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Agenda Item 3: Specific issues related to air navigation services economics and management
Agenda Item 3.4: Economic and organizational aspects related to implementation of the global air traffic management (ATM) concept

AERONAUTICAL INFORMATION MANAGEMENT AND IMPLICATIONS RELATED TO CHARGING PRINCIPLES

(Presented by CANSO[2])

SUMMARY

The ICAO *Symposium on Enabling the Net-Centric Information Environment*, held on 2-4 June 2008, set out to begin the process of resolving the institutional and legal issues identified during 2007 Global AIM Congress that constrain progress in the transition from a product-centric AIS to a data-centric AIM. The Symposium identified cost recovery, liability, copyright and ownership as being the main areas to be addressed, and viewed the *Conference on the Economics of Airports and ANS* (CEANS) as the opportunity to address the issues related to cost recovery. The newly-establishment AIS-AIM Study Group (AIS-AIMSG), the purpose of which is to develop a global strategy/roadmap and Standards and Recommended Practices (SARPs) necessary to support AIM implementation, will also require guidance on the implications related to charging principles. The purpose of this paper is to make the CEANS aware of the issues related to the transition of AIS to AIM, inviting the Conference to endorse the conclusions and recommend that the ANSEP provide guidance to the newly-formed AIS-AIMSG.

Action by the conference is in paragraph 4.

[1] Language versions provided by CANSO.

[2] FULL MEMBERS | Aena - Spain | AEROTHAI - Thailand | Airports Authority of India | Airservices Australia | Airways New Zealand | ANS of the Czech Republic | ATNS - South Africa | ATSA - Bulgaria | Austro Control - Austria | Avinor - Norway | AZANS - Azerbaijan | Belgocontrol - Belgium | CAAS - Singapore | DFS - Germany | DHMI - Turkey | DSNA - France | EANS - Estonia | ENAV SpA - Italy | Federal Aviation Administration - USA | Finavia - Finland | GACA - Kingdom of Saudi Arabia | Hellenic Civil Aviation Authority | HungaroControl | Irish Aviation Authority | ISAVIA - Iceland | Kazaeronavigatsia - Kazakhstan | LFV - Sweden | LGS - Latvia | LPS Slovak Republic | LVNL - the Netherlands | MATS - Malta | NAMA | NANSC - Egypt | NATS - UK | NAV CANADA | NAV Portugal | Naviair - Denmark | OACA - Tunisia | Oro Navigacija - Lithuania | PANSA - Poland | ROMATSA - Romania | Sakaeronavigatsia Ltd - Georgia | Serco | skyguide - Switzerland | Slovenia Control | SMATSA - Serbia | State ATM Corporation - Russia | UkSATSE - Ukraine |

1. INTRODUCTION

1.1 The global ATM system is becoming increasingly data dependent, requiring access to global broad-based aeronautical information of a considerably higher quality and better timeliness than is generally available today. The objective of aeronautical information management (AIM) is the implementation of a net-centric collaborative framework for the exchange and management of aeronautical information/data[i] that will meet all present and future needs of ATS and flight operations. The management and sharing of information on a system-wide basis, will allow informed collaborative decisions to be made that will achieve best business and operational outcomes. AIM will be a key enabling activity for the future global ATM system.

1.2 The transition to AIM will bring about new sources and types of aeronautical information/data, and the commoditisation of aeronautical information/data that will have implications for the related charging principles. Some of the information/data will be provided based on State obligation, while other information/data will be provided on a commercial value-added basis in a competitive environment. The regulatory framework must be flexible enough to allow for innovation and evolution in the provision of AIS, allowing new business models to emerge and value-added products to be offered, while at the same time ensuring the quality and timeliness of the information/data provided to the end user is maintained.

2. DISCUSSION

Roles and responsibilities

2.1 The object of the aeronautical information service (AIS) is to ensure the flow of information/data necessary for the safety, regularity and efficiency of international air navigation. Annex 15 currently prescribes that each State provides an AIS, whether it does so itself, through agreement with other States as a joint service, or delegates the authority to an agency. The State shall remain responsible for ensuring that the aeronautical information/data provided is adequate, of required quality and timely. While the AIS is to receive and/or originate, collate or assemble, edit, format, publish, store and distribute aeronautical information/data, the State shall ensure a quality system exists at each stage of the aeronautical data chain, providing users the assurance and confidence that distributed aeronautical information/data satisfies State requirements for data quality, data traceability and applicability period. With the transition to AIM, these basic State responsibilities will not change.

2.2 In terms of what has to be provided, Annex 15 currently prescribes that aeronautical information shall be published as an Integrated Aeronautical Information Package (IAIP), consisting of the Aeronautical Information Publication (AIP), including amendments and supplements thereto; the NOTAM and Pre-flight Information Bulletin (PIB); and the Aeronautical Information Circular (AIC). An AIS product is defined in Annex 15 as any aeronautical information provided in the form of the elements of the IAIP (except NOTAM and PIB), including aeronautical charts, or in the form of suitable electronic media.

