

# Disaster Warning and Alerting Integrated Systems Based on CAP profile

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**Abstract**— If a disaster occurs or is predicted, the Korean government and local governments will deliver disaster information to the people based on the “Disaster and Safety Management Basic Law”[1]. Disaster information transmission media currently used in Korea are classified into mobile communication networks, broadcasting networks, civil defense alerts, and disaster warning and alerting systems. This paper deals with the implementation of an integrated system of disaster warning and alerting and managing disaster information in various types of disaster warning and alerting systems operated and managed by local governments. The proposed system utilizes the Common Alerting Protocol(CAP) established by the ITU-T standard[2] to integrate and issue and manage disaster information in the existing disaster forecast and warning system. In this paper, the CAP-based profile was implemented by modifying it to consider the environment of the Korean warning and alerting system. Based on the TTA standard, this CAP profile defined the method of using the parameter defined as an option according to the characteristics of each disaster. This paper includes interworking methods and test results to directly connect with the automatic voice notification system, the village broadcasting system, and the bus information system(BIS) among the existing disaster warning and alerting systems.

**Keywords**—disaster information, warning and alerting system, CAP, disaster information transmission



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