

**WMO Steering Group on Radio-Frequency Coordination (SG-RFC)**  
**and**  
**EUMETNET programme on protection of Radio-Frequencies (Eumetfreq)**  
**Meeting report N° 2/07**

**Meeting :** ITU-R Conference Preparatory Meeting (CPM)

**Venue and date :** Geneva (Switzerland), 19 february-2 March 2007

**SG-RFC participants\* :** Roger CARTER (UK Metoffice)  
Markus DREIS (EUMETSAT)  
David FRANC (NOAA)  
Bob LECK (NOAA)  
David Mc GINNIS (NOAA)  
Carmelo RIVERA (NOAA)  
Jean-Michel RAINER (WMO)\*\*  
Philippe TRISTANT (Météo France)\*\*  
Alexandre VASSILIEV (ITU Staff)

**Other Eumetfreq participants\* :** Edoardo MARELLI (ESA)  
Manfred OTTER (ESA)  
Jean PLA (CNES)  
Bjorn ROMMEN (ESA)  
Klaus RUF (DLR)

-----  
\* unlike within CEPT, EUMETNET is not a recognised body within ITU-R and Eumetfreq participation to these meetings is made under national or WMO delegations.

\*\* Also representing WMO

The ITU-R Conference Preparatory Meeting (CPM) aims at finalising the “CPM Text” that will serve for all administrations to prepare their national proposals to the forthcoming World Radiocommunication Conference (WRC-07).

Recognising that the whole preparatory work during the last 3 years has only been followed by a limited number of Administrations, the CPM is also the first ITU meeting at which most of the ITU Member Administrations are represented and can apprehend the issues related to different agenda items.

For most of these agenda items, the CPM text is assumed to reflect the different diverging views and hence propose different Methods to satisfy each of these agenda items.

## **1 General comment**

The national delegations in CPM are led by National Radio Administrations and it appears that, for a majority of these delegation, from developing countries but also some developed countries, there is a general lack of understanding of the meteorological and scientific processes as well as requirements related to radio-frequency.

WMO inputted two documents to this CPM, one on the specific WMO positions related to all agenda items of interests (Document CPM/65 and its addendums) and the second one presenting on behalf of GEO the “Importance of radio spectrum for the Global Earth Observation System of systems (GEOSS) and related frequency protection requirements” (Document CPM/82).

These documents certainly allowed for a better appreciation of WMO and Earth Observations community requirements by the radiocommunication community but there will be a need for maintaining and increasing pressure and communication efforts to advertise our positions to National Radiocommunication Administrations (NRA) up to WRC-07.

## **2 Report on specific agenda items :**

### **Agenda item 1.2 : Issue 1 : Protection of the 36-37 GHz EESS (passive) band**

The CPM text on this issue proposes 2 Methods :

C1 : proposing mandatory limits to be applied to active services to protect EESS (passive)

C2 : only encouraging administrations to make the best effort to protect EESS (passive)

Method C1 is in line with WMO and EUMETNET positions and, following discussions during CPM, one can assume that it may have big chance to succeed.

---

### **Agenda item 1.2 : Issue 2 : Extension of the 18 GHz METSAT allocation**

The CPM text on this issue proposes 3 Methods :

A1 : proposing an extension of the current METSAT allocation (18.1-18.3 GHz) in the 18-18.1 GHz band

A2 : proposing an extension of the current METSAT allocation (18.1-18.3 GHz) in the 18-18.1 GHz band but with a specific provision related to the protection of the BSS (Broadcasting Satellite Service) plan.

A3 : proposing an extension of the current METSAT allocation (18.1-18.3 GHz) in the 18.3-18.4 GHz band

Method A1 and A2 are not favoured by a number of developing countries whereas A3 is not supported by the US Administration but the the principle of the 100 MHz extension is globally supported. WRC-07 would “only” have to choose whether this extension should be made upward or downward and the only strong requirement from WMO and EUMETNET is that this extension been made on a worldwide basis.

---

### **Agenda item 1.2 : Issue 3 : Protection of the 10.6-10.68 GHz EESS (passive) band**

The CPM text on this issue proposes 3 Methods :

B1 : proposing a tightening of the current limits on active services to ensure a proper protection of EESS(passive)

B2 : proposing roughly to maintain the current limits

B3 : only encouraging administrations to make the best effort to protect EESS (passive)

Despite evidence of current interference from active services to EESS (passive), there is still a number of oppositions (Japan, Arab countries and few European countries) to tighten the current limits to ensure future operation of EESS (passive) in this band, arguing about the constraints imposed on active services. WMO and EUMETNET of course favour Method B1 that is limiting the constraints on active services while improving the EESS (passive) situation recognising that, under methods B2 and B3, development of active services would lead to a total loss of this important passive band.

---

### **Agenda item 1.3 : Issue 1 : Upgrading and protection of radiolocation in the 9 GHz range**

The CPM text on this issue proposes 2 Methods :

A1 : upgrading the radiolocation service status from secondary to primary but with a footnote stating that Radiolocation shall not cause harmful interference to Radionavigation service

A2 : upgrading the radiolocation service status from secondary to primary

This is a pure principle issue on whether or not a primary service (radiolocation) is not able to protect another primary service (radionavigation). WMO and EUMETNET favour method A2, recognising that there are currently a number of meteorological radars operating under the secondary radiolocation service without any adverse impacts on radionavigation systems.

