25th MEETING OF THE AFI SATELLITE NETWORK MANAGEMENT COMMITTEE (SNMC/25)

Fourth Working Group meeting

Freetown, Sierra Leone, 18–22 Dec 2017

Agenda Item 7:Preparation of the ITU World Radio Communication Conference 2019 (WRC-19)

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SUMMARY

An Information Paper for Agenda Item 7.
Preparation of the ITU World Radio Communication Conference 2019 (WRC-19).

1. INTRODUCTION

During the International Telecommunications Union (ITU) World Radiocommunication Conference (WRC-15), an agenda item 9.1.5 was allocated to address the issue of regulatory measures to protect the fixed satellite services, C-band used for the transmission of aeronautical information (VSAT) from interference on networks.

ITU WRC-15 has taken a resolution, Resolution 154 seeks to support the technical and regulatory measures in countries in Region 1 to support the existing and future Fixed Satellite Services (FSS) earth stations in the 3400 MHz - 4200 MHz band used for satellite communications related to safe operation of aircraft and reliable distribution of aeronautical information.

In preparation for the ITU WRC-19, a working paper was presented at the ICAO Frequency Spectrum Management panel fourth working group meeting in Bangkok for inclusion of the VSAT on the Frequency Spectrum Strategy and Policy. This will ensure the action by ICAO for the continued regulatory measures to protect the FSS C-Band VSAT frequency spectrum.

2. DISCUSSION

2.1 The points below provide the background of VSAT networks in AFI region and the usage for Aeronautical purposes in the region:

a) Aviation safety across the African Continent has been compromised by a lack of reliable fixed aeronautical telecommunications infrastructure used for providing Air Traffic Services/Direct Speech (“ATS/DS”) and Aeronautical Fixed Telecommunications Network (“AFTN”) voice and data services as well as extended VHF for aeronautical mobile service.

b) AFI States and Service Providers, agreed to introduce Very Small Aperture Terminal (VSAT) networks technology to resolve the lack of communications. The basic networks evolved with improving technology became available networks supporting the Southern African Development Community (SADC), the North-East Africa-Indian Ocean Region (NAFISAT), to address the ATS/DS and AFTN deficiencies within this region.

c) In Western and Central Africa Region, ICAO in collaboration with the European Commission and the ANSP of ASECNA, NAMA, GCAA developed the AEROSATEL network which provided Reliable Aeronautical Fixed and mobile services. VSAT terminals in the following ACCRA, KANO, N`DJAMENA and NIAMEY FIR. This network was expanded and became (AFISNET and covers all the ASECNA area in the Western and Central Africa, and the Indian Ocean (Madagascar, Comoros and Mauritius) The expansion continued to include Roberts FIR, Reunion and Mayotte, , Algeria, Sao Tome & Principe, South Africa, France and Spain. Up today, AFISNET is expanded to SAM and to CAR regions with AFISNET nodes in Recife (Brasil) and in Cayenne (French Guyana) and Piarco (Trinidad and Tobago) offering the opportunity of its interconnection the South American digital network REDDIG.

d) AFISNET through additional Multi-Channel per Carrier ("MCPC") point-to-point links is interconnected to the SADC and NAFISAT VSAT networks as well as to the CAFSAT (Central Atlantic Firs VSAT) Network which links the SAM, EUR and AFI regions and provides interconnectivity between the AFI networks and the South American digital network (REDDIG).

e) The current aeronautical VSAT infrastructures cover all the Africa and Ocean Indian Region and interconnect it to the other Regions notably SAM, EUR and CAR Regions. These VSAT networks support all aeronautical communications services including the extension of VHF aeronautical mobile, navigation and surveillance. VSAT networks are also used for data links for the meteorological services in Africa. Today, VSAT networks constitute a real infrastructure, spanning the entire African continent and beyond.

f) **The availability of the entire 3400 MHz to 4200 MHz Downlink and 5725 MHz to 6725 MHz Uplink Fixed Satellite Service C-band is crucial for the AFI Region** to ensure the continued growth of traffic while maintaining the required level of safety in this region.

3. CONCLUSION

Beyond ITU WRC 2015, the state's administrations in AFI Region have to consider Resolution 154 when planning and licencing in the Fixed Satellite Services (FSS) band of 3400 MHz - 4200 MHz

In preparation for the ITU WRC 2019, the VSAT have been included in ICAO Frequency Spectrum strategy and policy document (DOC 9718) in ensuring regulatory and technical measures are taken by states to protect the frequency band.

The agenda item in discussion for WR-19 is ITU A.I 1.10, which deals with "Considering spectrum needs and regulatory provisions for the introduction and use of the global aeronautical distress and safety system (GADSS), in accordance with Resolution 426 (WRC-15)''.

A Working paper was submitted to the ATU APM 19 -2 which was held in September 2017 in Dakar. Subsequently the AFI Region participated in the 1st ITU inter-regional workshop in preparation for the WRC-19 which was held in November 2017 in Geneva.

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