



PUBLIC NOTICE

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Washington, D.C. 20554

News Media Information 202 / 418-0500
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DA 04-1698
June 14, 2004

THE FCC'S ADVISORY COMMITTEE FOR THE 2007 WORLD RADIOCOMMUNICATION CONFERENCE PROPOSES PRELIMINARY VIEWS ON WRC-07 ISSUES

On June 8, 2004, the World Radiocommunication Conference Advisory Committee (WRC-07 Advisory Committee) adopted preliminary views on numerous issues that the 2007 World Radiocommunication Conference (WRC-07) will address. The WRC-07 Advisory Committee was established by the Commission in January 2004 to assist it in the development of proposals for WRC-07. To that end, the WRC-07 Advisory Committee has forwarded the recommendations it has developed since the beginning of the year to the Commission for consideration. We have attached to this Public Notice the WRC-07 Advisory Committee's recommendations, which are in the form of "preliminary views". We appreciate the substantial amount of work that the WRC-07 Advisory Committee has put into developing its recommendations. This Public Notice requests comments on all of these preliminary views.

Based upon our initial review of the recommendations forwarded to the Commission, the International Bureau in coordination with other Commission Bureaus and Offices tentatively concludes that we can generally support most of the preliminary views recommended by the WRC-07 Advisory Committee. We do, however, find the preliminary views reflected in documents WAC/015 and WAC/026, to be premature or inconsistent with current Commission policies. We seek comment on the recommendations that appear in all of the WRC-07 Advisory Committee documents and on our initial impressions of which preliminary views we can support.

In addition, the National Telecommunications and Information Administration (NTIA) has submitted to the Commission preliminary views that have been developed by the Executive Branch Agencies. We also request comment on these preliminary views.

The comments provided will assist the FCC in its upcoming consultations with the U.S. Department of State and NTIA in the development of U.S. preliminary views. Once agreed by these agencies of the U.S. Government, preliminary views will be used by U.S. delegations at bilateral, regional and international meetings to stimulate discussion and to attempt to achieve common proposals with other countries on these issues. The proposed preliminary views that are attached to this Public Notice may evolve in the course of interagency discussions as we approach WRC-07 and, therefore, do not constitute a final U.S. Government position on any issue.

The complete text of these preliminary views and proposals is also available in the FCC's Reference Information Center, Room CY-A257, 445 12th Street, SW, Washington, DC 20554 or by accessing the

FCC's WRC-07 world wide web site at: <http://www.fcc.gov/wrc-07>. To comment on the preliminary views and proposals, please submit an original and one copy of your comment to Alexander Roytblat, FCC WRC-07 Director, Federal Communications Commission, Room 6-A865, 445 12th Street, SW, Washington, DC 20554. Comments should refer to specific preliminary views by document number. Parties preferring to e-mail their comments should address their comments to: wrc07@fcc.gov. The deadline for comments on the proposed preliminary views is July 2, 2004. It is necessary that all comments be received by July 2, 2004 in order to allow us to finalize the U.S. position before commencement of regional WRC-07 preparatory meetings.

I. Recommendations on draft preliminary views by the Advisory Committee for the 2007 World Radiocommunication Conference:

INFORMAL WORKING GROUP 1 (IWG-1)

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

(Res.746)

AGENDA ITEM 1.2: to consider allocations and regulatory issues related to the Earth Exploration Satellite (passive) Service, space research (passive) service, and the meteorological satellite service in accordance with Resolutions 746 (WRC-03) and 742 (WRC-03).

ISSUE:

This Preliminary View only addresses the 18 GHz aspects of Resolution 746 (WRC-03). For this case, the issue is the feasibility of sharing between meteorological satellites operating in the space-to-Earth direction and the fixed service and fixed satellite service in the space-to-Earth direction in the band 18.0-18.4 GHz. (Resolution 746)

BACKGROUND:

Resolution 746 indicates that a space-to-Earth meteorological allocation exists in the band 18.1-18.3 GHz, but that this allocation is not wide enough to support the data rates viewed as necessary by the Metsat service. The Metsat service wishes to use geostationary satellites to provide this service.

The band 18.0-18.4 GHz is allocated to the FSS in the space-to-Earth direction and in the Earth-to-space direction. The Earth-to-space allocations are limited to use by BSS feederlinks with the 18-18.1 GHz segment being part of the Appendix 30A BSS feederlink Plan for Regions 1 and 3, and the 18.1-18.4 GHz segment being non-planned. In the 18-18.4 GHz band GSO satellites,

including Metsats in the band 18.1-18.3 GHz band, are subject to coordination under No. 9.7 (and coordination threshold of $\Delta T/T = 6\%$).

Article 21 pfd limits for GSO FSS in the band 18.0-18.4 GHz range from $-105 \text{ dB W/m}^2 \cdot \text{MHz}$ to $-115 \text{ dB (W/m}^2 \cdot \text{MHz)}$) depending on angle of arrival. GSO FSS systems are either operating or being designed to operate up to these levels. Further, GSO FSS systems in these bands operate with small orbital spacing, e.g., 2° . In Region 2, the 18.3-19.3 GHz band was identified by WRC-03 [No. 5.516B] for deployment of High Density FSS (HDFSS) earth stations, and thus plans for use of the 18.3-18.4 GHz band by high power satellites operating with ubiquitously deployed small Earth stations are well advanced.

BSS feeder links systems generally use a relatively small number of large feeder link earth stations, which may facilitate the sharing situation for the terrestrial paths (FSS earth station interfering into MetSat receiving earth stations).

ITU-R WP-7B has the lead in preparing CPM text for this agenda item and WP-4A has identified a Rapporteur to participate in its work.

U.S. VIEW:

1. The FSS is planning and designing geostationary satellite systems for use of the band 18.3-18.4 GHz, including FSS systems currently under construction in the US, under the technical and regulatory constraints presently found in the Radio Regulations. The United States has implemented HDFSS in the 18.3-18.8 GHz bands, through allowing blanket licensing of FSS earth stations. In addition, to facilitate ubiquitous deployment of small earth stations, the United States has removed terrestrial allocations in this band. Considering this, any extension of the MetSat allocation into the 18.3-18.4 GHz band cannot impose any additional constraints on the FSS.
2. While the ITU-R is continuing to study this issue, the sharing conditions that result as a consequence of the protection requirement for the MetSat service, that were communicated to ITU-R WP 4A, would impose unacceptable constraints on the FSS.
3. If it is not possible to meet the Metsat data transmission bandwidth requirements in the already established 18.1-18.3 GHz Metsat allocation, consideration should be given to extending the allocation to 18.0-18.3 GHz due to the difficulty of sharing between HDFSS GSO FSS systems and Metsats in 18.3-18.4 GHz.

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

WRC-07 Agenda Item 1.5: to consider spectrum requirements and possible additional spectrum allocations for aeronautical telecommand and high bit-rate aeronautical telemetry.

ISSUE: This agenda item seeks to satisfy requirements for additional wideband aeronautical mobile telemetry, and associated telecommand, spectrum above 3 GHz. Methods for resolving the issue will entail sharing studies with existing services and continued protection of incumbent services.

BACKGROUND: This agenda item has its origins in efforts undertaken by the aerospace industry prior to WRC-97. The issue was pursued by the U.S. and other Administrations at WRC-03 and placed on the agenda for WRC-07. In addition, CITELE adopted an IAP in support of the agenda item, which was supported by the U.S. and numerous other Region 2 Administrations. The agenda item seeks to address a large and growing shortfall in the spectrum available to conduct aeronautical telemetry. The shortfall is due to rapidly increasing telemetry data rates associated with the testing of new technologies. It has been exacerbated by the loss of telemetry spectrum diverted to other applications such as mobile and broadcast satellite. Without additional spectrum, U.S. aeronautical development increasingly will be subject to program delays, escalating costs, and impaired competitiveness in the global marketplace. These factors will impact equipment manufacturers, airlines, civil test programs, and, ultimately, the traveling public. Additional worldwide telemetry allocations will also aid other nations inasmuch as many Administrations maintain and operate National air carriers, and several are initiating space programs of their own.

U.S. VIEW: The United States supports additional spectrum allocations for aeronautical telemetry. Once the ITU-R studies are completed, the U.S. can make a proposal regarding the methods by which the agenda item can be best satisfied.

INFORMAL WORKING GROUP 2 (IWG-2)

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

WRC-07 Agenda Item 1.6 (Res. 415 (WRC-03) only): to consider additional allocations for the aeronautical mobile (R) service in parts of the bands between 108 MHz and 6 GHz, in accordance with Resolution **414 (WRC-03)** and, to study current satellite frequency allocations, that will support the modernization of civil aviation telecommunication systems, taking into account Resolution **415 (WRC-03)**;

ISSUE: How broadening the services and applications of current satellite frequency allocations that could support civil aviation telecommunications systems can be made compatible with existing uses and at the same time encourage the deployment of a satellite infrastructure that can be used for other non-aeronautical telecommunications services.

BACKGROUND:

The objective behind Resolution 415 is to identify satellite spectrum that could, compatibly with current allocations and uses, support additional applications that could be used for aviation-related services that modernize and are supportive of International Civil Aviation Organization (ICAO) Communication, Navigation & Surveillance/ Air Traffic Management (CNS/ATM) systems. Special emphasis is placed on the extension of these modernized systems to developing countries and remote areas that do not have terrestrial infrastructure.

With ever increasing speed, existing and new communications systems are being based on Internet related protocols and services. Access to these services with sufficient bandwidth is becoming essential for both terrestrial and aeronautical communications. Without this access aeronautical operations will be hindered from gaining the efficiencies and benefits that this type of service offers. The development of satellite facilities to support aeronautical operations can also support the extension or enhancement of non-aeronautical telecommunications services to developing countries and remote areas.

Some African countries have indicated that the problems of providing CNS/ATM services to remote airports in some developing countries, and some developed countries with underdeveloped infrastructure, can be eased through the application of satellite-based solutions. Further, they say that in order to promote improved communication capabilities in general, these improved, satellite-based, facilities should be shared with non-aviation users to increase affordability.

The ITU-R recognized that the use of the 14.0-14.5 GHz band for Aeronautical Mobile Satellite Service (AMSS) on a Secondary basis, an allocation added at WRC-03, was compatible with current Fixed Satellite Service (FSS) systems and was supported by studies leading up to WRC-03. Studies within the ITU-R assessed compatibility of the usage of the 11/12 GHz downlink

band, associated with the 14 GHz uplink band, and found that these downlink signals could co-exist with FSS systems.

