GLOBAL SPATIAL DATA INFRASTRUCTURES and International Cartographic Association

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OPERATING Environments
Science and technology
Education
Professional Practice (Nature, January 04)
Society (social and organisational)

Geographer Ptolemy first developed the idea of atlases: how to subdivide the world into 26 parts, how to portray the world in its entity and in parts. We are still using his ideas of subdividing the world, in parts from north to south and from west to east.

Ortelius Atlas
Mercator Atlas
GMES and INSPIRE

Global Monitoring for Environment and Security

INSPIRE
Infrastructure for Spatial Information in Europe

The INSPIRE concept:
- Availability
- Accessibility
- Legislation rules

Bill CLINTON, EW III Conference, Bonn, March 27 urges:
„Risk Reduction Become a Global Priority“
We need implementation of well known but under-applied measures to reduce risk.
E.g. encouraging the practice of Hazard Mapping to identify areas of extreme vulnerability, better enforcement of uniform building codes to prompt safer construction, the expansion of access to insurance to help survivors recover and education to increase awareness.
4. Contemporary Cartography

A new generation of electronic maps and atlases, mainly on the Internet, resulted in the definition of multimedia cartography. Multimedia, global communication systems, and global publishing offer possibilities for the production of dynamic and interactive visualizations, which utilize mainly virtual environments (developed originally for the computer games industry).

Intelligent access to databases and interactive user support can be used not only for the location of suitable maps on the Internet, but also for map creation (art) and modification according to specific and individual requirements. Instead of just using maps created by someone else in advance, these new research technologies allow individuals to use cartography interactively, on the basis of individual user's requirement, to study and present spatial information.

It is not enough to build a nice technical infrastructure without teaching the population how to use the maps (analog or digital one). We have to provide:

- the concepts with which the population is able to deal with geospatial information,
- to provide maps from which the population is able to derive the information they need: information that is up to date and tailor made for solving the problems.
Three most dynamic streams in cartography:

1. Cartographic visualization (ICA Commission on Visualization and Virtual Environments).
2. Ubiquitous mapping
3. Internet maps

Ubiquitous mapping

Mobile Internet / TeleCartography
Map based LBS
Navigation systems

Working fields:

Mobile
Adaptable
SENSOR Cartography
MOBILE AND ADAPTIVE CARTOGRAPHY

Adaptability of Cartographic Representation

1. User level – operational units, dispatching units and stakeholders need different scales, themes and map extent, but over the same data.
2. User background – different educational and map use bias.
3. Theme importance – different features in map content and variable significance with changing emergency situation.

4. New phenomena – new features reflecting the emergency status need to be inserted into map consistently.
5. Interaction device and environment – various electronic visualization devices are used and they are also in interaction with environment which is influencing visibility and amount of information used.
Examples of Deployment

Ilustrační foto – mini ARAX

mini ARAX

Monitoring
Scanning
Application MI-RT 25-50km²
Retranslation

MOBILE CARTOGRAPHY DEVICES

DANKE SCHON !!!!!
THANK YOU VERY MUCH

Shukran
Alligator
Xie, Xie
Spasibo

DEKUJI (in Czech)