



PUBLIC NOTICE

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April 7, 2005

**THE FCC'S ADVISORY COMMITTEE FOR THE
2007 WORLD RADIOCOMMUNICATION CONFERENCE APPROVES
RECOMMENDATIONS ON WRC-07 ISSUES**

IB Docket No. 04-286

On April 4, 2005, the World Radiocommunication Conference Advisory Committee (WRC-07 Advisory Committee) approved recommendations to the Commission on a number of issues that will be considered by the 2007 World Radiocommunication Conference (WRC-07). 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 2004 to the Commission for consideration. We appreciate the substantial amount of work that the WRC-07 Advisory Committee has put into developing its recommendations. We have attached to this Public Notice the WRC-07 Advisory Committee's recommendations that were approved at the April 4, 2005 meeting and request comments on these recommendations.

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 the attached WRC-07 Advisory Committee recommendations. We seek comments on the recommendations that appear in all of the WRC-07 Advisory Committee documents and on our initial impressions.

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

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. positions for WRC-07. The recommendations 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 recommendations 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>. Comments on the recommendations may be filed by referencing IB Docket 04-286 using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies. Parties are encouraged to file electronically by following the instructions at: <http://www.fcc.gov/cgb/ecfs> Parties who choose to file paper copies only should submit an original and

four copies of each filing. Guidelines and address for paper filings are available at: <http://www.fcc.gov/osec> . In addition, please submit one copy of your comments electronically or by paper to Alexander Roytblat, FCC WRC-07 Director, Federal Communications Commission, Room 6-A865, 445 12th Street, SW, Washington, DC 20554; e-mail: WRC07@fcc.gov. Comments should refer to IB Docket No. 04-286 and to specific recommendations by document number. The deadline for comments on the recommendations is April 15, 2005. It is necessary that comments be received by April 15, 2005 in order to give us enough time to consider them in the formulation of the U.S. positions for the upcoming meeting of the Inter-American Telecommunication Commission, Permanent Consultative Committee II, WRC-07 Working Group that is scheduled for April 26-29, 2005.

I. Recommendations by the Advisory Committee for the 2007 World Radiocommunication Conference:

INFORMAL WORKING GROUP 1 (IWG-1) **Terrestrial and Space Science Services**

Document WAC/051(04.04.05):

DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE

Agenda Item 1.5 (WRC-07): *“to consider spectrum requirements and possible additional spectrum allocations for aeronautical telecommand and high bit-rate aeronautical telemetry, in accordance with Resolution 230 (WRC-03)”*

Background Information

At the meeting of ITU-R Working Party 8B held in September 2004, one Administration presented a paper (Document 8B/30) which proposed the adoption of definitions for the terms “aeronautical telemetry,” and “aeronautical telecommand.” WP8B square-bracketed the definitions in the CPM text and agreed to carry the matter forward for resolution at the next meeting. See Chairman’s Report of the 15th Meeting of Working Party 8B, Document 8B/98, Annex 6.

Proposal:

USA/__/01

NOC: Article 1

Reasons: Formal definitions are not necessary for resolution of this Agenda Item. Aeronautical mobile telemetry has been conducted for many years internationally without special definitions for the terms “aeronautical telemetry” or “aeronautical telecommand.” See, e.g., No. 5.342 (e.g., Russian Federation and Ukraine, among a number of Administrations); No. 5.343 (Region 2); No. 5.394 (United States, Canada); and No. 5.395 (France). This approach is not only the least restrictive of the options for implementing AMT, but has a long and successful history in the ITU.

The effort to secure Article 1 definitions would impose substantial burdens on the Special Committee for Regulatory and Procedural Matters and ITU staff, as well as complicate the work of the WRC. Given the points noted in the preceding paragraph, those burdens would far outweigh any conceivable benefit. The US also believes that there are less formal approaches to exploring the meaning of these terms as an alternative to adopting formal definitions under Article 1 of the Radio Regulations. To the extent any Administration should be of the view that further clarification regarding the scope of the Agenda Item would be in order, that clarification can be provided via text in the Preliminary Draft New Report.

DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE

Agenda Item 1.5 (WRC-07): *“to consider spectrum requirements and possible additional spectrum allocations for aeronautical telecommand and high bit-rate aeronautical telemetry, in accordance with Resolution 230 (WRC-03)”*

Background Information

Unmanned aerial vehicles (“UAVs”) are envisioned by many as fulfilling a variety of civil applications, and flying in national airspace of numerous Administration within the next decade. Vehicles such as these must be carefully tested before any such operation commences given the obvious safety implications associated with these flights.

Additional spectrum designated for aeronautical mobile telemetry pursuant to Agenda Item 1.5 may be utilized for the flight testing of such aircraft. Such testing is expected to occur at designated test centers on a coordinated basis with incumbent services. Such use does not include command and control of UAVs in national airspace. Consideration of the spectrum needs of UAVs operating in national airspace should be the subject of other Agenda Items.