U.S. VIEWS:

1. That existing Fixed Satellite Service (FSS) spacecraft and appropriate earth stations can be used to create, augment or enhance infrastructure to support civil aviation telecommunications services, including non-safety related ICAO CNS/ATM applications.
2. The use of satellite-based facilities in connection with civil aviation applications mentioned above will contribute to the overall improvement of the communications infrastructure in developing countries and remote areas and allow ready access to Internet based services. However, since these latter applications are already consistent with existing satellite frequency allocations and can be supported by existing or planned satellite networks, no action from WRC-07 is required in this respect.
3. That the extension of broadband digital access to aeronautical platforms is a necessary step in the modernization of civil aviation telecommunications systems and that this extension can be facilitated through the Aeronautical Mobile Satellite Service (AMSS) operating in the 14/11/12 GHz bands. There is currently no AMSS downlink allocation and downlink signals operate under RR 4.4 in the 11/12 GHz band. The matching of the secondary AMSS uplink in the 14 GHz band with a secondary downlink allocation in the 11/12 GHz band would aid in the acceptance and standardization of these non-safety applications for aviation use.

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

WRC-07 Agenda Item 1.8 (Res. 122 (Rev.WRC-03) only): to consider the results of ITU-R studies on technical sharing and regulatory provisions for the application of high altitude platform stations operating in the bands 27.5-28.35 GHz and 31-31.3 GHz in response to Resolution **145 (WRC-03)**, and for high altitude platform stations operating in the bands 47.2-47.5 GHz and 47.9-48.2 GHz in response to Resolution **122 (Rev.WRC-03)**;

ISSUE: Matters related to the use of the bands 47.2-47.5 GHz and 47.9-48.2 GHz by high altitude platform stations (HAPS) in the fixed service and by systems and networks in the fixed-satellite service (FSS).

BACKGROUND: The ITU has been considering the implications of HAPS in the fixed service in the 47.2-47.5 GHz and 47.9-48.2 GHz band since 1997, when WRC-97 first made provision for the operation of HAPS within the fixed service. Studies have been ongoing under versions of Resolution 122 since WRC-97.

In the WRC-2000 revision to Resolution 122, the ITU-R was requested to complete sharing studies between the FSS and HAPS operations in the fixed service. Following WRC-2000, Recommendation ITU-R SF.1481 was developed and adopted. This recommendation makes clear that co-frequency operations between HAPS in the fixed service and FSS networks and systems is feasible in the 47.2-47.5 GHz and 47.9-48.2 GHz bands (even though it was noted that “there may be a need to develop the maximum allowable power flux-density at satellites on the GSO due to aggregate interference caused by ground user terminals of high altitude platform networks”).

In the revision to Resolution 122 approved at WRC-03, co-existence between HAPS in the FS and the FSS at 47.2-47.5 GHz and 47.9-48.2 GHz was presumed feasible, as administrations were encouraged to facilitate interservice coordination. The ITU-R was invited to study power limitations on HAPS ground stations to facilitate sharing with space station receivers, regulatory provisions to address deployment of HAPS in the FS near country borders, and technical sharing criteria between HAPS in the FS and both radio astronomy and FSS systems (taking into account the operational environments and the requirements of FSS systems). WRC-03 decided, after much debate, to retain the prior limitation on notices for new FSS networks – but only in Regions 1 and 3. WRC-03 also decided to maintain indefinitely notices for HAPS that were received by the BR prior to 22 November 1997.

U.S. VIEW:

1. The U.S. will participate in studies on the power limitations to be applied to HAPS ground stations to protect space station receivers.
2. The U.S. believes, as it did at WRC-03, that the question of the feasibility of co-frequency operation between HAPS in the FS and the FSS at 47.2-47.5 GHz and 47.9-48.2 GHz has been answered in the affirmative. With that, there no longer is any need for Resolution 122, the restrictions it perpetuates on FSS notices in Region 1 and 3, or the limitless privileges it extends to HAPS notices. Resolution 122 should be suppressed.

DRAFT UNITED STATES PRELIMINARY VIEWS ON WRC-07

WRC-07 Agenda Item 1.18: to review pfd limits in the band 17.7-19.7 GHz for satellite systems using highly inclined orbits, in accordance with Resolution **141 (WRC-03)**;

ISSUE: Suitability of Current Non-GSO FSS Power Flux-Density Limits for Non-GSO FSS Satellites in Highly-Inclined Elliptical Orbits

BACKGROUND: The ITU-R has been considering the sharing aspects of highly elliptical orbit (HEO) satellite systems in a number of contexts and under a number of different names in recent

years. HEO systems are non-geostationary satellite orbit (non-GSO) systems, and hence are subject to all limitations that apply to non-GSO systems in the Radio Regulations. All HEO systems are treated as non-GSO systems by the ITU when they are examined for regulatory compliance. WRC-97 and WRC-2000 modified the Article 21 power flux-density (pfd) limits that apply to non-GSO FSS systems to protect terrestrial systems in the 17.7-19.7 GHz frequency band.

In Resolution 141 (WRC-03), the ITU-R has been invited to determine whether the current pfd limits for non-GSO FSS satellite systems in Article 21 are adequate to protect the fixed service in the 17.7 to 19.7 GHz band from non-GSO systems using highly inclined orbits, without unduly constraining the use of these non-GSO systems. WRC-07 Agenda item 1.18 limits the review of the current non-GSO limits to non-GSO satellite systems using highly inclined orbits, and defines these systems as having orbit apogee altitudes greater than 18,000 kilometers and orbital inclination between 35° and 145°. Resolution 141 also calls for a determination to be made as to whether there are technical and operational measures that could be implemented by the fixed service to mitigate interference from FSS space stations.

In preparation for WRC-03 Agenda Item 1.37 on highly-elliptical orbit (HEO) satellites, some studies were commenced on the subject of HEO interference into FS systems in 17.7-19.7 GHz, but no conclusions were reached in the ITU as whether it is technically appropriate to apply the Art. 21 pfd limits for non-GSO satellites to HEO satellites. The ITU has begun the process of responding to Resolution 141 (WRC-03). ITU-R Working Party 4-9S has looked at prior work, and determined that the FS and FSS parameters used in the collected studies, along with the FS protection criteria and methodologies for developing/assessing pfd masks all needed further review. It has begun the process of gathering the relevant materials from the responsible working parties in ITU-R Study Groups 4 and 9.

Resolution 141 (WRC-03) is a follow-on item from WRC-03 Agenda Item 1.37 on HEO satellites. Unfortunately, when it used the term “highly inclined orbit” non-GSO satellite systems instead of the term HEO in Resolution 141, WRC-03 unintentionally introduced some ambiguity into the scope of the studies it was requesting, as the term highly-inclined orbit, by itself, can include not only the HEO systems that were under study pursuant to the unfinished business from WRC-03 Agenda Item 1.37, but also some circular-orbit non-GSO systems that were never part of the Agenda Item 1.37 studies. This ambiguity already has been noted in early discussions within the ITU-R Working Parties responsible for and interested in this agenda item, and could prove to be an unwelcome distraction if the intended scope of the agenda item is not readily clarified.

It is noteworthy that at least one HEO system has been operating in the 17.7-19.7 GHz band for years at the power levels in the applicable portion of Article 21, and that to date, there have been no reports of interference from the non-GSO FSS into the fixed service.

U.S. VIEWS:

1. The U.S., which has looked closely at this issue over the last three years, believes now, as it did at WRC-03, that the non-GSO FSS pfd limits for the 17.7-19.3 GHz band that were

included in Art. 21 at WRC-2000 remain adequate to protect the terrestrial services from non-GSO FSS satellites in highly-elliptical orbits without unduly constraining HEO non-GSO FSS systems.

2. That Agenda Item 1.18 and its associated resolution, although ambiguously worded so as to encompass some circular-orbit non-GSO systems that meet the apogee altitude and orbital inclination criteria in *considering g*) of Resolution 141 (WRC-03), was intended to apply to highly-inclined (i.e., between 35° and 145°) non-circular-orbit non-GSO FSS satellite systems with orbital apogee altitudes greater than 18,000 km ***and orbital perigee altitudes that are less than the orbital apogee altitudes***. Consequently, there is no need to review the limits that apply to those non-GSO satellite systems using circular orbits, such as medium earth orbits (MEO), that satisfy both the apogee altitude criterion and the inclination criterion.

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

Agenda Item 1.19: to consider the results of the ITU-R studies regarding spectrum requirement for global broadband satellite systems in order to identify possible global harmonized FSS frequency bands for the use of Internet applications, and consider the appropriate regulatory/technical provisions, taking also into account No. **5.516B** of the Radio Regulations;

ISSUE: The purpose of this agenda item is to investigate fixed-satellite service (FSS) frequency bands for the use by Internet applications.

BACKGROUND: WRC-03 adopted this agenda item to address the use of fixed-satellite service bands for broadband Internet applications. There is no WRC-03 Resolution associated with this agenda item to guide and focus ITU-R studies. WP 4A is the Study Group lead for the development of CPM text.

U.S. VIEWS:

1. The United States is of the view that any FSS frequency band can be used for broadband satellite systems, and that many existing and planned systems in a number of different FSS frequency bands are fully capable of providing Internet applications on a harmonized global basis.
2. Given that current ground equipment is frequency agile, and notwithstanding the reference to No. **5.516B** in the agenda item, there is no need to identify a specific frequency range within the FSS for these applications. Any FSS allocations can be used for broadband Internet applications without requiring changes to the Radio Regulations,

and without the imposition of any additional or particular constraints on the FSS or the use of the FSS bands.

3. One of the FSS allocations is the bands covered by the Allotment Plan in Appendix 30B. The United States supports the use of the Appendix 30B bands for this particular application. The use of agenda item 1.10 and changes to the regulatory procedures and technical criteria in Appendix 30B to make these bands more useful is supported, but replanning of the allotment Plan is neither necessary nor supported.

**DRAFT UNITED STATES
PRELIMINARY VIEWS ON WRC-07**

WRC-07 Agenda Item 1.21: to consider the results of studies regarding the compatibility between the radio astronomy service and the active space services in accordance with Resolution 740 (WRC-03), in order to review and update, if appropriate, the tables of threshold levels used for consultation that appear in the Annex to Resolution 739 (WRC-03).

ISSUE:

On the basis of studies determine which of the band pairs, and associated threshold values need to be added to the consultation provisions of Resolution 739 (WRC-03).

BACKGROUND:

As a consequence of studies carried out in conjunction with ITU-R Recommendation SM.1633, Resolution 739 was adopted by WRC-03 to provide a regulatory basis for the use of consultations to provide for the protection of the radio astronomy service in certain bands close to or adjacent to space-to-Earth, space service allocations. The band pairs of concern are listed in Table 1-1 of the Annex to Resolution 739 as well as the threshold values which if exceeded by a space service transmission would necessitate consultation.

