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PPDR needs
for
dedicated
harmonized spectrum
for
high speed data usage



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Public Safety Communication Europe Forum (PSCE) is a liaison partner of the ECC and represents institutional organizations as well as individual members from the Public Safety Communication Sector.

TETRA Association has 160 organizations as members who all work in the professional communications field, including Public Protection and Disaster Relief (PPDR) sector as well as in energy, transport, oil & gas, and other sectors servicing a safe and effective society.





Content

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- Decision in 1996
 - Effect of that decision
- User requirement from
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Summary **TETRA** ASSOCIATION



- We encourage the European Regulators to identify a fully harmonized spectrum solution for the benefit of tax-payers, PPDR practitioners and the European industry.
- We encourage FM 49 to take a successful decision again (as ERC/ DEC(96)01).
- The larger PPDR community, including Critical Infrastructure services, rely on spectrum in 410-470 MHz band which is equally essential to a well functioning society.
- The user community has, through ETSI and through the European Council made its need clear.



Effect of 1996 decision

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- ERC/DEC(96)01 opened the way:
 - shared nationwide multi-agency networks
 - common network enabled a totally new way of cooperation
 - common frequency band radically improving the spectral efficiency of emergency services radio operations.
- TETRA is now deployed in 124 countries of the world.
- FM38(10)45 - Efficiency of Use of Public Safety Spectrum in Europe



Council - LEWP **TETRA** ASSOCIATION

Council decision for a RCEG

harmonised technology +
harmonised frequencies

Council recommendations:

FM38(10)35rev3 - Public Safety
frequency statement from LEWP RCEG

See LEWP presentation



ETSI - SRdoc TR 102 628

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- In the SRdoc the emphasis is on a spectrum within the tuning range of the technology, to be used for wide-band and broadband applications.
 - The high-speed data emergency communication services assume a very high priority in European spectrum designation.
 - The requested band is considered as a European-wide asset for PPDR communication and is not subject to criteria used in spectrum designation for commercial consumer networks and services such as auctions.
 - This band is to be designated on a dedicated (and protected) basis.
 - This band is for harmonised use (interoperable) across Europe.



ETSI - SRdoc TR 102 628

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- Preferably,
 - 2 separate contiguous blocks of 10 MHz plus
 - 2 separate non-contiguous blocks of 2 x 3 MHz for new NB and
 - 2 x 3 MHz for new WB
- Dedicated to PSS and harmonised across Europe.
- Total of additional 16 MHz for each direction (uplink and downlink).
- The tuning range concept of $\pm 12,5$ % of the centre frequency applies to NB and WB, however not to BB.
- The BB spectrum designation may be located in separate spectrum range.

Activities at EU level

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- High Level workshop
- RSPP – EC
- RSPP - EP
- RSPP - Council



High Level PPDR workshop

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- Conclusion from Session 1 – National activities:
 - Clear user requirement for high-speed mobile data services and dedicated PPDR network. Call for European harmonisation of spectrum and European standards to ensure interoperability of PPDR systems.
- Conclusion from Session 2– Cooperation in Europe and abroad:
 - Common view that co-operation at all levels among different public safety services as well as with the defense community brings clear benefits.
- The Commission drew the following main conclusions from the lively debate, ensuring its support to PPDR community actions:

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- There was clear support for a harmonisation at the European level coming from both national regulators and industry. Both equipment standards and spectrum are seen as important elements in this matter. While fully recognising the national competence of the Member States, the co-ordinating role of the Commission is important and is fully acknowledged.
- While some PPDR high speed data requirements may be covered by commercial networks, there were clear indications that mission critical services call for a dedicated, non-commercial network. This requirement will generate costs that can only be borne by government funding (and not by the market), thus creating a very challenging situation in the period of budgetary cuts. Consequently, it will be crucial to share resources among public safety services and defense in order to ensure cost effectiveness as well as timely solutions.
- Public safety standardisation activities in ETSI have started and all public safety and defense users were invited to participate in order to conceive a standard reflecting the functionality required for various mission critical services.



PPDR in RSPP ASSOCIATION



- EC draft RSPP –
 - recognition that the need for BB PPDR spectrum below 1 GHz has been "shown by studies" (in Recital 18)
 - If necessary, the Commission shall 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.”
- A stronger compromise text that was adopted in the Parliament first reading
 - “The Commission shall ensure that sufficient spectrum is made available under harmonised conditions and in harmonised bands for PPDR (Public Protection & Disaster Relief) and to take actions to support the development of safety services and the free circulation of related devices as well as the development of innovative interoperable solutions for PPDR. To ensure the efficient use of spectrum the Commission shall in this regard examine the possibilities for PPDR to use military frequencies.”



Council - LEWP TETRA ASSOCIATION

- The LEWP agreed their own wording proposal for the RSPD Article 7.3 to the Telecom Council in their June 16th meeting:
 - "The Member States shall ensure, in cooperation with the Commission and the ECC/CEPT, that sufficient spectrum is made available under harmonised conditions and in harmonised bands for PPDR (Public Protection and Disaster Relief) and take actions 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."



Industry considerations

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- PPDR community is a niche sector
- relies fully on harmonisation of spectrum
- A general observation is that introduction of a new telecoms technology generation multiplies the development effort and cost.
 - In the days of analogue FM radios the development cost was relatively low and the radios were produced by the national champions of each country for use in often nationally defined frequency band.
 - The entry of analogue trunked radio systems required creation of the first international radio protocol standards and brought the need for internationally agreed frequency bands and first signs of industry consolidation.
 - The introduction of digital trunked radio required international standards, harmonised frequency bands - and even major industry consolidation - to enable the much higher development investment.



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- Now that the introduction of broadband technologies is being planned it is again of even higher importance that the development is backed up with both international standards and harmonised markets. The size of the accessible market is even more important factor now.

