



Electronic Communications Committee (ECC)
within the European Conference of Postal and Telecommunications Administrations (CEPT)

ECC RECOMMENDATION (03)03

MEASURES TO SAFEGUARD THE FUTURE USE OF TERRESTRIAL UMTS/IMT-2000 IN THE 2.5 GHz RANGE WITH RESPECT TO SATELLITE SYSTEMS

Recommendation approved by the "Working Group Frequency Management" (WG FM)

INTRODUCTION

The frequency band 2500-2690 MHz is the CEPT preferred band to accommodate additional UMTS/IMT-2000 spectrum in Europe. Furthermore, the European administrations recognise the priority of the future use of the band 2500-2690 MHz for terrestrial UMTS/IMT-2000 applications vis-à-vis satellite services in Europe. It is therefore necessary to safeguard the future use of the band by UMTS/IMT-2000 systems from potential interference from satellite systems. The European administrations also agree that satellite systems may operate only provided that they shall not cause harmful interference to UMTS/IMT-2000 and do not claim protection from them.

The application of the current provisions of the Radio Regulations, although being not sufficient, is the minimum action necessary for the safeguard of terrestrial UMTS/IMT-2000.

The recommended actions in this Recommendation will have to be complemented by additional CEPT proposals to future WRCs with a view to best protect terrestrial UMTS/IMT-2000 systems in Europe.

”The European conference of Postal and Telecommunications Administrations,

considering

- a) that the frequency band 2500-2690 MHz is the CEPT preferred band to accommodate additional UMTS/IMT-2000 spectrum in Europe in accordance with ECC DEC (02) 06 on “The designation of the frequency band 2 500 – 2 690 MHz for UMTS / IMT-2000”,
- b) that CEPT administrations recognise the priority in Europe of the future use of the band 2500-2690 MHz by terrestrial UMTS/IMT-2000 systems with respect to satellite systems,
- c) that satellite systems may only operate over Europe provided that they do not cause harmful interference to UMTS/IMT-2000 and do not claim protection from them,
- d) that the application of the current provisions of the Radio Regulations concerning the coordination in the band 2500-2690 MHz between satellite systems and terrestrial stations, although not sufficient, is necessary to safeguard the future use of the band by terrestrial UMTS/IMT-2000 applications from potential interference from satellite systems;

recommends

1. that each CEPT administration notifies to the ITU Radiocommunication Bureau, as soon as possible and in conformity with the Radio Regulations, the characteristics of terrestrial stations in order to protect UMTS/IMT-2000 systems in the frequency band 2500-2690 MHz,
2. that, upon publication under No. **9.38** by the ITU Radiocommunication Bureau of assignments in the broadcasting satellite service (sound) in the band 2605-2655 MHz subject to Nos. **5.417A** or **5.418** provisions, each CEPT administration informs within four months after that publication the notifying administration and the ITU Radiocommunication Bureau,
 - a. in case of a NGSO system having assignments in the band 2605-2630 MHz, and if its national territory is included in the service area of the satellite system, of its objection to include its territory in the service area of the satellite system in project, under *resolves* 3 of Resolution **539 (Rev.WRC-03)**,
 - b. in case of a NGSO system having assignments in the band 2605-2630 MHz, and if active space stations of the system are not seen from its national territory with an elevation higher or equal to 76 degrees, of its disagreement to accept any level of power flux density over its territory higher than the pfd mask provided in Resolution **539 (Rev.WRC-03)** because of risks of harmful interference in respect of existing and planned terrestrial stations,
 - c. in case of a NGSO system having assignments in the band 2605-2630 MHz, and if active space stations of the system are seen from its national territory with an elevation higher or equal to 76 degrees, of its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.11** provisions because of risks of harmful interference in respect of existing and planned terrestrial stations,
 - d. in case of a GSO network having assignments in the band 2605-2630 MHz, and if it is susceptible to be identified under No. **9.11** upon application of No. **5.417A** provisions, of its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.11** provisions because of risks of harmful interference in respect of existing and planned terrestrial stations,
 - e. in case of a NGSO system having assignments in the band 2630-2655 MHz, and if its national territory is included in the service area of the satellite-system, of its objection to include its territory in the service area of the satellite system in project, under *resolves* 3 of Resolution **539 (Rev.WRC-03)**,
 - f. in case of a NGSO system having assignments in the band 2630-2655 MHz, and if active space stations of the system are not seen from its national territory with an elevation higher or equal to 76 degrees, of its disagreement to accept any level of power flux density over its territory higher than the pfd mask provided in Resolution **539 (Rev.WRC-03)** because of risks of harmful interference in respect of existing and planned terrestrial stations,

