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| 35th Meeting | |  | |
| Berlin, 5-8 November 2013 | |  | |
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| N  Group membership required to read? (Y/N) | | | |
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| Summary: | | | |
| This ECO Bulletin provides a summary update on aspects of progress in spectrum management outside the CEPT. The items in this bulletin include:   1. APT – as a result of the APT Wireless Group Meeting end of August 2013: several new consultations and new APT Reports have been approved, inter-alia for BB-PPDR, M2M, SRD, mobile fixed convergence; 2. Japan – Status and approach of TV White Space Usage; this includes an approach based on individual licensing, but striving to improve the licensing process. 3. FCC has changed the 57-64 GHz Part 15 regulation. The Report and Order recognises also that the 60 GHz band can be used indoors to form wide bandwidth channels for a new Wi-Fi standard called 802.11ad, i.e. can be used for off-loading the internet; 4. Canda has approved RSS-222 for TV White Space Use; this Bulletin also provides links to other recent Canadian spectrum initiatives such as in 700 MHz. In Addition, it should be noted that Canada has (similar to ECC Report 173) many initiatives and information about Fixed Service usage, e.g. for backhauling); 5. Broadband Direct Air to Ground Communications – Besides the APT having launched a questionnaire now on BB-DA2GCS, this Bulletin also provides the links to the FCC consultation for the consultastion on 14-14.5 GHz BB-DA2GCS; 6. Information on US spectrum sharing initiatives; sharing situation in various bands; role of sensing, specific situation in various frequency bands (1695-1710 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2155-2180 MHz, including H-Block) is provided; 7. FCC streamlines licensing and operating rules for satellite services; 8. Intelligent Transport Services:status and information about an upcoming important conference – also in light of the near future review of the regulation in Europe and leading role of Europe standardisation in the ITS field. | | | |

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| Proposal: |
| This bulletin is to note by the ECC. More detailed input on some of the subjects covered is being input to the groups dealing with the respective subjects.  The information about the 57-64 GHz in the USA may be seen as an alternative for indoor usage with wide bandwidth channels (new Wi-Fi standard called 802.11ad) which can be used for off-loading of mobile internet traffic.  Several other issues (BB-PPDR related, satellite service related, DA2GC, SRD, ITS, etc.) should be discussed at the respective WG/ PT level that is indicated, to the extent it is appropriate. |
| Background: |
| The Office brings to each ECC meeting a bulletin on activities in radio communications in other world regions, where a regulatory dimension is raised (e.g. by innovative services or technology). The primary objective is to identify whether the ECC needs to investigate further or consider possible new actions. A secondary but more frequently addressed objective is to enable comparison to be made with the regulatory approach in other regions to subjects already treated by the ECC (including, where relevant, to the work of the CPG). |

1. **15th Meeting of the APT Wireless Group (AWG-15)**

The Asia-Pacific Telecommunity (APT) organised the 15th Meeting of the APT Wireless Group (AWG-15) from 27 to 30 August 2013 in Bangkok, Thailand.

The recent **APT e-Newsletters** are available under: <http://www.apt.int/Publications>

The following new APT Reports have been approved:

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| [APT/AWG/REP-38](http://www.apt.int/sites/default/files/Upload-files/AWG/APT-AWG-REP-38-APT_Report_on_PPDR.docx) | APT Report on "Technical Requirements for Mission Critical Broadband PPDR Communications" | 09/2013 |
| [APT/AWG/REP-39](http://www.apt.int/sites/default/files/Upload-files/AWG/APT-AWG-REP-39-APT_Report_on_Reg_Spec_Requirement_Estimates.docx) | APT Report on "Regional Spectrum Requirements Estimates related to WRC-15 Agenda Item 1.1" | 09/2013 |
| [APT/AWG/REP-40](http://www.apt.int/sites/default/files/Upload-files/AWG/APT-AWG-REP-40-APT_Survey_Report-FMC_Services.docx) | APT Survey Report on "Fixed Mobile Convergence Services" | 09/2013 |
| [APT/AWG/REP-41](http://www.apt.int/sites/default/files/Upload-files/AWG/APT-AWG-REP-41-APT_Report-FMC_Services.docx) | APT Report on "Fixed Mobile Convergence Services" | 09/2013 |
| [APT/AWG/REP-42](http://www.apt.int/sites/default/files/Upload-files/AWG/APT-AWG-REP-42-APT_Report_on_M2M.docx) | APT Report on "Machine to Machine Communications Applications and Developments" | 09/2013 |