Proposal:

USA/ __/02

NOC: Article 5 (with regard to the use of spectrum by unmanned aerial vehicles operating in regular flight in national airspace pursuant to Agenda Item 1.5 (WRC-03)).

Reasons:

Agenda Item 1.5 was approved for one purpose only; namely, to ensure adequate spectrum resources for flight testing in the face of extraordinary increases in telemetry data rates. Use of the Agenda Item for broader purposes is inconsistent with WRC-03’s intent in this respect. See Res. 230 (WRC-03), recognizing a) (“there are emerging telemetry systems with large data transfer requirement to support testing of commercial aircraft and other airframes”).

Second. Command and control of UAVs in civil airspace involves the use of spectrum for an aeronautical safety service such as the Aeronautical Mobile Route Service (AM(R)S). While flight testing involves the safety of pilots and those on the ground, aeronautical mobile telemetry is not a radio service, but a function performed under the Mobile Service (MS), and hence is not a safety service as defined by the ITU. Accordingly, Agenda Item 1.5 is not the appropriate vehicle for any consideration of UAVs operating in civil airspace.

Document WAC/052(04.04.05):

DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE

Agenda Item: 1.20-To consider results of studies and proposals for regulatory measures if appropriate regarding the protection of the Earth exploration-satellite service (passive) from unwanted emissions of active services in accordance with Resolution 738(WRC-03).

Background Information

TG 1/9 is the ITU-R group responsible for carrying out the studies related to this agenda item. The agenda item was necessary due in part to the inadequacy of information contained on certain band pairs found in ITU-R Recommendation SM. 1633. To address the band pairs in which there was sufficient information developed, WRC-03 adopted Resolution 739 and included in its associated Tables of band pairs those active services where it was considered that certain steps as described in the resolves of Resolution 739 be taken to protect the paired passive service. It appears that a similar regulatory approach should be taken with this agenda item

TG 1/9 is developing information related to Agenda Item 1.20. Resolution 738 urges (resolves 1) to update Recommendation ITU-R SM. 1633. The studies being carried out in connection with the band pairs in Resolution 738 such as those systems using the Inter Satellite Service link band 22.55-23.55 GHz will or will not cause unacceptable interference to the EESS in the band 23.6-24 GHz. The material developed should be included in a modification to Recommendation SM. 1633.

Band pairs associated with this agenda item should be treated in a way analogous to those for Radio Astronomy band pairs in Resolution 739.

PROPOSAL

ADD

USA/1.20/1- No. 5. 347A to the bands [abcd Mhz - efgh MHz,.....] referencing application of a resolution like Resolution 739.

Reason: This proposal sets forth the appropriate regulatory approach to be taken for this agenda item. The bands to be listed in the [.....] will depend on the result of studies carried out for individual band pairs.

INFORMAL WORKING GROUP 2 (IWG-2)

Satellite Services and HAPS

Document WAC/049(04.04.05):

DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE

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)**;

ISSUES:

1. Whether the current pfd limits in Article 21 for non-geostationary (non-GSO) systems in the FSS are adequate to protect the fixed service in the 17.7-19.7 GHz band from non-GSO systems using Highly Inclined Orbits (HIO) 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.

BACKGROUND: The ITU-R has been considering the sharing aspects for non-GSO fixed-satellite service systems using highly-inclined orbits (“HIOs”), including highly elliptical orbit (HEO) satellite systems, in a number of contexts and under a number of different names in recent years. Several categories of non-GSOs are encompassed within the term “highly-inclined,” but all HIO 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. Specifically, all HIO systems are treated as non-GSO systems by the ITU when they are examined for regulatory compliance. 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 17.7-19.7 GHz in order to protect terrestrial services. WRC-97 and WRC-2000 modified the Article **21** power flux-density (pfd) limits that apply to non-GSO FSS system satellites, including HIO satellites, to adequately protect terrestrial systems in the 17.7-19.7 GHz frequency band.

In Resolution **141 (WRC-03)**, the ITU-R was 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. 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.

Studies performed in the ITU-R, using conservative but feasible assumptions for satellite operations, show conclusively that systems of HIO satellites operating at the pfd limits from Article **21**, Table **21-4**, applicable to non-GSO FSS satellites in the 17.7-19.7 GHz band adequately protect the fixed service. 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.

The following proposals under Agenda Item **1.18** are intended to resolve the question of the appropriate pfd limits to apply to non-GSO FSS systems using highly-inclined orbits having an apogee altitude greater than 18 000 km and an orbital inclination between 35° and 145° -- especially, but not exclusively, those operating in highly-elliptical orbits.

USA/ /1
NOC

ARTICLE 1
Terms and definitions

Reasons: Satellite networks using highly-inclined orbits, including HEOs, should continue to be considered as non-GSOs so there is no need to modify the terms and definitions in the Radio Regulations to accommodate HIO-type or HEO-type non-GSO operations.

