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ELEVENTH AIR NAVIGATION CONFERENCE

Montreal, 22 September to 3 October 2003

Agenda Item 6: Aeronautical navigation issues

GNSS LEGAL FRAMEWORK CONTRACTUAL FRAMEWORK FOR THE IMPLEMENTATION, PROVISION, OPERATION AND USE OF THE GLOBAL NAVIGATION SATELLITE SYSTEM FOR AIR NAVIGATION PURPOSES

(Presented by the European Organisation for the Safety of Air Navigation — EUROCONTROL, on behalf of its Member States and those of ECAC[1])

SUMMARY

As the technical and operational development of GNSS is now well-advanced, there is an increasing need for an adequate GNSS legal and institutional framework. This paper describes the main features of a legal framework to govern the implementation, operation, provision and use of GNSS signals and services, as advocated by the 32nd and 33rd Sessions of the ICAO Assembly.

This paper has been prepared by the EUROCONTROL Agency in coordination with the European Commission.

Action by the Conference is in paragraph 7.

[*] French, Russian and Spanish versions provided by EUROCONTROL.

[1] The ECAC Member States are: **Albania**, Armenia, **Austria**, Azerbaijan, **Belgium**, Bosnia and Herzegovina, **Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark,** Estonia, **Finland, France, Germany, Greece, Hungary**, Iceland, **Ireland, Italy**, Latvia, Lithuania, **Luxembourg, Malta, Moldova, Monaco, the Netherlands, Norway,** Poland, **Portugal, Romania**, Serbia and Montenegro, **the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, The Former Yugoslav Republic of Macedonia, Turkey,** Ukraine and **the United Kingdom**).

The 31 Member States of EUROCONTROL appear in **bold**.

1. INTRODUCTION

1.1 The 32nd Assembly adopted Resolution A32-20 which recognised the importance of regional initiatives regarding the development of the legal and institutional aspects of global navigation satellite system (GNSS); the urgent need for the elaboration at a regional and global level of the basic legal principles that should govern the provision of GNSS (following on from the world-wide communications, navigation, and surveillance/air traffic management (CNS/ATM) systems implementation conference at Rio de Janeiro in 1998 and the work of the Panel of Legal and Technical Experts of GNSS (LTEP)); and the need for an appropriate long-term legal framework to govern the implementation of GNSS.

1.2 A Secretariat Study Group was set up to elaborate proposals for such a legal framework. This group reported to the 33rd Assembly that some of its Members were of the view that the current liability regime under domestic law could cope with the advent of GNSS, while others believed that a global instrument of international law would be required as the long-term solution. In order to provide a realistic stepping stone towards such a solution, a middle ground was considered, namely the development of a contractual framework, for the short to medium-term.

1.3 The 33rd General Assembly mandated the Study Group to finalize the concept of a "Contractual Framework", as an interim framework, while further work should include the consideration of an international convention.

1.4 The objective of this paper is to present such a framework. It sets out the main elements of the contractual framework while taking into account specific regional requirements. For Europe, these would relate to the provision of the European Geostationary Navigation Overlay Service (EGNOS) and GALILEO, while other regions would have their own specific requirements, all of which would be addressed within the GNSS contractual framework.

1.5 As the technical and operational development of GNSS is now well advanced, there is an increasing need for an adequate GNSS legal and institutional framework. This arises from the fact that most States will not be directly involved in the operation of GNSS systems or sub-systems, in particular as far as the space segments are concerned. Air navigation within their sovereign airspace will consequently rely heavily on facilities beyond their direct control. With the advent of different GNSS primary and augmentation signal providers, States will have to ensure in particular that they are able to meet their commitments under Article 28 of the Chicago Convention.

1.6 States need to be satisfied, inter alia, that the GNSS signals and services offered within their airspace meet the appropriate performance requirements in terms of integrity, reliability, accuracy and continuity and that their liability is clearly defined. Presently, no comprehensive framework exists that can provide the legal certainty required for States or for industry, for the development and financing of CNS/ATM satellite-based systems. In a global environment, reliance on national laws and procedures is not sufficient to deal effectively with the challenge of technological advances.

