

EUROPEAN COMMON PROPOSAL

Proposal submitted by the following administrations

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Agenda Item 1.7

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 1 - Sharing between MSS and SRS (passive)

Introduction

Sharing between the MSS and SRS(passive) systems in the band 1 668-1 668.4 MHz has been shown to be feasible, but may require some constraints on the systems involved. Of the two regulatory approaches which have been considered, CEPT supports an approach based on coordination rather than hard limits. This will allow important system specific factors (particularly relating to MSS systems) to be taken into account and will avoid potential unnecessary constraints on MSS operations. All planned SRS(passive) systems will be adequately protected.

CEPT proposes coordination thresholds based on the MES e.i.r.p. spectral density and the total power spectral density delivered to an MES antenna.

Proposals:

MOD EUR/XXA17/1

5.379B The use of the band 1 668-1 675 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. In the band 1 668- 1668.4MHz, mobile-satellite service systems that exceed the relevant coordination threshold condition shall be coordinated with any space research service (passive) system for which complete advance publication information was received by the Bureau prior to 8 December 2005, irrespective of the date of receipt of the coordination information. (WRC-07)

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MOD EUR/YYA17/2

5.379D For sharing of the band 1 668-1 675 MHz between the mobile-satellite service and the fixed and mobile services, Resolution 744 (WRC-03) shall apply.

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MOD EUR/XXA17/3

1 660-1 710 MHz

Allocation to services		
Region 1	Region 2	Region 3
1 668-1 668.4	MOBILE-SATELLITE (Earth-to-space) 5.348C MOD 5.379B 5.379C RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379 5.379A <u>MOD 5.379D</u>	

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MOD EUR/XXA17/4

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APPENDIX 5 (Rev.WRC-03)

Identification of administrations with which coordination is to be effected or agreement sought under the provisions of Article 9

TABLE 5-1 (continued)

Reference of Article 9	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method	Remarks
No. 9.13 GSO/non-GSO	A station in a GSO satellite network in the frequency bands for which a footnote refers to No. 9.11A or No. 9.13, in respect of any other non-GSO satellite network, with the exception of coordination between earth stations operating in the opposite direction of transmission	Frequency bands for which a footnote refers to No. 9.11A or No. 9.13	<p>1) Bandwidths overlap</p> <p>2) <u>For the band 1 668-1 668.4 MHz with respect to MSS network coordination with SRS(passive) networks, in addition to bandwidth overlap, the e.i.r.p. density of mobile earth stations in a GSO network of the mobile-satellite service operating in this band exceeds -4 dBW / 4 kHz or the power density delivered to the MES antenna exceeds - 11 dBW / 4 kHz.</u></p>	<p>1) Check by using the assigned frequencies and bandwidths</p> <p>2) <u>Check by using MSS network Appendix 4 data</u></p>	

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Reasons: To provide adequate protection to space research (passive) systems while minimising constraints on MSS systems, coordination thresholds based on MES e.i.r.p. density and power density delivered to the antenna of the MES_would be applied. All MSS systems which exceed

the threshold condition in the band 1 668-1 668.4 MHz would be required to coordinate with SRS (passive) systems which have submitted advance publication information, received before 8 December 2005, to ensure that the Radioastron system (ITU filing "SPECTR-R") is taken into account.

Issue 2 - Sharing between MSS and MS

Introduction:

In general sharing between the mobile service and the mobile satellite service is difficult and could potentially prevent the use of this band for MSS or for MS. However, as there is currently little actual use of this band for mobile systems, it would be feasible to restrict the usage of the mobile service to transportable radio relay systems, thus avoiding the introduction of aeronautical or high density mobile applications.

Eirp limitation towards the GSO arc which may be necessary to protect MSS satellite would prevent operation of tactical radio relays. Several CEPT administrations expressed the willingness to continue transportable radio relays operations in this frequency band and CEPT can not support an eirp limitation. However, it is proposed to make a reference to the ITU-R Recommendation M.[MS-MSS-1.6 GHz] which specifies the value of -27 dBW/4 kHz in the direction of the GSO arc and to encourage administration to take into account the MSS protection requirement.

