



**INTERNATIONAL CIVIL AVIATION ORGANIZATION  
WESTERN AND CENTRAL AFRICA OFFICE**

**Third Meeting of the Central Atlantic FIR Satellite Network (CAFSAT)  
Management Committee (CNMC/3)  
(Dakar, Senegal, 15-16 July 2013)**

**Agenda Item 4: interconnection and interoperability of CAFSAT with its neighboring networks (NAFISAT, REDDIG, MEVA)**

*Preparation of WRC-15*

(Presented by the secretariat)

**SUMMARY**

The purpose of this paper is to provide the meeting with the actions required to be undertaken by CNMC members in the framework of the preparation of ITU World Radiocommunication Conference 2015

**Reference:**

Reports on ACP WG/F Meetings  
Final acts of WRC-12  
ITU-R Studies 2109; 2199 on C Band sharing

**Related ICAO Strategic Objectives: A: Safety; B: Air Navigation Capacity and Efficiency**

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**Related ASBU Bloc 0 Modules, Performance Improvement Aerials and Applications:**

**B0-FRTO/PIA3-PBN En Route Trajectories;**

**B0-FICE/PIA2-AIDC,**

**B0-DATM/PIA2-AIM,**

**B0-TBO/PIA4-Datalink**

**B0-AMET/PIA2-MET**

**Action by the meeting see paragraph 3**

**1. Introduction**

1.1 At World Radiocommunication Conferences (WRC), convened by International Telecommunication Union (ITU) about every three - four years, changes are made to the ITU Radio Regulations, including the Table of Frequency Allocations (Article 5 of the ITU Radio Regulations), on the basis of proposals made by States.

1.2 Therefore, the civil aviation community under the technical guidance of ICAO brings its needs through ICAO position, as developed by the Air Navigation Commission, reviewed by all ICAO States, and agreed by the ICAO Council.

The forthcoming WRC is scheduled to take place on 2015 and the experience gained by some of the SAT community during the past Conferences recommends that earlier preparation activities be conducted in order to support ICAO position that includes the concern raised by the Aeronautical VSAT networks managing bodies for a safe operation of the 3400-4200MHZ C-Band

**2. Discussion**

## 2.1 Overview on SAT stakeholders for the preparation of WRC

The preparation of WRC comprises various activities at national, sub / regional and international level.

At the national level the National Authority of Regulation of Telecommunication leads the process by capturing and arbitrating the needs from the spectrum users in line with ITU Radio Regulation provisions.

At this level the Civil Aviation Authority (CAA) should be the flag holder of the Civil Aviation community and will summarize the position of ICAO as well as the local concerns of aviation industry in terms of availability of spectrum, prevention and mitigation of harmful interferences.

The CAA, assisted by Air Navigation Service Providers (ANSPs), Airports Operators and Airlines must ensure the participation of civil aviation in the national coordination meetings convened by the Telecommunication Regulator.

At the sub regional level the regulators are usually organized as specialized associations of sub regional organizations for economic integration.

In particular for AFI CNMC members, ECOWAS/UEMOA telecommunication regulators have established the **West African Telecommunication Regulators' Association (WATRA: <http://www.watra.org>)** located in Abuja, Nigeria while the central area established the **Central Africa Telecommunication Regulators' Association (CATRA: <http://www.artac.cm>)** located in Yaoundé, Cameroon to harmonize their point of view in the framework of the policy agreed by their states.

The **Southern African Development Community (SADC)** has established the **Communication Regulators' Association of Southern Africa (CRASA: <http://www.crasa.org>)** located in Gaborone, Botswana. The contact of some individual Telecommunications' Regulators of Western and Central Africa can also be downloaded at: <http://www.cipaco.org/spip.php>.

These associations should be provided with the ICAO position for WRC as well as with the common concerns encountered in the sub region in the operation of frequency spectrum for air navigation service provision.

At the interregional level, the **African Telecommunication Union (ATU: <http://atu-uat.org/index.php?lang=en>)** located in Nairobi, Kenya, the **Inter-American Telecommunication Commission (CITEL)**, the **European Conference of Postal and Telecommunications Administrations (CEPT)** are coordinating the actions within the concerned regions before, during and after the WRC meetings. In particular, the ATU preparatory meetings are aiming to defining a regional common position in each agenda item of the conference. They are supposed to liaise with other regionals Telecommunication Unions:

- Asia-Pacific Telecommunity (APT);
- Arab Spectrum Management Group (ASMG);
- Regional Commonwealth in the Field of Communications (RCC)

The key role of CNMC CAAs will consist on providing ATU, CITEL and CEPT through their regulators with the concerns of the aviation community what suppose that the position of ICAO is captured understood and shared with stakeholders.

As an example, before each WRC, ATU organizes 03 to 04 coordinating meetings aiming to harmonizing the position of African States for the Conference.