The following circulation of questionnaires has been approved by AWG-15 (September 2013)

* + [Circular Letter](http://www.apt.int/sites/default/files/Upload-files/AWG/AWG-15-Circulars/AWG-Q-Circular-Sept2013.docx)
  + [Questionnaire on APT Frequency Usage of the Bands 8 700-9300 MHz and 9 900-10 500 MHz in Asia Pacific Region](http://www.apt.int/sites/default/files/Upload-files/AWG/AWG-15-Circulars/AWG15-OUT-04-SPEC-Q-EESS.docx)
  + [Questionnaire on Usage and Future Plan of Frequency Bands in relations to studies on WRC-15 Agenda Item 1.1 in Asia Pacific Region](http://www.apt.int/sites/default/files/Upload-files/AWG/AWG-15-Circulars/AWG15-OUT-05-SPEC-Q-Ffrequency_bands_AI_1_1.docx)
  + [Questionnaire on APT Frequency Usage of the Bands 2 700-2 900 MHz, 4 200-4 400 MHz and 5 350-5 460 MHz in Asia Pacific Region](http://www.apt.int/sites/default/files/Upload-files/AWG/AWG-15-Circulars/AWG15-OUT-06-SPEC-Q-WAIC.docx)
  + [Questionnaire for Network Synchronization Technologies in Radio Access Networks for IMT](http://www.apt.int/sites/default/files/Upload-files/AWG/AWG-15-Circulars/AWG15-OUT-13-TECH-Q-Network_Synchronization.docx)
  + [Questionnaire on Road Sensor Network](http://www.apt.int/sites/default/files/Upload-files/AWG/AWG-15-Circulars/AWG15-OUT-14-TECH-Q-Road_Sensor_Network.docx)
  + [Questionnaire for revision of the APT Report on “Introduction, Application, Issues and Technology for Short Range Devices (SRDs)"](http://www.apt.int/sites/default/files/Upload-files/AWG/AWG-15-Circulars/AWG15-OUT-15-TECH-Q-Revision_APT_REP31.docx)
  + [Questionnaire on Embedded Narrow Band M2M](http://www.apt.int/sites/default/files/Upload-files/AWG/AWG-15-Circulars/AWG15-OUT-21-SA-Q-Embeded_Narrow_Band_M2M_R1.docx)
  + [Questionnaire on Application of Direct Broadband Radio Communication System between Air and Ground](http://www.apt.int/sites/default/files/Upload-files/AWG/AWG-15-Circulars/AWG15-OUT-22-SA-Q-Air_to_Ground_communication.docx)

(for FM48, FM49, SRD/MG, CPG, PT1 and also other groups in the ECC to note)

1. **Japan – TV White Space Devices – Status end of 2013**

The Japanese approach for TVWSD in the band 470-710 MHz (715-725 MHz -> ITS, 730-770 MHz Mobile) foresees individual licensing for the following four application categories: wireless microphones, ad-hoc PPDR, sensor networks, and WAS/RLAN.

The WSDB is provided in Japan by ISB Corporation and aims at avoiding interference to incumbents of TV broadcasters from automatically selecting the non-interfering TV band.

The government agency National Institute of Information and Communications Technology (NICT) cooperates in bringing up some new applications such as for emergency services. The regulation is supervised by the MIT Council for White space Promotion for future adaptions.

