XI MEETING OF PERMANENT CONSULTATIVE COMMITTEE II: RADIOCOMMUNICATIONS INCLUDING BROADCASTING **September 16 to 19, 2008** **Mara Del Plata, Argentina**	**OEA/Ser.L/XVII.4.1** **CCP.II-RADIO/doc. xxxx/08** **29 August 2008** **Original: English**

PRELIMINARY VIEWS FOR WRC-11

(Item on the Agenda: 4.1)

(Document submitted by the delegation of United States)

The United States of America submits the attached Preliminary Views on WRC-11 Agenda Items 1.5, 1.8, 1.12 and 1.20 for consideration of CITEL PCC II. The U.S. looks forward to discussion on these views at the twelfth meeting of PCC II.

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PRELIMINARY VIEWS ON WRC-11

AGENDA ITEM 1.5: to consider worldwide/regional harmonization of spectrum for electronic news gathering (ENG), taking into account the results of ITU-R studies, in accordance with Resolution **954 (WRC-07)**

ISSUE: To review the needs of ENG systems, to decide if harmonization is possible, and in what potential bands such harmonization is appropriate. This issue may also lead to requests from administrations for consideration of additional spectrum allocations.

BACKGROUND: The issue of spectrum for ENG applications has been a long-standing issue within the ITU and has been prominent for several WRC study cycles. WRC-07 decided to include an agenda item that would look at possible global/regional harmonization. The need for global/regional harmonization must also take into account advances in technology, which may account for operations that are more efficient.

There are several different broadcasting services, which operate under the umbrella of ENG and each will have its own unique requirements for harmonization based on deployment, technical parameters, and user density.

U.S. VIEW: The United States supports reviewing the requirements developed in WP 6A to determine if harmonization is feasible on a regional/global basis for ENG systems. The United States supports studies on technologies for ENG that maximize efficient and flexible use of frequencies at the national level in lieu of global/regional identification of frequency bands. If studies demonstrate that such harmonization is required and feasible, the United States supports focusing on studying the impact of identifying in the Radio Regulations harmonized spectrum for ENG systems on the existing services.

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UNITED STATES OF AMERICA

PRELIMINARY VIEWS ON WRC-11

AGENDA ITEM 1.8: to consider the progress of ITU-R studies concerning the technical and regulatory issues relative to the fixed service in the bands between 71 GHz and 238 GHz, taking into account Resolutions **731 (WRC-2000)** and **732 (WRC-2000)**

ISSUE: The intent of this agenda item is to study compatibility between passive and active services and develop sharing criteria for co-primary active services in bands above 71 GHz. In particular, it is important to study the spectrum requirements for active services for which the technology will be commercially available at a future date. Based on proposals and documentation available at WRC-07 it is likely that some administrations may seek to develop sharing criteria for the radio regulations in the form of pfd limits on space service downlinks.

BACKGROUND: WRC-2000 adopted Resolutions **731** and **732** as part of the conference decisions on the allocation of frequency bands above 71 GHz to the Earth exploration-satellite (passive) and radio astronomy services resulting in an overall rearrangement of the allocation tables in Article **5** of the Radio Regulations. These resolutions became necessary because the ITU-R was not able to fully evaluate for the active services (e.g., fixed, mobile, radiolocation, etc.), the new arrangement of their allocations vis-à-vis the passive allocations or each other. Therefore, the conference decided to adopt these two resolutions providing for further study and possible action in the future when active services technology and emerging requirements become better known. Since that time, millimeter wave spectrum above 71 GHz has become the subject of increasing interest for commercial use due to its unique propagation characteristics and the wide bandwidth available for carrying telecommunications traffic. New technologies are now emerging that offer the possibility of using these higher frequency bands for fixed wireless applications, taking advantage of the wide bandwidths available to support applications such as extremely high speed data transmission (e.g., data rates in the 1 to 10 Gbps range) for short distance (e.g., < 1-2 km). Several administrations have made or are making provisions for such wideband terrestrial fixed wireless applications.

In a somewhat unique set of circumstances, WRC-07 did not adopt a Resolution to define this agenda item. Therefore, the definition and scope of the agenda item is unclear.

U.S. VIEW: The United States supports ITU-R studies concerning the fixed service bands between 71 and 238 GHz. The United States supports protection of the existing services allocated within this frequency range.

