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Communications for Public Protection and Disaster Relief: Overview and Vision Toward the Future

This paper gives an overview on communications for Public Protection and Disaster Relief (PPDR), and its way towards the future, where it will use Long Term Evolution (LTE). Is exposed the well known characteristics of narrowband systems, such as Terrestrial Trunked Radio (TETRA), Tetrapol Publicly Available Specification (TETRAPOL) or Project 25 (P25). The LTE networks growth pace is also analyzed by means of an LTE competitive analysis. As security is a key topic in PPDR, the LTE security architecture is also addressed. The possibility of network sharing is also mentioned as a possibility to reduce the Capital Expenditure (CAPEX) and the Operational Expenditure (OPEX). The new LTE features developed for PPDR networks are also described, with an updated news related with. Aspects of prioritization are analyzed in light of the LTE proposal. Finally, spectrum management issues in PPDR networks are presented. Some challenges to reach into a PPDR network based on LTE in a near future are discussed in the conclusion. The availability of broadband will certainly create the possibility of supporting a wide variety of services, which will definitely benefit operators and users.

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