Recently, in 2013, spectrum co-existence studies amongst the secondary usages mentioned above (so-to-say intra-white-space devices) have been started and are seen as necessary in Japan to satisfy the demand for sufficient QoS of such applications. Note: the existing ECC Reports 159, 185 and 186 do not include intra-TVWSD studies.

To apply for an individual licence in Japan for a TVWS usage required initially a lead time of typically three days but after setting up of the processes, this time could already be shortened to approx. *one* day and the approach can become more and more dynamic in the future with much shorter lead times.

Japan may also provide their work to the APT in the future and may be considered as a major contributor on this subject in APT. (for WGSE, FM53 to note)

An extensive presentation from the NICT is provided below:



1. **FCC has changed the 57-64 GHz Part 15 regulation**

The FCC has released on 9 August 2013 a Report and Order modifying the 57-64 GHz regulation for unlicensed devices. This is similar to European SRD regulation in these frequencies - relevant information for SRD/MG.

The Report and Order recognises also that the 60 GHz band can be used indoors to form wide bandwidth channels for a new Wi-Fi standard called 802.11ad, i.e. can be used for off-loading the internet.



1. **Industry Canada – RSS-222 for TV WSD Usage approved**

IC has published in May 2013 a first version of the Radio Standards Specification 222 (RSS-222), Issue 1, White Space Devices (WSD) setting out the requirements for the technical compliance of licence-exempt, category I radio apparatus operating in the frequency bands 54-60MHz, 76-88MHz, 174-216MHz, 470-608MHz and 614-698MHz, known as White Space Devices (WSDs). This document shall be used in conjunction with other Radio Standards Specifications (RSS) for compliance with Industry Canada requirements. The final version of RSS-222 (taking into account comments received during a 120 days commenting period) is expected to become available soon. (RS-222 should be considered by FM53)

Recent Canadian Spectrum initiatives can be found in general under [www.ic.gc.ca/spectrum](http://www.ic.gc.ca/spectrum) and include in particular also the 700 MHz [Licensing Framework for Mobile Broadband Services (MBS) — 700 MHz Band](http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10572.html) and [Technical Requirements for Mobile Broadband Services (MBS) in the Bands 698-756 MHz and 777-787 MHz](http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10614.html).

1. **FCC – Broadband Direct-Air-to-Ground Communications**

The New Proposed Rulemaking comment period is over and information can be seen under:

NPRM: [NPRM](http://transition.fcc.gov/Daily_Releases/Daily_Business/2013/db0509/FCC-13-66A1.pdf).

Comments received: [Comments](http://apps.fcc.gov/ecfs/proceeding/view?name=RM-11640)

The proceeding seeks ways to apportion the spectrum and the FCC is considering two options. The first is a single BB-DA2GCS provider in the future, and the second is to auctionspectrum (2 x 250 MHz) to enable two separate air-ground mobile broadband systems. This may happen at the end of the current licensing period, i.e. the Aircells operator, in 2016).

Comments received emphasise the importance that the new service must protect the primary FSS in the band and must not constrain existing or future FSS uses of the band 14-14.5 GHz (i.e. emissions towards the geostationary arc have to be avoided; this requires antennas/beamforming developments which may take some time before implementation).

(relevant for FM48)

1. **USA: Spectrum Sharing Initiatives**

The recent presentation below (22 October 2013) provides some valuable information on some US spectrum sharing initiatives:



There is linkage to TVWSD use in the USA which is coming to a standstill,due to the 700 MHz incentive auction in 2014 reducing confidence in the viability of WSDi.e. the investments in this field are considerably low.

Only 2 geo-location database providers are certified at the time of writing (out-of 10 applicants):

<http://www.fcc.gov/encyclopedia/white-space-database-administration>

On 23 July 2013, the FCC proposed rules for spectrum that would make available significantly more commercial spectrum for Advanced Wireless Services (“AWS”) for operations in the 1695-1710 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2155-2180 MHz Bands. The embedded presentation shows some of the sharing issues in these bands.