2.3 According to Annex 15, a copy of each of the elements of the IAIP shall be made available, in paper or electronic form or both, upon request by the AIS of an ICAO contracting State without charge. Such exchange should be subject to bilateral agreement. The procurement of aeronautical information/data, including the elements of the IAIP, by States other than ICAO Contracting States or by third parties should be subject to separate agreement with the originating State.

2.4 In the transition to AIM, the IAIP is expected to evolve into an aeronautical data set with digital content, transforming the current components of the IAIP. It will therefore be necessary to redefine what aeronautical information is to be covered by the future IAIP, a task for the newly established AIS-AIMSG. Any AIS product or service not included as part of the future IAIP should be considered a value-added product or service that can be offered on a commercial basis.

Copyright and intellectual property

2.5 Current ICAO guidance notes that States may apply copyright to AIS products in accordance with their national laws in order to protect the investment made in their provision as well as to ensure better control of their use. Copyright grants the creator the sole right to produce, or reproduce in any material way, and publish a work. Where an AIS product has been granted copyright protection it shall only be made available to a third party on the condition that the third party is made aware that the product is copyright protected. The unauthorized reproduction by a third party would be considered copyright infringement. Whether copyright extends to aeronautical data is an open question.

Charging Principles

2.6 Annex 15 recommends the recovery of costs incurred in the provision of AIS. The overhead cost of collecting and compiling aeronautical information/data should be included in the cost basis for airport and air navigation services charges, as appropriate, in accordance with the principles contained in ICAO's *Policies on Charges for Airports and Air Navigation Services* (Doc 9082). This is not expected to change with the transition to AIM.

2.7 Annex 15 further notes that when costs of collection and compilation of aeronautical information/data are recovered through airports and air navigation services charges, the charge to an individual customer for the supply of an IAIP component, whether in paper or electronic form, may be based on the costs of printing or production of electronic media, as well as the costs of distribution.

2.8 Value-added products or services created by the AIS provider, and offered on a commercial basis can be priced like any other commercial product or service.

2.9 An ANSP that provides AIS should be permitted to enter into a commercial agreement with third parties who intend to use the aeronautical information/data for commercial gain. The revenues received could in turn be used to reduce the cost basis for air navigation services charges.

Liability

2.10 Potential liability associated with erroneous or incomplete aeronautical information rests with the authority responsible for the provision of AIS. However, information/data providers, compilers and distributors could all bear some of the liability associated with losses arising from erroneous or incomplete information. Parties that manipulate the information/data have responsibility for the manipulations they make.

2.11 An ANSP that provides AIS should be permitted to equitably allocate potential liabilities when providing AIS information/data to third parties. Such potential liabilities may also be covered by a license agreement that is commercially negotiated and provides for necessary limitations and indemnities. It is the role of the States, through ICAO, to establish Standards and Recommended Practices (SARPs) that will reasonably protect the interests of all stakeholders and foster consistent practices from State to State.

3. CONCLUSIONS

3.1 The transition to AIM will bring about new sources and types of aeronautical information/data (notably, raw digital data), and the commoditisation of aeronautical information/data that will have implications for cost recovery. The basic roles and responsibilities in respect of AIS provision as contained in Annex 15 will not change. However, the SARPs and guidance material related to the provision of AIS need to be flexible enough to allow for innovation and new business models to emerge and value-added products to be offered, while ensuring the quality and timeliness of the information/data provided is maintained.

a) ICAO should consider any AIS product that forms part of the current IAIP, or its future equivalent, to be subject to the charging principles as contained in ICAO's *Policies on Charges for Airports and Air Navigation Services* (Doc 9082). Any other AIS product or service would be considered a value-added product or service that can be offered by the AIS on a commercial basis. It is the role of the States through ICAO, with input from stakeholders such as airspace users and ANSPs, to define the future equivalent of the IAIP.

b) States should note that where an ANSP provides AIS, potential liability in the case of loss related to erroneous or incomplete information may rest with the ANSP, and that the ANSP should therefore have the right to limit its liability and obtain indemnities from the manipulation by third parties.

c) An ANSP that provides AIS should be permitted to charge third parties who intend to use the aeronautical information/data for commercial gain, which may be covered by way of a license agreement negotiated on a commercial basis. The revenues could be used to reduce the cost basis for air navigation services charges.

4. ACTION BY THE CONFERENCE

4.1 The Conference is invited to:

a) endorse the conclusions in paragraph 3.1; and

b) recommend that the ANSEP provide guidance to the newly-formed AIS-AIMSG on the charging principles contained in ICAO's *Policies on Charges for Airports and Air Navigation Services* (Doc 9082) as they relate to the provision of aeronautical information/data.

— END —

[i] As the nature and type of information/data required for the future ATM system broadens and goes beyond the current scope of AIS, clarification and agreement is needed on a unique, global definition of the terms "data", "information" and "product". Annex 15 – Aeronautical Information Services currently does not provide a definition and distinction between the terms "data" and "information" (ICAO nomenclature utilises "information/data"), yet their definition has implications for future business models and contractual arrangements in the transition to a data-centric AIM. It is the role of the States through ICAO, with input from stakeholders such as airspace users and ANSPs, to define these terms such that the distinction and implications of the differences will be clear in the context of AIM.