



Broadband spectrum for mission critical communication needed

The TETRA and Critical Communications Association (TCCA) is the sector association representing the interests of over 160 public and private users, operators and manufacturers of mission critical communication services, hardware and software.

EU member states, in cooperation with the Commission, are in preparation for the ITU World Radiocommunications Conference 2015 to identify a single spectrum environment for Broadband Public Protection and Disaster Relief (PPDR) services and to define conditions for taking the 700 MHz band to mobile use, including conditions for PPDR use of the band. TCCA recommends that a sufficient amount of 700 MHz frequency resources shall be made available for these mission critical communication services.

What is mission critical communication?

Mission critical communication is supplied by special communications systems where the reliability, availability, stability and security of mobile communication is vital to ensure continuous availability of functions critical for society. Typical users of mission critical communication are law enforcement and emergency services for public protection and disaster relief (PPDR) operations. Mission critical communications include communication hardware, software, as well as radio frequency band (spectrum) capacity to transmit and share information between field units and command centres.

Current status of public safety mobile communication

Traditionally, emergency services throughout Europe use a part of 380-400 MHz spectrum for voice communications. This frequency band allows today for effective mission critical voice communications, whilst the needs for mission critical broadband data communication cannot be covered until such time that a suitable amount of radio frequency spectrum has been identified under harmonised conditions in Europe.

Emergency services have an increasing demand for access to mobile broadband data services for their PPDR operations. The establishment of mission critical mobile broadband data services requires a frequency band located below 1 GHz. An opportunity is opening at 700 MHz. This band is today *inter alia* used by terrestrial broadcasting services, but is expected to be re-allocated to mobile service at the World Radiocommunications Conference in Nov. 2015 (WRC-15).

The immediate beneficiaries are likely to be private mobile operators who offer commercial mobile broadband services to the public. However, a specific agenda item of the WRC-15 is dedicated to the agreement of a Resolution, which adds one or more frequency bands for mobile broadband PPDR services throughout Europe, Middle East and Africa. It is of the utmost importance for the European PPDR community that a European Common Position on this agenda item incorporates the 700 MHz band for Broadband PPDR.

The PPDR community, through the EU Council's Law Enforcement Working Party (LEWP) has worked jointly with the spectrum regulator community (CEPT-ECC) and concluded in an ECC Report that a minimum of 2 x 10 MHz spectrum is required for mobile Broadband data services, with additional spectrum required to implement voice services, Air Ground Air, Direct Mode Operation and ad hoc networks.

What is the problem?

The available frequencies are limited and in high demand, and Member States are reviewing how these can be used most efficiently. The biggest challenge arises from the PPDR



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organisations' stated need for dedicated frequency bands and the spectrum regulators' obligation to satisfy both PPDR requirements and the commercial demand for more spectrum. Currently a few options are under discussion, and each of these has either operational shortcomings or economic consequences:

1. The organisations responsible for PPDR are convinced that their needs for mission critical broadband services can only be met by dedicated harmonised spectrum. Regardless of whether communication services are delivered by a government or a commercial operator, it is essential for governments to keep control of an adequate amount of radio spectrum under EU harmonised conditions in order for their PPDR organisations to deliver a future proof service to society.
2. It is evident that spectrum regulators in some countries plan to auction all available 700 MHz bandwidth to the highest commercial bidder. In such cases, Emergency Services will be forced to purchase capacity from a commercial cellular network operator. They will have to share capacity with business and the general public, even during major incidents where life and property are at stake. Experience shows that commercial operators are unable to guarantee the availability, security and stability of communications especially during times when good communications are needed most.

How can these shortcomings be addressed?

TCCA advocates that whenever a Member State decides to implement a PPDR broadband service – whether by building a dedicated network, as required by its emergency services, or by outsourcing to a commercial operator, or a combination – it must be implemented within a PPDR spectrum range agreed within CEPT that permits seamless operation of broadband PPDR equipment across borders in Europe, where such systems have been implemented. Such position should be reflected in the European Common Position for WRC15.

Request to the Member States

We invite each Member State to consider the overall cost to society from not having an efficient and always-available public safety radio communication service in place taking into account both direct and indirect impacts on human lives, health, property etc.

PPDR users have specific needs that ordinary commercial operators will never be able to meet under their business plans. Those needs cover specific functionalities and specific engineering implementations to ensure robustness, security and availability. We strongly believe that those needs are ultimately best met by implementing a dedicated radio network in a dedicated spectrum allocation, following the principles of the current and well proven PPDR narrow band implementations.

Based on our collective experience we take the view that it is of a substantial advantage for governments to keep control of an adequate amount of radio spectrum under harmonised conditions in order for their PPDR organisations to deliver a future proof service to society.

In particular, each Member State should ensure that PPDR is allocated sufficient 700 MHz spectrum and that data communication solutions are interoperable across the EU. In fact, we encourage all Member States to take further actions to implement the provisions of the Radio Spectrum Policy Programme (RSPP) Article 8.3¹

¹ DECISION No 243/2012/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 14 March 2012



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What should happen next?

Discussions are currently taking place within and between Member States on the future use of 700 MHz frequencies and future Broadband PPDR services, with the aim of presenting a coordinated position of all EU and CEPT Member States at the World Radiocommunication Conference (WRC-15) in November 2015, organised by the International Telecommunication Union (ITU-R).

We request that action is taken to ensure that RSPD Article 8.3 is implemented by the Member states.

The organisations responsible for PPDR are convinced that their needs for mission critical broadband services can only be met by dedicated harmonised spectrum.

Those needs have been documented within CEPT who have concluded that there is a need for a minimum of 2 x 10 MHz of spectrum for mobile broadband data services with additional spectrum required when implementing voice services, Air Ground Air, Direct Mode Operation and ad hoc networks.

Public Protection and Disaster Relief is of vital importance to our communities and the emergency services are mandated by law to deliver the highest possible quality of service to society. Whilst saving lives and protecting property, PPDR staff work in very dangerous situations and Governments have the responsibility of ensuring that they have the best possible tools to do their jobs.

It should be noted that RSPD Article 8.3 states: *“The Commission shall, in cooperation with the Member States seek to ensure that sufficient spectrum is made available under harmonised conditions to support the development of safety services and the free circulation of related devices as well as the development of innovative interoperable solutions for public safety and protection, civil protection and disaster relief.”*

The public safety community needs your help - “Spectrum saves lives”.

About TCCA

The TETRA + Critical Communications Association is the sector association representing the interests of over 160 public and private users, operators and manufacturers of mission critical communication services, hardware and software in Europe.

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