The FCC proposes to:

* license the 2155-2180 MHz band for DL – base station operations;
* license the 2020-2025 MHz band for uplink – UE operations;
* license the 1755-1780 MHz band for uplink - UE operations on a shared basis with Federal incumbents, if clearing is not feasible.
* license the 1695-1710 MHz band for uplink – UE operations on a shared basis with Federal incumbents within specified Protection Zones recommended by NTIA.

In June 2013 the FCC adopted service rules for 1915-1920 and 1995-2000 MHz in a separate proceeding ( the “H-Block”): <http://www.fcc.gov/document/h-block-report-and-order>

The examples in the presentation clearly show that the situation regarding the use of sensing technology is very much frequency band specific in terms of costs, trade-offs etc. This experience can be very valuable when dealing with the role of sensing for identifying spectrum occupancy / “holes” in the spectrum usage (relevant information for a number of groups, including FM22).

1. **FCC streamlines licensing and operating rules for satellite services**

Published in August 2013, the Commission’s Report and Order eliminates unneeded technical and information filing requirements, updates rules to better accommodate evolving technology, simplifies existing requirements.



1. **ITS**

In light of the review of the ECC/DEC/(08)01 and ECC/DEC/(08)01 for 5 GHz ITS, there is some information about an upcoming important workshop. Some text drafted by the conference organisers is reproduced below (in italics)

In this context it is also to note that the SRD/MG at the meeting in December 2013 will receive an ITS presentation and demonstration of ITS equipment.

The CAR 2 CAR Communication Consortium (12 European car manufacturers) agreed on a Memorandum of Understanding (MoU) to commonly bring cooperative Intelligent Transport Systems and Services (C-ITS) onto European roads. First implementations may use a 10 MHz wide, one channel in cars as of 2015.

*“ETSI TC ITS together with the German Federal Ministry of Economics and Technology invite to the* ***6th Workshop on Intelligent Transport Systems****. The event hosted by the Federal Ministry of Economics and Technology will take place in Berlin on 12-13 February 2014 (*[***http://www.etsi.org/ITSWorkshop***](http://www.etsi.org/ITSWorkshop)***).*** *Participation is free of charge upon* [*registration*](http://webapp.etsi.org/meetingCalendar/MakeChoice.asp?mid=14705&date=2014%2D02%2D12+09%3A00%3A00)*.*

*ITS is said to be happening in the year 2015 (Car2Car MoU on implementation), upon the completion of the Release 1 standardization package for Cooperative ITS and the completion of the associated European Commission Standardization Mandate M/453.*

*“Although implementing Cooperative ITS is very important, it is essential to continue standardisation activities. The Release 2 standardisation package is already being built. This package marks the next phase of standardisation for Cooperative ITS. It aims at developing standards, based on functionalities which will be agreed and deployed by the stakeholders.*

*“In order to complete the Release 2 standardisation package, ETSI is currently calling for presentation and input on the following aspects:*

1. *The Release 2 standardization package – complete or not complete?*
2. *Spectrum management – dynamic channel selection and carrier aggregation*
3. *Enhanced Cross Layer Decentralized Congestion Control for ITS G5*
4. *White Space Devices in ITS – a way forward to satisfy future spectrum demand?*
5. *Autonomous driving beyond sensors – spectrum and networking needs*
6. *When ITS stations talk to each other – dynamic information exchange in real time*
7. *ITS and Smart City - the move towards I2TS (Intelligent Integrated Transport Systems)*
8. *Using ITS to revolutionize road access - road pricing, driver management, logistics*
9. *Cooperative ITS in other safety critical domains – management systems for urban rail*
10. *Deploying IPv6 in Cooperative ITS*
11. *How can ITS applications be certified to operate properly?”*