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UNITED STATES OF AMERICA

PRELIMINARY VIEWS ON WRC-11

AGENDA ITEM 1.12: to protect the primary services in the band 37-38 GHz from interference resulting from aeronautical mobile service operations, taking into account the results of ITU-R studies in accordance with Resolution **754 (WRC-07)**

ISSUE: Resolution **754 (WRC-07)**, "Consideration of modification of the aeronautical component of the mobile service allocation in the 37-38 GHz band for protection of other primary services in the band," calls for consideration of the compatibility of the aeronautical mobile service (AMS) with other primary services in the band 37-38 GHz in order to determine appropriate compatibility criteria for inclusion within the Radio Regulations or an appropriate modifications to the Table of Frequency Allocations.

BACKGROUND: Space research service (SRS) earth station receivers are being implemented in the 37-38 GHz band to support manned missions, for both near Earth and deep space distances. Use of the wider bandwidth available in the 37-38 GHz band is required to support the increasing data requirements of planned manned missions.

Preliminary analysis within ITU-R Working Party 7B has shown that aeronautical mobile stations (assuming parameters from lower bands) are capable of causing unacceptable levels of interference for significant periods whenever they are within-line-of-sight of an SRS receiving earth station. In particular, SRS earth station receivers operating in the 37-38 GHz band have a very low interference threshold. Protection criteria applicable to these SRS Earth stations operating with either deep space or non-deep-space missions are contained in ITU-R recommendations. The operation of an aeronautical mobile station exceeding the protection criteria of the SRS for an extended period could jeopardize the success of a manned or scientific space mission. WRC-07 approved this agenda item based on information that no aeronautical mobile systems operate or plan to operate in the 37-38 GHz band.

CITEL proposed this agenda item at WRC-07 with the intent to exclude the AMS from the 37-38 GHz band in order to protect the other services using this band, particularly the space research service. Preliminary studies in the ITU have shown that sharing with traditional AMS systems is not feasible if they were to operate in the band. However, since WRC-07 adopted this agenda item, the aviation industry is considering several candidate bands, which includes the 37-38 GHz band, for a newly identified airborne application. If studies show this application can operate without exceeding applicable interference thresholds, it may be feasible to establish sharing criteria that protects the other primary services in the band 37-38 GHz.

Resolution **754 (WRC-07)** calls for sharing studies between the AMS and the SRS, fixed service, FSS and MS in the band 37-38 GHz to determine appropriate criteria to ensure the protection of the other primary services from AMS operations in the band 37-38 GHz.

U.S. VIEW: The United States supports sharing studies in the band 37-38 GHz to determine appropriate compatibility criteria for the AMS. If the studies show that sharing is feasible with particular AMS applications, support the establishment of sharing criteria that both protects the other primary services in the band 37-38 GHz, as well as allows for such compatible AMS applications. However, if the studies show that sharing is not feasible, support the suppression of the AMS from the 37-38 GHz band.

UNITED STATES OF AMERICA

PRELIMINARY VIEWS ON WRC-11

AGENDA ITEM 1.20: To consider the results of ITU-R studies and spectrum identification for gateway links for high altitude platform stations (HAPS) in the range between 5 850-7 075 MHz in order to support operations in the fixed and mobile services, in accordance with Resolution **734 (Rev.WRC-07)**

ISSUE: Different segments of the 5 850-7 075 MHz frequency band are utilized for fixed, fixed-satellite, and mobile services. Resolution **734 (WRC-07)** proposes to study spectrum identification for gateway links for high-altitude platform stations in the range from 5 850 to 7 075 MHz. The study effort is to identify two channels of 80 MHz each for gateway links for HAPS in the range from 5 850 to 7 075 MHz, in bands already allocated to the fixed service, while ensuring the protection of existing services.

BACKGROUND: Previous WRC efforts (WRC-97, WRC-2000) had undertaken initiative to examine HAPS types of applications in various frequency bands. Due to the fact that all previous studies were carried out in frequency bands significantly higher than 5 850-7 075 MHz, new electromagnetic compatibility (EMC) studies will have to be initiated and conducted. The EMC studies will have to address HAPS ability to coexist with mobile, fixed satellite services as well as with radiolocation service, which exists in adjacent frequency bands.

Land-based and maritime radiolocation systems operate in the lower adjacent frequency band. Fixed, mobile, and fixed-satellite systems also operate in the 5 850-7 075 MHz band. Remote sensing systems operate in the 6 475-7 075 MHz band.

U.S. VIEW: The United States supports the studies for potential HAPS identification in the 5 850 – 7 075 MHz band. The identification of any spectrum for HAPS in the 6 GHz band should not constrain the use of the 5 850-7 075 MHz band or the adjacent bands by any application of the services to which they are allocated.