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| Summary: | | |
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| Proposal: | | |
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DRAFT CEPT BRIEF ON AGENDA ITEM 1.3

1.3 to review and revise Resolution 646 (Rev.WRC‑12) for broadband public protection and disaster relief (PPDR), in accordance with Resolution 648 (WRC‑12);

# ISSUE

Resolution 648 (WRC‑12) “Studies to support broadband public protection and disaster relief” resolves to invite WRC-15 to consider ITU-R studies on broadband PPDR and take appropriate action with regard to revision of Resolution 646 (Rev.WRC-12) which invites ITU‑R

1. to continue its technical studies and to make recommendations concerning technical and operational implementation, as necessary, for advanced solutions to meet the needs of public protection and disaster relief radiocommunication applications, taking into account the capabilities, evolution and any resulting transition requirements of the existing systems, particularly those of many developing countries, for national and international operations;
2. to conduct further appropriate technical studies in support of possible additional identification of other frequency ranges to meet the particular needs of certain countries in Region 1 which have given their agreement, especially in order to meet the radiocommunication needs of public protection and disaster relief agencies.

# Preliminary CEPT position

CEPT supports studies on the revision of Res. 646 in accordance with Res. 648. Regarding the question of frequency ranges to be identified in Region 1, specific account should be given to the requirements of broadband PPDR. These ranges can then be compared within the ITU process to facilitate regional or worldwide interoperability and to maximise economies of scale and the consequential effect on any revisions needed in Res. 646.

CEPT is of the view, that any action at WRC-15 needs to reflect that PPDR related radiocommunication matters are an issue of sovereignty of the member states, and that PPDR requirements may vary to a significant extent from country to country. Therefore CEPT will consider future harmonization of PPDR only if the action is flexible enough to consider different national circumstances such as the PPDR scenarios, the amount of available spectrum and the type of network which may be a dedicated, a commercial or a hybrid solution.

With regards to this need for a flexible solution CEPT is of the view that the concept of “frequency range” already used in Resolution 646 (Rev.WRC‑12) includes the possibility to offer full flexibility for administrations to decide on their PPDR spectrum use to meet national needs.

CEPT is also of the view that this concept should enable PPDR organizations that are adopting a common broadband technology (e.g. LTE) to enable seamless cross border operations between countries using a number of different frequency bands that the common technology is designed for use within. This could include the use of frequencies allocated on a national basis, to the different types of networks, which provide a dedicated, commercial or a hybrid PPDR network solution.

CEPT is of the view that in Resolution 646 (Rev.WRC‑12), the term “frequency range” should be updated by enhancing footnote number 4 from the original resolution as highlighted below:

“In the context of this Resolution, the term “frequency range” means a range of frequencies over which a radio equipment is envisaged to be capable of operating but limited to specific frequency band(s) according to national conditions and requirements. When different national PPDR networks use a common technical standard, the frequency range includes the possibility of using any number of bands that the technology can use.”

# Background

One objective within this Agenda item is to collect information on regional available frequency ranges in order to identify those able to be used on a worldwide basis. This is independent from the type of radiocommunication PPDR application, such as narrowband usage.

Another is the request of Res. 648 to study in particular the development of broadband PPDR applications and their requirements, which includes a review of the available frequency ranges in Res. 646 regarding the usability for broadband PPDR.

Within CEPT, lead by FMPT49, the draft ECC Report 199 on User requirements and spectrum needs for the future European broadband PPDR system (Wide Area Network) has been elaborated. [This has been developed with the support of European PPDR agencies, organizations and industry, ETSI and especially based on inputs coming from the Law Enforcement Working Party of the European Council]. Highlights include a two-step concept for European Broadband PPDR with a Wide Area Network (WAN) and ad-hoc networks for temporary additional capacity and detailed scenario-based capacity studies within the 400 and the 700 MHz band.

The subject for a new draft ECC Report (PPDR solutions) being developed in FM PT49 will identify, among other issues, options how spectrum requirements can be implemented within the candidate bands for the future European PPDR BB systems. Availability of the final report is expected by mid 2015. Having regard to Res. 648 noting-c) and with the possible identification of worldwide available frequency ranges to ensure worldwide interoperability and maximise economies of scale, this could impact on AI 1.3 as well.

ECC Report 199 together with the results earlier studies given in ECC Report 102 on Public Protection and Disaster Relief Spectrum Requirements (e.g. introduction of harmonisation through the concept of a tuning range for PPDR) substantial work has already been carried out to reflect and to evaluate European PPDR needs.