USA / /2
NOC

TABLE 21-4 (continued) *

Frequency band	Service*	Limit in dB(W/m ²) for angle of arrival (δ) above the horizontal plane			Reference bandwidth
		0°-5°	5°-25°	25°-90°	
....					
17.7-19.3 GHz ^{7, 8}	Fixed-satellite (space-to-Earth) Meteorological-satellite (space-to-Earth)	-115 ^{12bis} or -115 - X ¹²	-115 + 0.5(δ - 5) ^{12bis} or -115 - X + ((10 + X)/20)(δ - 5) ¹²	-105 ^{12bis} or -105 ¹²	1 MHz
19.3-19.7 GHz 22.55-23.55 GHz 24.45-24.75 GHz 25.25-27.5 GHz	Fixed-satellite (space-to-Earth) Earth exploration-satellite (space-to-Earth) Inter-satellite Space research (space-to-Earth)	-115	-115 + 0.5(δ - 5)	-105	1 MHz

Reasons: The current 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 17.7-19.3 GHz frequency band, and the limits that apply to all FSS satellites in the 19.3-19.7 GHz band, are adequate to protect the fixed service in the 17.7-19.7 GHz band from non-GSO FSS systems using highly-inclined orbits having an apogee altitude greater than 18 000 km and an orbital inclination between 35° and 145°. Satellite networks using HIOs, including non-GSO systems using HEO, should continue to be considered as non-GSOs and have the same regulatory standing as other types of non-GSOs. No additional regulatory provisions are needed for such systems.

USA/ /3
SUP

RESOLUTION 141 (WRC-03)

**Sharing between certain types of non-geostationary-satellite systems
in the fixed-satellite service and stations in the fixed service
in the 17.7-19.7 GHz band**

Reasons: All of the actions required under this Resolution have been completed and it may be suppressed. The technical studies confirmed that the current pfd limits for non-GSO FSS systems in Article 21 are adequate to protect the fixed service in the 17.7-19.7 GHz band from non-GSO systems having an apogee altitude greater than 18 000 km and an orbital inclination between 35° and 145, without unduly constraining the non-GSO FSS systems. With the suppression of this Resolution, there is no need for the Radiocommunication Bureau to review or revise any findings made on the compliance with the limits contained in Article 21 of a highly-inclined orbit non-GSO FSS system for which complete advance publication information has not been received prior to 5 July 2003.

INFORMAL WORKING GROUP 5 (IWG-5)
Regulatory Procedures Issues

Document WAC/050(04.04.05):

Recommended revisions to the preliminary views from the National Telecommunications and Information Administration (NTIA) on WRC-07 Agenda Item 1.12:

Editorial note: In the following revision, each of the several views listed under “U.S. VIEWS” at the end of the NTIA document (Document WAC/046(04.04.05) in Section II of this public notice) has been moved so that each appears under its respective topic in the “Issues” section.

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)**;

BACKGROUND: Resolution **86 (Rev. Marrakesh, 2002)** requested that WRC-03 and subsequent Conferences review the regulatory procedures associated with the advance publication, coordination, notification and recording of frequency assignments pertaining to satellite network with the aim to simplifying the process and providing the BR and administrations with cost savings while maintaining the guiding principles outlined in the Constitution and the Radio Regulations.

WRC-03 identified in Resolution **86 (WRC-03)** the scope and the criteria to be used for the implementation of Resolution **86 (Rev. Marrakesh, 2002)**. *Resolves 1* of Resolution **86 (WRC-03)** specifically states that WRC-07 should “consider any proposals which deal with deficiencies in the advance publication, coordination, notification and recording procedures of the Radio Regulations (RR) 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.” WRC-03 also resolved that future WRCs consider any proposals that are intended to transform the content of the Rules of Procedure into regulatory text.

For a number of years the ITU has been struggling with how to manage the extensive development of satellite networks and their associated filings at the ITU-BR. Such developments have put a strain on the application of the RR by the BR, which has the responsibility for the processing and examination of the advance publications, coordination requests and notifications of satellite networks.

The burden was such that backlogs have developed and methodologies were developed for trying to improve the process. However, experience has indicated that such methodologies could be

improved. In addition, the ITU is itself in a budgetary crisis which has led to concern that all of its necessary functions can be supported.

It appears that some of the concerns that have arisen could be mitigated through ~~some~~selective modifications of Articles 9 and 11 of the RR. Such modifications could allow the BR staff to carry out their responsibilities more efficiently and effectively. This would result in better service to administrations and more time to provide assistance to individual administrations meriting such support. Such modifications could have the consequential effect of reducing the amount of time necessary for the BR to spend on processing satellite filings and making the result of the BR's work more beneficial to administrations.

