International Civil Aviation Organization

SECOND MEETING OF SPECTRUM REVIEW WORKING GROUP (SRWG/2)

Bangkok, Thailand 12 – 14 May 2015

Agenda Item 8:   Any other business

INFORMATION ON FREQUENCY ASSIGNMENT TOOL USED IN INDIA

(Presented by Airports Authority of India)

SUMMARY

This paper presents the background information and salient features on the frequency assignment too used in India.

1.0   INTRODUCTION

1.1   This paper intends to provide background information and salient features on the frequency assignment tool used in India for planning selection and assignment of frequencies for CNS facilities.

2.0   DISCUSSION

2.1   Presently, the frequency assignment planning in AsiaPac Region is based on **Conclusion 11/4, ICAO Third Asia/Pacific Regional Air Navigation** (ASIA/PAC/3 RAN) **Meeting** on the *Procedure for very high frequency (VHF) aeronautical mobile service (AMS) frequency assignments.*

2.2   Similarly, the procedure for development of radio navigation aids (NDB/VOR/ILS) is in line with Conclusion 12/9 of the above said RAN meeting.

2.3   These assignments are published by ICAO Asia Pacific Regional Office in the following lists:

   i)   **Frequency List 1**: For the navigation facilities (NDB) in the band of 190-526.5 kHz

   ii)   **Frequency List 2**: For the navigations facilities (VOR/DME and ILS) in the bands of 108-117.975 MHz and 960 – 1215 MHz

   iii) **Frequency List 3**: For aeronautical communication facilities in the VHF Frequency Bands from 117.975 to 137 MHz

2.4   The above Three lists also contain frequency planning and selection criteria for these facilities. Accordingly states are required to coordinate the frequencies with ICAO AsiaPac Regional office to avoid harmful interference.

3.0   Salient features of present frequency finder tool used in India:

3.1   In order to meet the growing demands for frequencies in various aeronautical bands and ensure better frequency coordination with ICAO and national licensing authority, an automated tool to identify and assign suitable frequencies and manage the data of such assignments was felt necessary.

3.2   The above requirement culminated in the development and use of a frequency finder tool Named "**Frequency Management Software**" (**FMS**). The tool was locally developed and is in regular use since 2005.

3.3   The planning and selection criteria applied in the tool were based on frequency utilization plan and selection criteria provided in the concerned ICAO frequency lists and relevant ICAO Annexes/Documents and ITU-RR provisions.

3.4   The features of various modules of FMS tool and their functions are appended below:

  i)   **Frequency Master Module**: This module is the main one and contains location details and assignable frequency data in the different aeronautical bands. All other modules are using the data from this module.

  ii)   **Frequency Selection Module**: This module is used to identify and assign suitable frequencies for HF, VHF, VOR, ILS, DME, GBAS facilities.

  iii) **Frequency List Module**: This module contains data concerning all the assigned frequency details, which include location, facility, frequency, geo-coordinates, code etc,

  iv)   **NOC Module**: This module is used to make frequency coordination (aeronautical and non-aeronautical) with Indian Regulator (Licensing authority) for issuing necessary license to other users including military services (classified).

  v)   **License Management Module**: This module contains all the details of licenses issued by the Regulator including payment and renewal details.

  vi)   **Report Module**: The Report Module helps to generate various reports/frequency lists for reference. The details are periodically checked and updated.

3.5   It may be mentioned that civil aviation and the regulator have mutual consultation and coordination mechanism in place. The regulator duly coordinates and obtains NOC from aviation before issuing licenses to other users to avoid harmful interference.

3.6   India has planned to examine before implementing the changes/modifications to Frequency Management Software in line with provisions brought out in the new ICAO document 9718 (Volume-II) in respect of VHF assignments. In this regard, India is keen to understand the various functions of ICAO frequency finder tool.

4.0   ACTION BY THE MEETING

4.1   The meeting is invited to note the information in this paper.

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