

Development and Application Examples of General-Purpose/Small Water Level Gauges

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Problem

- There is a high risk of inland flooding in small waterways that flow through municipalities.
- Emergency management water-level gauges are often not installed due to the small size of these rivers.
- Water level gauges need to be installed in more locations to understand the detailed local situation and the water levels of nearby rivers.



Framework

This time, we developed a water level gauge for agricultural canals that lead to rice fields.

A water level gauge is installed.



- Equipped with a camera and laser, it measures image data of the waterway and the distance to the surface of the water.
- Using the antenna of the water level gauge, the data is uploaded to the cloud.
- The data can be viewed from a web browser.



Finding

- We could know how to develop a system viewing the water level and waterway images on the web browser.
- We gained knowledge about the relationship between rainy weather and water levels.
- The cloud services and web browser programs worked fine.



Discussion

- Applying water level gauges to other locations
- Durability issues such as water ingress due to capillary action
- Enhancements like security to make web browsers more accessible to a wider audience