In connection with Resolution **86 (WRC-03)**, the Conference also adopted ~~other~~the following resolutions to address some of the potential issues: Resolution **88** which deals with the rationalization of Articles 9 and 11 of the Radio Regulations, Resolution **89** regarding the backlog of satellite network filings and Resolution **901** which concerns the extension of the coordination arc concept to new bands and services.

ISSUES:

1) Resolution 86 (WRC-03) – Scope and criteria to be used for the implementation of Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference

a) Identification of Deficiencies in Selected Parts of the Radio Regulations and Transformation of Rules of Procedure into Radio Regulations

~~Resolves 1 and Resolves 2~~ of Resolution **86 (WRC-03)** relates to the consideration of proposals dealing with deficiencies in the advance publication, coordination and notification procedures of the Radio Regulations for space services, and Resolves 2 relates to consideration of proposals intended to address the transformation of the content of the Rules of Procedure into regulatory text, on the basis of proposals received by WRC-07. In addition, **Nos. 13.0.1 and 13.02** require the Radio Regulations Board (RRB) to submit to the coming WRC modifications to the Radio Regulations needed to alleviate difficulties in the Radio Regulations whether or not they were resolved by Rules of Procedures. For those difficulties that were resolved by Rules of Procedure, the RRB is to include its suggestions in the Report of the Director to the conference, which will be treated under agenda item 7.1. *Considering e)* of Resolution **88 (WRC-03)** also refers to the extensive development of Rules or Procedure to facilitate understanding and interpretation of the Radio Regulations.

U.S. VIEW:

The U.S. supports the transformation of selected Rules of Procedure into Radio Regulations where doing so would alleviate known difficulties; ~~and~~moreover, the U.S. considers this ~~an ongoing activity beyond~~topic appropriate for consideration by WRC-07 and subsequent WRCs. In view of the ~~wide ranging treatment of the Radio Regulations~~potentially broad scope of provisions that might be treated under agenda item 1.12, the U.S. is of the view that WRC-07 ~~could~~might transform some, but not all, of the current Rules of Procedures into Radio Regulations. When recommendations or

proposals are made to transform a Rule of Procedure into a Radio Regulation, it would be most important for proponents to identify the difficulties being addressed and any differences between the existing and proposed regulations to facilitate their consideration.

It is noted that a certain number of Rules of Procedure have been, and will continue to be necessary. These generally relate to activities of the Board and the Bureau in the application of the Radio Regulations, and are unrelated to the difficulties or inconsistencies encountered in the Radio Regulations contemplated by this agenda item. Moreover, Additional Rules of Procedure are inevitable as a result of WRC-07 decisions. In the process of transforming Rules of Procedures into Radio Regulations, it will be important to highlight any differences between the proposed regulation and the current Rule of Procedure.

b) Ensuring that procedures, characteristics and appendices reflect the latest technologies

Resolves 3 of Resolution **86 (WRC-03)** addresses the need for provisions of the Radio Regulations to take into account technologies as they develop.

U.S. VIEW:

The U.S. could support modification of the Radio Regulations when the existing procedures, characteristics, and appendices are ineffective for the assessment and management of changes in the interference environment due to the introduction of new technologies.

c) Simplification of the Radio Regulations for space services

Resolves 5 of Resolution **86 (WRC-03)** addresses changes to provisions of the Radio Regulations for space services that would result in the simplification of the procedures and the work of the Bureau and/or administrations. Simplification is also addressed in the *considerings* of Resolution **88 (WRC-03)**.

U.S. VIEW:

The U.S. supports the continued simplification of the Radio Regulations procedures that would facilitate their understanding and minimize the need for associated Rules of Procedure.

d) Changes as a result of a Plenipotentiary Conference

Resolves 6 of Resolution **86 (WRC-03)** addresses changes to the Radio Regulations that follow from decisions of a Plenipotentiary Conference on space matters.

U.S. VIEW:

The U.S. is of the view that the decisions of past Plenipotentiary Conferences as well as the future Plenipotentiary Conferences in 2006 are within the scope of this activity. The U.S. will focus its efforts on assessing the decisions of the 2006 Plenipotentiary Conference to identify any changes to the Radio Regulations that may be required.

2) Resolution 88 (WRC-03) - Rationalization of Articles 9 and 11 of the Radio Regulations

~~It appears that some of the concerns that have arisen could be mitigated through some modifications of Articles 9 and 11 of the RR. Such modifications could allow the BR staff to carry out their responsibilities more efficiently and effectively. This would result in better service to administrations and more time to provide assistance to individual administrations meriting such support. Such modifications could have the consequential effect of reducing the amount of time necessary for the BR to spend on processing satellite filings and making the result of the BR's work more beneficial to administrations.~~

Resolution 88 (WRC-03) recognizes the attempts of various groups within the ITU, beginning with the Voluntary Group of Experts (VGE), to simplify the Radio Regulations, systematically remove unnecessary duplication, inconsistency and complexity and to address omissions. This Resolution resolves that the rationalization, clarification and possible simplification of Articles 9 and 11 be considered by a future conference under Resolution 86 (Rev. Marrakesh, 2002). CPM06-1 assigned the Special Committee on Regulatory and Procedural Matters as the responsible group for the Resolution 88 (WRC-03) aspects of agenda item 1.12.