2. THE CONTRACTUAL FRAMEWORK

2.1 To resolve the issues referred to above, the following steps have been identified:

a) a series of private law contracts in which the relationships among the various stakeholders involved in the chain of implementation, operation, provision and use of GNSS signals and systems would be addressed. Parties would have contractual freedom within the limits set by the need to attain commonality in a multi-State environment; and

b) a framework agreement, concluded by the participating States which would identify common provisions for the implementation, operation, provision and use of signals and services based upon a given GNSS system for navigation purposes over the territory of participating States. These would focus on safety, certification, liability and jurisdictional matters.

2.2 A framework is essential in any contractual solution in order to recognize the distinction between a State's regulatory and supervisory activities and its service provision functions;the latter could be delegated to a private or corporatised entity. The framework agreement would establish that States, pursuant to Article 28 of the Chicago Convention, remain responsible for GNSS implementation in their territory and that they have to verify that GNSS service providers and operators comply with the requirements set out in the private law contracts when performing activities over their territory.

2.3 Accordingly, States ensure that their service providers and operators implement in their contracts the common elements, set out in paragraph 3.3. Isolated contracts which would address only the relationship of States in their capacity as service providers, would not be adequate to provide the assurances sought by States to implement a GNSS which is outside their control. Hence, the need for the overarching framework which would serve as the vehicle for the legal recognition of the mandatory elements to be contained in the contracts. Furthermore, in a multi-State region such as Europe, it would prevent a massive proliferation of mostly identical contracts.

3. FRAMEWORK AGREEMENT AND RELATED CONTRACTS

3.1 The framework agreement will not only address the relationship between States in the context of the provision of GNSS, but it will also govern certain aspects of the contractual relationships which are necessary for the establishment of a comprehensive framework.

3.2 The main purpose of the agreement would be the introduction of mandatory common elements, which will need to be included in contracts involving the system operators and service providers. Those common elements, to be kept to a minimum, are essential to the establishment of the overall framework. Harmonization of essential parts of the contracts will help achieve a framework where the roles and responsibilities of all players involved are clear to all and where relationships are well defined.

3.3 These mandatory elements have been identified, in line with previous discussions held in the ICAO Secretariat Study Group, as follows:

a) compliance with Standards and Recommended Practices (SARPs);

b) compliance with the ICAO Charter (A32-19) and relevant ICAO documentation (e.g. Annex 10 to Chicago Convention) with regard to continuity, availability, integrity, accuracy and reliability;

c) recognition of fault-based liability;

d) compulsory risk coverage;

e) recourse to arbitration;

f) waiver of right to invoke sovereign immunity; and

g) central role for ICAO as global coordinator.

3.4 The agreement therefore ensures that the contracts will be in line with the relevant provisions contained therein. Clearly, in respect of other contractual aspects, the parties shall be free to enter into further arrangements as they see fit.

4. ELEMENTS OF THE CONTRACTUAL FRAMEWORK

4.1 Regional GNSS entity

4.1.1 In multi-State regions, the need for a focal point may be required to address the common requirements of the States involved. In Europe, it has been identified as one of the important elements of a contractual framework. This focal point would take the form of a regional GNSS entity. It could be an existing or newly created body. Its establishment and mandate would be facultative, depending on the wishes of the parties involved. The primary function of such a body would be to act as a facilitator for the contractual framework. It could facilitate, by means of contractual arrangements, the establishment of relationships between the various GNSS system operators and the service providers in the region covered by the agreement. As a corollary role, it should also monitor the contractual arrangements established pursuant to the agreement.

4.2 Liability

4.2.1 Since the very beginning of the work related to the institutional aspects of GNSS, liability matters have been highlighted as a central, fundamental issue. The mandate given to the ICAO LTEP explicitly listed liability aspects among the GNSS factors to be addressed, requesting the experts to investigate the possible need for arrangements under a common international framework.