Resolution 740, which is referenced in this agenda item, resolves: 1) to invite the ITU-R to study the compatibility between the RAS and the corresponding active space services listed in the Table (of the Resolution), with a view to updating or developing ITU-R Recommendations, if appropriate; and 2) that WRC-07 should consider the results of the studies as identified in resolves 1, in order to review and update, if appropriate, the tables of threshold levels for consultation in the Annex to Resolution 739 (WRC-03).

ITU-R Task Group 1/9 was designated by CPM-06 as the lead group for carrying out the studies referenced in resolves 1.

U.S. VIEWS:

1. The only band pairs and associated thresholds to be reviewed and, if appropriate, added to Tables 1-1 or 1-2 of Resolution 739 pursuant to this Agenda Item are those found in the table of Resolution 740.
2. Any updating of Tables 1-1 or 1-2 in Resolution 739 must be based on the studies being carried out in TG 1/9, which could also be used as the basis for modifying ITU-R Recommendation SM.1633.
3. Any studies to develop thresholds associated with band pairs from Resolution 740 should fully consider the impact to the concerned active services in order to ensure that those active services are not unduly constrained.
4. Changes to the consultation process provisions in Resolution 739 are neither appropriate nor under the scope of this agenda item.

Recommended changes to Draft Preliminary Views from the National Telecommunications and Information Administration's (NTIA) Radiocommunication Conference Subcommittee (RCS):

WRC-07 Agenda Item 1.8: to consider the results of studies on technical sharing and regulatory provisions for the application of high altitude platform stations operating in the bands 27.5-28.38 GHz and 31-31.3 GHz in response to Resolution **145 (WRC-03)**, and for high altitude platform stations operating in the bands 47.2-47.5 GHz and 47.9-48.2 GHz in response to Resolution **122 (Rev. WRC-03)**;

INTRODUCTION: IWG-2 has developed a Preliminary View on the Resolution **122 (Rev. WRC-03)** aspects of this agenda item. This document comments only upon the Resolution **145 (WRC-03)** aspects of the RCS Preliminary View

DISCUSSION AND IWG-2 RECOMMENDED CHANGES TO RCS PV

Background Section of PV: In the Background discussion of the RCS PV, the first sentence make proper reference to WRC-97 making "a provision" for HAPS operation in the 47 GHz band. The third sentence of this Background section, however, makes reference to WRC-00 deciding to make "additional allocations for HAPS" in the 28 GHz and 31 GHz bands. HAPS systems may operate in specifically "identified" portions of Fixed Service allocations (see RR **4.15A**). This same sentence of the RCS PV, and the following one, also need to be modified to more accurately reflect decisions of past WRCs on this issue. As such IWG-2 recommends that the second and third sentences of the RCS PV be modified, and an additional sentence be added after the third sentence, as follows:

"WRC-2000 decided to adopt provisions make additional allocations for the operation of HAPS on a non-interfering/non-protected basis in the bands 27.5-28.35 and 31-31.3 GHz in Region 3,

but did not allow operation in the entire bands until studies could be completed to determine how best to protect existing services in these and nearby frequency bands. WRC-03 further refined these provisions by deciding to limit permit HAPS operation to 300 MHz in a specified direction in each of these two bands, retaining the requirement for HAPS to operate on a non-interfering/non-protected basis in these 300 MHz segments, and in the full allocated bands by HAPS and adopting Resolution 145, which created the considers the additional possibility of allowing Region 2 administrations to advise the Radiocommunications Bureau of their intent to implement HAPS system operations within the bands 27.5-28.35 and 31-31.3 GHz in region 2. Administrations intending to implement HAPS in these bands are to seek the explicit agreement of concerned administrations in accordance with resolves 4 of this Resolution.

U.S. Views Section of RCS PV: IWG-2 agrees with the “U.S. View” section of the RCS PV, however, it is recommended to supplement this section with the following additional U.S. View:

“The United States also supports the continued studies called for in Resolution **145 (WRC-03)** that will demonstrate whether HAPS can operate successfully on a non-interference/non-protected basis in the 28 GHz and 31 GHz bands, and the encapsulation of the results of these studies, as appropriate, in ITU-R Recommendations. However, recognizing the regulatory status of this service in these bands, the United States does not support the specification of interference or sharing criteria for HAPS in ITU Radio Regulations for these bands.”

Comments of IWG-2 on NTIA’S RCS Draft Preliminary View on Agenda Item 1.18:

IWG-2 has prepared its own preliminary view on agenda item 1.18. In reviewing the RCS preliminary view on this agenda item, IWG-2 found one additional aspect on which it wishes to comment.

IWG-2 agrees with the conclusion of the RCS preliminary view that the Article 21 pfd limits should not be changed and that HEO or HIO systems are a sub-category of non-GSO systems and are therefore subject to the provisions of the Radio Regulations applicable to non-GSO systems. However, IWG-2 opposes the inclusion of the second sentence of the US view #2: “The results of studies will be improved by considering only 2-3 HIO systems and using realistic assumptions for the characteristics for fixed-satellite service and fixed service systems.” This sentence addresses a specific underlying assumption for studies that are ongoing in the ITU-R and is not appropriate for text in preliminary view or proposal language for a WRC. As an alternative to deletion of the sentence, it could be generalized in an acceptable manner as follows: “Studies will be improved by using realistic assumptions for the fixed-satellite service and fixed service systems.”

INFORMAL WORKING GROUP 3 (IWG-3)

DRAFT UNITED STATES

PRELIMINARY VIEWS ON WRC-07

WRC-07 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)**;

ISSUE: Resolution **228 (Rev.WRC-03)** invited the ITU-R to further study the technical and operational issues associated with the future development of IMT-2000 and systems beyond IMT-2000 and to develop reports and recommendations as required in time for WRC-07. In particular, the Resolution invited the ITU-R to:

- Report the results of studies on spectrum requirements and potential frequency ranges that take 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;
- And to conduct studies that consider:
 - the use of frequencies below those currently identified
 - the needs of developing countries, including the use of the satellite component of IMT-2000, for suitable coverage in these countries
 - the results of sharing and compatibility studies with services to which the potential bands are already allocated

BACKGROUND: WARC-92 identified the 1885-2025 MHz and 2110-2200 MHz bands (230 megahertz of spectrum) allocated to the mobile service for possible use on a worldwide basis by administrations wishing to implement IMT-2000 systems in footnote 5.388. Additionally, WRC-2000 identified the 806-960 MHz band in footnote 5.317A and the 1710-1885 MHz and 2500-2690 MHz bands in footnote 5.384A for possible IMT-2000 use. Each administration would decide which portions of the identified bands to use for IMT-2000.

In Res. 228 WRC-2000 invited the ITU-R to continue studies on overall objectives, applications and technical and operational implementation for the future development of IMT-2000 and systems beyond. It was also invited to study spectrum requirements and potential frequency

ranges suitable for the future development of IMT-2000 and systems beyond IMT-2000, and in what time frame such spectrum would be needed. Res. 228 also resolved that the future development of IMT-2000 and systems beyond are to be reviewed by WRC-07, taking into consideration the results of ITU-R studies presented to WRC-03. Those studies were not completed in time for WRC-03.

At WRC-03, Res. 228 was modified to invite the ITU-R to conduct and complete in time for WRC-07, the appropriate studies of technical and operational issues, including spectrum requirements and potential frequency ranges suitable for those systems and to develop appropriate Recommendations. This would enable any necessary action to be taken by WRC-07.

The need for the studies was driven by the perception that there may be a need for new spectrum to accommodate:

- the increasing demand for mobile services,
- the development of higher bandwidth technologies, and
- the potential to use mobile services to meet universal service requirements

WP 8F of ITU-R is developing Reports on service types and spectrum requirements. It is also developing a Recommendation that evaluates suitable frequency ranges, and in what timeframe such spectrum would be needed. WP 8F is in the process of developing the spectrum calculation methodology for systems beyond IMT-2000 and a new Recommendation on a spectrum calculation methodology that takes into account current systems, 3G systems, and systems beyond 3G. The completion of this work by WP 8F is planned for March 2006, so that the studies and Recommendation can be presented to WRC-07 for appropriate action.

U.S. VIEW: The US supports conducting and participating in the studies in WP8F to ensure that the appropriate methodology is employed; that anticipated services are reasonable and realistic; and that the estimate of spectrum needs is based on these reasonable methodologies/services.

In determining the need for additional spectrum, the US must protect existing services. The US should recognize the special needs of developing countries.

As studies are conducted in WP8F, the US will determine if it will support the identification of any additional bands for the deployment of these systems.

INFORMAL WORKING GROUP 4 (IWG-4)

DRAFT UNITED STATES PRELIMINARY VIEWS ON WRC-07

WRC-2007 Agenda Item 1.15: to consider a secondary allocation to the amateur service in the frequency band 135.7-137.8 kHz.

ISSUE: Allocation to the amateur service the band 135.7 – 137.8 kHz on a Secondary basis by Footnote.

BACKGROUND: For more than two decades radio amateurs around the world increasingly have been interested in experimenting with communications at low frequencies, a part of the spectrum in which the amateur service has not had a frequency allocation for more than 50 years. In the past ten years, more than 20 Administrations have given domestic amateur radio allocations or have authorized experimental amateur radio communications in the low frequency range including 73 kHz, 135.7 – 137.8 kHz, and 160 – 190 kHz.

Region 1. In 1997, radio amateurs in Europe were given formal authority to operate in the LF band pursuant to the European Conference of Postal and Telecommunications Administrations (CEPT) Recommendation 62-01 E (Mainz 1997), which pertains to the use of the band 135.7 – 137.8 kHz by the amateur service. Currently, radio amateurs are active in the band 135.7 – 137.8 kHz in more than 25 European countries. Operation in Russia has been authorized in both the European and Asiatic parts of the Federation. The British Royal Amateur Society (BRAS) and with the approval of the CEPT Recommendation in Europe, France has also authorized the use of the band 135.7 – 137.8 kHz in St. Pierre and Miquelon, Martinique and Guadeloupe.

Region 2. Canadian and American radio amateurs have been conducting experimental communications in the frequency band 135.7 – 137.8 kHz under experimental licensees. The American Radio Relay League (ARRL) has petitioned the Federal Communications Commission (FCC) for access to the band (FCC RM-9404).

Region 3. New Zealand has granted an allocation to the amateur service in this band and Australia has authorized some experimental communication.

In the amateur radio bands at higher frequencies (above 400 MHz), the amateur service has a history of sharing frequencies with other services having primary allocations. As a result, radio amateurs conducting low frequency experiments in the band 135.7 – 137.8 kHz have taken measures to avoid interference to the operations of the primary users of the band. Various studies have shown that the probability of interference to other services from amateur LF stations with an EIRP of 1 or 2 watts is very low.

Many countries consider that there is technical and experimental merit in a secondary allocation, subject to some constraints. This secondary allocation may be given by adding an appropriate footnote to the Table of Frequency Allocations.

