

ABSTRACT

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Judul : PUBLIC PROTECTION AND DISASTER RELIEF (PPDR) NETWORK PLANNING BASED ON LONG TECHNOLOGY TERM EVOLUTION (LTE) 700 MHz WITH CASE STUDY IN BANDUNG AREA.

Abstract – Natural Disasters or Crimes is a necessity that will happen sometime and can harm many people both in terms of material or even loss of life. It is on this basis that the authors think that it is necessary "Public Protection and Disaster Relief" to create a safe and comfortable environment to support the stability of a country. In addition, a rapid response from each disaster agency is essential in critical missions. One important parameter is the communication system.

Current PPDR communication systems mostly use Narrowband and Wideband communication systems and the absence of Interopability of each agency. Narrowband and Wideband also do not support services like Video Streaming which will make it difficult for the PPDR Institution to see the conditions at the scene. Therefore the European Conference of Postal and Telecommunications Administrations (CEPT) discusses the spectrum options for the implementation of broadband PPDR services in the 400 and 700 MHz frequency ranges. In this frequency LTE is the best technology candidate that can be applied in this frequency.

Therefore the authors use the Planning of PPDR communication system to see the needs of services with case studies in the area of Bandung, because based on the data BNPB is one of the areas prone to natural disasters and social problems often occur. Planning uses 12 scenarios with 2 planning ie capacity and coverage planning, these 12 scenarios will be simulated using the atoll software to see coverage quality, RSRP, SINR and Throughput of each scenario, the results of this plan indicate the need for bts needed to fulfill the PPDR service.

Keywords: LTE, PPDR, APT 700, Software Atoll, Network Planning