ECC NEWSLETTER **February 2012 Special Edition**

WRC-12: a success for CEPT?

With the World Radiocommunication Conference (WRC) now over, we can outline some of the important results achieved at the Conference and the ways in which they affect the European radiocommunications environment. The ECC can now consider the WRC's influence on its own work programme. Although it's been a long and, at times, challenging process, the journey overall has been successful and has delivered a better regulatory framework for spectrum use for everybody.

The main outcomes are as follows:

1. **CEPT has successfully coordinated the European positions in WRC-12**

European Common Proposals (ECP) had been adopted in July and November on all WRC-12 agenda items. 44 administrations have provided signatures for these ECPs. For the most controversial agenda item (Agenda Item 1.7 on aeronautical mobile satellite service), the number of signatures reached 37 but in most cases the number of signatures exceeded 40.

During WRC-12 the coordination of CEPT administrations was ensured through almost daily Heads of Delegation meetings and additional coordination meetings for specific agenda items as necessary. In spite of lively discussions during these coordination meetings, CEPT was able to speak with one voice for all major issues of the Conference, including the extension of the mobile allocation at 700 MHz.

As a result, the CEPT proposals and positions were successful with satisfying results and compromises on all agenda items.

2. **Results for Electronic Communications**

WRC-12 has successfully concluded on the technical and regulatory conditions applicable to the frequency band 790-862 MHz (Agenda Item 1.17). This is mainly the result of the process initiated at the CPM meeting in February 2011 with a framework agreement signed by the Regional Commonwealth in the field of Communications (RCC) and CEPT. The objective of this agreement was to ensure that all necessary cross-border coordination agreements needed between RCC countries operating Aeronautical Radionavigation systems in this band and CEPT countries wishing to implement mobile service would be reached before WRC-12. This was ultimately achieved in the last week of the conference with an agreement signed by Romania and Ukraine.

CEPT faced a difficult situation at the beginning of the Conference with a request from Arab and African countries for a mobile allocation in the 700 MHz - an extended digital dividend. Since this proposal was not corresponding to an agenda item of WRC-12, CEPT unanimously opposed this proposal at the beginning of WRC-12.

However, given the importance given by these countries to their proposals and after many discussions, a compromise was reached and supported by all regional organisations at WRC-12:

- Allocation of the band 694-790 MHz to the mobile service in, co-primary with broadcasting, and identified for IMT, however, the allocation will be effective only after WRC-15

- Refinement at WRC-15 of the lower edge of the allocation (694 MHz) and definition at WRC-15 of the technical and regulatory conditions applicable to the mobile service in this band

This compromise accommodates the requirement expressed by African and Arab countries for a new allocation and identification, although not immediate, and takes into account the need for European countries to better study the issue before taking a final position on the best suitable allocation and associated regulation. This compromise pays due attention to the merits of harmonisation. However, it fully preserves the possibility for each country and for CEPT to decide about the best use of this band after 2015, i.e. mobile or broadcasting services, and the rights of administrations as from the Geneva-06 Agreement.

Also, flexibility has been maintained in regard to short range device, software-defined radio and cognitive radio, and electronic news gathering, with no or non-binding regulation in line with the ECP for the three corresponding agenda items.

3. Results for satellite communications

Concerning satellite issues, the technical and regulatory provisions which have been adopted for the use of the frequency band 21.4-22 GHz and the allocation of a new frequency band at 25 GHz for associated feeder links are in line with the ECP and will facilitate the development of broadcasting services in this band. WRC-12 has also made major changes in the procedures applicable to the coordination and notification of satellite networks in order to clarify the rules which provides the rights for administrations on orbital positions and frequency assignment. WRC-12 did not go as far as proposed by CEPT regarding the improvement of the transparency but some significant steps were taken in the direction of improving the management of orbital and spectrum resource and reducing its scarcity.

The frequency band 2483.5-2500 MHz was successfully allocated on a primary basis to radiodetermination satellite service, under the conditions proposed in the ECP, therefore offering a new opportunity for the development of Galileo services.

A compromise was also reached under agenda item 1.7 on the way to preserve the priority for accessing the L band to aeronautical mobile service satellites in order to facilitate the implementation of European project such as SESAR.