PRELIMINARY VIEW: The U.S. agrees that this allocation in the band 135.7-137.8 kHz should be allocated worldwide on a secondary basis. (12 May 2004)

INFORMAL WORKING GROUP 5 (IWG-5)

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

WRC-07 Agenda Item 1.10: to review the regulatory procedures and associated technical criteria of Appendix 30B without any action on the allotments, the existing systems or the assignments in the List of Appendix 30B.

ISSUE:

Appendix 30B delineates allotments within portions of C-band and Ku-band for each country; each allotment provides for national coverage under specific technical conditions (e.g., maximum power densities and minimum antenna sizes). While this plan was intended to preserve the opportunity for all countries to obtain real benefits from use of satellite systems in the geostationary satellite orbit (GSO), the actual number of systems put into operation pursuant to this appendix since its original adoption in 1988 has been quite limited.

Some aspects of the regulatory procedures and technical criteria are outdated and serve to restrict, rather than foster, the development of real, economical systems.

BACKGROUND:

Since the adoption, in 1988, of Appendix 30B, satellite technologies have advanced dramatically. And at the same time, many countries have recognized that satellites offer great potential to facilitate access to digital broadband services such as the Internet, thereby leaping past antiquated technologies. Yet, only slight changes have been made to Appendix 30B, rendering it still poorly-suited to satisfy these new technology requirements. WRC-03 has only just begun to address the issue. For example, full account has yet to be taken of the widespread use of digital modulation techniques that facilitate high capacity at substantially lower interference margins than envisaged when the appendix was originally adopted.

WRC-03 made two notable changes to the appendix that involve the technical criteria for analyses carried out from 5 July 2003: 1) the interference criteria for aggregate and single entry C/I thresholds were relaxed by 3 dB, and 2) an improved earth station off-axis gain pattern was

decided to be applied for cases requiring the additional discrimination to resolve interference issues. Based on these decisions, and the instructions of Resolution 146, the BR has prepared a new reference plan reflecting these changes.

WRC-03 also recognized that additional changes to the regulatory procedures and associated technical criteria of Appendix 30B may be productive and thus put this item on the agenda for WRC-07. The CPM referred this topic to WP-4A and the Special Committee (SC) for study. At its April 2004 meeting, WP-4A, as the lead group for this item, considered several contributions, including one from the USA, related to this topic. WP-4A prepared a summary of the specific issues to be studied for which contributions to its next meeting in October are encouraged.

U.S. Views

1. The U.S. does not advocate any action on the allotments, the existing systems or the assignments in the List of Appendix 30B.
2. The U.S. supports continued improvements to the regulatory procedures and associated technical criteria of Appendix 30B and is committed to working through the study groups and with other administrations toward that end.
3. The U.S. considers that future technical criteria should be based on realistic parameters that reflect digital communications technology in use today and foreseen for the near future.
4. The U.S. considers that sufficient flexibility should be built in to the regulatory procedures to permit reasonable accommodation of new technologies without requiring additional revisions to Appendix 30B post WRC-07.
5. The U.S. intends to focus its efforts on improvements to the regulatory procedures and associated technical criteria for the Ku-band portion of Appendix 30B, as it considers this offers the greatest opportunity for improvements that can yield cost-effective access to satellite broadband services.
6. The U.S. considers that the bands subject to Appendix 30B should be among those considered for the global broadband satellite systems serving Internet applications addressed under agenda item 1.19

UNITED STATES
DRAFT PRELIMINARY VIEWS ON WRC-07

WRC-07 Agenda Item 1.12: to consider possible changes in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference: “Advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks” in accordance with Resolution 86 (WRC-03).

ISSUE: Resolves 1 of Resolution 86 (WRC-03) reflects part of the scope and criteria of this agenda item as determined by the Plenipotentiary Conference in Res. 86 (Marrakesh). It specifically states that WRC-07 should “consider any proposals which deal with deficiencies in the advance publication, coordination and notification procedures of the Radio Regulations for space services which have either been identified by the Board and included in the Rules of Procedure or which have been identified by administrations or by the Bureau as appropriate.”

In this respect certain provisions of Article 9 may not be satisfactory for dealing with the issues of time and cost as related to their application to the requests of satellite network coordination.

BACKGROUND: For a number of years the ITU has been struggling with how to manage the extensive development of satellite networks. Such developments have put a strain on the normal capability of the BR, which has been responsible for the processing and examination of the Advance Publications, Coordination Requests and Notifications of satellite networks.

The burden was such that the 1998 Plenipotentiary Conference agreed Resolution 88 (Minneapolis, 1998) to provide for the cost recovery of ITU activities associated with this processing. Nevertheless, backlogs have developed and methodologies were developed for cost recovery. However, due to concerns raised about such methodologies, proposals for modification are being proposed. In addition, the ITU itself is in a budgetary crisis in which it is not certain that all of the budgeted functions can be supported.

It appears that the difficulties that have arisen could be mitigated if some of the responsibility of the BR were to be carried out by Administrations. This would require modification of Article 9 of the RR. It would give the BR staff more time to provide assistance to individual administrations meriting such support rather than expend that same time in support of major space users who, within their respective administrations, should be able ably equipped to conducting coordination without daily BR support. This would have the consequential effect of reducing the amount of time which the BR would need to spend on processing satellite filings.

U.S. Views:

1. The US supports continued simplification of the RR procedures and is committed to working through the study groups and with other administrations toward that end.

2. At this preliminary stage, it is the U.S. view that the burden on ITU staff could potentially be reduced through modification or replacement of portions of **Nos. 9.34-9.44** of Article 9 of the Radio Regulations to have Administrations carry out functions currently done by

the BR. Studies are required to determine which modifications, if any, would be appropriate. These modifications would be made under Agenda Item 1.12 for WRC-07.

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

WRC-07 Agenda Item 2: to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with Resolution **28 (Rev.WRC-03)**, and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with principles contained in the Annex to Resolution **27 (Rev.WRC-03)**

ISSUE: Incorporation by Reference

BACKGROUND: A number of provisions of the Radio Regulations make reference to specific ITU-R Recommendations. As these referenced ITU-R Recommendations are updated at future meetings, it is then necessary for later WRCs to review the corresponding Radio Regulations to see if the references they contain should be revised to reflect the new version of the cited ITU-R Recommendation. Otherwise, the older version of the ITU-R Recommendation remains in effect.

Resolution **27 (Rev.WRC-03)** provides principles and procedures for use of incorporation by reference in the Radio Regulations. WRC-03 revised this Resolution to clarify and minimize the use of this procedure. Resolution **28 (Rev.WRC-03)** directs WRCs to review ITU-R Recommendations incorporated by reference in the Radio Regulations that have been revised during the elapsed study period (based on the list to be provided by the Radiocommunication Assembly). To facilitate this task, the Director is instructed to present to the CPM prior to the WRC an initial list of those recommendations incorporated by reference that have been, or are likely to be, revised in time for the WRC.

U.S. VIEW: WRC-07 should follow the incorporation by reference process in Resolution **27 (Rev.WRC-03)** and Resolution **28 (Rev.WRC-03)**. It should, in accordance with Resolution **28**, review those revised ITU-R Recommendations listed by the Director to the CPM and communicated by the Radiocommunication Assembly to the WRC to determine whether the updated version should be incorporated by reference in the Radio Regulations in place of the previous version. (5.19.04)

II. Draft Preliminary Views formulated and approved within the National Telecommunications and Information Administration:

WAC/008(08.06.04)

Mr. Donald Abelson
Chief, International Bureau
Federal Communications Commission
445 12th Street S.W.
Washington, D.C. 20554

Dear Mr. Abelson:

The National Telecommunications and Information Administration, on behalf of the Executive Branch Agencies, wishes to bring to your attention a set of recently approved draft preliminary Executive Branch views considering federal agency inputs toward the development of U.S. preliminary views for WRC-2007.

The enclosure is forwarded for review by the Commission. Jim Vorhies of my staff is the primary contact for NTIA.

Sincerely

(Original Signed April 30, 2004)
Fredrick R. Wentland
Associate Administrator
Office of Spectrum Management

Enclosure

Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

Agenda Item 1.2: to consider allocations and regulatory issues related to the Earth exploration-satellite (passive) service, space research (passive) service and the meteorological satellite service in accordance with Resolutions **746 (WRC-03)** and **742 (WRC-03)**;

ISSUE: Resolution **746 (WRC-03)**, “Issues dealing with allocations to science services”, contains the following two issues:

1. possible additional 100 MHz for geostationary meteorological satellites operating in the space-to-Earth direction extending the current 18.1-18.3 GHz geostationary meteorological satellites allocation to 300 MHz of contiguous spectrum;
2. consideration of the sharing conditions between the EESS (passive) and the SRS (passive) on one hand and the fixed and mobile services on the other hand in the band 10.6-10.68 GHz to determine appropriate sharing criteria and to consider the inclusion of such sharing criteria within the Radio Regulations;

and Resolution **742 (WRC-03)**, “Use of the frequency band 36-37 GHz” deals with;

- U.□. consideration of sharing criteria between the passive services and the fixed and mobile services in the band 36-37 GHz to determine appropriate sharing criteria and to consider the possible inclusion of such sharing criteria within the Radio Regulations.

BACKGROUND: A primary allocation to the geostationary meteorological satellite (space-to-Earth) exists in the band 18.1-18.3 GHz in RR No. **5.519**. However, Resolution **746** recognizes that the bandwidth requirements for transmission of data from high-resolution sensors on the next generation geostationary meteorological satellites to be launched in the time-frame 2015 to 2020 are in excess of 200 MHz. Therefore, an extension to the existing 200 MHz allocation by 100 MHz within the band 18-18.4 GHz is being considered. The band 18-18.4 GHz is allocated to the fixed, fixed-satellite and mobile services. Sharing studies are needed to determine if such an extension to the existing allocation is feasible and have begun within the ITU-R. One fact that could facilitate sharing in an extension band is that the number of earth stations that would be deployed to support these meteorological satellites will be low (on the order of five per Region). The United States makes significant use of both the fixed and the fixed-satellite services in the 18-18.4 GHz band and these services would need to be protected.

The frequency band 10.6-10.68 GHz is allocated to the Earth exploration-satellite service (EESS) (passive), radio astronomy and space research (passive) services on a primary basis. This band is also allocated to the mobile (except aeronautical mobile) and the fixed services on a primary basis, taking into account RR No. **5.482**. Passive sensing of Earth and its atmosphere has been done using this band for many years. It is an important resource for remote sensing of such things as rain,

snow, sea state, ocean wind, and soil moisture content and is often used in conjunction with a number of other passive sensing bands to extract such data. The United States flies a variety of scientific spacecraft with instruments that utilize this band. However, the United States also makes extensive use of this band for the fixed service. Furthermore, footnote RR **5.482** already places power and e.i.r.p. restrictions on the fixed and mobile services. Therefore it may be difficult to alter the current sharing conditions without placing undue constraints on the terrestrial services in this band.

