UNITED STATES DEPARTMENT OF COMMERCE
National Telecommunications and Information Administration
Washington, D.C. 20230

SEP 13 2006

Mr. John Giusti
Acting Chief of the International Bureau
Federal Communications Commission
445 12th Street SW
Washington, D.C. 20554

Dear Mr. Giusti:

The National Telecommunications and Information Administration (NTIA), on behalf of the Executive Branch agencies, has approved the release of an additional draft Executive Branch proposal for WRC-07. This proposal considers the federal agency inputs toward the development of U.S. Proposals for WRC-07.

The enclosed document contains a draft proposal for Agenda Item 1.4. Please note that the proposal only addresses the problem of identification of a number of Federal Government exclusive or shared frequency bands that currently are being considered by ITU-R Working Party 8F as candidate bands. The proposal does not comment on the merits of identifying additional spectrum for IMT, nor on the results or status of the work that the ITU was to undertake under Resolution **228**.

This proposal is forwarded for your consideration and review by your WRC-07 Advisory Committee. Jim Vorhies of my staff is the primary contact for NTIA.

Sincerely,

for Fredrick R. Wentland
Associate Administrator
Office of Spectrum Management

Enclosure

United States of America

DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE

Agenda Item 1.4: to consider frequency-related matters for the future development of IMT 2000 and systems beyond IMT 2000 taking into account the results of ITU-R studies in accordance with Resolution **228 (Rev.WRC 03)**;

Background Information: Resolution **228 (WRC-03)** calls for studies on frequency-related matters for the future development of IMT-2000 and systems beyond IMT-2000 (IMT-Advanced) as defined by ITU-R. Resolves 2 under Resolution **228 (WRC-03)** invites the ITU R to report, in time for WRC 07, on the results of studies on the spectrum requirements and potential frequency ranges suitable for the future development of IMT-2000 and systems beyond IMT 2000, taking into account:

- the evolving user needs, including the growth in demand for IMT 2000 services;
- the evolution of IMT-2000 and pre-IMT-2000 systems through advances in technology;
- the bands currently identified for IMT-2000;
- the time-frame in which spectrum would be needed;
- the period for migration from existing to future systems;
- the extensive use of frequencies below those identified for IMT-2000 in No. **5.317A**.

WARC-92 identified the bands 1 885-2 025 MHz / 2 110-2 200 MHz and WRC-2000 identified the bands 806-960 MHz (ITU-R Region 1: 862-960 MHz) / 1 710-1 885 MHz / 2 500-2 690 MHz for use on a worldwide basis by administrations wishing to implement IMT-2000 systems. Resolutions **212 (WARC 92)**, **223 (WRC-2000)** and **224 (WRC-2000)** invite administrations to make available the necessary portion of these identified bands for IMT-2000 development, while recognizing that administrations have the flexibility to use the bands for other applications of services to which the bands are allocated and to implement IMT-2000 in other mobile bands.

In order to identify additional spectrum to meet IMT-Advanced requirement, compatibility with existing services in the bands of interest must be demonstrated through ITU-R technical studies. However, at this time such studies have not been completed.

The prioritized candidate bands for IMT-2000 and IMT-Advanced systems are between 400 MHz and 5 GHz (ITU-R Report [IMT.CANDI]) and are:

1. 410-430 MHz
2. 450-470 MHz
3. 470-862 MHz (portions already identified for Region 2 and some administrations by Resolution **224**)
4. 2 300-2 400 MHz (already identified for some administrations (U.S.) by Resolution **223**)
5. 2 700-2 900 MHz
6. 3 400-3 650 MHz

7. 3 650-4 200 MHz
8. 4 400-4 940 MHz
9. 4 940-5 000 MHz

Four of the bands identified as candidates, 410-430 MHz, 2 700-2 900 MHz, 3 400-3 650 MHz, and 4 400-4 940 MHz are considered in this proposal. The remaining bands are 450-470 MHz, 470-698 MHz, 2 300-2 400 MHz, 3 650-4 200 and 4 940-5 000 MHz.[1]

The band 410-430 MHz is used extensively by many administrations for fixed and mobile communications systems, long-range surveillance systems, as well as personnel location systems. Ground, shipborne, and airborne radars, which are used for national security, utilize this particular frequency band. Parts of the band are also used for extra vehicular activity (EVA) communications by both the Shuttle and International Space Station on a primary basis for the space research service; and for transmitting hydrological and meteorological data.

In all three ITU-R Regions, the 2 700-2 900 MHz band is allocated to aeronautical radionavigation. The radionavigation service is designated as a safety service under RR No. **4.10** and harmful interference to it cannot be accepted. By footnote No. **5.423**, ground-based meteorological radars are authorized to operate on an equal primary basis. Previous detailed analysis and sharing studies undertaken by various ITU administrations and ongoing within the working parties have shown that the utilization of the 2 700-2 900 MHz band by IMT systems is not feasible.