---

### **Agenda item 1.3 : Issue 2 : extension of the Earth exploration satellite service (EESS) allocation at 9500-9800 MHz**

The CPM text on this issue proposes 2 Methods :

B1 : extension of the EESS (active) in the 9300-9500 MHz, limiting this extension to systems requiring more than the current 300 MHz bandwidth

B2 : extension of the EESS (active) in the 9800-10000 MHz

According to Resolution 747 (WRC-03), B1 is to be considered in priority before B2. WMO and EUMETNET do not favour one of these 2 methods but note that under B1, protection of meteorological radars operating in the 9300-9500 MHz band is ensured by the limitation of use of this extension by system only requiring more than the current 300 MHz bandwidth in the 9500-9800 MHz band. One can also note that the German proposal to increase this extension to 300 MHz hence covering the 9300-9900 MHz band has not been agreed as a new Method, under the argument that it is not in line with the agenda item, but is mentioned in the CPM text as a proposal by some administrations.

---

### **Agenda item 1.4 : Impact on meteorological radars and satellite C-Band related to future frequency bands for IMT-2000**

It is rather difficult to summarise the methods under this agenda item since they refer to generic allocations without specifying any frequency bands.

On the other hand, the CPM text provides a list of frequency bands to be considered by WRC-07, giving, for each of these bands, advantages and disadvantages.

From the meteorological perspective, 2 bands are of interests for WMO and EUMETNET and have been lengthily discussed during CPM :

- 2700-2900 MHz band : one of the 2 major bands for meteorological radars. One cannot say that the CPM text is negative for our interest but a potential identification of this band for IMT-2000 is still open (even though there is only a few European administrations supporting it) since technical studies and in particular consideration of possible mitigation techniques, are yet to be finalised. On the other hand, it is felt that a big majority of administrations would oppose identification of this band, hence following the WMO and EUMETNET position.
- 3400-4200 MHz band : this band is not allocated to meteorological services but is quite heavily used for broadcasting of meteorological information and alerts. According to the discussion during CPM, it is likely that the whole band would not be identified for IMT-2000 on a worldwide basis but WMO and EUMETNET would have to make sure that, at least, sufficient capacity and availability for meteorological related broadcasts be maintained. It has to be noted that mentioning this use in the CPM text has been very difficult to obtain and required a certain insistence of WMO to get the following text “ *The use of the band 3 400-4 200 MHz by FSS also includes governmental uses and international commitments within the WMO, which are essential for civil aviation and weather, water, climate and environmental alerts and which are currently using only a few channels, mainly in the 3 600-3 800 MHz band* “.

On a more general basis, one can note that discussions on the inclusion of the above text on 3400-4200 MHz band has shown that a number of administrations are ready to follow WMO requirements. This is something that would have to be kept in mind under this agenda item but also on a more general basis.

---

#### **Agenda item 1.12 : Coordination and notification procedures for Earth Exploration Satellite Service (EESS) (active and passive) sensors**

This agenda item concerns quite a wide range of regulatory issues among which meteorological services are only concerned with the issue related to coordination and notification of EESS active and passive sensors.

The CPM text makes only one proposal supporting such coordination and notification possibility, hence in line with WMO and EUMETNET positions.

---

#### **Agenda item 1.17 : Protection of the 1.4 GHz EESS (passive) band**

There is now a general consensus to delete the secondary FSS allocation in the bands 1390-1392 MHz (Earth-to-space) and 1430-1432 MHz (space-to-Earth) and the CPM text only proposes a consistent Method, in line with WMO and EUMETNET position.

---

#### **Agenda item 1.20 : Unwanted emissions in EESS (passive) bands**

This is certainly the more important agenda item for the meteorological community since it refers to essential passive bands all listed in RR Footnote 5.340 (1.4 GHz, 24 GHz, 31 GHz and 50 GHz).

Even though this agenda item will likely be one of the more complex at WRC-07, finalisation of the CPM did not led to difficult discussions.

The CPM text on this issue proposes 3 Methods :

A : proposing mandatory limits for unwanted emissions falling in the related passive bands

B : proposing recommended levels for unwanted emissions falling in the related passive bands

C : only encouraging administrations to make the best effort to protect EESS (passive)

WMO and EUMETNET are supporting method A, the only solution to ensure worldwide protection of the EESS (passive) bands, and are definitively opposed to see Method C retained as a solution in any the of the frequency band. One can note that the WMO proposal to delete this Method C was not supported and that, on the contrary, a number of administrations strongly supported its maintaining, arguing about flexibility given to administrations.

From the discussions, it clearly appears that, the most difficult issue will relate to the protection of the 1.4 GHz band, in particular from radars, and that, even though diverging views on the required protection level for the 31 and 50 GHz bands (ranges of levels are provided in the CPM text), the case of the bands above 20 GHz may be easier to solve.

---

**Other Agenda items : 1.5, 1.6, 1.8, 1.18 and 1.19**

On all these agenda items, meteorological interests are not endangered.

-----