The frequency band 36-37 GHz is allocated to the Earth exploration-satellite (passive), the space research (passive), the fixed and the mobile services on a primary basis. Passive sensing of the Earth and its atmosphere has been done using this band for many years. It is an important resource for remote sensing of such things as rain rates, snow, sea ice and clouds and is often used in conjunction with a number of other passive sensing bands to extract such data. The United States flies a variety of scientific and meteorological spacecraft with instruments that utilize this band.

Resolution **742** calls for sharing studies between EESS (passive) and the fixed and mobile services in the band 36-37 GHz to determine appropriate sharing criteria for this band. It should be noted that the EESS (passive) protection criteria are contained in Recommendation ITU-R SA.1029-2 and that Recommendation ITU-R F.758-2 provides characteristics of fixed service point-to-multipoint systems operating in the band 36-37 GHz, but does not provide information on characteristics of fixed service point-to-point systems operating in this band. Furthermore, the band 36-37 GHz is not available for high-density applications in the fixed service as stipulated in RR No. **5.547**. Due to the sensitivity and applications of passive radiometers used in remote sensing, the EESS (passive) operating in the band 36-37 GHz could receive interference from the emissions of systems of these active services. There is no current use of the band in the United States by the fixed or mobile services. However, determination of appropriate sharing criteria should not place undue constraints on the future use of the band by the fixed and mobile services.

U.S. VIEW: The United States supports the study of the possible extension to the existing geostationary meteorological-satellite service allocation within the 18-18.4 GHz band. If studies show that sharing is feasible without placing undue constraints on the incumbent services, the United States could support such an extension for high data rate transmission from future meteorological satellites. If supported at WRC-07, the existing footnote **5.519** could be modified to show the geostationary meteorological-satellite service allocation within the 18-18.4 GHz band or the table of allocations could be modified to show the allocation and footnote **5.519** would be modified to show only the limitation of the meteorological-satellite service allocation to geostationary orbits. Concerning the 10.6-10.68 GHz band, while the United States supports studying the sharing conditions in this band, it is skeptical about altering the current sharing conditions given the existence of RR No. **5.482**. Any proposed alteration of the existing sharing conditions would have to be examined with respect to their possible impact on the current operation of the fixed service in this band. Finally, the United States supports studies to determine the appropriate sharing conditions between the EESS (passive) and the fixed and mobile services in the band 36-37 GHz. However, implementation of any constraints on these terrestrial services would have to be evaluated with respect to the future operations of such services in this band. (April 30, 2004).

Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

DRAFT PRELIMINARY VIEW FOR WRC-07

Agenda Item 1.3: in accordance with Resolution **747(WRC-03)**, consider upgrading the radiolocation service to primary allocation status in the bands 9 000-9 200 MHz and 9 300-9 500 MHz and extending by up to 200 MHz the existing primary allocations to the Earth exploration-satellite service (active) and the space research service (active) in the band 9 500-9 800 MHz without placing undue constraint on the services to which the bands are allocated;

ISSUE: Resolution **747(WRC-03)** further resolves that, taking into account the results of ITU-R studies, WRC-07 consider:

- 1 the upgrading of the radiolocation service to a primary allocation in the bands 9 000-9 200 MHz and 9 300-9 500 MHz; and
- 2 the possible extension by up to 200 MHz of the allocation in the band 9 500-9 800 MHz to the EESS (active) and the space research service (active),

These allocations must ensure the protection of the incumbent services already allocated to these bands.

BACKGROUND: There is a need to provide contiguous spectrum in the bands around 9 GHz for the radiolocation service allocated on a primary basis worldwide, in order to provide adequate spectrum for new radar systems to function. Emerging requirements for increased image resolution and increased range accuracy necessitate wider contiguous emission bandwidths than are currently available. Therefore, there is a need to upgrade the status of frequency allocations to the radiolocation service in the frequency range 9 000-9 200 MHz and 9 300-9 500 MHz in order for existing and planned radar systems to satisfy their required missions.

The bands 9 000-9 200 MHz and 9 300-9 500 MHz are allocated on a primary basis to Aeronautical radionavigation and Radionavigation, respectively. While radionavigation is recognized as a safety service as delineated in No. **4.10** of the Radio Regulations, radiolocation services have demonstrated compatible operations with radionavigation services in the bands 9 000-9 200 MHz and 9 300-9 500 MHz over many years through the use of similar system characteristics such as low-duty cycle emissions and scanning beams as well as interference reduction techniques. Previous and ongoing studies within the ITU-R addressing other frequency bands indicate that sharing in the bands 9 000-9 200 MHz and 9 300-9 500 MHz between the radionavigation and radiolocation services is likely to be feasible. It should be noted that Recommendation ITU-R M.1313 contains the technical characteristics and protection criteria for maritime radars in the band 9 300-9 500 MHz and that Recommendation ITU-R M.1372 identifies interference reduction techniques which enhance compatibility among radar systems. Further study is ongoing within the ITU-R to confirm the compatibility between the radiolocation and radionavigation services in these bands.

The band 9 500-9 800 MHz is allocated on a primary basis to the Earth exploration-satellite (EESS) (active), space research (active), radiolocation and radionavigation services, taking into account the constraints of footnote 5.476A. The allocation of this band to the EESS (active) and SRS (active) was decided by WRC-97 largely based on studies that were completed in ITU-R Joint Working Party 7-8R. In order to satisfy global environmental monitoring requirements for improved resolution, EESS (active) and the space research service (active) allocations require an increase by up to 200 MHz. There are plans to enhance synthetic aperture radars (SAR) that operate near 9.6 GHz to improve the spatial resolution to the order of 1 meter, which would require up to 500 MHz bandwidth. This additional bandwidth would greatly improve the resolution of the features for global monitoring and for environmental and land-use purposes.

Previous ITU-R studies have resulted in a number of pertinent Recommendations. Recommendation ITU-R SA.516 indicates the general feasibility of sharing between the EESS (active) and the radiolocation service for active sensors. Recommendation ITU-R SA.1166 contains the technical characteristics and protection criteria for Earth sensors operating near 9 500 MHz. Finally, Recommendation ITU-R SA.1280 addresses the selection of active spaceborne sensor emission characteristics to mitigate the potential for interference to terrestrial radars operating in frequency bands 1-10 GHz. Further study is ongoing to confirm the compatibility between EESS (active), SRS (active) and the incumbent services in the possible extension bands around 9 500-9 800 MHz.

U.S. VIEW: While there is a long history of successful co-band operations between radiolocation and radionavigation systems near 9 GHz, new systems may not necessarily be compatible with existing systems. Therefore, the United States supports measurement tests and ITU-R studies to verify the feasibility of sharing in these bands. If the outcome of these measurements and studies is favorable, the United States anticipates supporting the allocation upgrades for radiolocation. However, it is the position of the United States that there would also need to be regulatory text in the form of a footnote to protect aeronautical radionavigation and radionavigation systems so that there will be no constraints on ARNS/RNS use in these bands, regardless of the outcome of the studies. Concerning the possible extension to the EES and SRS allocations, the United States could support such an extension provided that there is a favorable outcome from the sharing studies and that the incumbent services are protected. Some regulatory text in the form of one or more applicable footnotes may be necessary to ensure such protection. (April 9, 2004)

Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

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)**;

ISSUE: The actions associated with this agenda item include; additional applications for advanced wireless services beyond those identified for IMT-2000 systems, the spectrum requirements associated with these requirements, and candidate bands where these requirements may be satisfied. The primary issue from these actions will be the availability of the required spectrum and the impact to incumbent users.

BACKGROUND: WRC-2000 and prior WRCs, identified 749 MHz of spectrum for terrestrial IMT-2000. During the period between WRC-2000 and WRC-03, the ITU continued its work on the radio interface technology standards and future market requirements. WRC-03 did not identify new spectrum, however there was an expectation at the conference that new spectrum would be required for systems beyond IMT-2000. WP8F is studying new market and service requirements and additional spectrum needs. Upon completion of these studies, WP8F will select candidate bands and conduct sharing studies with existing services.

U.S. VIEW: Before an agreement can be reached on additional bands to be identified for systems beyond IMT-2000, the bandwidth requirements must be fully agreed in the ITU-R and the bands chosen must be available for use. The bandwidth requirements must consider, in as realistic fashion as possible, the expected future applications and demand for these applications. In addition, the availability of existing bands for IMT-2000 and beyond must be included. The bands identified for these future applications must also be available for use globally and/or regionally. Available for use implies that sharing can be accomplished with existing users or the incumbents can be accommodated in an equitable fashion. For systems beyond IMT-2000, proponents must demonstrate that the spectrum already allocated for their use is insufficient and that *X* amount of spectrum is required to meet their future requirement for *Y* years. While a global solution is preferred, regional solutions are appropriate for resolution at an ITU level. National solutions should not drive the work in identifying these bands. (April 30, 2004)

Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

Agenda Item 1.5: to consider spectrum requirements and possible additional spectrum allocations for aeronautical telecommand and high bit-rate aeronautical telemetry;

ISSUE: Obtaining sufficient spectrum to satisfy wideband aeronautical mobile telemetry requirements and associated telecommand above 3 GHz, possible sharing with existing services, and continued protection of incumbent services.

BACKGROUND: This agenda item has its origins in efforts undertaken by the Space Industry prior to WRC-97. The issue was pursued by the United States, CITELE and other regions at WRC-03 and placed on the agenda for WRC-07. This agenda item seeks to address a large and growing shortfall in spectrum necessary to conduct aeronautical telemetry. The shortfall is due to rapidly increasing telemetry data rates associated with the testing of new technologies. The shortfall is exacerbated by the loss of telemetry spectrum diverted to other than telemetry applications. Without additional spectrum, aeronautical development will be subject to major delays, escalating costs, and the impairment of global competitiveness of the aerospace industry (including equipment manufacturers, civilian space programs and test ranges, airlines, and passengers). In addition, the benefits of new worldwide telemetry spectrum will greatly aid most other countries and the international aeronautical community, as Administrations continue to support their national airlines and some administrations initiate their own space programs. Existing international allocations used for aeronautical telemetry will need to remain available without additional constraints for current applications.

