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Public Safety Communication Europe

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PSCE reaction to the Catalogue of PPDR Applications Related Requirements drafted by CEPT FM49 Project Team

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Public Safety Communication Europe Forum (PSCE) is a permanent autonomous organisation aiming at improving provision of public safety communications and information management systems and the safety of the citizens during crisis and emergency situations. PSCE provides a unique common platform for researchers, industry and users enabling regular exchange of ideas, information, experiences and best practices.

PSCE welcomes the initiative of FM49 working on the identification of potential spectrum for Public Protection and Disaster Relief (PPDR) wireless broadband applications.

PSCE has taken the freedom to forward the Catalogue of PPDR Applications Related Requirements to its institutional and individual members from the Public Safety User arena and received comments which are to be summarised as follows:

1) **The quality of the document is seen as excellent and a very good basis for the further work on the topic.**

2) **"Interoperability" in chapter 2.2.2.5 (Operational Requirements), first paragraph:**

Some important aspects of interoperability seem to be missing in this paragraph.
Taking into account the recent disasters (Haiti and Japan 2011, other earthquakes and floods in Pakistan, Turkey, Czech Rep., etc. have shown the need of <u>international interoperability</u>. This means, that PPDR forces from different countries and even different continents (Europe, Asia, USA, etc.) need to communicate ad-hoc in a disaster prone area. "Ad-hoc" meaning, that these forces are transported without long preparation beforehand. A consequence out of this is, that interoperability ("roaming") needs to be done as automatically as possible, especially without intervention of technicians (there is no time for it).

But not only "DR" cases, but also PP1 and PP2 incidents require cross-nation cooperation and therefore technical interoperability:
Police forces in (ad-hoc) surveillance or hot-pursuit action are allowed to cross borders between European Schengen countries and need seamless or close-to-seamless communications in the network(s) of the visiting country to communicate with headquarters and supporting mobile forces of the visiting country as well as to communicate with the own home-country headquarter and mobile forces accompanying in the visiting country as well as in the own country.(PP1)
Ambulance cars are crossing border on a daily basis to transport patients to the nearest and/or most specialised hospital. Real cases in Austria show, that ambulance cars use highway routes over German territory to reach another area in Austria, because the highway route is shorter than any inner-Austrian route. (PP1)

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In events that can be pre-planned (PP2), more and more often police, fire and ambulance forces support those in their neighboring countries. Especially in huge sports events (like the EURO Championship [Belgium/NL 2000, Austria/Switzerland 2008, Poland/Ukraine 2012], the UEFA Champions and Euro League games, the Tour-de-France, Giro-d'Italia and many more) cross-border communication between forces from different countries on different countries' territory have to cooperate.

Worldwide harmonisation of spectrum and equipment is the only key for this most important requirement.

3) Table 2 (PPDR applications and examples) and Table 3 (User requirements)

PSCE is fully aware that the content of these tables is based on the ITU-R Report M.2033.

Nevertheless, there might be the need to re-consider and maybe change the quotes to allow a broader view. For clarification of these classifications some description "why" the respective classification is made, might be useful.

PSCE's proposals for change in table 2:

1.Narrowband
Telemetry – Location status:
Knowing the position of a unit at a large emergency incident is crucial, therefore PP(2) should be "H" (not "M")

2.Wideband
Messages – Routine email message:
Sending e-mails during day-to-day operation may done using public networks too. However, during large emergencies or disasters those networks may fail, therefore, wepropose to classify the following priorities: M H H (instead of M M L).

PSCE's proposals for change in table 3:

1.   Coverage

"PPDR system should provide complete coverage within relevant jurisdiction and/or operation"
Especially during disasters a high coverage is very important.
"H HH" instead of H H M

"Coverage of relevant jurisdiction and/or operation of PPDR organization whether at national, provincial/state or at local level"
Especially during disasters a high coverage is very important.
"H HH" instead of H H M

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"Systems designed for peak loads and wide fluctuations in use"
Especially during disasters a high coverage is very important.
"H HH" instead of H H M

2.   Security

"End-to-end encryption"
E2E encryption is important only for some categories of sensitive users (police, medical service; less for fire service) and can be an add-on option for such users. For PP(1) or PP(2) operations "authentication and air interface encryption" (comparable to TEA2 for TETRA) are of high priority.
PSCE suggests a new row under requirement "2. Security" namely "Authentication and air interface encryption" with the same classification "H H L" as end-to-end encryption.

4) Chapter 4 "Requirements to Public Safety and Security (PSS) Systems defined by ETSI" – 3rd paragraph

"Initially it is expected that broadband PPDR systems will operate together with narrowband TETRA systems,…"
The spectrum currently allocated for TETRA systems is barely enough for the operation of those systems, that ensure critical voice and narrow band data for PPDR users (PP(1), PP(2) and DR). PSCE does not expect the possibility to implement broadband PPDR systems in the same sub-bands that are currently allocated for TETRA, without harmful interference for both systems.

PSCE hopes that the points briefly outlined in this position paper will contribute to overall quality of FM49's work program.

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