At the international level, ITU regularly hosts the Conference Preparatory Meetings (CPMs) during which most of the agenda items are preliminarily discussed, based on the results of the studies undertaken by the specialized ITU-R Working Parties and Study Groups.

Although it may not be possible for each CNMC member to participate in these CPM meetings, the attention of CAAs must be reminded on the concerns of the SAT aviation community so that these concerns be taken into consideration by the national sub regional and regional coordination meetings to bring a clear support to aviation spectrum provision. This coordination task is undertaken by the regional Frequency Management Groups that are specialized technical Group established by the Planning and Implementation Regional Group (**PIRGs**). As an example the AFI Frequency Management Group (AFI/FMG) has been very active during last WRC-12; this group is currently chaired by ASECNA, ICAO WACAF Office is servicing.

## **2.2- Stakes and challenges on the future WRC-15 and their impact on the safe operation of CAFSAT Frequency band**

During the two last conferences WRC 2007 and WRC 2012, it was recognized through Recommendation 724 (WRC-07) and Resolution 154 (WRC 12), the importance of the use of VSAT technology for the needs for the international civil aviation especially in developing countries and therefore the need for technical and regulatory measure to ensure a safe operation of the Fixed Satellite Service 3400-4200 C-band supporting satellite based aeronautical VSAT networks (**See WP 06A**). These results are important steps toward a suitable protection of the band that is a corner angle for the provision of a robust telecommunication infrastructure for the SAT region although subject to candidature by IMT 200, WIMAX and other emerging broadband mobile telecommunication.

WRC-07 allocated the frequency band 3.4 – 3.6 GHz to the mobile, except aeronautical mobile, service on a primary basis in some countries, including ITU Region 1, subject to regulatory and technical restrictions (**No. 5.430A**). The deployment of mobile service systems in the vicinity of airports has led to an increased number of cases of interference from the mobile service stations to the FSS receivers. Consequently, some additional measures may need to be adopted to improve the protection of the FSS links supporting aeronautical communications and ITU-R and States were called upon by Resolution 154-WRC-12 to conduct studies in this matter that will be addressed under **Agenda item 9.1, sub-item 5 of WRC-15**.

It may be noted that Resolution 154-WRC-12 applies with the limitation to **“some countries in Region 1”**. ITU region map presented in appendix to this working paper shows that although they are operating C-band based VSAT networks (CAFSAT, REDDIG and MEVA) for the provision of aeronautical communication CAR/SAM region is not in ITU region 1, so is APAC.

ICAO supports ITU-R studies on the appropriate regulatory and/or technical measures that Administrations in the SAT region should apply to facilitate protection of VSATs used for the transmission of aeronautical and meteorological information in the 3.4 to 4.2 GHz frequency band from other services operating in the band. This will ensure the continued growth of air traffic while maintaining the required level of safety in this region.

The ICAO position on all issues of relevance to aviation on the agenda of WRC-15 is currently under development. Following a review by the Air Navigation Commission, a draft of the ICAO position is expected to be communicated to all ICAO Contracting States by State Letter in December. It is expected that the position will be finalized and agreed by ICAO Council in June 2013. A preliminary draft of the ICAO position is available at:

[http://legacy.icao.int/anb/panels/acp/wg/f/wgf27/ACP-WGF27-Flimsy05\\_DraftPos\\_Clean\).doc](http://legacy.icao.int/anb/panels/acp/wg/f/wgf27/ACP-WGF27-Flimsy05_DraftPos_Clean).doc)

Some CNMC States are pioneers, since the 90s, in the usage of VSAT technology for the implementation of satellite-based networks that support in this FSS band all aeronautical communications services including the extension of VHF aeronautical mobile, navigation, surveillance and upcoming ATN components. Therefore, they should actively participate in the actions aiming to ensure a suitable protection of the band. The main initiative that can help overcoming the challenges for the forthcoming preparatory period of WRC-15 should amongst others be:

- Support by CNMC members of ICAO position for WRC-15;
- Strong link between ANSPs and CAAs to represent and defend the ICAO position at the national regulation level with the aim to obtaining a clear support from the regulator
- Active participation in the national sub regional and regional preparatory meetings organized by, ANSPs, Regional Frequency Management Group, ATU, CEPT, CITEL, ICAO.
- Participation when possible in ITU preparatory meetings such as CPMs;
- Participation in the Conference itself.

## **2. Action by the meeting**

The meeting is invited to:

- a) Take note of the information given above
- b) Encourage States/Organizations to participate in the preparatory activities for WRC-15;
- c) Take into account the forthcoming ICAO position for WRC-15 to conduct the Collaborative Decision Making (CDM) with the stakeholders involved in the usage of aeronautical spectrum;
- d) Consider the above stakes and challenges on the FSS band when conducting the re-engineering exercise of CAFSAT

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**Appendix**

**ITU Regions**