Proposals:

SUP EUR/XXA17/5

5.380

Reasons: The use of aeronautical public correspondence systems in the band 1670-1675MHz is not compatible with MSS. The band is not used or planned to be used by aeronautical public correspondence systems and hence the footnote should be suppressed .

MOD EUR/XXA17/6

RESOLUTION 744 (Rev.WRC-07)

**Sharing between
the mobile-satellite service (Earth-to-space) and the fixed and
mobile services in the band 1 668.4-1 675 MHz**

The World Radiocommunication Conference (Geneva, 2007),

considering

a) that WRC-03 made a global allocation to the mobile-satellite service (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;

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b) that the band 1 668.4-1 675 MHz is also allocated to the fixed and mobile services;

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c) that due to sharing conditions between MSS (space-to-Earth) and the aeronautical mobile service for telemetry in the band 1 518-1 525 MHz (see No. 5.348B), MSS operation in the United States of America is unlikely to be feasible;

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d) that the above constraints on the MSS in the band 1 518-1 525 MHz therefore limit the possible use of the band 1 668-1 675 MHz by the MSS in the United States of America;

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e) that in the band 1 668-1 668.4 MHz, mobile earth stations and space research (passive) stations are subject to coordination under No. 9.11A;¶

e) that the band 1 670-1 675 MHz is used in the United States of America for the fixed or mobile services,

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f) that some administrations operate transportable radio-relay systems in the band 1668.4-1675 MHz which could operate as part of the fixed or mobile services allocations;

g) that sharing between the mobile service and the mobile satellite service (earth-to-space) in the band 1 668.4-1 675 MHz has been studied in ITU-R Recommendation M.[MS-MSS-1.6 GHz DOC. 8/165(REV.1)].

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a) that the band 1 668.4-1 675 MHz is allocated to the fixed and mobile services;

resolves

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1) that the use of the band 1 668.4-1 675 MHz by systems in the mobile service is limited to transportable radio-relay systems;

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c) that sharing between mobile systems other than those re [1]

2) that administrations operating transportable radio-relay systems should take into account Recommendation ITU-R M.[MS-MSS-1.6 GHz], stating that to adequately protect MSS networks, the e.i.r.p. of transportable radio-relay stations should not exceed -27 dBW/4kHz in the band 1668.4-1675 MHz in the direction of the geostationary orbit.

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3) that in the band 1 670-1 675 MHz, stations in the MSS shall not claim protection from fixed and mobile stations operating within the in the United States of America, and resolves 1 and 2 do not apply in the United States of America.

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4) that resolves 1 and 2 do not apply to fixed and mobile stations operating in the United States of America.

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Reasons:

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- Studies identified in invites ITU-R 1 and 2 have been completed.

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- Mobile systems other than transportable radio-relay systems are not compatible with MSS use of the band 1 668.4-1 675 MHz.

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- Administrations should be encouraged to take into account ITU-R Recommendation M.[MS-MSS-1.6 GHz DOC. 8/165(REV.1)], which specifies the value of -27 dBW/4 kHz in the direction of the GSO arc for transportable radio relays to protect MSS space stations.

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- b) that No. 5.380 identifies the band 1 670-1 675 MHz for aeronautical public correspondence systems but that no such systems exist;
- c) that sharing between mobile systems other than those referred to in No. 5.380 and the MSS in the band 1 670-1 675 MHz has not been studied, since mobile service system characteristics were not available;
- d) that MSS systems in the band 1 668-1 675 MHz are not expected to become operational prior to 2007,

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invites ITU-R

1 to complete, as a matter of urgency and in time for WRC-07, studies relating to provisions to protect space research (passive) space stations from harmful interference from mobile earth stations in the band 1 668-1 668.4 MHz, taking care to avoid undue constraints on either service;

2 to study, as a matter of urgency and in time for WRC-07, the use of the band 1 668.4-1 675 MHz by the mobile service, and to complete any relevant sharing studies between the mobile service and the MSS in this band, taking care to avoid undue constraints on either service;

3 to bring the results of these studies to the attention of WRC-07,

invites administrations and interested parties

to participate actively in these studies,

recommends that WRC-07 take appropriate action based on the results of those studies, excluding modification of the above resolves.

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