PUBLIC NOTICE

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

IB Docket No. 04-286

On February 23, 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 February 23, 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 of which recommendations we can support.

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. To comment on the recommendations, 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 IB Docket No. 04-286 and to specific recommendations by document number. Parties preferring to e-mail their comments should address their comments to: wrc07@fcc.gov. The deadline for comments on the recommendations is March 18, 2005. It is necessary that all comments be received by

March 18, 2005 in order to allow us to finalize the U.S. position before commencement of regional WRC-07 preparatory meetings.

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

INFORMAL WORKING GROUP 2 (IWG-2)
Satellite Services and HAPS

Document WAC/041(23.02.05):

DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE

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)**;

(Resolution 415)
Secondary Allocations for AMSS (space-to-Earth) in the 11/12 GHz bands

Background

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 all forms of telecommunications. Communications with aircraft are not exempt from this growing dependence on Internet applications. Aircraft owners and operators are realizing that without this access aeronautical operations will be hindered from gaining the efficiencies and benefits that these types of service offer. Internet usage is fast becoming dependent on broadband connectivity. A demonstrated viable means of providing this connectivity for mobile platforms on an intercontinental basis is through satellite channels.

The availability of this broadband communications capability on board aircraft will promote the efficiency of aircraft operations and provide access to information, such as enhanced weather data, hitherto inaccessible to aircraft in flight.

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 was compatible with current Fixed-Satellite Service (FSS) systems and was supported by studies leading up to WRC-03. Additional studies in the ITU-R also confirmed compatibility with other Services in the 14.0-14.5 GHz range. At WRC-03, the decision was made to expand the secondary MSS allocation in the 14-14.5GHz band to include AMSS (Earth-to-space). This decision has enabled the use of Internet applications by aircrews and passengers.

Related to this decision, there were discussions of a downlink that could be used with this new uplink allocation and it was concluded at the 14th Plenary Meeting that:

1. The downlink (space-to-Earth) bands associated with the secondary mobile-satellite service allocation shall be:

    - In Region 1, 10.7-11.7 GHz and 12.5-12.75 GHz;
    - In Region 2, 10.7-12.2 GHz;
    - In Region 3, 10.7-11.7 GHz and 12.2-12.75 GHz.

2. The use of the downlink (space-to-Earth) bands listed above by the aeronautical mobile-satellite service shall be under the provisions of No. 4.4.

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.

The adoption of and equipage of aircraft with a new communication system is expensive and time consuming. In order to protect their investment, aircraft operators would welcome the regulatory certainty brought by an allocation for the downlink frequencies used by these new systems.

Further, to conform to the usual conventions of the Radio Regulations, it is prudent and timely now to augment the existing Fixed-Satellite Service allocations around 11/12 GHz to include a secondary AMSS allocation for the downlink.

Proposal

USA/xx/1

Allocation to services		
Region 1	Region 2	Region 3
10.7-11.7 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 5.484A (Earth-to-space) 5.484 MOBILE except aeronautical mobile Aeronautical Mobile-Satellite (space-to-Earth) ADD5.XX	10.7-11.7 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 5.484A MOBILE except aeronautical mobile Aeronautical Mobile-Satellite (space-to-Earth) ADD 5.XY	10.7-11.7 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 5.484A MOBILE except aeronautical mobile Aeronautical Mobile-Satellite (space-to-Earth) ADD 5.XZ
11.7-12.5 FIXED BROADCASTING BROADCASTING-SATELLITE MOBILE except aeronautical mobile 5.487 5.487A 5.492	11.7-12.1 FIXED 5.486 FIXED-SATELLITE (space-to-Earth) 5.484A Mobile except aeronautical mobile 5.485 5.488 Aeronautical Mobile-Satellite (space-to-Earth) ADD 5.XY	11.7-12.2 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE
	12.1-12.2 FIXED-SATELLITE (space-to-Earth) 5.484A 5.485 5.488 5.489 Aeronautical Mobile-Satellite (space-to-Earth) ADD 5.XY	5.487 5.487A 5.492
	12.2-12.7 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE	12.2-12.5 FIXED MOBILE except aeronautical mobile BROADCASTING 5.484A 5.487 5.491 Aeronautical Mobile-Satellite (space-to-Earth) ADD 5.XZ
12.5-12.75 FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space) Aeronautical Mobile-Satellite (space-to-Earth) ADD 5.XX 5.494 5.495 5.496	5.487A 5.488 5.490 5.492 12.7-12.75 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE except aeronautical mobile	12.5-12.75 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A MOBILE except aeronautical mobile BROADCASTING-SATELLITE 5.493 Aeronautical Mobile-Satellite (space-to-Earth) ADD 5.XZ

Reason: Under Agenda 1.11 at WRC-2003, the secondary allocation at 14-14.5 GHz to the mobile-satellite service (MSS) was extended to include the aeronautical mobile-satellite service (AMSS). Also at WRC-2003, since Agenda 1.11 dealt only with the extension of the MSS allocation at 14-14.5 GHz and did not include provisions for a

downlink, the 14th Plenary Meeting concluded that the AMSS the downlink bands at 12 GHz shall be used under the provisions of RR 4.4.

