

# Bright New GI Horizons

Synergies and accelerated activity in implementing integrated geospatial-data cyber-infrastructure flow from recent technological achievements and challenges driven by world socio-economic sustainable development and disaster management. All are supported by the use of GI. Clear messages indicating and/or confirming this trend are coming from major international professional communities. Examples are the fifth ISDE Symposium in Berkeley, the Cape Town Declaration from the fourth GEO Plenary and the GSDI-10 Conference in Trinidad. Meanwhile, the United Nations Geographical Information Working Group has taken steps towards accepting its UNSDI strategy and project-driven implementation.

## Paradigm Shift

We are in fact experiencing the renaissance of GIS, which offers bright, new horizons for management and use of GI, organising information by geographical location. The trend is to map, monitor and control the natural and manmade environment, but also to trace objects, goods and products. The widespread use of standardised RFID and relevant sensor webs will have a comparable impact upon society as that of the internet itself. The mid-term goal will be both integration and management of dynamic heterogeneous data, and interoperability of novel, innovative technologies such as the web, GNSS, passive/active RFID and static/moving sensor networks with emerging web-based local, national, supra-national and global spatial data infrastructures.

Areas specially impacted include:

- operational applications of earth observation with special emphasis on environmental and security monitoring (GEOSS, CEOS WGISS, GMES etc) and geographically organised web-based Digital Earth representations
- information-society related socio-economic benefits (e.g. GEOSS, some European programmes and directives such as eContentplus, INSPIRE and PSI, reuse of public-sector information, and a multilevel concept of Digital Asia)
- business applications such as intelligent solutions in transportation systems and inventory and purchase/supply, related logistics in commerce, role of standards.

CEN TC287 and ISO TC 211 emphasised the key role of standards at their Conference for the Mediterranean countries hosted by FAO in early June, and similar outreach action is envisaged for Central and Eastern European countries. In the context of the sensor web, OGC took a lead role in developing the Sensor Web Enablement initiative, while recent efforts within the GEOSS expert framework focus on enhancing dynamic capabilities. Growing numbers of effective SDI implementations raise the issue of how to qualify best practices for sharing. New evaluation methods have been developed and applied recently under the leadership of EUROGI within the framework of the eSDI-Net+ project, part of the EU eContent programme.

## Spatial and Temporal

Logistics represent a significant segment of national GDP. GI-related achievements and new capabilities are expected to raise awareness in this field, and the recently established European Institute for Technology and Innovation will also support further research and development. An international conference addressing city logistics development and applications based on integrated GNSS- RFD-sensor web-SDI services is scheduled to be held in Budapest in April 2009, organised by HUNAGI and the Hungarian Association of Logistics, Purchasing and Inventory Management.

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