

**ELEVENTH AIR NAVIGATION CONFERENCE**

**Montreal, 22 September to 3 October 2003**

**REPORT OF COMMITTEE B TO THE CONFERENCE  
ON AGENDA ITEM 6**

(Paragraphs 6.2.5.8 through 6.2.5.10)

**ADDENDUM NO. 1**

The attached paragraphs have been approved by the Committee B as a part of the report on Agenda Item 6 presented in AN-Conf/11-WP/201

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*Note.—After removal of this covering sheet, this paper should be inserted in the appropriate place in the Report Folder.*

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Report on Agenda Item 6

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6.2.5.8 The meeting considered a proposal to develop requirements and provisions for a GNSS augmentation system to be used in support of A-SMGCS applications and based on the same technologies that are used for ADS-B. In the discussion, concerns were expressed over the use of the same systems for ADS-B and A-SMGCS because of perceived single point-of-failure considerations. It was also questioned whether there was a need for and feasibility of integrating ADS-B and GNSS augmentation systems that had already been defined in ICAO SARPs. In this connection, it was argued that the proposed approach, by using a common augmentation would ease the integration of air and surface movement in the new ATM environment. Although the proposal received some support, the meeting was not in a position to recommend it for further study by ICAO.

6.2.5.9 A proposal for ICAO to define requirements and develop appropriate provisions in support of a ground-based autonomous back-up to GNSS was reviewed. The proposal made use of the ICAO standard VDL Mode 4 system to provide, by range measurements from VDL mode 4 transmissions, an independent back-up for GNSS service. Interest in the proposed approach was expressed by some delegations, while others questioned its maturity and feasibility. Issues with on-board integration, both from a human factors and an avionics point of view were also raised. In conclusion, there was consensus that the proposal should be noted and referred to an appropriate ICAO body. This was noted by the Secretariat who would bring it to the attention of the Navigation Systems Panel (NSP).

6.2.5.10 The meeting was informed of the results of trials conducted in the European Region to validate a new GNSS terrestrial regional augmentation concept, the EGNOS Terrestrial Regional Augmentation Network (ETRAN). With this concept, a subset of the EGNOS data is broadcast through terrestrial networks. The results presented to the meeting were based on the use of VDL Mode 4 as the supporting network. The use of terrestrial links compensates for limitations in EGNOS satellite signal availability, for instance at northern latitudes. The meeting noted that, while the concept was similar to that underlying the GRAS for which SARPs are currently under development by the NSP, certain differences existed. The differences included the use of different physical layers. It was observed that the results provided to the meeting included useful supporting information for the validation of certain aspects of the GRAS currently under standardization by ICAO. The meeting noted the results achieved within the ETRAN programme and encouraged presentation of these results to an appropriated ICAO body. The Secretariat indicated the information would be brought to the attention of the NSP.

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