U.S. VIEW: The United States supports additional spectrum allocations for aeronautical telemetry. Once the ITU-R completes its studies, the United States can make a recommendation regarding the methods by which the agenda item can be best satisfied. (April 30, 2004)

Radio Conference Subcommittee (RCS)

Preparation for ITU Radiocommunication Conferences

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

Agenda Item 1.7: to consider the results of ITU-R studies regarding sharing between the mobile-satellite service and the space research service (passive) in the band 1 668 – 1 668.4 MHz, and between the mobile-satellite service and the mobile service in the band 1 668.4 – 1 675 MHz in accordance with Resolution 744 (WRC-03)

ISSUE: Resolution 744 (WRC-03), deals with sharing between the mobile satellite service (MSS) (Earth-to-space) and the space-research (passive) service in the band 1 668 – 1 668.4 MHz and between the MSS (Earth-to-space) and the fixed and mobile services in the band 1 668.4 – 1 675 MHz.

BACKGROUND: At WRC-03, a new global allocation was made to the MSS (Earth-to-space) in the band 1 668 – 1 675 MHz and a global allocation to the MSS (space-to-Earth) in the band 1 518 – 1 525 MHz. MSS interests provided support for this agenda item. In the United States, the band 1 668 – 1 668.4 MHz is allocated to the space research (passive) and radio astronomy services (RAS) and the band 1 668.4-1 670 MHz is allocated to meteorological aids (MetAids) (radiosonde) and radio astronomy, both on a primary basis. The band 1 670 – 1 675 MHz is currently planned for use in the United States for the fixed and mobile services, and the MSS shall not claim protection from fixed and mobile stations operating within the United States. One Region 2 Administration also expressed interest in new allocations for the MSS at the WRC and thus there may be cross-border issues, involving coordination zones that need to be resolved.

U.S. VIEW:

1. The United States supports the completion of studies demonstrating how: a) Radio astronomy and Space Research (passive) services, and b) Radio astronomy stations and MetAids earth stations can be protected from interference from mobile earth stations, in the bands 1 668 – 1 668.4 MHz and 1 668.4-1 670 MHz, respectively. Preliminary studies within the ITU-R show that co-frequency sharing between RAS stations and mobile earth stations (MES) is feasible, e.g. by employing coordination zones of radii on the order of 300 km, under worst case scenarios. To date, these studies considered only terrestrial MES; the airborne case was not considered. Interference by MES operating in the 1 670-1 675 MHz band can be prevented by much smaller coordination radii, on the order of 50 km.

U.□. The United States supports the completion of sharing studies between the mobile service and MSS in the band 1 668.4 – 1 675 MHz, recognizing that stations in the MSS shall not claim protection from fixed and mobile stations operating in the United States, as stated in the *resolves* of Resolution 744. (April 30, 2004).

Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

Agenda Item 1.8: to consider the results of ITU-R studies on technical sharing and regulatory provisions for the application of high altitude platform stations operating in the bands 27.5-28.35 GHz and 31-31.3 GHz in response to Resolution **145 (WRC-03)**, and for high altitude platform stations operating in the bands 47.2-47.5 GHz and 47.9-48.2 GHz in response to Resolution **122 (Rev.WRC-03)**;

ISSUE: Resolution **145** invites WRC-07 to review and consider appropriate refinement of the regulatory provisions for the use of HAPS within the bands 27.5-28.35 and 31-31.3 GHz. The resolution limits the use of HAPS to 300 MHz in each band, and such use shall not cause harmful interference to, nor claim protection from, other stations of services operating in accordance with the Table of Frequency Allocations of Article 5, and, further, that the development of these other services shall proceed without constraints by HAPS operating pursuant to this resolution.

Resolution **122** deals with the use of the bands 47.2-47.5 GHz and 47.9-48.2 GHz by high altitude platform stations (HAPS) in the fixed service and by systems and networks in the fixed-satellite service (FSS).

BACKGROUND: WRC-97 first made a provision for the operation of HAPS, also known as stratospheric repeaters, within a 2 X 300 MHz portion of the fixed-service allocation in the bands 47.2-47.5 GHz and 47.9-48.2 GHz. During WRC-2000, several countries expressed a need for a lower frequency band for HAPS due to excessive rain attenuation that occurs at 47 GHz. WRC-2000 decided to make additional allocations for HAPS in the bands 27.5-28.35 and 31-31.3 GHz in Region 3, but did not allow operation in the entire bands until studies could be completed to determine how best to protect existing services in these and nearby frequency bands. WRC-03 decided to permit operation in the full allocated bands by HAPS and created Resolution **145**, which considers the additional possibility of allowing HAPS operations in the bands 27.5-28.35 and 31-31.3 GHz in Region 2. Additionally, WRC-03 specified certain regulatory provisions for the use of HAPS in these bands to protect existing and nearby allocated services.

U.S. VIEW: The existing HAPS ground station power density limits described in No. **5.543A** adequately protect passive satellite services operating in 31.3-31.8 GHz, yet provide sufficient power for operation of ground-to-HAPS links. The United States anticipates supporting no change to the existing No. **5.543A**.

The United States supports studies on the power limitation to be applied to HAPS ground stations to protect space station receivers in the band 47.2-47.5 GHz and 47.9-48.2 GHz. (April 30, 2004)

Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

Agenda Item 1.9: to review the technical, operational and regulatory provisions applicable to the use of the band 2 500-2 690 MHz by space services in order to facilitate sharing with current and future terrestrial services without placing undue constraint on the services to which the band is allocated;

ISSUE: This agenda item deals with the development of sharing criteria and regulatory provisions to facilitate use of the band by satellite and terrestrial services without placing undue constraints on any services allocated in the band. To protect U.S. terrestrial services, there may need to be studies to ensure Region 1 and 3 space service uses does not cause interference.

BACKGROUND: One of the bands identified for IMT-2000 at WRC-2000 was the 2 500-2 690 MHz band. In the United States this band has been identified for advanced terrestrial wireless services (FCC Report and Order 03-269). Internationally, in addition to the band being identified for IMT-2000 use, parts of the band are allocated for the broadcast satellite service (BSS) and the mobile satellite services (MSS). Within WP8F, there have been preliminary attempts at defining a band plan for terrestrial use of this band and it is expected this would continue. The sharing issues between NGSO BSS (Sound) and terrestrial services have been addressed by WRC-03 and it is anticipated that they will not be reopened under this agenda item.

U.S. VIEW: In the United States this band is designated for advanced terrestrial wireless applications and there is a strong possibility that this band could be used to meet future IMT-2000 requirements, thereby relieving pressure on the identification of new bands. (April 30, 2004)

Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

UNITED STATES

PRELIMINARY VIEWS ON WRC-07

Agenda Item 1.13: taking into account Resolutions **729 (WRC-97)**, **351 (WRC-03)** and **544 (WRC-03)**, to review the allocations to all services in the HF bands between 4 MHz and 10 MHz, excluding those allocations to services in the frequency range 7 000-7 200 kHz and those bands whose allotment plans are in Appendices **25**, **26** and **27** and whose channeling arrangements are in Appendix **17**, taking account of the impact of new modulation techniques, adaptive control techniques and the spectrum requirements for HF broadcasting;

ISSUE: There are three areas to be addressed:

- a. to consider frequency assignments for frequency adaptive systems in frequency bands allocated for fixed/mobile operation per Resolution **729**,
- b. that, as soon as the ITU-R studies are completed, a future competent conference should consider necessary changes to Appendix **17** to enable the use of new technology by the MMS per Resolution **351**,
- c. to consider identification of additional spectrum for HF broadcasting between 4-10 MHz per Resolution **544**. In particular focus has been given to the following bands:
 - 4 500-4 650 kHz
 - 5 060-5 250 kHz
 - 5 840-5 900 kHz
 - 7 350-7 650 kHz
 - 9 290-9 400 kHz
 - 9 900-9 940 kHz,

BACKGROUND: There are three separate issues to be addressed within agenda item 1.13. Each Resolution, although related due to possible impact to systems, will be studied in a separate ITU-R WP as the primary lead. The commonality between these items comes in the form of interested ITU-R WPs:

- a. Resolution **729** is a hold-over from WRC-97 and has not been successfully completed at this time. The lead group is WP 9C.
- b. Resolution **351** from WRC-03 and the studies for a technology or interoperable technologies have not been completed. The lead group is WP 8B.
- c. Resolution **544** from WRC-03, where it was agreed that no allocation would be considered for WRC-03. It was put to WRC-07 to resolve this issue on additional HF broadcasting spectrum. This was a very difficult issue at WRC-03 and in past WRCs where it has been discussed. The lead group is WP 6E.

U.S. VIEW: These issues, although related should still be addressed separately in the groups assigned primary responsibility with cooperation from other groups achieved through liaison statements and cross participation from administration experts that attend the contributing groups for each issue.

Resolution 729 – Before this Resolution can be resolved, development ITU-R Recommendations on characteristics for HF Frequency Adaptive systems is needed. In addition, review of the utilization of current and future fixed HF operations is required. Once this has been accomplished within WP 9C, then the feasibility and need of modifying the HF channel plans to accommodate HF adaptive systems can be investigated. Every attempt should be made to accomplish these tasks prior to WRC-07 to keep this resolution from being “rolled-over” to the next conference. Also this resolution is not limited to the 4-10 MHz band, and could impact all fixed HF channel plans (3-30 MHz).

Resolution 351 – Given the vital nature of the safety systems in Appendix 17, that a thorough review of the digital techniques for the HF/MF bands must be accomplished before any changes are made. Recommendations that detail the characteristics of these digital systems and a review of Appendix 17 operations must be accomplished to fully determine the impact of any changes. Every attempt should be made to accomplish these tasks prior to WRC-07 to keep this resolution from being “rolled-over” to the next conference. This resolution is not limited to the 4-10 MHz band, and could impact all of Appendix 17.

Resolution 544 – This contentious resolution dealing with the 4-10 MHz band must be considered carefully, taking into account impact on existing services after a careful review of broadcasting service requirements. Initial investigation shows that the allocation of all of the spectrum identified as “preferred” bands is problematic for the United States given that vital government systems operate in all these bands. In a proposal to WRC-03 the United States limited allocations to 250 kHz of spectrum for the broadcasters. The United States is investigating the current requirement that is needed to meet broadcasting needs.

The United States agrees with the need for a thorough study of the consequences of the current situation, augmented with projections of future broadcasting HF use. There should be a clear set of findings from this study of the maximum amount of spectrum desired, as well as what can be accomplished with lesser amounts of additional allocated broadcasting spectrum, including the case where no new spectrum for broadcasting is added. (April 30, 2004)

Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

Agenda Item 1.17: to consider the results of ITU-R studies on compatibility between the fixed-satellite service and other services around 1.4 GHz, in accordance with Resolution **745 (WRC-03)**;

ISSUE: Resolution **745 (WRC-03)**, deals with the protection of existing services in all Regions from non-geostationary-satellite feederlinks for mobile-satellite service links below 1 GHz operating in the fixed-satellite service and using the frequency bands around 1.4 GHz on a secondary basis.

