part I, Chapter I, Page 1-1).

Flight. The operation of an aircraft on a flight stage or number of flight stages with the same flight number (Form B).

Flight, commercial air transport. The operation of aircraft on one or more stages on a scheduled or non-scheduled basis, which is available to the public for remuneration and for hire. (Technical stops are not counted in ICAO's statistics.) (1994 Statistics Manual).

Commercial air transport operations can be classified into scheduled and non scheduled operations.

Scheduled (Council Definition, 1952) (Doc 9587, Part 1, Page 1-11)

A scheduled international air service is a series of flights that possesses all the following characteristics:

- a) it passes through the airspace over the territory of more than one State;
- b) it is performed by aircraft for the transport of passengers, mail or cargo for remuneration, in such a manner that each flight is open to use by members of the public;
- c) it is operated, so as to serve traffic between the same two or more points, either
 - i) according to a published timetable, or
 - ii) with flights so regular or frequent that they constitute a recognizably systematic series.

Scheduled services (revenue). Scheduled services (revenue) are flights scheduled and performed for remuneration according to a published timetable, or so regular or frequent as to constitute a recognizably systematic series, which are open to direct booking by members of the public; and extra section flights occasioned by overflow traffic from scheduled flights (Form B).

Non scheduled (Manual on the regulation of international air transport, Doc. 9626, Chapter 4.6, Page 4.6-1 and 4.6-2).

A non-scheduled air service is a commercial air transport service performed as other than a scheduled air service.

A charter flight is a non-scheduled operation using a chartered aircraft. Though the terms non-scheduled and charter (i.e. a contractual arrangement between an air carrier and an entity hiring or leasing its aircraft) have come to be used interchangeably, it should be noted that not all commercial non-scheduled operations are charter flights.

The current and historical types on non-scheduled services fall into four categories: passenger charter flights, cargo charter flights, combined passenger-cargo flights, non-scheduled non-charter flights for the carriage of individually ticketed or individually waybilled traffic (sometimes referred to as on-demand air taxi service). These are flights not operated according to a published schedule but sold to individual members of the public (usually freight shippers). They fly authorized routes but only make stops at en-route points where there is traffic to be set down or picked up.

Air taxi revenue flights. On-demand, non-scheduled flights on short notice for the carriage by air of passengers, freight or mail, or any combination thereof for remuneration usually performed with smaller aircraft including helicopters (typically no more than 30 seats). This definition includes any positioning flights required for the provision of the service.

General Aviation (Annual Survey of Civil Aviation Activities and Civilian Pilot Licenses, 1994)

General aviation is defined, for statistical purposes, as all civil aviation operations other than scheduled air services and non-scheduled air transport operations for remuneration or hire. For ICAO statistical purposes the general aviation activities are classified into instructional flying, business flying, pleasure flying, aerial work and other flying.

A somewhat different definition of general aviation (which excludes aerial work) is provided in Annexes 6 and 17 where a general aviation operation is defined as an aircraft operation other than a commercial air transport operation or an aerial work operation. But for statistical purposes, it is suggested to retain the definition provided above.

Instructional flying is defined as the use of an aircraft for purposes of formal flight instruction with an instructor. The flights may be performed by aero-clubs, flying school or commercial operators.

Pleasure flying is defined as the use of an aircraft for personal or recreational purposes not associated with a business or profession.

Business flying is defined as the use of an aircraft to carry personnel and/or property to meet the transport needs of officials of a business, firm, company or corporation. These flights may be performed by a commercial pilot or by a private pilot. Another definition of business aviation, sub-dividing it into commercial, corporate and operator-owned, is adopted by the International Business Aviation Council (IBAC) is provided in Appendix C.

Corporate aviation. The non-commercial operation or use of aircraft by a company for the carriage of passengers or goods as an aid to the conduct of company business, flown by a professional pilot employed to fly the aircraft. (Annex 17, Chapter I, Page 1-1)

Fractional ownership refers to the shared ownership of expensive assets such as aircraft. In general, the fractional owner pays regular fees to a company that manages the asset (operates the aircraft) on behalf of all owners. Fractional ownership has recently become very popular in business aviation since it reduces the cost of ownership while offering a greater operational flexibility and a wider airport (destination) access.

Aerial work. An aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

Agricultural flying. Use of an aircraft for activities such as crop dusting, chemical or fertilizer spraying, seed dissemination, prevention of frost formation, insect fighting, animal herding. Other aerial work: Use of an aircraft for activities such as aerial photography; patrol and surveillance; prospecting; construction (i.e., aerial work in construction projects); advertising; medical, relief and rescue work.

Other flying. All general aviation flights other than glider and free balloon flights that cannot be included in the above four categories. Flights by pilots for maintaining their flying proficiency are also be included.

Maintenance and Overhaul (Annex 8)

Maintenance. The performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair (Annex 8, Part I, Page 1-2).

Repair. The restoration of an aeronautical product to an airworthy condition as defined by the appropriate airworthiness requirements (Annex 8, Part I, Page 1-2).

Repair. The restoration of an aeronautical product to an airworthy condition to ensure that the aircraft continues to comply with the design aspects of the appropriate airworthiness requirements used for the issuance of the type certificate for the respective aircraft type, after it has been damaged or subjected to wear (Annex 6, Part I, Chapter I, Page 1-6).

Airport Operations (Manual on Airport Economics, Doc 9562)

Aerodrome. A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft (Annex 14, Volume 1, Chapter I, Page 1-2).

International airport. Any airport designated by the Contracting State in whose territory it is situated as an airport of entry and departure for international air traffic, where the formalities incident to customs, immigration, public health, agricultural quarantine and similar procedures are carried out (1994 Statistics Manual).

ANSP Operations (Manual on Air Navigation Services Economics, Doc 9161, Glossary of terms and abbreviations, page (xi))

Air navigation services provider. An independent entity established for the purpose of operating and managing air navigation services, and empowered to manage and use the revenues it generates to cover its costs. In this manual, the terms provider, entity and organization are used interchangeably.

Air navigation services. This term includes air traffic management (ATM), communications, navigation and surveillance systems (CNS), meteorological services for air navigation (MET), search and rescue (SAR) and aeronautical information services (AIS). These services are provided to air traffic during all phases of operations (approach, aerodrome and en route).

Aviation training (Annex 1, Chapter I, Page 1-1)

Approved training organization. An organization approved by a Contracting State in accordance with the requirements of Annex 1, 1.2.8.2 and Appendix 2 to perform flight crew training and operating under the supervision of that State.

Ground handling

Ground handling services include ground administration and supervision, passenger handling, baggage handling, freight and mail handling, ramp handling, aircraft services, fuel and oil handling, aircraft maintenance (light maintenance), flight operations and crew administration, surface transportation and catering services.

APPENDIX C

IBAC DEFINITIONS RELATED TO BUSINESS AVIATION

Definition of Business Aviation:

'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.'

Definition Sub-divisions

Sub-division 1 Business Aviation - Commercial

The commercial operation or use of aircraft by companies for the carriage of passenger or goods as an aid to the conduct of their business and the availability of the aircraft for whole aircraft charter, flown by a professional pilot(s) employed to fly the aircraft.

Sub-Division 2 Business Aviation - Corporate

The non-commercial operation or use of aircraft by a company for the carriage of passengers or goods as an aid to the conduct of company business, flown by a professional pilot(s) employed to fly the aircraft.

Sub-Division 3 Business Aviation - Owner Operated

The non-commercial operation or use of aircraft by an individual for the carriage of passengers or goods as an aid to the conduct of his/her business.

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