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# EUROPEAN COMMON PROPOSALS

## Part 5

## Agenda Item 1.5
## Allocations in the frequency range 5150-5725 MHz

### Introduction

WRC-2003 agenda Item 1.5 invites the Conference ”to consider in accordance with Resolution 736 (WRC-2000), regulatory provisions and spectrum requirements for new and additional allocations to the mobile, fixed, Earth exploration-satellite and space research services, and to review the status of the radiolocation service in the frequency range 5 150–5 725 MHz, with a view to upgrading it, taking into account the results of ITU-R studies”.

Based on the assessment requested by Resolution 736 of the WRC-2000, Europe proposes that:

1. The bands 5 150-5 350 MHz and 5 470-5 725 MHz be allocated worldwide on a primary basis to the mobile service for the implementation of wireless access systems (WAS) including RLANs, ensuring non-interference with other services by footnotes 5.XXX and 5.YYY specifying the relevant ITU-R Recommendations with appropriate operational restrictions and e.i.r.p. limits.
2. The allocation to the fixed service in Region 3 in the band 5 250-5 350 MHz for the implementation of Fixed Wireless Access (FWA) systems ensure the protection of the Earth exploration-satellite (active) and space research services in this band. The allocation to the fixed service in Region 3 should not prevent the worldwide primary allocation to the mobile service as proposed under point 1.
3. The additional primary allocation to EESS (active) in the frequency range 5 460-5 570 MHz be subject to no additional constrains to the worldwide primary allocation to the mobile service as proposed under point 1.
4. The radiolocation service in the frequency range 5 350- 5 650 MHz be upgraded. In the band 5 470 – 5 650 MHz the upgrade is also seen as a consequence to the worldwide primary allocation to the mobile service as proposed under point 1.

### Proposals

# ARTICLE 5

**MOD EUR/1.5/1**

**4 800-5 830 MHz**

| Allocation to services | | |
|---|---|---|
| **Region 1** | **Region 2** | **Region 3** |
| **5 150-5 250** | AERONAUTICAL RADIONAVIGATION<br>FIXED-SATELLITE (Earth-to-space) 5.447A<br>MOBILE ADD 5.XXX ADD 5.YYY<br>5.446 5.447B 5.447C | |
| **5 250-5 255** | EARTH EXPLORATION-SATELLITE (active)<br>RADIOLOCATION<br>SPACE RESEARCH 5.447D<br>MOBILE ADD 5.XXX ADD 5.YYY<br>5.448 5.448A | |
| **5 255- 5 350** | EARTH EXPLORATION-SATELLITE (active)<br>RADIOLOCATION<br>SPACE RESEARCH (active)<br>MOBILE ADD 5.XXX ADD 5.YYY<br>5.448 5.448A | |
| **5 350-5 460** | EARTH EXPLORATION-SATELLITE (active) MOD 5.448B<br>AERONAUTICAL RADIONAVIGATION 5.449<br>RADIOLOCATION | |
| **5 460-5 470** | RADIONAVIGATION 5.449<br>RADIOLOCATION<br>EARTH EXPLORATION-SATELLITE (active) MOD 5.448B | |
| **5 470-5570** | MARITIME RADIONAVIGATION<br>MOBILE ADD 5.XXX ADD 5.YYY<br>RADIOLOCATION<br>EARTH EXPLORATION-SATELLITE (active) MOD 5.448B<br>5.450 5.451 | |
| **5 570-5 650** | MARITIME RADIONAVIGATION<br>MOBILE ADD 5.XXX ADD 5.YYY<br>RADIOLOCATION<br>5.450 5.451 5.452 | |
| **5 650-5 725** | RADIOLOCATION<br>Amateur<br>MOBILE ADD 5.XXX ADD 5.YYY<br>Space research (deep space)<br>5.282 5.451 5.453 5.454 5.455 | |

*Reasons:*

- *With the global growth in the mobile internet and multi-media applications the use of Wireless Access Systems including RLANs (WAS/RLANs) has enormous potential worldwide which requires harmonized additional spectrum.*
- *The proposed changes within the allocation table are interrelated.*
- *The global allocation of the bands 5 150-5 350 MHz and 5 470-5 725 MHz to the MS on a primary basis for the implementation of Wireless Access Systems including RLANs (WAS/RLANs) will provide an appropriate regulatory status for the operation and development for them.*
- *WAS/RLANs will offer many operational and economic benefits to users in commercial, educational and leisure activities as well as to countries with developing communications infrastructures.*
- *The allocation of the whole frequency range 5 250 MHz-5 570 MHz to the EESS (active) will allow the use of wideband sensors providing an increased resolution.*
- *The upgrade of the radiolocation service in the band 5 350-5 650 MHz will provide the same regulatory protection to it over the whole frequency range. The upgrade of the radiolocation service in the band 5 470-5 650 MHz is also a consequence of **EUR/1.5/3**. Within the frequency range 5 460-5 570 MHz the upgrade of the RLS is also seen as a consequence to the proposed world wide allocation to the EESS (active).*

