DRAFT

UNITED STATES OF AMERICA

PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 1.1: *to consider additional spectrum allocations to the mobile service on a primary basis and identification of additional frequency bands for International Mobile Telecommunications (IMT) and related regulatory provisions, to facilitate the development of terrestrial mobile broadband applications, in accordance with Resolution **233** (WRC-12)*

Background Information:

According to a recent ITU report, mobile-broadband subscriptions have climbed from 268 million in 2007 to 2.1 billion in 2013. This reflects an average annual growth rate of 40%, making mobile broadband the most dynamic ICT market. In the developing countries, the number of mobile broadband subscriptions more than doubled from 2011 to 2013 (from 472 million to 1.16 billion) and surpassed those in the developed countries in 2013.[1] The mobile broadband access has become a key driver of global economic growth, job creation and competitiveness. In the developing countries, where mobile-wireless is often the only alternative for ubiquitous broadband access, it has become an economic imperative. Africa, for example, has experienced the highest growth, with mobile-broadband penetration increasing from 2% in 2010 to 11% in 2013. This dramatic growth in mobile broadband traffic, with mobile video comprising over 50% and growing, has resulted in an acute need for additional spectrum. The 2012 World Radiocommunication Conference recognized this need and adopted WRC-15 Agenda Item 1.1, in an effort to address the looming spectrum shortage for the mobile broadband services.

In considering the global spectrum requirements under WRC-15 Agenda Item 1.1, it is important to recognize that the spectrum below 1 GHz is exceptionally suited for cellular applications. In particular, the unique propagation characteristics in the 470-806/862 MHz range allow for wider area coverage which in turn requires less infrastructure and facilitates service delivery to rural or sparsely populated areas. In urban settings, mobile networks operating on these frequencies offer better indoor coverage, thereby, improving service delivery and availability.

Recognizing importance of this spectrum for the development of mobile broadband services, previous WRCs already allocated portions of the 470-806/862 MHz frequency range to the mobile service with identification for IMT (e.g., 450-470 MHz (No. **5.286AA**) and 698/790-902 MHz (No. **5.317A**)). The mobile deployments in these allocations resulted in considerable social and economic benefits but this spectrum is insufficient to address forthcoming growth in the mobile traffic.

The 470-806/862 MHz frequency range is allocated to the broadcasting service on a primary basis in all three Regions and used predominantly for the delivery of broadcast television. In most cases,

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[1] The World in 2013-ICT Facts and Figures, ITU, http://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2013.pdf

broadcast television stations provide video programming that is responsive to the needs and interests of the communities they serve. In many countries, over-the-air television broadcast remains the primary source for video programming service, but a significant trend among the viewing audience is towards other sources such as satellite, cable, internet, etc. In the United States, for example, only 10 percent of the television households rely solely on over-the-air broadcast television service.[2] Moreover, broadcast television itself continues to evolve to keep pace with technological and marketplace changes. Many television broadcasters now pursue a three-screen approach, sharing their programming online and on mobile devices in addition to providing it over the air. Giving consumers mobile access to broadcast television content, however, further increases demand on mobile spectrum.

Recognizing the growing need for mobile spectrum 470-806/862 MHz frequency range and different national priorities among the member states for the UHF broadcasting, it is necessary for WRC-15 to adopt a regulatory solution that would:

(a) Enable administrations to preserve broadcasting and other services in the UHF range and,
(b) Allow administrations flexibility to address the mobile spectrum shortage consistent with their domestic requirements.

To achieve these objectives, the WRC-15 proposal presented below provides changes to Article **5** of the Radio Regulations.

[2] Nielsen Company, Nielsen National Universe Estimates, January 1, 2012. Several factors contribute to the decrease in reliance on over-the-air broadcast television, including high cable penetration rates and the fact that consumers increasingly turn to online and mobile broadband platforms to access news, information and video programming.

Proposal:

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations

(See No.2.1)

MOD USA/1.1/1

460-890 MHz

Allocation to services		
Region 1	**Region 2**	**Region 3**
470-790 BROADCASTING MOBILE ADD 5.317A 5.149 5.291A 5.294 5.296 5.300 5.304 5.306 5.311A 5.312 5.312A	**470-512** BROADCASTING Fixed MOBILE ADD 5.317A 5.292	**470-585** FIXED MOBILE ADD 5.317A BROADCASTING 5.291 5.298
	512-608 BROADCASTING MOBILE ADD 5.317A	**585-610** FIXED MOBILE ADD 5.317A BROADCASTING RADIONAVIGATION 5.149 5.305 5.306 5.307
	608-614 RADIO ASTRONOMY MOBILE ADD 5.317A ; ADD 5.XXX Mobile-satellite except aeronautical mobile-satellite (Earth-to-space)	
	614-698 BROADCASTING Fixed MOBILE ADD 5.317A 5.309 5.311A	**610-890** FIXED MOBILE 5.313A MOD 5.317A BROADCASTING
	698-806 MOBILE 5.313B MOD 5.317A BROADCASTING Fixed 5.309 5.311A	
790-862 FIXED MOBILE except aeronautical mobile 5.316B MOD 5.317A BROADCASTING 5.312 5.314 5.315 5.316 5.316A 5.319	**806-890** FIXED MOBILE MOD5.317A BROADCASTING	
862-890 FIXED MOBILE except aeronautical mobile MOD 5.317A BROADCASTING 5.322 5.319 5.323	5.317 5.318	5.149 5.305 5.306 5.307 5.311A 5.320

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Reasons: Globally harmonized allocations to the mobile service in the 470-698 MHz band would enable introduction of innovative broadband services while preserving access to spectrum for the existing services such as broadcasting. The new allocation to the mobile service would provide administrations with the necessary flexibility to maximize spectrum utilization consistent with their domestic timetables, requirements and objectives. Under the proposed allocations arrangements, administrations, consistent with their domestic priorities, may continue to operate existing services such as broadcasting or utilize portions of the UHF band for implementation of new mobile broadband applications such as IMT.

SUP USA/AI 1.1/2

5.293, 5.297

Reasons: Consequential change. Proposed allocation to Mobile service supersedes allocation(s) by footnote.

MOD USA/AI 1.1/3

5.317A Those parts of the band 470-960 MHz which are allocated to the mobile service on a primary basis are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) – see Resolutions **224 (Rev.WRC-12)** and **749 (Rev.WRC-12)**, as appropriate. This identification does not preclude the use of these bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-15)

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Reasons: Globally harmonized allocations to the mobile service in the 470-960 MHz band would enable introduction of innovative broadband services such as IMT while preserving access to spectrum for the existing services such as broadcasting. The new allocation to the mobile service would provide administrations with the necessary flexibility to maximize spectrum utilization consistent with their domestic timetables, requirements and objectives.

ADD USA/AI 1.1/4

5.XXX In making assignments to stations in the mobile service in the band 608-614 MHz administrations shall take all practicable steps to protect the radio astronomy service operations from harmful interference. (WRC-15)

Reasons: Compatibility between mobile and radio astronomy stations is a localized issue that can best be addressed by administrations in the application of domestic regulations.