BACKGROUND: At WRC-03, the Conference decided to make the bands 1 390-1 392 MHz and 1 430-1 432 MHz available for the fixed-satellite service (FSS) on a secondary basis for feeder links in the (Earth-to space) and (space-to-Earth) directions, respectively, for non-GSO satellite systems in the MSS with service links operating below 1 GHz, and subject to Resolution **745** as follows:

1 that the additional allocations for the FSS on a secondary basis in the bands 1 390-1 392 MHz and 1 430-1 432 MHz for feeder links in the (Earth-to space) and (space-to-Earth) directions, respectively, for non-GSO satellite systems in the MSS with service links operating below 1 GHz, shall not be used until the completion of ITU-R studies on all identified compatibility issues as shown in Annex 1 to this Resolution and the results of these studies shall be reported to WRC-07 and the decisions should be taken by WRC-07 accordingly;

2 to recommend that decisions taken by WRC-07, including any provisions for the protection of other services to which the bands in *resolves* 1 are allocated, and of passive services in the adjacent band, apply to all non-GSO FSS systems in these bands filed to the Bureau after 5 July 2003,

The band 1 350-1 400 MHz is allocated on a primary basis to the radiolocation, fixed and mobile services in Region 1 and to the radiolocation service in Regions 2 and 3, and the footnotes Nos. **5.149**, **5.338** and **5.339** also apply to this band. The band 1 400-1 427 MHz is allocated to the Earth exploration-satellite service (EESS) (passive), radio astronomy and space research (passive) services on a primary basis in all Regions and footnote No. **5.340** also applies to this band. The band 1 427-1 429 MHz is allocated in all Regions to the space operation (Earth-to-space), fixed and mobile (except aeronautical mobile) services on a primary basis. The band 1 429-1 452 MHz is allocated on a primary basis to the fixed service in all Regions, to the mobile service (except aeronautical mobile) in Region 1 and to the mobile service in Regions 2 and 3. It should also be noted that footnote No. **5.341** also applies to the band 1 400-1 452 MHz and that footnote No. **5.342** also applies to the band 1 429-1 452 MHz in Region 1. As can be seen from this discussion of the

existing allocations prior to WRC-03, additional allocations in the frequency region are quite complicated as many other services are potentially impacted.

The CPM-02 Report indicated that there were significant technical challenges to be overcome in some areas if existing services, particularly passive services, were to be protected from harmful interference from the operation of feeder links around 1.4 GHz. The report also indicated that studies in ITU-R were incomplete for the radio astronomy, EESS (passive), space research, aeronautical mobile (aeronautical mobile telemetry (AMT)) and radiolocation services. This posed some difficulties for WRC-03 and the Conference decided to make the secondary allocation for the MSS feederlinks subject to completion of this work.

Studies are on-going in various ITU-R groups to complete this technical work and to determine the technical and operational means of enabling the use of the MSS feederlink allocations while at the same time protecting the existing services. While the amount of work necessary is substantial, the United States believes that these secondary allocations around 1.4 GHz to the fixed-satellite service (FSS) for feeder links for non-GSO satellite systems in the MSS with service links below 1 GHz will support the development of new services on a global basis and be very beneficial to many administrations, especially those in developing countries.

U.S. VIEW: The United States supports the completion of studies, and testing and demonstrations to validate such studies, on operational and technical means to facilitate sharing around 1.4 GHz, including the protection of the passive services in the band 1 400-1 427 MHz from unwanted emissions. Upon the successful completion of these studies, tests and demonstrations, the United States supports implementation of appropriate provisions in the Radio Regulations to protect existing services and the use of the bands 1 390-1 392 MHz and 1 430-1 432 MHz for non-geostationary-satellite feederlinks for mobile-satellite service links below 1 GHz operating in the fixed-satellite service (April 9, 2004).

Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

Agenda Item 1.18: to review the pfd limits in the band 17.7-19.7 GHz for satellite systems using highly inclined orbits, in accordance with Resolution **141 (WRC-03)**;

ISSUES:

1. Whether the current pfd limits in Article **21** for non-GSO systems in the FSS are adequate to protect the fixed service in the 17.7-19.7 GHz band from non-geostationary systems using highly-inclined orbits (HIOs) having an apogee altitude greater than 18000 km and an orbital inclination between 35° and 145° without unduly constraining the use of these non-GSO FSS systems.
2. Whether there are technical and operational measures in the band 17.7-19.7 GHz that could be implemented in the fixed service to mitigate interference from FSS space stations in HIO.
3. As a consequence of this agenda item, whether HIOs should be categorized as special type of non-GSO distinct from other non-GSOs such as low or medium earth orbit systems.

BACKGROUND: The ITU-R has been considering sharing aspects for non-GSO systems using HIOs, including systems in highly elliptical orbit (HEO), for a number of years. Several categories of orbits are encompassed within the term “highly-inclined”, including “highly elliptical”. These are all non-geostationary satellite systems and need to be treated as such. WRC-95 adopted provisional limits on the pfd produced at the surface of the Earth by non-GSO satellites operating in the FSS (space-to-Earth) in the band 17.7-19.3 GHz in order to protect terrestrial services. These limits were revised at WRC-97 and WRC-2000. WRC-03 determined that no changes were needed to the pfd limits and associated provisions in Section **V** of Article **21** that were finalized at WRC-2000 for all non-GSO FSS systems in the 17.7-19.7 GHz. WRC-03 adopted Resolution **141 (WRC-03)**, which invites the ITU-R to conduct studies to determine whether the current pfd limits in Article **21** for non-GSO systems in the FSS are adequate to protect the fixed service in the 17.7-19.7 GHz band from non-geostationary systems using HIOs, of the orbital characteristics as stated in considering g) of Resolution **141**, and whether there are technical and operational measures that could be implemented by the fixed service to mitigate interference from FSS space stations in HIO.

Studies previously performed by ITU-R on the sharing between non-homogeneous non-GSO satellite systems noted that sharing between non-GSO systems was self-limiting and assumed a maximum effective number of 3.5 systems for co-coverage, co-frequency, non-GSO systems, including HIO systems. It is noteworthy that at least one HIO system has been operating in the 17.7-19.7 GHz band for several years at the power levels in the applicable portion of Article **21**, and that to date, there have been no reports of interference from the non-GSO FSS into the fixed service.

U.S. VIEW:

1. The United States continues to support no change to the current limits and associated provisions in Section V of Article **21** for all non-GSO FSS systems in the 17.7-19.7 GHz frequency bands.
 2. ITU-R studies on sharing between non-GSO systems using HIOs and FS networks should continue. The results of studies will be improved by considering only 2-3 HIO systems and using realistic assumptions for the characteristics for fixed satellite service and fixed service systems.
 3. Satellite networks using HIOs should continue to be considered as non-GSOs and have the same regulatory standing as other types of non-GSOs such as those in low and medium earth orbits. There is no need to modify the Radio Regulations in a way that separates HIO-type non-GSO operations from other non-GSO systems (April 30, 2004).
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Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

UNITED STATES

PRELIMINARY VIEWS ON WRC-07

Agenda Item 1.19: to consider the results of the ITU-R studies regarding spectrum requirement for global broadband satellite systems in order to identify possible global harmonized FSS frequency bands for the use of Internet applications, and consider the appropriate regulatory/technical provisions, taking also into account No. **5.516B** of the Radio Regulations;

ISSUE: The purpose of this agenda item is to identify fixed satellite service (FSS) frequency bands for the use of internet applications, while keeping in mind the newly identified high density fixed satellite service (HDFSS) bands (**No. 5.516B**) and consider the appropriate regulatory and technical provisions.

BACKGROUND: WRC-03 adopted this agenda item to identify fixed satellite service bands for the use of broadband internet applications. It is not exactly clear what the objective is for this agenda item, but No. **5.516B** does reference Resolution **143**, which provides guidelines for the implementation of high-density applications in the fixed-satellite service in frequency band identified for this service. WP 4A is the Study Group lead, and the intent of the agenda item will become clear in the near future.

U.S. VIEW:

1. The United States supports the use of the underutilized FSS Allotment Band Plan (AP30B) for this particular application. The use of agenda item 1.10 and changes to the technical characteristics of the Plan, to make these bands more useful is supported, but replanning of the allotment plan is not supported.

U.□. The United States supports the use of the HDFSS bands (see RR No. **5.516B** and Resolution **143**) for broadband internet access applications. Taking this into account the appropriate regulatory provisions in the Radio Regulations are already in-place and there is no need for additional Radio Regulation modification. (April 9, 2004)

Mr. Donald Abelson
Chief, International Bureau
Federal Communications Commission
445 12th Street S.W.
Washington, D.C. 20554

Dear Mr. Abelson:

The National Telecommunications and Information Administration, on behalf of the Executive Branch Agencies, wishes to bring to your attention an additional approved draft preliminary Executive Branch view considering federal agency inputs toward the development of U.S. Preliminary Views for WRC-2007. The enclosed preliminary view addresses WRC-07 agenda item 1.21.

The enclosure is forwarded for review by the Commission. Jim Vorhies of my staff is the primary contact for NTIA.

Sincerely

(Original Signed May 7, 2004)
Fredrick R. Wentland
Associate Administrator
Office of Spectrum Management

Enclosure

Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

DRAFT PRELIMINARY VIEW FOR WRC-07

Agenda Item 1.21: to consider the results of studies, regarding the compatibility between the radio astronomy service and the active space services in accordance with Resolution **740 (WRC-03)**, in order to review and update, if appropriate, the tables of threshold levels used for consultation that appear in the Annex to Resolution **739 (WRC-03)**;

ISSUE: Taking into account the results of the compatibility studies, including the impact on the active and passive services concerned, in the band pairs contained in the Table to Resolution **740**, should WRC-07 include any or all of the band pairs in Annex 1 to Resolution **739**? If so, what are the appropriate threshold levels for consultation?

BACKGROUND: In preparation for WRC-03, Task Group 1/7 conducted studies that led to the adoption of Recommendation ITU-R SM.1633, which contains over 20 annexes that, using the methodology contained in the Recommendation, assess the compatibility of various band pairs between the radio astronomy service and space services. Not all studies in the annexes are complete. On the basis of Recommendation SM.1633 and associated studies, WRC-03 adopted Resolutions **739** and **740**.

Resolution **739** contains guidance to administrations operating space and radio astronomy stations in the band pairs contained in Tables 1-1 and 1-2, in order to come to acceptable solutions regarding space station unwanted emissions at a radio astronomy station. A consultation process is included.

Resolution **740** calls for the completion of studies for the band pairs indicated in its associated band pair Table. Comprehensive studies are needed to determine whether any of the band pairs from Resolution **740** should be added to the tables in Resolution **739**, and, if so, [to determine] the impact on all the concerned active and passive services and the appropriate threshold levels for consultation.