4. Results for aeronautical, maritime and radiodetermination services

WRC-12 allocated new spectrum (5030-5091 MHz) for the safe operation of unmanned aircraft systems in non-segregated airspace for line of sight operations, under agenda item 1.3

A package was successfully adopted to ensure the protection of Galileo uplink band in the 5 GHz band, which was endangered by proposals for a new allocation in several countries including United States and many African Countries. CEPT accepted to support the allocation of the entire frequency band 15.4-15.7 GHz to the radiolocation service, in spite of the ECP proposing 15.4-15.5 GHz under agenda item 1.3 and 15.5-15.7

GHz only for radiolocation under agenda item 1.21, in exchange of a withdrawal of the proposals for a new allocation in the Galileo band.

Concerning the two agenda items relating to maritime services, the Conference took decisions in line with the European proposals, with limited compromise such as delaying by 2 years the modification of Appendix 17.

5. Results for the scientific use of spectrum

WRC-12 took the required decisions for new allocations for scientific services, in particular at 9 kHz (lightning detection), 7 GHz (meteorological satellite service), 23 GHz (space research) and for its protection in the 80/90 GHz and in the 37 GHz ranges. It also strengthens the essential role and global importance of Earth Observation through a modification of Resolution 673.

For the protection of earth-exploration at 80/90 GHz, CEPT reached a compromise in favour of a light regulation (a WRC Recommendation) which maintains the objective of ensuring that equipment in the fixed service will be specified with the appropriate restrictions on unwanted emissions.

For all other scientific agenda items, discussions did not appear so controversial during WRC-12 owing to their high level of preparations. On almost of these items, the ITU-R studies had concluded in favour of one single method - except a minor alternative - and although some regional organisations opposed initially to the solutions proposed by Europe, it was possible to arrive rapidly to a consensus on the basis of the methods proposed by the ECP.

6. Agenda of the next Conference

After considerable debates, the agenda item for WRC-15 to consider spectrum requirements for broadband, new allocation for mobile service and identification for International Mobile Telecommunications (IMT) was adopted in terms very close to the ECP. In particular, the agenda for the WRC-15 does not include nor exclude specific frequency bands.

Almost all other agenda items proposed by CEPT for WRC-15 have been accepted and CEPT will now set the wheels in motion within its Conference Preparatory Group to initiate all necessary preparations for WRC-15.

Eric Fournier
Chairman of the ECC's Conference Preparatory Group

World Radiocommunication Conference 2012

The results item by item: in brief

Below we've made a very short summary of the outcome of each agenda item. You can see a more detailed account of the outcomes, and other processes which led to them, at the ECC's website on the page of the Conference Preparatory Group http://www.cept.org/ecc/groups/ecc/cpg .

AI 1.1: Radio Regulations footnotes. These are specific provisions relevant to one or more country which allows some exemption from Article 5 of the Radio Regulations. Some of these footnotes were modified.

AI 1.2: International regulatory framework. Agreed that ITU-R studies should continue to examine whether ongoing convergence between different types of service requires amendment of the Radio Regulations but this conference agreed that the existing definitions should remain the time being. However Resolution 951 was dropped.

WRC-12 agreed some modifications to the principles for allocating frequency bands (Revised Resolution 34); largely influenced by CEPT contributions.

AI 1.3: Radio spectrum for unmanned aircraft ('drones'). A new allocation was made in the band 5030 - 5091 MHz specifically for terrestrial communication with UAVs. This avoids any impact on the European Satellite Navigation system Galileo. The question of satellite component will be considered at the next WRC; compatibility with other terrestrial services on the candidate frequencies still needs to be studied.

AI 1.4: Any further regulatory measures to facilitate introduction of a new aeronautical mobile (R) services in 112 - 117.975 MHz and 960 - 1164 MHz. Revisions to the corresponding resolutions from WRC-07 were agreed. However a proposal also for the 5000-5030 MHz band was not accepted: this will ensure continued protection for the European Galileo satellite system.

AI 1.5: Electronic News Gathering. Some agreement on (rather loose) worldwide harmonisation (Footnote 5.296 was amended by inclusion of 42 countries. Studies will continue in accordance with ITU-R Resolution 59).

AI 1.6: The range identified for passive services usage was extended from an upper limit of 275 GHz up to 3000 GHz. The WRC does not, however, expect this to imply allocation exclusively to passive services.

AI 1.7: Aeronautical mobile satellite (R) service: agreement of certain procedures for coordinating satellite networks, notably an appeals mechanism if the spectrum offered at the end of a coordination process is insufficient to meet the demands claimed by the administration which is applying. Agreement involved some acceptable compromise to the CEPT's preferred position.

AI 1.8: Recommended limits applied to unwanted emissions of the fixed service in the range 71 GHz to 238 GHz. This will enhance protection of Earth Exploration Satellite Service, used particularly for environmental monitoring

AI 1.9. Frequencies for the maritime service: flexibility was added to existing provisions (which were based on analogue technology) to enable the deployment of new digital technologies. Those results are in line with CEPT proposals.

