Attachment A

IWG-4/028 rev 7

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United States of America

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 7: *To consider possible changes in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference: "advance publication, coordination, notification and recording procedures of the Radio Regulations for frequency assignments pertaining to space services,"*[1] *in accordance with Resolution 86 (Rev. WRC 07).*

Background: Integrated MSS Systems[2] employ technology that integrates mobile-satellite components and terrestrial components ("complementary ground component or 'CGC'") into a single system reusing MSS frequencies for both components. Currently, there are provisions in the Radio Regulations to accommodate satellite systems and terrestrial networks separately, but additional provisions are needed to accommodate the unique aspects of Integrated MSS Systems.

Resolution 86 resolves to invite future world radiocommunication conferences to:

1) *to consider any proposals which deal with deficiencies and improvements in the advance publication, coordination, notification and recording procedures of the Radio Regulations for frequency assignments pertaining to space services which have been identified by administrations as appropriate, and 2) to ensure that these procedures and the related appendices of the Radio Regulations reflect the latest technologies as far as possible.*[3]

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[1] Int'l Telecomm. Union [ITU], *Implementation of Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference*, at *resolves to invite future world radiocommunication conferences* ¶ 1, Resolution 86 (Rev. WRC-07) (2007).

[2] The ITU-R Coordination Committee for Vocabulary ("CCV") is considering the definition of Integrated MSS System given below. This is also the working definition used in ITU-R Working Parties 4C, 4B, and 4A. *See, SUMMARY RECORD OF THE CCV/1-10 MEETING OF THE COORDINATION COMMITTEE FOR VOCABULARY (CCV)*, Document CCV/29, 22 March 2010 (Geneva).

[3] *Supra* note 1, *resolves to invite future world radiocommunication conferences* ¶¶ 1-2.

Discussion: Currently, the Radio Regulations lack adequate regulatory provisions for coordinating, notifying, and registering the complementary ground component ("CGC") of Integrated MSS Systems. Because the architectural and operational features of Integrated MSS Systems are such that the MSS component and terrestrial component are integrated within a single network, it is essential to recognize and give consideration to both elements of these networks. In the bands 1525-1544 MHz, 1545-1559 MHz, 1626.5-1645.5 MHz and 1646.5- 1660.5 MHz , at least one MSS operator will roll out CGC deployments in 2011.

Consequently, it would be prudent to provide, at least on an interim basis as a minimum, procedures in the Radio Regulations to take account of CGC deployment in the bands 1525-1544 MHz, 1545-1559 MHz, 1626.5- 1645.5 MHz and 1646.5- 1660.5 MHz . Therefore, interim procedures are proposed in New Resolution [CGC.Notify] to provide a mechanism for notifying and registering CGC stations, and for submitting to the ITU BR and subsequently entering information for the notification of CGC stations and for associating and coordinating CGC assignments with their operational MSS systems within the bands referenced above.

Additionally, Resolution [CGC. Notify] proposes and recognizes that CGC can be included as a part of the MSS coordination process in these frequency bands, and thus instructs the ITU Radiocommunication Bureau on procedures for handling such CGC information submitted in accordance with interim procedures provided in Resolution [CGC.Notify]. Resolution [CGC.Notify] will supplement the current Article 9 and Article 11 procedures that are applicable to the satellite component of Integrated MSS Systems. No. 5.354 is proposed to be modified to indicate that Resolution [CGC-Notify} applies as appropriate to these frequency bands.

ARTICLE 5

Frequency Allocations

USA/ / 01 MOD

5.354 The use of the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz by the mobile-satellite services is subject to coordination under No. **9.11A**. Resolution [CGC- Notify] (WRC-2012) applies, as appropriate.

Reason: To indicate that Resolution [CGC-Notify] applies, as appropriate, in the bands 1525-1559 MHz and 1626.5- 1660.5 MHz.