Since WRC-03, there has been rapidly growing global use of the AMSS in the 14-14.5 GHz band. In order to assure the users and providers of these new aeronautical applications of continuing spectrum availability, it is necessary to allocate downlink spectrum, on a secondary basis, corresponding to the existing uplink allocation. Rather than continue to operate the downlink under RR 4.4, it is more consistent with the structure and the common practice of the Radio Regulations to have an AMSS secondary allocation listed in the Table for the downlink at 12 GHz. Additionally, to show that the AMSS in the 12 GHz band will operate with FSS satellites, there are three new footnotes, one for each Region, to reflect the same relationship between the FSS and AMSS services that is contained in RR 5.504A for the uplink. This new allocation would, further, provide opportunities for the users of current fixed-satellite service frequency allocations to provide this service.

USA/xx/2

ADD 5.XX

5.XX In Region 1, in the bands 10.95-11.2 GHz, 11.45-11.7 GHz and 12.5-12.75 GHz, space stations in the fixed-satellite service may communicate with aircraft earth stations in the secondary aeronautical mobile-satellite service. The provisions of Nos. **5.29**, **5.30** and **5.31** apply.

Reason: Reflects regional differences in FSS allocations and is consequential to the reasons given above.

USA/xx/3

ADD 5.XY

5.XY In Region 2, in the bands 10.95-11.2 GHz and 11.45-12.2 GHz, space stations in the fixed-satellite service may communicate with aircraft earth stations in the secondary aeronautical mobile-satellite service. The provisions of Nos. **5.29**, **5.30** and **5.31** apply.

Reason: Reflects regional differences in FSS allocations and is consequential to the reasons given above.

USA/xx/4

ADD 5.XZ

5.XZ In Region 3, in the bands 10.95-11.2 GHz, 11.45-11.7 GHz and 12.2-12.75 GHz, space stations in the fixed-satellite service may communicate with aircraft earth stations in the secondary aeronautical mobile-satellite service. The provisions of Nos. **5.29**, **5.30** and **5.31** apply.

Reason: Reflects regional differences in FSS allocations and is consequential to the reasons given above.

RECOMMENDED CHANGES TO DRAFT PRELIMINARY VIEWS ORIGINATED BY THE NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION

Document WAC/042(23.02.05):

PRELIMINARY VIEWS ON WRC-07

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: 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**. Resolution **745** states that these bands are not available for use until the completion of IUT-R studies identified within Resolution **745**, the results of these studies reported to WRC-07 and decisions should be taken by WRC-07 accordingly. WRC-03 considered this allocation on a primary basis but decided to make the allocation on a secondary basis. The secondary allocation poses significant difficulties for the use of this band by the MSS due to the lack of protection of MSS feeder link earth stations from future primary frequency assignments and makes the implementation of regulatory provisions needed to protect MSS feeder links problematic.

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) service 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 telemetry (AMT)~~)~~ and radiolocation services. This posed some difficulties for WRC-03 and the Conference decided to make the secondary allocation for the MSS feeder links 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 feeder link 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.

Studies performed this study cycle have determined requirements for the protection of RA from FSS space-to-Earth feeder links and EESS (passive) from both space-to-Earth and Earth-to-space FSS feeder links in the bands being considered. These results are currently being used to develop recommendations. Test Reports and studies ~~which~~that have also been submitted demonstrat~~e~~ing the technical feasibility of protection of the passive services and that the degree of attenuation of unwanted emissions needed to protect the passive services is less than that required for two-frequency full-duplex FSS feeder link operations. The protection of RA and the FS from FSS earth stations can be based on existing recommendations. Studies concerning the protection of the FS from space-to-Earth feeder links have also been performed and a recommendation is being developed. Work on the protection of RADAR and AMT is pending responses from the relevant ITU study groups to requests for characteristics of systems that would be affected. To date responses have not been received, which ~~and the lack of response~~ is cause for concern and may prevent the completion of studies identified within Resolution 745 and needed for action by WRC-07.

Prior Conferences considered allocations on a primary basis to the FSS service for feeder links for non-GSO satellite systems in the MSS with service links operating below 1 GHz~~,~~. However, WRC-03 made the allocations on a secondary basis. Considering that a secondary service cannot claim protection from harmful interference from stations of a primary service to which frequencies are already assigned or may be assigned at a later date, this places the investment in feeder link earth stations at considerable risk. These feeder link earth stations should be afforded the same protection from future frequency assignments within a primary service that a station with a primary allocation is afforded. Specifically, a coordination zone should be established around each feeder link earth station that would provide protection from future terrestrial primary frequency assignments.

