CUSTOMER CASE STUDY
FOR DELIVERY IN JAPAN ONLY

> “Prefectural residents, parties concerned with reducing water disaster risks, and so forth can now obtain more accurate information.”
>
> **Prefectural Government Official**

Fujitsu’s proposals were adopted due to its ability to provide advanced information communication systems, its support system, and its excellent performance track record.

At a glance

Country: Japan
Industry: Government
Website: kasen.pref.ishikawa.lg.jp/

Challenge

- To confirm river information at each location and vicinity using a smart device
- To ensure a high availability level suitable for disaster risk reduction systems
- To effectively use data on the past 17 years more quickly and easily

Solution

Fujitsu provided the application server ‘Interstage Application Server’, the database ‘Symfoware Server’, and the cluster software ‘Fujitsu Software PRIMECLUSTER’ as well as other middleware products to establish an advanced system to communicate information.

Benefit

- Making the most of GPS to construct a system to communicate information efficiently
- Improving availability by detecting signs of problems to respond before they occur
- Storing past data in a database to ensure high-speed search/statistics

shaping tomorrow with you

FUJITSU

Customer

The Ishikawa Prefecture Comprehensive River Information System, operated by the River Division of the Ishikawa prefectural government's Civil Engineering Bureau, collects data on precipitation, water levels, and dams from observation posts in the prefecture as well as from the Meteorological Agency and the Ministry of Land, Infrastructure, Transport, and Tourism, and communicates such information to prefectural residents and parties concerned with water disaster risk reduction via websites and email. This information is updated every ten minutes and displayed by area.

Products and services

- Fujitsu Software Interstage Application Server
- Fujitsu Software Symfoware Server

Challenge

"By providing real-time information on places hit by torrential rains and rivers that are becoming dangerous because their water levels are rising, we want to ensure the safety of prefectural residents. Because of its geographical features, with the region stretching from north to south, Ishikawa Prefecture has rapid rivers, and there have been more and more localized torrential rains in recent years. For this reason, it has become even more important to provide river information," says a prefectural government official.

The Ishikawa Prefecture Comprehensive River Information System was first built in 2001, but as the surrounding situation changed, several problems emerged. Though the previous system also disclosed information via websites, it was not optimized to serve smart devices. When the government made plans to restructure it, it was essential that smart device compatibility was included.

Solution

In September 2014, due to the term of its software maintenance contract coming to an end, the Ishikawa prefectural government decided to restructure its entire system, from infrastructure through to applications, and compared proposals from several vendors.

When making a proposal, based on the abundant results it had produced with other prefectural government systems, Fujitsu used the application server 'Interstage Application Server', the database 'Symfoware Server', and the cluster software 'Fujitsu Software PRIMECLUSTER' as well as other middleware products to establish an advanced system to communicate information by making the most of smart device functions and to meet the system requirements, such as those related to integrated hardware/software support systems. The government accepted Fujitsu's proposal.

Benefit

To communicate necessary information efficiently, the new system makes the most of the GPS functionality built into smart devices, the use of which Fujitsu proposed to communicate information. Enabling users to obtain information on their present locations and vicinity via GPS enables swifter flood risk reduction and evacuation. The Interstage Application Server's jQuery Mobile is used for the web screen. Merely by adding simple bits of code to the existing PC screen generation logic, one can create smart device-compatible screens because jQuery Mobile evens out differences among devices, operating systems, screen sizes, and web browsers.

The user interfaces, to disclose information and operate screens, were drastically overhauled with the aim of making them easy for everyone to use. Web responsiveness was improved by offering a system that minimizes database access and by making a multi-process configuration for web applications available with Interstage Application Server.

Interstage Application Server enables advance detection of insufficient memory and signs of Java garbage collection abnormalities. A duplicate configuration using cluster software and the Fujitsu Software ServerView Suite server operation management software to detect signs of server trouble were introduced to increase overall system availability. The data formats for the past 17 years' worth of data on precipitation, water levels, and so forth from approximately 250 locations were unified, and all of this data was stored in Symfoware Server to support high-speed searching and facilitate statistical processing.

The new system was developed in just sixth months and placed into operation. Interstage Application Server's jQuery Mobile enabled developers to respond to all types of smart devices with the minimum number of development man-hours. "GPS allows users to obtain information on their present locations immediately using smart devices. This is the first river system of its kind in Japan. Because of this, prefectural residents, parties concerned with reducing water disaster risks, and so forth can now obtain more accurate information," says the government official.

Meanwhile, the system enables real-time display of information on large monitors, making information sharing within the division much more smooth when disaster strikes. The drastic user interface improvements allow the government to disclose information through intuitive, easy-to-understand operation screens that were developed from the perspective of prefectural residents, and the system has been well received by both residents and government personnel. It is frequently used for patrolling and other purposes. Copies of a newly produced leaflet have been distributed to prefectural residents, leading to a steady increase in the number of users.

Web responsiveness has also been improved. The system's performance received a significant boost, enabling users to access screens even when the number of visitors greatly increases. Combined with displays of images from river monitoring cameras and other features, the system provides a full array of services, supporting swift water disaster risk reduction and evacuation in a multifaceted way.

Other benefits include advance detection allowing users to act before problems occur, the system operates stably at all times, reducing operation and maintenance costs through one-stop support that handles both hardware and software.

Fujitsu will continue to further improve the system by making the most of its technological innovation results in the ICT sector.

FUJITSU

Phone: +81-3-6252-2220

01-17