U.S. VIEW:

The U.S. supports the continued modification, including simplification, of the Radio Regulations procedures that would facilitate their understanding and minimize the need for associated Rules of Procedure. The U.S. is committed to working through the study groups and with other administrations toward that end.

At this preliminary stage, it is the view of the U.S. that the work of the ITU staff could potentially be made more efficient and effective through selective modification of Articles 9 and 11 of the Radio Regulations. However, it is important to ensure that proposed modifications to rationalize and simplify Articles 9 and 11 do not alter the regulatory rights currently afforded to assignments of satellite network filings from the application of satellite coordination and notification procedures. Studies are required to determine which modifications of Articles 9 and 11, if any, would be appropriate.

In the context of agenda item 1.12, the U.S. understands the term “rationalization” to mean clarification, simplification, and improvement of Articles 9 and 11 and not a complete replacement or major rewrite of Articles 9 and 11. ~~In view of the wide ranging treatment of the Radio Regulations under Resolution 86 (WRC-03), the U.S. doubts that extensive revision and restructuring of Articles 9 and 11 in accordance with Resolution 88 (WRC-03) can be successfully treated by WRC-07.~~ The cascading effect on other Articles of the Radio Regulations, the inadvertent introduction of errors and inconsistencies requiring more Rules of Procedure, and the resultant state of uncertainty for the Bureau and Administrations are a few of the anticipated difficulties of extensive revisions to the Articles. These cascading effects, when combined with the wide-ranging treatment of the Radio Regulations under Resolution 86 (WRC-03), lead the US to conclude that extensive revision and restructuring of Articles 9 and 11 should not be attempted. The U.S. supports selective modification of Articles 9 and 11 based on specific needs and opposes extensive revision and restructuring.

3) Resolution 89 (WRC-03) – Backlog in satellite filings

Resolution **89** addresses the issue of reducing the backlog of satellite filings by means of removing unnecessary data in Appendix 4 to reduce processing time, identifying inconsistencies in Appendix 4, and improving the overall database structure and software for electronic filing, particularly the means for validating satellite network filings.

U.S. VIEW:

The U.S. supports correcting inconsistencies and removing unnecessary data elements from Appendix 4. Unnecessary data is understood as data which is duplicative or not useful in the context of the coordination of satellite networks by Administrations. The U.S. supports the continuing improvement of the database structure and software for electronic filing by the Bureau but does not view these initiatives as WRC matters.

4) Resolution 901 (WRC-03) – Determination of the orbital arc separation for which coordination would be required between two satellite networks operating in a space service not subject to a Plan

Resolution **901 (WRC-03)** recognized that no difficulties have resulted from the current implementation of the coordination arc concept for certain frequency bands and services. WRC-03 provisionally extended the concept for the BSS and FSS to include bands above 17.3 GHz that are not already covered and specified orbital separations that would apply. Resolution **901 (WRC-03)** invites the ITU-R to conduct studies on the applicability of the coordination arc concept for bands and services where this concept is not currently covered in the Radio Regulations and recommend the orbital separation required for triggering coordination to be considered by a future conference for incorporation into Appendix 5 of the Radio Regulations.

U.S. VIEW:

The U.S. supports the coordination arc concept as currently reflected in the Radio Regulations as it facilitates the work of administrations and the Bureau. Any extension of this concept to other frequency bands and other services or the confirmation or revision of the provisional values for the BSS and FSS for bands above 17.3 GHz should be based on technical studies taking into account that the coordination arc concept, if appropriate, may require different values for different services and frequency bands. As is currently provided for in Appendix 5 for GSO/GSO coordination under **No. 9.7**, administrations should retain the right to request to be included in coordination for networks outside the coordination arc, based on the value of $\Delta T/T$ exceeding 6% ~~even if the coordination arc threshold condition is not met.~~

II. Draft preliminary views and proposals on WRC-07 Agenda Items received from the National Telecommunications and Information Administration (NTIA):

Document WAC/046(04.04.05)¹:

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)**;

BACKGROUND: Resolution **86 (Rev. Marrakesh, 2002)** requested that WRC-03 and subsequent Conferences review the regulatory procedures associated with the advance publication, coordination, notification and recording of frequency assignments pertaining to satellite network with the aim to simplifying the process and providing the BR and administrations with cost savings while maintaining the guiding principles outlined in the Constitution and the Radio Regulations.

WRC-03 identified in Resolution **86 (WRC-03)** the scope and the criteria to be used for the implementation of Resolution **86 (Rev. Marrakesh, 2002)**. *Resolves 1* of Resolution **86 (WRC-03)** specifically states that WRC-07 should “consider any proposals which deal with deficiencies in the advance publication, coordination, notification and recording procedures of the Radio Regulations (RR) 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.” WRC-03 also resolved that future WRCs consider any proposals that are intended to transform the content of the Rules of Procedure into regulatory text.