Implementation of Broadband PPDR solutions will depend upon on national decisions and it is expected that in some counties within CEPT narrowband PPDR technology will still play an important role in the medium term (e.g. at least the next 10 - 15 years). However, broadband PPDR technology is expected to be able to include voice requirements, therefore some other countries within CEPT may move to a more comprehensive broadband solution which will include communications currently carried on narrowband solutions sooner. As a result, it is recognised that the broadband PPDR needs of the CEPT member states may vary to a significant extent and this will be regardless of who operates and/or owns the PPDR networks (i.e. government, commercial operators or hybrid networks with a mixture of both).

# List of relevant documents

ITU-Reports:

* ITU-R Report M.2033. «Radiocommunications objectives and requirements to provide public protection and disaster relief». 2003

ITU-Recommendations:

* ITU-R Recommendation M.2009. «Radio interface standards for use by public protection and disaster relief operations in some parts of the UHF band in accordance with Resolution 646». 2012
* ITU-R Recommendation M.2015. «Frequency arrangements for public protection and disaster relief radiocommunications systems in UHF bands in accordance with Resolution 646». 2012

Further ITU documents:

* ITU-R Resolution 53. «The use of radiocommunications in disaster response and relief».

ECC, ERC or CEPT-Reports:

* ECC Report 102. «Public Protection and Disaster Relief Spectrum Requirements». 2007.
* ECC Report 199. «User requirements and spectrum needs for the future European broadband PPDR system (Wide Area Network)»

# Actions to be taken

* To perform studies with regards to the Agenda item
* Analyse the results of all relevant studies.
* To develop proposal for a draft new ITU-R Report on PPDR which could be complementary to or replace ITU-R Report M.2033.
* To develop options for the revision of Res. 646 according to Res. 648.

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

Statement from Radio Communications Experts Group of the Law Enforcement Working Party[[1]](#footnote-1)

“Having recognized that frequency bands in the 700 MHz band are increasingly identified on a global scale (outside CEPT/EU) for broadband PPDR communications, LEWP-RCEG strongly encourage CEPT / ECC to take all regulatory actions possible to ensure that also European nations prepare and adopt a common position supporting the identification of the 700 MHz band in Region 1 under Agenda Item 1.3 of the World Radio Conference 2015 (WRC-15), recognising it will be a national decision which band(s) is/are selected for mobile broadband PPDR in each country. In this respect, assuming there will be a positive decision for PPDR Broadband frequencies, an amendment of the PPDR frequencies for Region 1 listed in WRC Resolution 646 would be logic, to include those new frequencies. In this way the European Law Enforcement organisations can be safeguarded the future access to affordable, capable of roaming into commercial networks when necessary, and cross-border interoperable broadband communications equipment.”

## Regional telecommunication organisations:

APT (August 2013)

Editor’s Note: It should be noted that an output from AWG-15 (August 2013) was a "REPORT ON TECHNICAL REQUIREMENTS FOR MISSION CRITICAL BROADBAND PPDR COMMUNICATIONS" which is intended to be presented to the next APT meeting in June 2014

ATU (date of proposal)

Arab Group (date of proposal)

CITEL (September 2012)

Preliminary Views

Canada: Is assessing and may contribute to studies on technical and operational issues relating to broadband public protection and disaster relief (PPDR) technology, services and applications including use of commercial and other networks, in accordance with Resolution 648 (WRC-12).

RCC (December 2013)

The RCC Administrations support the use of IMT family standards for the purpose of building public protection and disaster relief networks in the frequency bands earlier identified for PPDR, but allocation of certain new frequency bands to MS to provide operation of these systems is not supported.

The RCC Administrations consider that spectrum requirements for broadband PPDR applications should be identified taking into account the intended use of the IMT standard family.

The RCC Administrations recognize that requirements for PPDR systems such as the volume of available and used spectrum, applicable scenarios of PPDR use, could substantially vary depending on the country’s national interests.

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

NATO (December 2013)

Preliminary NATO Military Position

NATO supports the review and revision of Resolution 646, taking into account that military access to radio spectrum will not be constrained.

In Region 1 NATO opposes any new identification of broadband PPDR spectrum in the band 380 MHz to 400 MHz. The implementation of advanced technology in the bands 380-385 MHz and 390-395 MHz should take into consideration the impact of the out-of-band emission into the adjacent bands by a recommendation in accordance with Resolution 648.

In Region 2 NATO opposes any new identification of broadband PPDR spectrum in the bands 380 - 470 MHz and 5 850 - 5 925 MHz.

SFCG (date of proposal)

WMO (date of proposal)

## Regional organisations

ESA (date of proposal)

EUMETNET (date of proposal

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

1. The Law Enforcement Working Party reports to the European Council of the Justice and Home Affairs Ministers. [↑](#footnote-ref-1)