U.S. VIEW: Satisfactory studies need to be completed before a determination is made regarding adding any of pairs contained in Resolution **740** to the Table in Resolution **739**. The studies must identify the appropriate threshold levels for consultation and the impact on the concerned active and passive radio services.

Mr. Donald Abelson
Chief, International Bureau
Federal Communications Commission
445 12th Street S.W.
Washington, D.C. 20554

Dear Mr. Abelson:

The National Telecommunications and Information Administration, on behalf of the Executive Branch agencies, wishes to bring to your attention four additional approved Executive Branch preliminary views considering federal agency inputs toward the development of U.S. Preliminary Views for WRC-2007. These preliminary views address WRC-2007 agenda items 1.6, 1.14, 1.15, 1.16.

The enclosure is forwarded for review by the Commission. Jim Vorhies of my staff is the primary contact for NTIA.

Sincerely

(Original Signed May 28, 2004)
Fredrick R. Wentland
Associate Administrator
Office of Spectrum Management

Enclosure

Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

Agenda Item 1.6: to consider additional allocations for the aeronautical mobile (R) service in parts of the bands between 108 MHz and 6 GHz, in accordance with Resolution **414 (WRC-03)** and, to study current satellite frequency allocations, that will support the modernization of civil aviation telecommunication systems, taking into account Resolution **415 (WRC-03)**;

ISSUES: This agenda item encompasses three distinct efforts:

- 1) to determine whether additional allocations for aeronautical mobile (route) service (AM(R)S) are necessary: a) First consider adding AM(R)S allocations to existing aeronautical bands; and b) If step a is not sufficient, consider adding AM(R)S allocations to bands that are not currently used by aviation,
- 2) specifically consider how to accommodate the requirements for aeronautical systems in the band 5 091-5 150 MHz,
- 3) to examine the possibility of broadening the services and applications of the use of current satellite frequency allocations in order to allow the expansion of ICAO CNS/ATM systems that can also support other non-aeronautical telecommunication services.

BACKGROUND: The first of the three efforts contained in this agenda item addresses the current situation of existing AM(R)S bands nearing saturation in core Europe and the United States. In addition, many of the evolving navigation and surveillance applications may not meet the ITU-defined use of propagation property of waves required in order to operate in a radionavigation band. WRC-03 provided a good example of the latter issue, with the agenda including addition of a limited AM(R)S allocation to the 108-117.975 MHz band to accommodate International Civil Aviation Organization (ICAO) standard navigation and surveillance systems.

The second effort involves studies to consider how to accommodate the requirements for aeronautical systems in the band 5 091-5 150 MHz. Though this might be considered a subset of effort 1 as most proposed applications would fit under AM(R)S, the item is slightly broader in that aeronautical fixed links are also being considered to allow transmission of aeronautical sensor data on the airport property without requiring costly underground cable installation.

The third effort was proposed by a number of administrations with the goal of allowing them to modernize their air traffic control systems without requiring the need for extensive ground facilities. Studies are expected to focus on utilization of the ICAO Global Navigation Satellite System (GNSS) to improve navigation and timing services, and the exploration of using available satellite communications where safety objectives can be assured.

U.S. VIEW: Though studies have not been completed that quantify aviation need for additional AM(R)S spectrum, current aviation communication bands are severely congested. In addition, recent experience has shown that evolving technology for navigation and surveillance may necessitate allocations that are more encompassing than simply aeronautical radionavigation service (ARNS). As a result, the United States anticipates supporting the addition of AM(R)S allocations in some frequency bands depending on the results of ITU-R studies.

Regarding the second effort, AM(R)S applications in the 5 091-5 150 MHz band will be included in the effort 1 response. Based on these studies, the United States expects that a portion of the band will be reserved for the fixed service limited to aeronautical applications at airports.

Regarding the third effort, the United States expects to support the use of the Global Positioning System (GPS) as a constituent element of the GNSS. (May 27, 2004).

Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

Agenda Item 1.14: to review the operational procedures and requirements of the Global Maritime Distress and Safety System (GMDSS) and other related provisions of the Radio Regulations, taking into account **Resolutions 331 (Rev.WRC-03) and 342 (Rev.WRC-2000)** and the continued transition to the GMDSS, the experience since its introduction, and the needs of all classes of ships;

ISSUE: Per Resolution **331**, the transition to the GMDSS has not been completed by a large number of administrations. This transition requires the eventual modification of Appendix **13**, to include its possible deletion, and replacement by a suitable recommendation covering vessels subject to the radio regulations that are not required to be GMDSS equipped. However, until the transition is complete, provisions of Appendix **13** are still applicable and need to be retained, and possibly rewritten for non-SOLAS vessels that will not be under the purview the regulations of GMDSS. Also, as GMDSS is becoming the new worldwide distress alerting system there are applicable lessons learned and changes to incorporate in Chapter VII, IX, and other portions of the Radio Regulations. Resolution **342** calls for the review of Appendix **18**, with the goal of accommodating new VHF technology in the 156-174 MHz band. WRC-2003 modified Appendix **18**, including the addition of note *o*), to permit the possible use, on a voluntary basis, of various channels or bands created by the conversion of some duplex channels to simplex channels, for the initial testing and the possible future introduction of new technologies. The challenge before WP 8B is to identify world wide interoperable digital technology that is adaptable to the maritime mobile service. ITU-R WP 8B plans to evaluate the future uses of the currently designated Public Correspondence VHF Channels for other maritime related use, in view of the worldwide decline of VHF public correspondence services.

Background: The reasons for this agenda item are to ensure that GMDSS requirements and procedures are current, administrations continue the transition from legacy non-GMDSS distress and safety systems, and ensure that the International Radio Regulations continue to accommodate the needs of those that have not made the transition to the GMDSS. This agenda item will continue to provide worldwide maritime safety system coordination to promote Safety-of-Life at sea in conjunction with International Maritime Organization (IMO) circulars and directives. This agenda item also promotes the efficient use of the VHF maritime band and accommodates new VHF technology in this band. Many administrations and regional groups will support changes to Appendix **18**.

U.S. VIEW: The United States believes that the distress and safety communications, non-GMDSS, should be revised to accommodate interoperability with GMDSS. In particular, Chapter VII of the Radio Regulations should be revised. This interoperability is required to maintain Safety-of-Life at sea until the maritime community has fully transitioned to the GMDSS standard. In accordance with IMO recommendations, GMDSS ships continue to keep continuous guard on VHF channel 16 (156.8 MHz) with a view to maintaining communications between SOLAS and Non-SOLAS ships. The United States maintains that all vessels are encouraged to make use of the GMDSS as soon as possible. The IMO has authorized the discontinuance of a 2182 KHz guard for SOLAS vessels. The United States,

in recognition of its continuing domestic requirements regarding non SOLAS vessels outside of VHF range, will maintain a 2182 kHz guard for the foreseeable future.

With regard to the use of new technologies for the maritime mobile service in the band 156-174 MHz and the consequential revision of Appendix **18** to reflect new technologies, the United States supports and is implementing port and coastal systems in accordance with Recommendation ITU-R M.1371-1 for Automatic Identification System (AIS). The further introduction of digital systems into this band should be based on adopting suitably modified land mobile technology into a worldwide interoperable standard. Appendix **18** should also be modified to reflect the current diminished demand for public correspondence coast stations. (May 27, 2004)

Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

Agenda Item 1.15: to consider a secondary allocation to the amateur service in the frequency band 135.7-137.8 kHz;

ISSUE: Determine the impact of this proposed secondary allocation on the fixed and mobile primary services. Low Frequency (LF) propagation must be considered carefully due to potential worldwide propagation characteristics. Amateur emissions from this possible secondary allocation must be assessed for compatibility of services to the fixed and maritime mobile services.

BACKGROUND: Amateurs want to continue to perform experimental communications in the 135.7-137.8 kHz band segment. This spectrum is currently allocated to the fixed and maritime mobile services internationally and domestically. One Region 1 administration currently allows amateurs to operate in this frequency range limiting EIRP to 1 watt. Also, many other administrations have permitted experimental operation on a case-by-case basis.

U.S. VIEW: The United States could support a secondary allocation to the amateur service in the band 135.7-137.8 MHz depending on the results of ITU-R studies. ITU-R studies should include an assessment of the impact of an amateur secondary allocation to currently allocated services and a determination of appropriate protection criteria for the fixed and mobile maritime services. (May 27, 2004)

Radio Conference Subcommittee (RCS)
Preparation for ITU Radiocommunication Conferences

UNITED STATES

DRAFT PRELIMINARY VIEWS ON WRC-07

Agenda Item 1.16: to consider the regulatory and operational provisions for Maritime Mobile Service Identities (MMSIs) for equipment other than shipborne mobile equipment, taking into account **Resolutions 344 (Rev.WRC-03)** and **353 (WRC-03)**;

ISSUE: The expansion of MMSIs is proposed for effective maritime Search and Rescue (SAR) operations and enhancements of the maritime navigation systems. SAR aircraft using Digital Selective Calling (DSC) require assignment of MMSIs to enable effective communications with ships during emergency communications. Also, the assignment of MMSIs to aids-to-navigation will increase maritime navigational safety. The MMSIs for equipment other than shipborne mobile equipment must be unique to prevent confusion between vessels and distinguish aircraft engaged in search and rescue operations. ITU-R M.585 governs the MMSI format.

BACKGROUND: During WRC-03, MMSIs for other than shipborne equipment received considerable objections from some administrations. The United States first presented the issue of MMSIs for aeronautical equipment at the ITU during the Conference Preparatory Meeting (CPM-2), which were subsequently discussed and endorsed during a meeting of the International Maritime Organization (IMO). The main concern expressed by some administrations was the belief that changing the Radio Regulations during WRC-03 was premature. Administrations believed that ITU-R studies are required to ensure that there are no incompatibility issues regarding the use of MMSIs with the existing GMDSS. Administrations were also concerned that allowing DSC equipment on aircraft might degrade the effectiveness of the GMDSS. During WRC-03 several administrations expressed a need to assign MMSIs to Aids to Navigation as outlined in Resolution 353 (WRC-03).

U.S. VIEW: Recommendation ITU-R M.585 should be reviewed and modified prior to WRC-07 to take into account the potential exhaustion of maritime identification digits (MIDs) and MMSIs, and compatibility with current uses of MMSIs. This review may lead to recommendations for changes to the Radio Regulations. RR Article **19** should be modified to allow for assignment of MMSIs to aeronautical stations involved in maritime SAR. The United States and other administrations are currently studying, and in some cases implementing, replacement of existing RACON Transponders with AIS Transponders that require the use of MMSI's as an enhancement to maritime safety. The use of AIS Transponders will permit detection and identification of aids-to-navigation at greater ranges. (May 27, 2004)