



Report from an event supported by RadioNet

TITLE	<i>INTERNATIONAL SPECTRUM MANAGEMENT MEETING: CEPT PT1 #54</i>
DATE:	<i>16-20 JANUARY 2017</i>
LOCATION:	<i>CASCAIS, PORTUGAL</i>
MEETING WEBPAGE	<i>http://www.cept.org/ecc/groups/ecc/ecc-pt1/news/latest-news-from-ecc-pt154/</i>
HOST INSTITUTE:	<i>CEPT (EUROPEAN CONFERENCE OF POSTAL AND TELECOMMUNICATIONS ADMINISTRATIONS) / ANACOM (PORTUGUESE NATIONAL SPECTRUM AGENCY)</i>
PARTICIPANTS NO:	<i>75</i>

Report:

1. 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, CEPT (European Conference of Post and Telecommunications Administrations), deals with radio spectrum management in 48 European countries. At this meeting of its Project Team 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 mainly 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 A1.13 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.

At a European level, the CEPT is charged with coordinating proposals for new IMT frequency allocations, compatibility studies between the IMT applications and other spectrum users like the Radio Astronomy Service, and preparing European position documents for WRC-19, where final decision on new frequency allocations will be made.

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 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 CEPT PT1 meetings over a three-year period (2016-2019) is to draft a European Common Proposal on the issue at hand, 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 second meeting of PT1. No detailed compatibility studies could be presented at present, as the operational details of the proposed IMT systems have not yet been made available.

CRAF submitted an input document requesting the inclusion of the "21 cm" radio astronomy band 1400-1427 MHz in the draft CEPT ECC Decision on studies to be performed on the compatibility with proposed IMT mobile broadband operations in the adjacent band 1427-1452 MHz, as in some cases this could involve



cross-border interference that cannot be resolved through coordination on a national basis. CRAF also proposed text for the CEPT Brief listing the need to protect radio astronomy and the radio astronomy frequency bands for which the compatibility needs to be studied.

Neither the input nor the output documents of these meetings are publicly available, access is limited to accredited participants in CEPT fora. The CEPT has posted a public summary online at <http://www.cept.org/ecc/groups/ecc/ecc-pt1/news/latest-news-from-ecc-pt154/> Summary on AI 1.13 from this CEPT website:

"WRC-19 preparation

AI 1.13: Frequency bands for 5G (IMT-2020)

Discussion on AI1.13 focused on the 26 GHz band (24.25-27.5 GHz) in light of the [CEPT 5G roadmap](#) and the recent [EC 5G Mandate](#) which consider this as a pioneer band.

The working document on sharing and compatibility studies was updated based on inputs and the outcome from the correspondence group. Parameters for IMT and relevant victim systems are now included. Some initial studies are included for earth exploration satellite service (EESS) and Inter Satellite Service (ISS), however it is noted that these will need to be revised once the IMT-2020 parameters are agreed by ITU-R in February 2017 (14 – 22nd February), also bringing the methodology of the various studies in line with the new Recommendation ITU-R [IMT.MODEL].

The draft CEPT Brief was updated with info from IARU and actions to be taken, including the need to ensure consistency between spectrum needs and parameters.

The work will continue by [correspondence](#) prior to the next meeting and there may be a need to hold a physical meeting in order to draft inputs to TG 5/1."

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 countries, others industry involved in either the proposed new mobile broadband applications or the numerous potential victim services (broadcasting, satellite communications, etc.), and others represent scientific Member Organisations such as CRAF (radio astronomy) or ESA.

No attendance list was published for this meeting by the CEPT.

No conference picture was posted online by the CEPT.

4. RADIONET FINANCIAL CONTRIBUTION

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

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 and proposed modifications of CEPT's Brief and its European Common Proposal, none of which are publicly available. The ultimate goal is the revision in 2019 of the global Radio Regulations of the International Telecommunication Union.