- g. in case of a NGSO system having assignments in the band 2630-2655 MHz, and if active space stations of the system are seen from its national territory with an elevation higher or equal to 76 degrees, of its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.11** provisions because of risks of harmful interference in respect of existing and planned terrestrial stations,
 - h. in case of a GSO network having assignments in the band 2630-2655 MHz received by the ITU Radiocommunication Bureau after 1 June 2005, and if it is susceptible to be identified under No. **9.11** upon application of No. **5.418** provisions, of its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.11** provisions because of risks of harmful interference in respect of existing and planned terrestrial stations,
 - i. in case of a GSO network having assignments in the band 2630-2655 MHz received by the ITU Radiocommunication Bureau on or before 1 June 2005, of its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.11** provisions because of risks of harmful interference in respect of existing and planned terrestrial stations,
 - j. in case of a GSO network having assignments in the band 2630-2655 MHz received by the ITU Radiocommunication Bureau on or before 1 June 2005, and if its national territory is included in the service area of the satellite network, of its objection to include its territory in the service area of the satellite network in project,
3. that, upon publication under No. **9.38** by the ITU Radiocommunication Bureau of assignments in the broadcasting satellite service in the band 2520-2670 MHz subject to No. **5.416** provisions¹, each CEPT administration informs within four months after that publication the notifying administration and the ITU Radiocommunication Bureau,
- a. according to the provision of the Radio Regulations No. **9.21**, of its disagreement under No **9.52** to any protection which could be claimed by receiving BSS earth stations using frequency assignments made under No **5.416** to broadcasting satellite GSO and non-GSO systems in the frequency band 2520-2670 MHz,
 - b. if its national territory is included in the service area of the satellite system, of its objection to the inclusion of its territory in the service area of broadcasting satellite GSO and non-GSO systems proposed in the frequency band 2520-2670 MHz using frequency assignments made under No. **5.416**.
4. that, upon publication under No. **9.38** by the ITU Radiocommunication Bureau of assignments in the mobile satellite service in the bands 2500-2535 and 2655-2690 MHz, each CEPT administration informs within four months after that publication the notifying administration and the ITU Radiocommunication Bureau,
- a. in case of a system having assignments in the band 2500-2535 MHz planned to be brought into use before 1 January 2005, of its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.14** and No. **9.21** provisions because of risks of harmful interference in respect of existing and planned terrestrial stations,
 - b. in case of a system having assignments in the band 2655-2690 MHz planned to be brought into use before 1 January 2005, of its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.21** provisions because of risks of harmful interference in respect of existing and planned terrestrial stations,
 - c. in case of a system having assignments in the band 2500-2520 MHz planned to be brought into use on or after 1 January 2005, of its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.14** provisions because of risks of harmful interference in respect of existing and planned terrestrial stations,
 - d. in case of a system having assignments in the band 2520-2535 MHz planned to be brought into use on or after 1 January 2005, of its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.14** and No. **9.21** provisions because of risks of harmful interference in respect of existing and planned terrestrial stations,
 - e. in case of a system having assignments in the band 2655-2670 MHz planned to be brought into use on or after 1 January 2005, of its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.21** provisions because of risks of harmful interference in respect of existing and planned terrestrial stations,

¹ This recommends covers also broadcasting satellite service (sound) assignments in the band 2520-2670 MHz subject to No. **5.416** provisions, i.e. notified under the broadcasting satellite service generic allocation.

- f. in case of a system having assignments in the band 2520-2535 MHz or in the band 2655-2670 MHz, or having assignments to be brought into use before 1 January 2005 in the band 2500-2520 MHz or in the band 2670-2690 MHz, of its disagreement under No. **9.52** to any protection which could be claimed by receiving stations, according to No. **9.21** provisions
5. that, upon publication under No. **9.38** by the ITU Radiocommunication Bureau of assignments in the fixed satellite service in the band 2500-2690 MHz, each CEPT administration informs within four months after that publication the notifying administration and the ITU Radiocommunication Bureau,
 - a. according to the provision of the Radio Regulations No. **9.21**, of its disagreement under No **9.52** to any protection which could be claimed by receiving stations using frequency assignments made under No **5.415**,
 - b. in case of a system having assignments in the direction Earth-to-space in the band 2655-2690 MHz, of its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.21** provisions because of risks of harmful interference in respect of existing and planned terrestrial stations,
 - c. if its national territory is included in the service area of the satellite system, of its objection to include its territory in the service area of the satellite system in project.
6. to use the draft letter in Annex 1 as a framework for the notification of this disagreement.”

