



INTERNATIONAL CIVIL AVIATION ORGANIZATION

Sixth Meeting of the APIRG Infrastructure and Information Management Sub-Group (IIM/SG6)*(Nairobi, 29 July - 3 August 2023)***Agenda Item 3 : Achievements in AIM, CNS and MET****3.2 Implementation of ASBU elements and Achievements of IIM Projects****WP3.2F Summary of CNS IIM SG NAV Project Teams achievements***(Presented by Nfongang Gerald Etta)*

SUMMARY
<p>This working paper outlines the status of the APIRG IIM SG Navigation project, indicates the challenges encountered by the Project Team, how they have been faced and proposes recommendations and way forward for improvement.</p> <p>Action by the meeting in paragraph 3</p>
<p>REFERENCE(S):</p> <ul style="list-style-type: none">▪ Global Air Navigation Plan (GANP)▪ AFI Air Navigation Plan (ANP)▪ ICAO Annex 10 Volumes I and associated docs (8071, 9849, 9613)
<p>This working document relates to ICAO Strategic Objectives of:</p> <p>A – Safety and B – Air Navigation Capacity and Efficiency.</p>

1. INTRODUCTION

1.1 The Navigation Project was established during the first APIRG Sub-Group on Infrastructure and Information Management (IIM/SG/1) meeting held in Nairobi, Kenya from 27 to 30 June 2017, to support States in the implementation of ICAO Standards and Recommended Practices (SARPs) and carry out specific activities aimed to enable APIRG to discharge its functions and responsibilities in the areas of CNS, AIM and MET. This assistance to States is in the framework of the technologies Roadmap for Navigation defined in the GANP and the AFI strategy, in the implementation of Aeronautical Navigation Service by the effective implementation of:

- a) Aeronautical conventional Radio Navigation Systems (VOR, DME, ILS)
- b) Global Navigation Satellite systems (GNSS-core and augmented).

coherent and compatible with the developments carried out within the framework of the ATM Operational Concept, the Global Air Navigation Plan and the associated ASBU Modules for AIM, CNS and MET.

1.2 The effective realization of the above objective requires the gathering and analysis of available data on the current status of implementation of conventional radio navigation aids and Global satellite navigation systems, both core and augmented as well as the development of associated project documentation in line with the specifications of the APIRG procedural handbook.

2. DISCUSSIONS

2.1 Accomplishments

- a) In order to collect data, the team has developed a project questionnaire which was submitted to the secretariat for transmission to States.
- b) The team developed a project term of reference document.
- c) The team had a series of project meetings on the google meet platform.
- d) The team has explored alternative means of data collection for the project, including the use of data from Frequency Finder and States AIPs. The option of Frequency Finder was put away as the data obtained from the tool at the time consideration readily showed a lot of inconsistencies. The option of States AIPs is being explored but remains insufficient as operational details on facilities availability, replacement plans, fleet GNSS capabilities and others which are necessary for appreciating the operational status of implemented facilities presented on the AIP are unavailable.
- e) Basic data on the numbers of conventional navigation aids and use of GNSS has been obtained from the State AIPs and a preliminary analysis reveals the following concerning the implementation of VOR/DME and ILS facilities for 23 States under consideration (see Appendix A to this WP):
 - Average percentage implementation with respect to ANP vol II 2017: **70% for ILS/DME**
 - Average percentage implementation with respect to ANP vol II 2017: **125% for VOR/DME**. This percentage is justified by the fact that some States having planned the installation of VOR ended up with VOR/DME stations which carries the number of VOR/DME stations to numbers above the planned. This information is depicted in the chart in the attached excel file.
 - Not presented on the chart, but a progressive phase out of the NDB can be observed.
- f) The reference data used is from **TABLE CNS II-AFI-1 – NAVIGATIONAL AIDS of the eANP downloaded from the WACAF website.**
- g) The above data having been obtained from the AIPs may not reflect the reality on the ground at the moment. Other elements to consider are yet unavailable for the same reason. A reliable and exploitable analysis can only be obtained if the States come in and comply with data that reflects the reality on the ground.

2.2 Challenges

- a. The major challenge has been the availability of project team members causing repeated postponement of meetings. A majority of the present contributing members are not officially designated persons. To handle this challenge, the team adopted to carry on with a meeting even if just 4 members sign in for the meeting, envisaging organization face to face meetings.
- b. The unavailability of the States feedback. A reliable gap analysis cannot be performed without reliable data. Data will only be reliable if it came from the States.

2.3 Perspectives

- a. Get feedback from designated team members on their availability to work on with the project team.
- b. Request the officialization of the designation of active team member who are not yet officially designated.

- c. Get completed questionnaires from States and carry out an objective analysis of the status quo of radio navigation aids to serve as a basis for proposals for amelioration of the ANP.

3. ACTIONS BY THE MEETING

3.1 The meeting is invited to:

- a) Reflect on a strategy to improve on implication of designated delegates in IIM SG project activities.
- b) Consider and approve the participation of SATNAV-Africa JPO in the project navigation project.
- c) The meeting is invited to call on States through a State letter to update their list of IIM SG navigation project team delegates.

3.2 Draft Conclusion /Decision 6/xx : Title of Conclusion/Decision

That ;

States should set up mechanisms to evaluate the effective participation of their delegates in IIM SG project activities and to communicate the contact email address to ease liaising with the project teams.

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