USA/ /02 ADD

Resolution [CGC.Notify] (WRC-2012)

Interim Procedures for Coordination, Notification and Recording of the Complementary Ground Component of Integrated MSS Systems[4] in 1525-1544 MHz, 1545-1559 MHz, 1626.5- 1645.5 MHz and 1646.5- 1660.5 MHz

The World Radiocommunication Conference (Geneva, 2012),

considering

a) that MSS systems can provide service over a wide geographic area and are particularly suited for emergency and disaster recovery communications and rural communications;

b) that MSS systems can have limited capacity for providing radiocommunications services in urban areas due to natural and/or man-made blockage;

c) that an MSS system with an integrated Complementary Ground Component (CGC) system will extend and improve the availability of radiocommunications services in areas where reliable current and next generation communications are not otherwise provided with one or more space stations or cannot otherwise be assured, and in this way increase spectrum efficiency in bands allocated to the mobile-satellite service;

d) that a number of administrations are implementing or planning to implement Integrated MSS Systems in parts of the bands identified for the satellite component of IMT in the bands 1525- 1559 MHz and 1626.5- 1660.5 MHz;

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[4] An Integrated MSS System is a system employing a satellite component and ground component where the ground component is complementary to the satellite component and operates as and is an integral part of the MSS system. In such systems the ground component is controlled by the satellite resource and network management systems. Further, the ground component uses the same portions of MSS frequency bands as the associated operational mobile-satellite system.

e) that in providing radiocommunication services, there is a need continually to exploit technological developments to increase the efficiency of use of finite radiocommunication spectrum resources as technology permits,

recognizing

a) that the bands 1525-1544 MHz, 1545-1559 MHz, 1626.5-1645.5 MHz and 1646.5-1660.5 MHz are allocated on a co-primary basis to the mobile-satellite service and to other services;

b that Resolution **215 (Rev.WRC-97)** addresses the coordination process among mobile-satellite systems and the efficient use of the allocations to the mobile – satellite service in the 1- 3 GHz range;

c) that the distress, urgency and safety communications of the Global Maritime Distress and Safety System and the aeronautical mobile-satellite (R) service have priority in specified bands over all other mobile-satellite service communications in accordance with Nos. 5.353A and 5.357A;

d) that the frequency bands referred to in *recognizing a)* are also used by other systems in the services to which the bands are allocated, and that these systems and services need to be protected from harmful interference;

e) that the deployment of the Complementary Ground Component is predicated upon the Complementary Ground Component being integrated with one or more space stations of an Integrated MSS System;

f) that the Complementary Ground Component will use the same allocated and assigned frequency bands as the associated operational MSS system;

g) that the Complementary Ground Component will be located only within the service area of its associated MSS system and is to be controlled by the Integrated MSS System network management system;

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noting

1. that, in general, co-frequency sharing and reuse of the spectrum by independently controlled mobile-satellite and terrestrial mobile systems is not feasible in the same geographic area;
2. that Integrated MSS Systems can avoid the spectrum-sharing incompatibilities in *noting* 1);

3. that Article 11 provisions No 11.2 through 11.11 requires that " Any frequency assignment to a transmitter station and to its associated receiving station…shall be notified to the Bureau";

4. that the coordination and notification procedures of Articles 9 and 11 apply to the MSS component of Integrated MSS Systems;

5. that currently Appendix 4 of the Radio Regulations does not contain provisions for associating notified Complementary Ground Component Stations with their parent MSS systems;

6. that the mobile terminals (consisting of mobile earth stations and mobile stations in the same platform) of such Integrated MSS Systems are capable of communicating directly via multiple radio interfaces with the base stations of the Complementary Ground Component and the space stations of the associated mobile satellite system using the same common frequency bands;

resolves

1. that CGC stations shall be included within the coordination pursuant to no.9.11A of the associated MSS satellite network with other MSS networks to ensure that the CGC is compatible with other MSS satellite systems involved in the coordination process.

2. that administrations choosing to associate their CGC operations with their MSS network frequency assignments shall apply the attached Annex to the Complementary Ground Component of Integrated MSS systems as described in the *recognizings.*

invites administrations

1. to consider developing provisions to enable the deployment of Integrated MSS Systems;

2 to include the Complementary Ground Component of an Integrated MSS System within the mobile satellite coordination;

3. to bilaterally coordinate the Complementary Ground Component of an Integrated MSS system with terrestrial systems in accordance with existing or new bilateral arrangements, as appropriate.

instructs the Radiocommunication Bureau

1. to implement the interim procedures of the attached Annex for base stations transmitting in the bands 1 525 - 1544 MHz, and 1 545 - 1 559 MHz, and mobile stations

transmitting in the bands 1626.5 - 1645.5 MHz ,and 1646.5 - 1660.5 MHz that are integrated with MSS systems operating in the same frequency bands and in territories within the MSS system service area provided that coordination or notification information has been submitted for the associated MSS system in accordance with Article 9 or Article 11;

