

NDPPC Improves Ability to Respond to Emergencies with Advanced Mapping System

National Disaster Prevention and Protection Commission, R.O.C.
Taiwan
www.ndppc.nat.gov.tw

Industry:

Public Sector

Employees:

49

Oracle Products & Services:

Oracle Database
Oracle Application Server
Oracle Spatial
Oracle MapViewer

Key Benefits:

- Improved coordination of rescue efforts by establishing a central map repository
- Ensured secure, stable, and always available system performance by running Relief Map Warehouse system on Oracle 10g technology
- Enhanced access to information by allowing users to login to the map database via a Web browser

“The Oracle solution provided the high performance, stability, and availability required to run our Relief Maps Warehouse, ensuring emergency personnel across the country always have immediate access to critical information.” – National Disaster Prevention and Protection Commission, R.O.C.

The National Disaster Prevention and Protection Commission (NDPPC) R.O.C. is responsible for developing and coordinating disaster relief and rescue operations in Taiwan. The organization supervises the Central Disaster Emergency Center, local disaster emergency centers, and fire offices in 25 municipalities.

The NDPPC maintains a Relief Maps Warehouse (RMW) to store detailed reference and relief maps for use during emergencies. Ensuring the system is always up and running is a priority for the organization as emergency personnel across the country rely on the RMW for geographical information.

In 2006, the NDPPC implemented Oracle Database 10g and Oracle Application Server 10g to provide a stable, secure platform on which to run the RMW. It also made use of Oracle Spatial and Oracle MapViewer to support in-house geographical information systems.

Users now have online access to accurate, up-to-date maps, improving the NDPPC’s ability to coordinate rescue efforts and ensuring successful outcomes.

Enhancing Rescue Operations

In the past, rescue operations were hampered by the fact that the Central Disaster Emergency Center and local disaster emergency centers did not have access to identical maps. In some cases, maps were out of date or did not provide detailed information about surrounding relief-related information.

“The NDPPC’s task is to send the latest and most complete maps to subsidiary relief centers as soon as possible to ensure a quick, efficient response to emergency situations,” said an NDPPC spokesperson.

Establishing the 300GB RMW enabled the NDPPC to store accurate, detailed reference maps, relief maps, and aerial photographs in a central database. The reference maps include details such as administrative borders separating municipalities, counties, and towns; major highways; all roads wider than six meters; and drainage networks.

The location of schools, parks, and important facilities are also included. Relief maps show details such as mud-rock flow, potential flooding zones, fault lines, and other geological conditions. Users access the RMW via a Web browser.

With Oracle technology at the foundation of the RMW, the NDPPC is assured of secure, stable, and always-available system performance. The Oracle platform is also powerful enough to display high-level graphical documents and handle multiple queries without any slowdown in performance.

“A centralized map database significantly improved our ability to coordinate disaster relief operations,” said the spokesperson. “There is no confusion because we are all looking at the same information. We have also reduced costs because there is no need to build map warehouses for each district.”

Future Plans

The NDPPC is planning to expand the range of maps available and introduce 3D imaging. It intends to add alpine footpath maps, offshore marine navigation maps, and other similar documents. The NDPPC will also link more organizations to the RMW.

Why Oracle?

The NDPPC had three key requirements. “Firstly, the solution must help us better coordinate rescue efforts; secondly, it must be capable of displaying graphical documents down to the smallest detail; and lastly, it must be able to process simultaneous complex queries quickly and efficiently,” said the spokesperson.

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Implementation Process

The NDPPC began to build the RMW on the Oracle platform in 2005. The project was completed in six months and the organization went live with the system in May 2006.

The National Disaster Prevention and Protection Commission, R.O.C. coordinates disaster relief and rescue operations. It supervises local disaster emergency centers and fire offices in 25 municipalities from a Central Disaster Emergency Center.