For a number of years the ITU has been struggling with how to manage the extensive development of satellite networks and their associated filings at the ITU-BR. Such developments have put a strain on the application of the RR by the BR, which has the responsibility for the processing and examination of the advance publications, coordination requests and notifications of satellite networks.

The burden was such that backlogs have developed and methodologies were developed for trying to improve the process. However, experience has indicated that such methodologies could be improved. In addition, the ITU is itself in a budgetary crisis which has lead to concern that all of its necessary functions can be supported.

It appears that some of the concerns that have arisen could be mitigated through some modifications of Articles **9** and **11** of the RR. Such modifications could allow the BR staff to

¹ Informal Working Group 5 revised portions of this NTIA draft preliminary view as shown in Document WAC/050(04.04.05) that was approved by the WRC-07 Advisory Committee on April 4, 2005. (See Section I of this public notice.)

carry out their responsibilities more efficiently and effectively. This would result in better service to administrations and more time to provide assistance to individual administrations meriting such support. Such modifications could have the consequential effect of reducing the amount of time necessary for the BR to spend on processing satellite filings and making the result of the BR's work more beneficial to administrations.

In connection with Resolution **86 (WRC-03)**, the Conference also adopted the following resolutions to address some of the potential issues: Resolution **88** which deals with the rationalization of Articles 9 and 11 of the Radio Regulations, Resolution **89** regarding the backlog of satellite network filings and Resolution **901** which concerns the extension of the coordination arc concept to new bands and services.

ISSUES:

1) Resolution 86 (WRC-03) – Scope and criteria to be used for the implementation of Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference

a) Transformation of Rules of Procedure into Radio Regulations

Resolves 1 and Resolves 2 of Resolution **86 (WRC-03)** address the transformation of Rules of Procedure into regulatory text on the basis of proposals received by WRC-07. In addition, **Nos. 13.0.1 and 13.02** require the Radio Regulations Board (RRB) to submit to the coming WRC modifications to the Radio Regulations needed to alleviate difficulties in the Radio Regulations whether or not they were resolved by Rules of Procedures. For those difficulties that were resolved by Rules of Procedure, the RRB is to include its suggestions in the Report of the Director to the conference, which will be treated under agenda item 7.1. *Considering e)* of Resolution **88 (WRC-03)** also refers to the extensive development of Rules or Procedure to facilitate understanding and interpretation of the Radio Regulations.

b) Ensuring that procedures, characteristics and appendices reflect the latest technologies

Resolves 3 of Resolution **86 (WRC-03)** addresses the need for provisions of the Radio Regulations to take into account technologies as they develop.

c) Simplification of the Radio Regulations for space services

Resolves 5 of Resolution **86 (WRC-03)** addresses changes to provisions of the Radio Regulations for space services that would result in the simplification of the procedures and the work of the Bureau and/or administrations. Simplification is also addressed in the *considerings* of Resolution **88 (WRC-03)**.

d) Changes as a result of a Plenipotentiary Conference

Resolves 6 of Resolution **86 (WRC-03)** addresses changes to the Radio Regulations that follow from decisions of a Plenipotentiary Conference on space matters.

2) Resolution 88 (WRC-03) - Rationalization of Articles 9 and 11 of the Radio Regulations

It appears that some of the concerns that have arisen could be mitigated through some modifications of Articles **9** and **11** of the RR. Such modifications could allow the BR staff to carry out their responsibilities more efficiently and effectively. This would result in better service

to administrations and more time to provide assistance to individual administrations meriting such support. Such modifications could have the consequential effect of reducing the amount of time necessary for the BR to spend on processing satellite filings and making the result of the BR's work more beneficial to administrations.

Resolution **88 (WRC-03)** recognizes the attempts of various groups within the ITU, beginning with the Voluntary Group of Experts (VGE), to simplify the Radio Regulations, systematically remove unnecessary duplication, inconsistency and complexity and to address omissions. This Resolution resolves that the rationalization, clarification and possible simplification of Articles **9** and **11** be considered by a future conference under Resolution **86 (Rev. Marrakesh, 2002)**. CPM06-1 assigned the Special Committee on Regulatory and Procedural Matters as the responsible group for the Resolution **88 (WRC-03)** aspects of agenda item 1.12.

3) Resolution 89 (WRC-03) – Backlog in satellite filings

Resolution **89** addresses the issue of reducing the backlog of satellite filings by means of removing unnecessary data in Appendix **4** to reduce processing time, identifying inconsistencies in Appendix **4**, and improving the overall database structure and software for electronic filing, particularly the means for validating satellite network filings.

