



Smart JAMP(2022) Study for the Realization of Smart City regarding River-related Disaster Prevention

Target Area	<ul style="list-style-type: none"> Davao City, Republic of the Philippines
Background and Purpose	<ul style="list-style-type: none"> Davao City has currently no ways to know the river water level except for manually watching the river via the existing CCTV images. Therefore, this study proposes the introduction of AI based water level measurement system using the existing CCTV images, which contributes to labor saving and prevention of missed observations, as well as accumulation and effective utilization of data.
Related Organization	<ul style="list-style-type: none"> City Disaster Risk Reduction Management Office (CDRRMO)
Project Stage	<ul style="list-style-type: none"> Pre-feasibility Study
Contents and Results	<ul style="list-style-type: none"> A prototype of AI based water level measurement system was developed and the demonstration experiment was conducted as follows. <ol style="list-style-type: none"> The two important CCTV monitoring locations in the upstream area were selected for the experiment. The accuracy of the water level measurement and the usefulness of the system were evaluated. The feasible funding scheme for the implementing the system was studied.

Target Area	<ul style="list-style-type: none"> Province of Cavite, Republic of the Philippines
Background and Purpose	<ul style="list-style-type: none"> The province of Cavite has begun to establish a command center, which has a flood warning system and disaster response operations for the purpose of early evacuation of residents in the province. This study proposes utilization of Japanese technologies in flood early warning and operation of the command center.
Related Organization	<ul style="list-style-type: none"> Provincial Disaster Risk Reduction Management Office (PDRRMO)
Project Stage	<ul style="list-style-type: none"> Pre-feasibility Study
Contents and Results	<ul style="list-style-type: none"> Pilot version of a GIS-based disaster prevention dashboard system was constructed to streamline the collection and organization of information during disasters. Disaster drills were conducted using the above pilot system, and the following results were obtained. <ol style="list-style-type: none"> State officials learned how to operate the system Collection of ideas for additional functions and specifications necessary for the future version of the system

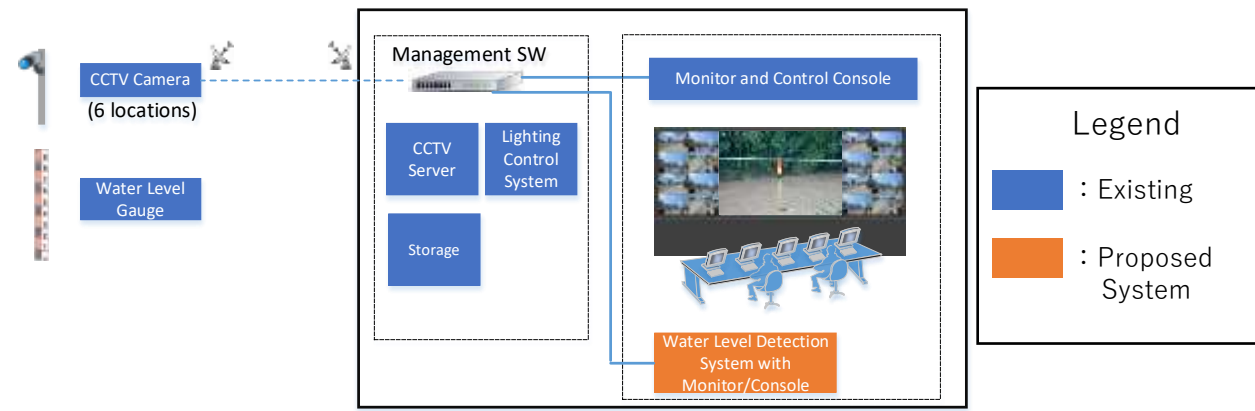


Figure 1: Configuration of the proposed AI based water level measurement system

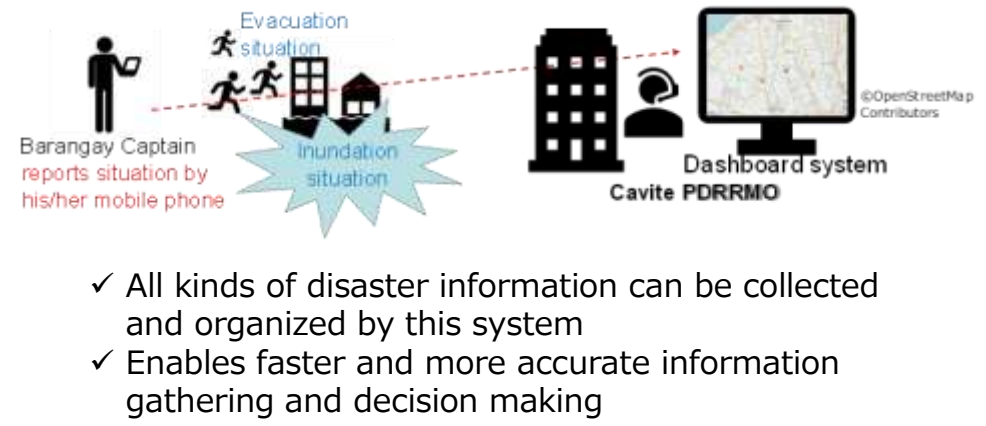


Figure 2: Conceptual diagram of the disaster prevention dashboard system