

Disasters Drive Interoperability

Many disaster mitigation and management activities involve sharing of geospatial information, and such sharing depends on standards that enable multiple systems to behave as one system. “Behaving as one system”™ wasn’t the norm in the past, of course, but today it is becoming so, as new deployments use open architectures based on open, international standards.

Web Mapping

Because government agencies have long understood the need for an open disaster-information network, OGC has focused on disaster-information requirements. The US Army Corps of Engineers (USACOE), the agency carrying primary responsibility for flood control in the US, provided OGC with its first funding. In 1999 the first OGC Inter-operability Initiative, the Web Mapping Testbed I (WMT-1) concluded, presciently, with a demonstration based on a hurricane-response scenario in Mobile, Alabama and New Orleans, Louisiana, and many other OGC testbeds and pilot projects have focused on disaster scenarios. GETIS, a European Commission-funded IST support measure undertaken by OGC-Europe (UK) and several European OGC members have evaluated interoperability requirements from natural disaster management scenarios.

Initiatives

Manmade disasters have also been the subject of test-beds. After 9/11 the sponsors of the OGC Web Services Initiative, Phase 1.1 (OWS 1.1) aligned the test-bed to address New York City interoperability challenges. OGC ran a Multihazard Mapping Initiative, an Emergency Mapping Symbolology Initiative and four Critical Infrastructure Protection Initiatives. Most recently, OGC’s OWS-3 initiative, structured around a forest-fire scenario, resulted in advances in the standards foundation for decision support and sensor webs. The Oak Ridge National Laboratory, an OWS-3 sponsor, has worked with OGC and several US agencies to develop SensorNet, an industry consensus standards platform for a US nationwide system that will provide real-time detection, identification and assessment of chemical, biological, radiological, nuclear and explosion hazards. The OGC consensus process has become the template for mobilisation of standards underpinning interoperability solutions for the disaster community. We also serve other communities and domains, but all connect in some way to disaster management.

Payback

2004 and 2005 brought more than their share of both natural and manmade disasters. Governments facing global warming, population growth, ageing physical infrastructure, terrorism, concentrated populations in coastal cities, and rising political tensions are putting more resources into disaster management. Few investments provide better payback than well-applied information technologies, and return on investment can be even better when costs are shared as they are in co-operative standards development. Such standards development improves with broad international participation, and this is the key to maximising international benefits.