ANNEX

Interim Procedures for the Coordination, Notification and Recording of Complementary Ground Components of Integrated MSS Systems

Introduction

This Annex provides interim procedures for the submission of technical information to the ITU Radiocommunications Bureau (BR) for the Complementary Ground Components of Integrated MSS networks in the 1525-1544 MHz, 1545-1559 MHz, 1626.5- 1645.5 MHz and 1646.5 – 1660.5MHz bands. These interim procedures provide information that is to be submitted by the Notifying Administration of the Integrated MSS system and by Administrations implementing the Complementary Ground Component of the Integrated MSS system.

Interim Procedure

A) Administrations that are implementing a Complementary Ground Component of an Integrated MSS system shall submit the following information to the ITU-BR in accordance with these procedures: An Appendix 4 Annex 1 notice for stations of a Complementary Ground Component;

1) in the remarks of the Appendix 4 Annex 1 notice,

   a. indicate that the stations are Complementary Ground Components of an Integrated MSS System submitted in accordance with these procedures, and

   b. specify the associated MSS system and related ITU IFIC and Network Identifier.

B) The Notifying Administration for an MSS system of an Integrated MSS system shall submit an Appendix 4 Annex 2 notice and

1) shall indicate in the submittal letter for the Appendix 4 Annex 2 notice that the MSS network is an Integrated MSS network , and

2) shall provide a cross reference to the Appendix 4 Annex 1 filing which has the characteristics of stations of the Complementary Ground Component,

3) shall confirm separately any Appendix 4 Annex 1 notice that is submitted by another Administration implementing a Complementary Ground Component that is associated with the Integrated MSS system.

C) The Notifying Administration for an MSS component of an Integrated MSS system shall include in the coordination of the MSS Network in accordance with Article 9, No. 9.11A, the Complementary Ground Component characteristics as provided in Appendix 4 Annex 1 to seek agreement with affected administrations of MSS networks that the CGC will not cause harmful interference to such affected MSS system operations.

D) Administrations of Integrated MSS systems and the Administrations of affected MSS networks shall inform the ITU –BR of agreements that include the Complementary Ground Components of Integrated MSS systems.

E) Administrations notifying Integrated MSS systems shall include reference to the Appendix 4 Annex 1 notice of the associated Complementary Ground Component of an Integrated MSS system in the Article 11 notification.

The ITU Radiocommunications Bureau shall:

1. process complete notices for Complementary Ground Component base stations transmitting in the bands 1 525 - 1544 MHz, and 1 545 - 1 559 MHz, and mobile stations transmitting in the bands 1626.5 - 1645.5 MHz ,and 1646.5 - 1660.5 MHz that are integrated with MSS systems operating in the same frequency bands and in territories within the MSS system service area provided that coordination or notification information has been submitted for the associated MSS system in accordance with Article 9 or Article 11;

2. where possible, include the reference to the Appendix 4, Annex 1 Complementary Ground Component notice with the publication of the Appendix 4 Annex 2 information for the MSS system of the Integrated MSS system.

3. record such CGC stations as integrated with MSS systems on the basis of:

   a) a statement by an Administration submitting Complementary Ground Component notices in accordance with this interim procedure identifying the MSS system with which the Complementary Ground Component is integrated; and

   b) a confirmation of the above statement by the Administration notifying the Integrated MSS System;

4 . record such CGC station notices, in accordance with the Radio Regulations, as appropriate, together with the identification of the associated MSS system,

concurrently with, or after assignments are recorded for the associated MSS system in the Integrated MSS System.

5. record such CGC stations with a favorable finding with respect to coordination with a particular affected MSS network, if the administration of that affected MSS network indicates that an agreement between the affected administrations includes provisions that assure that the CGC will not cause harmful interference to the affected MSS network. The recording does not provide priority rights for the Complementary Ground Component with respect to any current or future MSS network.

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Reason: *To provide additional interim coordination, notification, and recording procedures for the Complementary Ground Component of Integrated MSS Systems by providing a Resolution [CGC.Notify] with interim procedures for filing notices of stations of the Complementary Ground Component of Integrated MSS Systems and to identify the relevant associated mobile satellite network for the Complementary Ground Component.*