



Report from the event supported by RadioNet

TITLE *INTERNATIONAL SPECTRUM MANAGEMENT MEETING: CEPT PT1#58*

DATE: *16-20 APRIL, 2018*

LOCATION: *PRAGUE, CZECH REPUBLIC*

MEETING WEBPAGE: *<https://cept.org/ecc/groups/ecc/ecc-pt1/news/latest-news-from-ecc-pt158/> ; expected webpage, no public report has been posted yet*

HOST INSTITUTE: *CEPT (EUROPEAN CONFERENCE OF POSTAL AND TELECOMMUNICATION ADMINISTRATIONS)*

**RADIONET
BENEFICIARY / NO:** *OBSPARIS / 10*

Report:

1. SCIENTIFIC SUMMARY

This was not a scientific meeting. The goal of WP4.2 (spectrum management) is the protection of radio frequency bands allocated to the Radio Astronomy Service. The organizing body, the CEPT (*EUROPEAN CONFERENCE OF POSTAL AND TELECOMMUNICATION ADMINISTRATIONS*) deals with radio spectrum management within the 48 CEPT countries. At this meeting of its Project Team 1 (PT1) I represented CRAF, the Expert Committee on Radio Astronomy Frequencies of the European Science Foundation, which represents the European radio astronomical community in matters of radio frequency protection at the CEPT.

I attended the meeting to participate in deliberations on the following issue: at the 2015 World Radiocommunication Conference (WRC-15) of the International Telecommunication Union (ITU), which reviews and updates the Radio Regulations on the worldwide use of the radio spectrum, an Agenda Item A1.1.13 was defined for the next WRC in 2019, whose objectives include the identification of additional frequency bands in the range 24-86 GHz to be allocated to International Mobile Telecommunications (IMT) for the development of terrestrial mobile broadband application.

Some of the frequency bands considered for the new IMT allocations are either shared with, or adjacent to 11 bands used for radio astronomical observations. This indicates there are potential threats of harmful interference to some of the commonly used radio astronomy bands from these potential new allocations, which could render those bands unusable for radio astronomy.

PT1 of the CEPT is charged with coordinating proposals from the 48 CEPT countries for new IMT frequency allocations, compatibility studies between the IMT applications and other spectrum users such as the Radio Astronomy Service, and preparing position documents for WRC-19, where final, global decisions on new frequency allocations will be made at the ITU.

In broad terms, CRAF attends the meetings to present technical studies on the compatibility of the new proposed IMT applications with high-sensitivity radio astronomical observations, based on the protection criteria described in the ITU Radio Regulations, Recommendations and Reports. Furthermore, we actively liaise for support with European national spectrum management Agencies and with kindred scientific organisations like ESA, whose Earth exploration satellites share a number of frequency bands with radio astronomy.

2. AGENDA OF THE EVENT

The ultimate purpose of the series of PT1 meetings over a three-year period (2016-2019) is to reach consensus on a list of frequency bands supported for the new mobile broadband IMT communication applications, together with a list of protection criteria for potential victim services like the Radio Astronomy Service - whose protection criteria are much more strict than for other services due to the extremely weak radio signals we need to detect for our research.

Almost all radio services participate in these discussions, as the broad range of proposed new frequency allocations can potentially cause unwanted interference with many other spectrum users who already have a frequency allocation and the right to be protected from new allocations.

This was the sixth meeting of PT1 on these issues. CRAF presented revised compatibility studies on the protection of the Radio Astronomy Service in the frequency bands 31.3-31.8 GHz and 42.5-43.5 GHz and a new study for the frequency range 76-94 GHz. These studies concern radio astronomy sharing the same frequency band as IMT operations and/or unwanted emissions from IMT equipment from a frequency band adjacent to a band used by the RAS, as appropriate.



The studies indicated that exclusion zones of tens of km are required around radio telescopes in which no IMT systems can be allowed to operate. Such information is of great importance to national administrations for the ultimate decisions on the licensing of IMT systems.

CRAF had also submitted comments responding to a call for public consultation on a number of draft ECC and CEPT Reports and Decisions as well as draft text for the CEPT Brief that deals with possible allocations for IMT systems in the frequency range 24.25-86 GHz.

As a result, all these draft policy documents now include texts on the need to establish exclusion zones around RAS stations, plus indicative separation distances radii between IMT equipment and radio telescopes as derived from CRAF studies, where appropriate.

Besides continuing the lines of activity mentioned above, as a next step CRAF will work on draft CPM (ITU Conference Preparatory Meeting) text, the baseline working document for WRC-19 deliberations in which methods on how to put into practice proposed new IMT frequency allocations in the range 24.25-86 GHz, including the ways and means to protect radio astronomy observations, are defined.

Neither the input nor the output documents of these meetings are publicly available, access is limited to accredited participants in PT1 deliberations.

3. PARTICIPANTS

The participants at these meetings are all experts in spectrum management, on technical and/or regulatory aspects. Some represent the national spectrum Agencies of the 48 CEPT member countries, others industry involved in either the proposed new mobile broadband applications, or the numerous potential victim services (broadcasting, fixed services, satellite communications, etc.), and others represent accredited scientific organizations such as CRAF (radio astronomy) or ESA (Earth Exploration Science Service).

The attendance list published for this meeting by the CEPT is not publicly available. I estimate there were over a hundred participants.

No conference picture was posted online by the ITU.

4. RADIONET FINANCIAL CONTRIBUTION

The RadioNet support was used to pay for the attendance of the CRAF chairman, Wim van Driel (OBSPARIS).

5. PUBLICATIONS

This meeting will not result in scientific publications. CRAF's input consists of technical compatibility studies on the protection of the radio astronomy service from proposed IMT systems. None of the input and output documents are publicly available. The CEPT has not yet posted a publicly available summary of the meeting; it should later be published at <https://cept.org/ecc/groups/ecc/ecc-pt1/news/latest-news-from-ecc-pt158/>. The ultimate goal is the revision in 2019 of the global Radio Regulations of the ITU regarding frequency allocations for IMT systems.