4) Resolution 901 (WRC-03) – Determination of the orbital arc separation for which coordination would be required between two satellite networks operating in a space service not subject to a Plan

Resolution **901 (WRC-03)** recognized that no difficulties have resulted from the current implementation of the coordination arc concept for certain frequency bands and services. WRC-03 provisionally extended the concept for the BSS and FSS to include bands above 17.3 GHz that are not already covered and specified orbital separations that would apply. Resolution **901 (WRC-03)** invites the ITU-R to conduct studies on the applicability of the coordination arc concept for bands and services where this concept is not currently covered in the Radio Regulations and recommend the orbital separation required for triggering coordination to be considered by a future conference for incorporation into Appendix **5** of the Radio Regulations.

U.S. VIEWS:

1) Resolution 86 (WRC-03) – Scope and criteria to be used for the implementation of Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference

a) Transformation of Rules of Procedure into Radio Regulations

The U.S. supports the transformation of Rules of Procedure into Radio Regulations where doing so would alleviate known difficulties and considers this an ongoing activity beyond WRC-07. In view of the wide ranging treatment of the Radio Regulations under agenda item 1.12, the U.S. is of the view that WRC-07 could transform some but not all of the current Rules of Procedures into Radio Regulations. Additional Rules of Procedure are inevitable as a result of WRC-07 decisions. In the process of transforming Rules of Procedures into Radio Regulations, it will be important to highlight any differences between the proposed regulation and the current Rule of Procedure.

b) Ensuring that procedures reflect the latest technologies

The U.S. could support modification of the Radio Regulations when the existing procedures, characteristics, and appendices are ineffective for the assessment and

management of changes in the interference environment due to the introduction of new technologies.

c) Simplification of the Radio Regulations for space services

The U.S. supports the continued simplification of the Radio Regulations procedures that would facilitate their understanding and minimize the need for associated Rules of Procedure.

d) Changes as a result of a Plenipotentiary Conference

The U.S. is of the view that the decisions of past Plenipotentiary Conferences as well as the future Plenipotentiary Conferences in 2006 are within the scope of this activity. The U.S. will focus its efforts on assessing the decisions of the 2006 Plenipotentiary Conference to identify any changes to the Radio Regulations that may be required.

2) Resolution 88 (WRC-03) - Rationalization of Articles 9 and 11 of the Radio Regulations

The U.S. supports the continued modification, including simplification, of the Radio Regulations procedures that would facilitate their understanding and minimize the need for associated Rules of Procedure. The U.S. is committed to working through the study groups and with other administrations toward that end.

At this preliminary stage, it is the view of the U.S. that the work of the ITU staff could potentially be made more efficient and effective through modification of Articles 9 and 11 of the Radio Regulations. However, it is important to ensure that proposed modifications to rationalize and simplify Articles 9 and 11 do not alter the regulatory rights currently afforded to assignments of satellite network filings from the application of satellite coordination and notification procedures. Studies are required to determine which modifications of Articles 9 and 11, if any, would be appropriate.

In the context of agenda item 1.12, the U.S. understands the term “rationalization” to mean clarification, simplification, and improvement of Articles 9 and 11 and not a complete replacement or major rewrite of Articles 9 and 11. In view of the wide ranging treatment of the Radio Regulations under Resolution 86 (WRC-03), the U.S. doubts that extensive revision and restructuring of Articles 9 and 11 in accordance with Resolution 88 (WRC-03) can be successfully treated by WRC-07. The cascading effect on other Articles of the Radio Regulations, the inadvertent introduction of errors and inconsistencies requiring more Rules of Procedure, and the resultant state of uncertainty for the Bureau and Administrations are a few of the anticipated difficulties. The U.S. supports selective modification of Articles 9 and 11 based on specific needs and opposes extensive revision and restructuring.

3) Resolution 89 (WRC-03) – Backlog in satellite filings

The U.S. supports correcting inconsistencies and removing unnecessary data elements from Appendix 4. Unnecessary data is understood as data which is duplicative or not useful in the context of the coordination of satellite networks by Administrations. The U.S. supports the continuing improvement of the database structure and software for electronic filing by the Bureau but does not view these initiatives as WRC matters.

4) Resolution 901 (WRC-03) – Orbital arc separation for coordination

The U.S. supports the coordination arc concept as currently reflected in the Radio Regulations as it facilitates the work of administrations and the Bureau. Any extension of this concept to other frequency bands and other services or the confirmation or revision of the provisional values for the BSS and FSS for bands above 17.3 GHz should be based on technical studies taking into account that the coordination arc concept, if appropriate, may require different values for different services and frequency bands. As is currently provided for in Appendix 5 for GSO/GSO coordination under **No. 9.7**, administrations should retain the right to request to be included in coordination based on the value of $\Delta T/T$ exceeding 6% even if the coordination arc threshold condition is not met.