4.2.2 Through the framework agreement, States could strike a balance between the need for fair and adequate compensation for injuries and damages through transparent, efficient and coherent procedures

on the one hand and the interests of the liable entities or persons in knowing the extent of their potential liability on the other hand. The liability arrangements would coordinate existing fault-based liability regimes, to the extent possible, and avoid multiplicity of actions in different jurisdictions.

4.3 **Arbitration**

4.3.1 One of the major difficulties identified by the ICAO Study Group in attempting to set up a universal liability regime stems from the reluctance of States or State entities to appear in front of a foreign jurisdiction. GNSS related events present the characteristic of possibly involving State entities from more than one country. This implies setting up a regime, which would ideally provide for a single jurisdiction for each GNSS related event. This would most often require one or more State entities overcoming the commonly applied principle of foreign jurisdiction immunity. The preferred solution would be recourse to arbitration mechanisms. In effect, by establishing a neutral jurisdiction, no State entity would feel forced to appear in front of a foreign national jurisdiction. Indeed, arbitration is more and more often being used in liability cases involving several States.

4.3.2 The overall framework would therefore introduce arbitration for all GNSS-related aviation accidents involving different defendants, provided they are all nationals of a State adhering to the agreement.

5. **ROLE OF ICAO**

5.1 The proposed framework foresees implementation at the regional level. It has been developed with the specific concerns and expectations of States in mind and with a view to its easy transposition between the ICAO regions or sub-regions with minimal adjustments, as the basic issues are similar from one region to another.

5.2 The core and common elements of the overall framework applied to different regions could help ensure global consistency between the various elements of GNSS services. In this respect, the important role of ICAO in coordinating the different regional frameworks at the global level, in accordance with ICAO's regional air navigation plans and global coordinated CNS/ATM systems plan is recognized. Moreover, ICAO could provide the necessary liaison between the signal-in -space providers, ATS providers, regulatory authorities and operators.

5.3 This approach represents a first step, which could evolve into a long-term and more comprehensive global instrument under the aegis of ICAO. The need for such an international law instrument has been confirmed on numerous occasions and in different fora as the ultimate solution to address, inter alia, the liability and regulatory aspects relating to GNSS, and should remain the prime goal.

6. CONCLUSION

6.1 This paper describes the main elements of a GNSS legal framework, which has been discussed for some time now in ICAO fora and in Europe. While this paper is developed from the European perspective of a multi-state environment in coping with the provision of GNSS, it should be recognized that the proposed framework is in line with the conclusions of the 32nd and 33rd Sessions of the ICAO Assembly. It could be easily adapted for use in other regions, as the European situation does not basically differ from that of other regions or groups of States.

6.2 A major role is foreseen for ICAO as the global co-ordinator of GNSS activities in the various regions would ensure global commonality, which is an essential element for aviation.

6.3 The overall framework as outlined in this paper could serve as the interim solution between the status quo and the long-term elaboration of a GNSS international convention. The confidence given to the various players by having a comprehensive framework would help to promote the implementation of GNSS at a faster pace.

6.4 The main elements of the contractual framework can be summarized as follows:

a) harmonized contractual relationships between the parties involved, providing clarity and legal certainty;

b) addresses the joint interests of States involved and provides the institutional conditions for States to allow the provision of GNSS services over their territory;

c) creates a flexible and readily available framework to cover all legal and institutional elements related to GNSS at the regional level;

d) offers the possibility for new players to easily join the system;

e) it is responsive to the evolution of the CNS/ATM system; and

f) it recognizes the central role of ICAO to ensure a world-wide resolution of legal and institutional issues.

7. ACTION BY THE CONFERENCE

7.1 The conference is invited to:

a) note the overall contractual framework approach set out in this paper as a proposed legal framework for the implementation of GNSS;

b) note that this approach, which closely follows the instructions given by the ICAO Assembly at its 32nd and 33rd Sessions, could be used as a basis for a possible future ICAO institutional framework; and

c) recommend that the ICAO Council take the elements contained in this paper into consideration when examining the report of the ICAO Secretariat Study Group on legal aspects of CNS/ATM systems at its 170th Session.

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