U.S. VIEW: Test and demonstrations, submitted to WRC-03 and subsequently to the study groups during this study cycle, of the technical performance of MSS feeder link transmit system equipments, have been validated by independent studies and, when compared with the results of studies considering the requirements of the passive services, demonstrate that the passive services in the band 1 400-1 427 MHz can be protected from unwanted emissions. 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, ~~test and demonstrations,~~ the United States supports upgrading the allocation to primary, the implementation of appropriate~~d~~ 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 by the fixed-satellite service (FSS) for feeder links for non-GSO satellite systems in the MSS with service links below 1 GHz. ~~In addition provisions should be incorporated in the Radio Regulations to protect these feeder link earth stations from future terrestrial frequency assignments within a primary service. Specifically, a coordination zone should be established around each feeder link earth station that would provide protection from future terrestrial primary frequency assignments.~~

INFORMAL WORKING GROUP 4 (IWG-4)

Broadcasting and Amateur Issues

Document WAC/033(23.02.05):

DRAFT 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 techniques and the spectrum requirements for HF broadcasting;*

ISSUE: There are three Resolutions relating to different services to be addressed:

a. Resolution **729 (WRC-97),** to consider frequency assignments for frequency adaptive systems in frequency bands allocated for fixed/mobile services operation,

b. Resolution **351 (WRC-03),** that, as soon as 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 maritime mobile service (MMS), and

c. Resolution **544 (WRC-03),** to consider identification of additional spectrum for HF broadcasting between 4-10 MHz**.** In particular, with focus on the following HFBC preferred 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 the possible impact to other services, will be studies in a separate ITU-R Working Party (WP) which has the primary lead. The commonality between these items comes in the form of interested ITU-R WPs:

a. Resolution **729 (WRC-97)** was not successfully completed at the time. The lead group is ITU-R WP 9C.

b. Resolution **351** (WRC-03) and the studies for a technology or interoperable technologies have not been completed. The lead group is ITU-R WP 8B.

c. WRC-03 agreed that no additional HF broadcasting spectrum would be allocated at that conference. By Resolution **544 (WRC-03),** WRC-07 was directed to resolve this issue on additional HF broadcasting spectrum allocation(s). This was a very contentious issue at WRC-03 and at past WRCs where it had been discussed. The lead group is ITU-R WP 6E. It is important that the U.S. complete its studies in timely fashion in the event that WRC-07 decides to allocate/re-allocate the spectrum of other radiocommunication services in order to address the HFBC spectrum issue.

U.S. Preliminary View: These issues, although related should still be addressed separately in the ITU-R WPs assigned primary responsibility with cooperation and technical characteristics from the WPs of related services be achieved through liaison statements and cross participation from administration experts that attend contributing WPs and administration groups for each issue.

Resolution 729 (WRC-97). Before this resolution can be resolved; development of an ITU-R Recommendation for technical and operational characteristics for HF Frequency Adaptive systems is needed. In addition, review of the use of current and proposed 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 and determined. This resolution is not limited to the 4-10 MHz band and could impact all fixed HF channel plans (3-30 MHz).

Resolution 351 (WRC-03). Given the vital nature of the safety systems listed in Appendix **17** of the **ITU-R Radio Regulations (RR),** that a thorough review of digital techniques for the HF/MF bands must be accomplished before any changes to Appendix **17** are made. An ITU-R Recommendation that details the technical and operational characteristics of digital systems, and a review of Appendix **17** operations must be accomplished to fully determine the impact of any changes to existing services. This resolution is not limited to the 4-10 MHz band and could impact all of Appendix **17.**

Resolution 544 (WRC-03). This resolution deals with the contentious issue that spectrum in the 4-10 MHz band for allocation to the HF broadcasting service must be considered carefully, taking into account the impact on existing services after a careful review of the HF broadcasting service's requirements. Initial investigation shows that the allocation of the entire spectrum identified as "preferred" bands is problematic for the United States given that vital government systems operate in all of these bands. In a proposal to WRC-03 the United States limited allocations to 250 kHz of spectrum for the HF broadcasters in the 4-10 MHz band. WRC-03 did not make the allocation to the HF

broadcasting service that was requested. However, 50 kHz was allocated in Region 2 to the broadcasting service as a result of the realignment portions of the 7 MHz band under AI-1.23. The United States is investigating the current requirement that is needed to meet broadcasting needs.

The U.S. agrees with the need for thorough and timely studies of the consequences of the current HF broadcasting mission, augmented with projections of future HF broadcasting and fixed/mobile services use. There should be a clear set of findings from the studies of the representative ITU-R WPs of the maximum amount of spectrum required and in-use by existing services.

(January 13, 2005).

-FCC-