Document WAC/047(04.04.05)²:

DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE

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)**;

Background Information: The ITU-R has been considering sharing aspects for non-GSO systems using highly inclined orbits (HIOs), including systems in highly elliptical orbit, for a number of years. Several categories of non-GSOs are encompassed within the term “highly-inclined”. 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 17.7-19.7 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 band. 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. Resolution **141 (WRC-03)** also invites the ITU-R to determine 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 presented to the ITU in preparation for WRC-07 show conclusively that the current pfd limits in Table **21-4** of Article **21** are adequate to protect the fixed service in the 17.7-19.7 GHz band.

² Informal Working Group 2 merged this draft proposal from NTIA into its own draft proposal that became Document WAC/049(04.04.05) that was approved by the WRC-07 Advisory Committee on April 4, 2005. (See Section I of this public notice.)

Proposal:

ARTICLE 21

Section V – Limits of power flux density from space stations

USA/ / 1
NOC

TABLE 21-4 (continued)

Frequency band	Service*	Limit in dB(W/m ²) for angle of arrival (δ) above the horizontal plane			Reference bandwidth
		0°-5°	5°-25°	25°-90°	
17.7-19.3 GHz ^{7, 8}	Fixed-satellite (space-to-Earth)	-115 ¹³	$-115 + 0.5(\delta - 5)$ ¹³	-105 ¹³	1 MHz
	Meteorological-satellite (space-to-Earth)	-115 - X ¹²	$-115 - X + ((10 + X)/20)(\delta - 5)$ ¹²	-105 ¹²	
19.3-19.7 GHz 22.55-23.55 GHz 24.45-24.75 GHz 25.25-27.5 GHz	Fixed-satellite (space-to-Earth) Earth exploration-satellite (space-to-Earth) Inter-satellite	-115	$-115 + 0.5(\delta - 5)$	-105	1 MHz

Reasons: The current pfd limits and associated provisions in Section V of Article 21 are adequate to protect the fixed service in the 17.7 – 19.7 GHz band from non-GSO satellite systems, including those using highly-inclined orbits having an apogee altitude greater than 18 000 km and an orbital inclination between 35° and 145. Satellite networks using HIOs should continue to be considered as non-GSOs and have the same regulatory standing as other types of non-GSOs. No additional regulatory provisions are needed.

USA/ / 2
SUP

RESOLUTION 141 (WRC-03)

**Sharing between certain types of non-geostationary-satellite systems
in the fixed-satellite service and stations in the fixed service
in the 17.7-19.7 GHz band**

Reasons: All of the actions required under this Resolution have been completed and it may be suppressed. The technical studies confirmed that the current pfd limits for non-GSO FSS systems in Article 21 are adequate to protect the fixed service in the 17.7-19.7 GHz band from non-GSO systems having an apogee altitude greater than 18 000 km and an orbital inclination between 35° and 145. There is no need to review or revise any findings made on the compliance with the limits contained in Article 21 of a non-GSO FSS system for which complete advance publication information has not been received prior to 5 July 2003 per the *instructs the Radiocommunication Bureau*.

Document WAC/048(04.04.05):

PRELIMINARY VIEW ON WRC-07

Agenda Item 7.2: to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, taking into account Resolution **803 (WRC-03)**;

ISSUE: WRC agendas have grown increasingly complex and have included repetitious items or items that become repetitious due to lack of maturity in studies. This has placed undue burden on the ITU-R and administrations seeking to address these issues.

BACKGROUND: This was first recognized in Resolution **71 (Rev. Marrakesh, 2002)** where the Plenipotentiary Conference noted the increasingly complex and lengthy agendas for WRCs. Resolution **80 (Rev. Marrakesh, 2002)** of the Plenipotentiary Conference and Resolution **72 (WRC-2000)** recognized the positive contribution of regional and informal groups and the need for improved efficiency and fiscal prudence.

It should also be noted that the WRC-2007 and other recent WRC agendas, contain items which do not modify the Radio Regulations, only assess studies, or have appeared in substance upon the agendas of other recent WRCs. Prior to WRC-03 the U.S. submitted draft resolutions to address this issue by limiting the scope of WRCs to allocation, allotment or assignment matters and regulatory aspects necessary to implement an allocation, allotment or assignment.

Based on this U.S. contribution and other Administration contributions WRC-03 established Recommendation **800 (WRC-03)**, Principles for establishing agendas for world radiocommunication conferences.

U.S. VIEW: The United States fully supports the recommendations found in Recommendation **800 (WRC-03)** and further believes that WRC agendas should be limited to those items of a world-wide character that address allocation, allotment, or assignment matters and regulatory aspects necessary to implement an allocation, allotment, or assignment. The United States also supports limiting the roll over of agenda items from one conference to the next. Prior to an issue being placed on an agenda item the studies should be sufficiently mature to enable completion of consideration of the technical and regulatory aspects prior to WRC consideration. Issues that are not able to be resolved at a particular conference should not be rolled over more than three times. A need to roll an agenda item over repeatable indicates that the issue is not mature enough for consideration by a conference. (January 21, 2005)