

CONFERENCE ON THE ECONOMICS OF AIRPORTS AND AIR NAVIGATION SERVICES

(Montreal, 19 - 28 June 2000)

Agenda Item 4: Determinants of the economic regulation of airports and air navigation services

Agenda Item 5.2.2: Air navigation services charging principles

STUDY ON THE ALLOCATION OF GLOBAL NAVIGATION SATELLITE SYSTEMS (GNSS) COSTS

(Presented by the Secretariat)

SUMMARY

This paper presents a progress report on a study by ICAO on the allocation of GNSS costs. The paper provides background information, briefly describes a related undertaking in Europe and its relevance to the ICAO study, and discusses future work in this subject area. Suggested action by the Conference is at paragraph 3.1.

1. Background

1.1 The World-wide CNS/ATM Systems Implementation Conference (Rio de Janeiro, 11-15 May 1998) called on ICAO to conduct a study on the allocation of GNSS costs (Recommendation 3/16a). The study was subsequently initiated by the Council which decided that it be included in the work programme in the air transport field for the present triennium.

1.2 In considering GNSS cost allocation the necessity was recognized of distinguishing between:

- a) allocation amongst civil aviation users; and
- b) allocation between civil aviation and other users.

As regards the former, most of the guidance material required already existed in the Air Navigation Services Economics Panel (ANSEP) *Report on Financial and Related Organizational and Managerial Aspects of Global Navigation Satellite Systems (GNSS) Provision and Operation* (Doc 9660) and the *Manual on Air*

Navigation Services Economics (Doc 9161/3). Allocation between civil aviation and other users was, however, a much more complex undertaking since a large and growing number of user categories in addition to aviation was involved.

1.3 At the end of 1998 EUROCONTROL established a “Task Force on the allocation of GNSS costs”, the terms of reference of which were to undertake basically the same task with the EUROCONTROL constituency as ICAO has been called upon to carry out globally. The terms of reference of the Task Force also envisaged that it would collaborate with ICAO.

1.4 It was agreed that the work in ICAO on allocation between aviation and other users would be initiated through cooperation with EUROCONTROL. Input on financial and related information would at a later stage be sought from other international organizations and all States providing GNSS services for civil aviation, and preliminary exploration as to the global approach would be made with international organizations concerned with usage of GNSS in non-aviation sectors. On the basis of the experience gained, proposals for global evolution, on the initiative of ICAO, would be developed and presented.

1.5 During the first phase of its work the EUROCONTROL Task Force considered methods for determining the share of GNSS costs attributable to civil aviation as opposed to different non-aeronautical users. The Task Force evaluated a number of cost allocation methods but agreed to recommend only the application of the so-called “requirements driven” method, which is based on perceived costs of providing GNSS services to different user groups and thus in line with basic ICAO cost allocation principles. (Other work undertaken by the Task Force is close to completion and will be described in a paper on the outcome of the Task Force’s assignment which EUROCONTROL will be presenting to the Conference. That subject will therefore not be further addressed in this paper).

1.6 There is great pressure for the EUROCONTROL Task Force to complete its assignment because in Europe active consideration is now being given to plans for States in that region to establish a civil European GNSS – GALILEO. As the costs involved for GALILEO are extremely high there is great need amongst the European States involved to identify the main user groups (aeronautical and non-aeronautical) and establish an equitable approach to identifying the cost share allocable to each user group.

2. Future work

2.1 The conclusions of the EUROCONTROL Task Force will be of interest not only to the European States concerned but also to other States operating aircraft within or through the airspace that would be served by the proposed new civil GNSS, since it is assumed that GNSS costs attributable to civil aviation will be recovered from aircraft operators.

2.2 However, the urgent need being expressed in Europe for GNSS cost allocation guidance may not be matched in many other regions of the world because so far GNSS services are provided free of charge to civilian users, including civil aviation, at least up to the year 2010. As to the satellite-based augmentation services associated with the current GNSS there are so far no indications that the two provider States involved will be charging for their use once they have been implemented.

2.3 It has been noted that the EUROCONTROL Task Force serves a highly developed geographical area where more sophisticated methodologies could be applied whereas ICAO serves the global community and therefore should develop guidance which could be applied in much wider circumstances. Also, at the global level all major user groups, including civil aviation, other modes of transport and, not least, non-transport users

or their representative organizations, need to address the allocation issue jointly, since cost shares for other users determined by civil aviation alone could not necessarily be expected to be widely accepted.

2.4 For these reasons, the Air Transport Committee has agreed that the next step by ICAO in the allocation of GNSS costs will be for the Secretariat, on the basis of the comments of the present Conference, to prepare proposals for consideration by the Council on how to further proceed with this task. Civil aviation is in numerical terms a relatively minor user of GNSS and a broad based coalition of non-aeronautical users and civil aviation will need to be established if acceptable and equitable cost allocation shares for each major user group are to be estimated. This will be necessary because cost shares for each major user group determined by civil aviation alone are unlikely to be widely accepted.

2.5 Considering that GNSS is open to use by the populace at large, one idea under consideration in the ICAO Secretariat would be to suggest that the core system costs of GNSS be allocated to all States in the world on the basis of their gross national product (GNP). Then, each State could either finance its share in the same way as it does common governmental services, such as education, police services, etc.; or it could allocate the share to different user categories in the State using the approach referred to in paragraph 1.5 above.

3. **Action by the Conference**

3.1 The Conference is invited to note this paper and comment on the suggested approach outlined in paragraphs 2.4 and 2.5 above.

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