The 3 400-3 650 MHz band is allocated to the radiolocation service on a primary basis in ITU-R Regions 2 and 3. The band 3 400-3 600 MHz is allocated to the radiolocation service on a secondary basis in ITU-R Region 1 and the band 3 600-3 700 MHz band is allocated to the radiolocation service on a secondary basis in ITU-R Regions 2 and 3. In this frequency range, administrations have developed and deployed a variety of mobile and transportable high power radar systems that operate on land, on ships, and on aircraft. The shipborne radars are principally used in coastal areas, but can be used during open ocean transit also. The airborne radars are highly mobile and operate in many areas of the world. A number of ongoing sharing studies submitted to the ITU-R have indicated that sharing in the 3 400-3 700 MHz band between the radiolocation service and IMT-Advanced systems operating in the mobile service is not feasible due to significant levels of interference into both the radar systems and IMT-Advanced devices.

The 4 400-4 940 MHz band is allocated on a primary basis to the fixed service. The 4 400-4 800 MHz band is allocated on a primary basis to the mobile service. The 4 500-4 800 MHz band is allocated on a primary basis to the fixed satellite service, subject to Appendix **30B**. The 4 800-5 000 MHz band is allocated on a primary basis to the mobile service, expect aeronautical mobile. The 4 990-5 000 MHz band is allocated on a primary basis to the radio astronomy service. ITU-R Working Party 8B successfully concluded studies under agenda item 1.5 that show aeronautical telemetry systems for flight test can share with fixed and mobile systems in this band. Use of this band includes many datalinks and a number of unmanned air systems networks. Troposcatter radio terminals are deployed in this band to provide secure digital long-haul radio trunking. Systems in this band include deployable communications systems as well as fixed and mobile radio relay networks.

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[1] The United States has not identified any additional bands that might be suitable.

The band 4 400–5 000 MHz is designated by several administrations in Europe and North America as a harmonised band to be used for defense communications and thus is critical to these administrations' ability to fulfill their peacekeeping obligations.

Proposal

ARTICLE 5

USA/ / 1 **NOC**

410-460 MHz

Allocation to services		
Region 1	**Region 2**	**Region 3**
410-420	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-to-space) 5.268	
420-430	FIXED MOBILE except aeronautical mobile Radiolocation 5.269 5.270 5.271	
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Reasons: ITU-R studies have not shown compatibility between IMT systems and the incumbent services in the 410-430 MHz band. Extensive use of this band for national security and public safety purposes preclude the use of this band for commercial wireless purposes.

ARTICLE 5

USA/ / 2 **NOC**

2 700-4 800 MHz

Allocation to services		
Region 1	**Region 2**	**Region 3**
2 700-2 900	AERONAUTICAL RADIONAVIGATION 5.337 Radiolocation 5.423 5.424	
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Reasons: ITU-R detailed analysis and sharing studies undertaken by various ITU administrations and working parties have shown that the utilization of the 2 700 - 2 900 MHz band by IMT-2000 and IMT-Advanced systems is not feasible.

ARTICLE 5

USA/ / 3 **NOC**

2 700-4 800 MHz

Allocation to services		
Region 1	**Region 2**	**Region 3**
.....		
3 400-3 600 FIXED FIXED-SATELLITE (space-to-Earth) Mobile Radiolocation 5.431	**3 400-3 500** FIXED FIXED-SATELLITE (space-to-Earth) Amateur Mobile Radiolocation 5.433 5.282 5.432	
3 600-4 200 FIXED FIXED-SATELLITE (space-to-Earth) Mobile	**3 500-3 700** FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile Radiolocation 5.433 5.435	
	3 700-4 200 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile	
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Reasons: ITU-R studies have not shown compatibility between IMT systems and the radiolocation service, nor between IMT systems and the fixed or fixed satellite service in the 3 400-3 650 MHz band.

ARTICLE 5

USA/ / 4 NOC

2 700- 4 800 MHz

Allocation to services		
Region 1	**Region 2**	**Region 3**
.....		
4 400-4 500	FIXED MOBILE	
4 500-4 800	FIXED FIXED-SATELLITE (space-to-Earth) 5.441 MOBILE	

4 800-5 570 MHz

Allocation to services		
Region 1	**Region 2**	**Region 3**
4 800-4 990	FIXED MOBILE 5.442 Radio astronomy 5.149 5.339 5.443	
4 990-5 000	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY Space research (passive) 5.149	
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Reasons: Studies have not shown the compatibility of IMT with the radio relay and troposcatter networks operating within the fixed and mobile services. This NOC proposal applies to Agenda Item 1.4 and the identification of spectrum for IMT. The 4 500-4 940 MHz band is being considered for aeronautical mobile telemetry for flight test (air-to-ground) under Agenda Item 1.5.

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