**SUP EUR/1.5/2**

**5.447**

***Reason:*** *Suppression of No. 5.447 is conditional to the primary allocation of the band 5150-5250 MHz to the mobile service as proposed in **EUR/1.5/1**.*

**ADD EUR/1.5/3**

**5.XXX** The use of the bands 5150 – 5350 MHz and 5470 – 5725 MHz by the mobile service is for the implementation of wireless access systems, including RLANs. Stations in the mobile service shall be operated in accordance with the conditions below:

– In the 5 150-5 350 MHz band, the use of stations shall be restricted to indoor use with a maximum mean e.i.r.p. of 200 mW (averaged over the transmission burst at the highest power setting), with a mean e.i.r.p. density not exceeding 0.04 mW/4 kHz in any 4 kHz bandwidth.

– In the band 5 470-5 725 MHz, the use of stations shall be restricted to a maximum mean e.i.r.p. of 1 W (averaged over the transmission burst at the highest power setting), with a mean e.i.r.p. density not exceeding 50 mW/1 MHz in any 1 MHz bandwidth.

– Equipment operating in the bands 5 250-5 350 MHz and/or 5470 – 5725 MHz, shall employ transmitter Power Control to provide a mitigation factor of at least 3 dB on

the maximum mean output power. If Transmitter Power Control is not in use, the maximum mean e.i.r.p. shall be reduced by 3 dB.

– Equipment operating in the bands 5 250-5 350 and/or 5 470-5 725 MHz shall use Dynamic Frequency Selection as referred to in Resolution **[EUR/1.5/5 GHz]** (WRC 2003) to provide protection to co-primary terrestrial services. The stations shall also be designed to provide, on aggregate, a uniform spread of the loading of the stations across the available spectrum to improve sharing with satellite services.

***Reasons:***

- *The conditions and mitigation techniques described within footnote 5.XXX are required to protect MSS feeder links in the band 5 150-5 250 MHz allocated to FSS (Earth-to-space), the EESS (active) in the band 5 250-5 350 MHz and the radiolocation service in the bands 5 250-5 350 MHz / 5 470-5 725 MHz while allowing the operation of WAS/RLANs.*
- *Frequency sharing based on active avoidance of co-channel operation with existing systems (by DFS) requires an adequate amount of spectrum for WAS/RLANs.*
- *The content of proposed footnote 5.XXX is in line with the content of footnote 5.XX, proposed with respect to Agenda Item 1.6 of WRC-2003 (see **EUR/1.6/2**).*

**ADD EUR/1.5/4**

**5.YYY** In the band 5150 – 5250 MHz stations in the mobile service shall not claim protection from earth stations in the fixed satellite service. In the bands 5250 – 5350 MHz and 5470 – 5725 MHz stations in the mobile service shall not claim protection from the radiodetermination service. The provisions of No. **5.43A** do not apply to the mobile service allocations in the bands 5150 – 5350 and 5470 – 5725 MHz.

**MOD EUR/1.5/5**

**5.448B** The Earth exploration-satellite (active) service operating in the band 5 350-5 570 MHz shall not cause harmful interference to, or constrain the use and development of, the aeronautical radionavigation service in the band 5350-5460 MHz, the radionavigation service in the band 5460-5470 MHz and the maritime radionavigation in the band 5470-5570 MHz.

***Reason:*** *this footnote will also be applied to the band 5 460-5 570 MHz as a consequence of the proposed allocation to the EESS (active) and the proposed upgrade to the RLS.*

**ADD EUR/1.5/6**

# RESOLUTION [EUR/1.5/5 GHz] (WRC-2003)

## Characteristics of Dynamic Frequency Selection to be used by stations in the mobile service operating in the bands 5 250 – 5 350 MHz and 5470-5725 MHz to protect the radiodetermination service

The World Radiocommunication Conference (Geneva, 2003),

*considering*

a) that this conference allocated the bands 5 150-5 350 MHz and 5470-5725 MHz on a primary basis to the mobile service for the implementation of wireless access systems (WAS), including radio local area networks (RLANs);

b) the need to protect existing and planned radiodetermination systems in the bands 5 250-5 350 MHz and 5470-5725 MHz;

c) that studies have shown that sharing between these services is only possible with the application of mitigation techniques such as Dynamic Frequency Selection (DFS);

*resolves*

that, in order to ensure adequate protection to the radiodetermination systems, stations in the mobile service operating in the 5 250 - 5 350 MHz and 5470-5725 MHz bands shall implement the mitigation measures contained in Annex 1 of ITU-R Recommendation M. [8/152+corr1] ;

*invites ITU-R*

to conduct, as a matter of urgency and taking account of practical experience, further studies on the suitability of the DFS characteristics as referred to in *resolves*.