Note:

Please check the Office web site (<http://www.ero.dk>) for the up to date position on the implementation of this and other ECC Recommendations

Annex 1

PROPOSED FRAMEWORK FOR THE NOTIFICATION OF DISAGREEMENT FROM CEPT COUNTRY TO SATELLITE NOTIFYING ADMINISTRATION AND ITU RADIOCOMMUNICATION BUREAU

This annex contains a proposed letter for notification of disagreement to frequency assignments to a satellite system in the band 2500-2690 MHz, to be filled in and sent **imperatively within four months after publication** in BR IFIC to the satellite notifying administration and to the ITU Radiocommunication Bureau. Sections within square brackets have to be adequately filled in, while statements in italics set up conditions to the need of the subsequent section.

" **To:** [Name and Address of the satellite administration]

Copy: Radiocommunication Bureau, Geneva, Fax N° : +41227305785

Subject: [name of the satellite system]; Special section CR/C/[XXX] of the BR IFIC n° [XXXX], dated [dd/mm/yyyy]

The administration of [CEPT administration] would like to inform you of:

Case FSS:

- *Uplink case:* its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.21** provisions applying in the band 2655-2690 MHz for the FSS service.
- its disagreement under No. **9.52** to any protection which could be claimed by receiving stations using frequency assignments made under No. **5.415** and subject to No. **9.21** provisions.
- *If territory included in the service area of the satellite system:* its objection to include its territory in the service area of the satellite system in project, under No. **5.415** provisions.

Case MSS:

- *BiU < 01/01/05:*
 - o its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.14** and No. **9.21** provisions in the band 2500-2535 MHz for the MSS service.
 - o its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.21** provisions in the band 2655-2690 MHz for the MSS service.
 - o its disagreement under No. **9.52** to any protection which could be claimed by receiving MSS stations subject to No. **9.21** provisions.
- *BiU >= 01/01/05:*
 - o its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.14** provisions in the band 2500-2520 MHz for the MSS service.
 - o its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.14** and No. **9.21** provisions in the band 2520-2535 MHz for the MSS service.
 - o its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.21** provisions in the band 2655-2670 MHz for the MSS service.
 - o its disagreement under No. **9.52** to any protection which could be claimed by receiving MSS stations subject to No. **9.21** provisions in the band 2520-2535 MHz.
 - o its disagreement under No. **9.52** to any protection which could be claimed by receiving MSS stations subject to No. **9.21** provisions in the band 2655-2670 MHz.

Case of BSS or BSS (sound) in the band 2520-2670 MHz subject to No. 5.416 provisions:

- its disagreement to include its territory in the service area of the satellite system in project for assignments made under No. **5.416** in the band 2520-2670 MHz for the BSS service.
- its disagreement under No. **9.52** to any protection which could be claimed by receiving earth stations using frequency assignments made under No. **5.416** subject to No. **9.21** provisions.

Case of BSS (sound) subject to Nos. 5.417A or 5.418 provisions:

- 2605-2630 (NGSO):
 - o *If territory included in the service area of the satellite system:* its objection to include its territory in the service area of the satellite system in project, under *resolves* 3 of Resolution **539 (Rev.WRC-03)**, in the band 2605-2630 MHz
 - o *If identified by the BR under Res 539 provisions (elevation below 76°):* its disagreement to accept any level of power flux density over its territory higher than the pfd mask provided in Resolution **539 (Rev.WRC-03)**, in the band 2605-2630 MHz.
 - o *If national territory within contour of elevation above or equal to 76°:* its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.11** provisions in the band 2605-2630 MHz for the BSS (sound) service.
- 2605-2630 (GSO):
 - o *If identified under No. 9.11 upon application of No. 5.417A:* its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.11** provisions in the band 2605-2630 MHz for the BSS (sound) service.
- 2630-2655 (GSO received after 1st June 2005):
 - o *If identified under No. 9.11 upon application of No. 5.418:* its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.11** provisions in the band 2630-2655 MHz for the BSS (sound) service.
- 2630-2655 (GSO received on or before 1st June 2005):
 - o *If identified under No. 9.11:* its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.11** provisions in the band 2630-2655 MHz for the BSS (sound) service.
 - o *If territory included in the service area of the satellite network:* its objection to include its territory in the service area of the satellite network in project, in the band 2630-2655 MHz for the BSS (sound) service.
- 2630-2655 (NGSO):
 - o *If territory included in the service area of the satellite system:* its objection to include its territory in the service area of the satellite system in project, under *resolves* 3 of Resolution **539 (Rev.WRC-03)**, in the band 2630-2655 MHz.
 - o *If identified by the BR under Res 539 provisions (elevation below 76°):* its disagreement to accept any level of power flux density over its territory higher than the pfd mask provided in Resolution **539 (Rev.WRC-03)**, in the band 2630-2655 MHz.
 - o *If national territory within contour of elevation above or equal to 76°:* its disagreement under No. **9.52** for what concerns the request of agreement under No. **9.11** provisions in the band 2630-2655 MHz for the BSS (sound) service."