AI 1.10: Various allocations made for safety systems for ships and ports as well as exclusive worldwide allocation to the maritime mobile service. Some regional variations across the world, in particular, different status were given.

AI 1.11: Space research service (Earth-to-space): primary allocation made in the band 22.55 - 23.15 GHz. However, the provisions also allow some flexibility for counties which choose to use these frequencies for other purposes (fixed and mobile): separation distance for the Earth stations in the space research service of at least 54 km inland from a national border.

AI 1.12: It was resolved to exclude aeronautical mobile services from the 37-38 GHz band to protect land and maritime mobile services, and spacecraft communications, in this frequency range. This was fully in line with the European position.

AI 1.13: Tighter procedures agreed in the 21.4 to 22 GHz band to create some spectrum space for those countries which do not have filing for satellite broadcasting service. Also, a new uplink allocation FSS (Earth-to-Space) was agreed.

AI 1.14: New allocation of 154- 156 MHz agreed for radio location service: i.e. radars for space-object detection systems. Provisions were included to protect MMS (Maritime Mobile Service) safety systems in this range.

AI 1.15: Oceanographic radars: allocations made in the HF ranges on a secondary basis in some parts of the world, including Europe, although some European countries have opted out of this. Also some allocations in Region 1, in the low VHF range (39-39.5 and 42-42.5 MHz, also on a secondary basis except CEPT countries which signed this ECP).

AI 1.16: An allocation was agreed in the VLF range 8.3 to 11.3 kHz for lightning detection in *the meteorological aids service*.

AI 1.17: Raising the status of mobile services to co-primary in the range 694 to 790 MHz from 2015 (i.e. at the next WRC), and agreeing some outstanding technical issues on the existing 'digital dividend' (790 - 862 MHz). The first makes easier the possibility of an 'extended digital dividend' in Europe, and the second removes some practical barriers affecting implementation of the first digital dividend in Eastern Europe: see Eric Fournier's article in this Newsletter.

AI 1.18 Conditions agreed for extending the existing allocation for the radiodetermination service in the range 2483.5 to 2500 MHz, to achieve a global primary allocation. RDSS and MSS (Galileo and Globalstar) had reached an agreement on relaxation to pfd threshold levels applied in some countries worldwide except RCC, Arab group, India and China.

AI 1.19 It was agreed that no change is appropriate for the Radio Regulations to reflect the technologies of cognitive and software defined radio but a WRC-12 Recommendation on cognitive radio systems.

AI 1.20 Gateway links for High Altitude Platform Stations (HAPS). A frequency range and technical provisions were made for feeder links for these stations which can be used for fixed or mobile services of high-capacity. In Australia, Burkina Faso, Cote D'Ivoire, Nigeria and Mali, the allocation to the fixed service in the bands 6 440-6 520 MHz (HAPS-to-ground direction) and 6 560-6 640 MHz (ground-to-HAPS direction) may also be used by gateway links for high altitude platform stations (HAPS) within the territory of these countries. There is a footnote provisions agreed enabling individual countries to apply the facility as they wish.

AI 1.21: Allocation to the radio location service agreed in the band 15.4 - 15.7 GHz; this is a globally harmonised solution, and although not the preferred option of the CEPT at the start of the conference, it formed part of an agreement which protects the Galileo system in its frequency range at 5 GHz.

AI 1.22: It was agreed to apply no new provisions relating to emissions from short-range devices. This was based, inter-alia, on technical contributions from CEPT.

AI 1.23: Secondary allocation to the amateur service in the range 472 to 479 kHz. Several CEPT countries in the eastern end of Europe noted the need to protect aeronautical frequencies which include this range.

AI 1.24: Additional 50 MHz, between 7850 and 7900 MHz, to be added to contiguous leads to the 100 MHz already allocated for meteorological satellites. This new allocation is restricted to non geo-stationary meteorological satellites.

AI 1.25: No additional allocations to be made to the mobile-satellite service at this conference. This was in line with CEPT proposals.

AI 7: Agenda item 7 is a standing item at WRCs which covers regulatory issues relating to satellites. Many regulatory measures were agreed. However, other draft provisions will be further considered at the WRC 15, including how to deal with satellites which are launched, but do not reach the orbital positions that have been allocated to them (normally there are obligations to bring satellites into use once they have been internationally coordinated).

Provisional Final Acts downloadable from ITU website for those with an ITU (TIES) account: http://www.itu.int/md/R12-WRC12-R-0001

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