



Agenda Item 2:
del Orden del Día: Navigation systems developments

2.2 Follow up on the planning/implementation activities of the SBAS and GBAS augmentation systems in the CAR/SAM Regions

OWN SBAS SYSTEM

(Presented by Brazil)

RESUMEN

This Working Paper presents the Brazilian decision about a Regional owned SBAS implementation, in accordance to GNSS-TF/3 Draft Conclusion 03/02.

References:

- GNSS-TF/3 Report

1. Introduction

1.1 The GREPECAS/14 meeting, based on the Projects RLA/00/009 and RLA03/902 reports, considered that GNSS implementation, including SBAS and GBAS, shall be based in the operational requirements, as well as in the cost-benefit and technical analysis, allowing the establishment of a decision making process for its implementation. The decision making process must be done under a common perspective, where the political aspects acquire vital importance, considering that the States/Territories/International Organizations commitments to provide benefits, especially from the standpoint of the legal responsibilities associated with the installation of certain SBAS elements in a given State. The implementation of GNSS should allow for the concept globally. To do so, it will be necessary to study the operations and the contingency plans in case of a local service performance degradation.

1.2 Based on the project RLA /03/902 preliminary results, the GREPECAS/14 noted that the SBAS solutions proposed for the CAR/SAM regions should be directed to support at least the APV I capacity. In consequence the Decision 14/55 was made.

2. National ATM Operational Concept

2.1 Considering the ATM operational requirements, the Brazilian Administration has developed the National ATM Operational Concept, which is the document that guides the introduction of Global ATM Operational Concept in Brazil, supported by CNS/ATM Systems, in short, medium and long term.

2.2 Under the navigation chapter of the aforementioned document the ATM system navigation support will be based on the Performance Based Navigation (PBN) concept implementation, accordingly to the guidance contained in the Resolution 31/1 of the 36th ICAO Assembly.

2.3 The PBN implementation will use the GNSS/ABAS, as the primary means of navigation, which will provide the necessary support for operations in route, TMA, non precision approaches and APV/Baro-VNAV. It is important to stress that the National ATM Operational Concept navigation chapter is completely aligned with the PBN Road Map.

2.4 The National ATM Operational Concept does not envisage the SBAS introduction to support the Brazilian airspace operations. This decision was taken, bearing in mind that the cost-benefit is adverse, based on the following aspects:

- a) the use of basic GPS with RAIM also provides a very good availability for LNAV procedures in CAR/SAM Regions, fully supporting the PBN concept.
- b) A SBAS space segment cost would be high, due to the ionospheric uncertain situation in the geomagnetic Equator.
- c) The operational minima obtained through NPA and APV/Baro-VNAV will support the operational requirements for the major part of the airports.
- d) The precision approach requirements would be supported by GBAS CAT-1 and, in the long term, by the use of the second civil frequency.

3 Suggested action

3.1 The meeting is invited to take note of the information provided in this WP and to consider the Brazilian decision in the CNS Committee and GNSS-TF tasks assignment.
