

ESRI User Conference Truly European GIS Stands Strong from Defense to

“The human dimension in working with GIS has to do with collaboration, sharing how you do it. It’s about professional knowledge, not the non-experienced experience, but the real stuff. That’s why you are here.”

Promising words of Jack Dangermond, co-founder and President of GIS vendor ESRI Inc. during his welcome address at ESRI’s European User Conference 2007 in Stockholm, Sweden.

By Remco Takken



A Swedish drinking song ‘Helan Går’ during the Gala Dinner at Stockholm’s City Hall.

This year’s European User Conference by ESRI was held in Sweden. In September 2007, the Swedish distributor ESRI S-Group, invited a rich variety of European users for user stories and informative lectures on recent GIS developments using ESRI’s software. Many of the speakers were Scandinavian, some of the sessions were even held in Swedish. Fortunately, the programme booklet clearly stated which of the sessions were ‘local’. As ESRI President Jack Dangermond said in his opening speech: “The human dimension in working with GIS has to do with collaboration, sharing how you do it. It’s about professional knowledge, not the non-experienced experience, but the real stuff. That’s why you are here.”

Dangermond summarized the latest developments in GIS, because “what we did forty years ago (when ESRI started out, ed.), is fundamentally different from what we can do now.” He touched upon the Open Web, and the quick grasp of geo-information that Google and Yahoo got in their ongoing quest for better search engines. “What’s driving it, is up to 20 billion dollars in advertising, they are not geographers. But still, we work closely with them.” Dangermond feels that even the most uncoordinated geo coding by amateur Google Earth enthusiasts affect the professional GIS user. “You might think this is all junk, but it isn’t. We should get into all these non-authoritative and opinionated data. It still can be very useful.”

Foreign Affairs

Tomas Ries, connected with the Swedish Ministry of Foreign Affairs, peppered his key note speech with astute, and often disconcerting interpretations of contemporary problems in our world. His vision on today’s fading borders and globalising economies shed a totally different light on Geographic Information Systems.

Indeed, you would wish Ries’ eloquent style and lively presentation would be present in every European politician. Ries not only showed his excellent knowledge of the English language. Armed with a handful of literally exploding PowerPoint sheets Ries sketched how the present world is divided into ‘Globalizers’ and ‘Localizers’. Then he divided the Localizers into the ‘alienated’ (ie. Russia, North Korea and Syria) and the ‘poor’ (ie. Africa, parts of China and India). Above that, he added some striking examples of war, friction, upheaval and environmental damage. “The will, skill and the tools to overcome this, lies in an operational GIS,” said Ries. “A ‘conceptual’ GIS is there to help us get a broad, holistic perspective.”

He seemed prepared to face bad news for the near future, though, and he pointed out that we all should be better prepared. His rather bleak view of the present state of awareness notwithstanding, he got a big round of applause.

Massive Session

With a massive plenary after-lunch session dedicated to the upcoming release of ArcGIS 9.3, progress was shown in a real life demo of the beta version, which sadly crashed one time. Still, the enhanced cartography tools, new possibilities to build schematic networks out of original geospatial data and the impressive scalable on-demand caches of maps came over fine. Although not totally new, a good amount of time was spent on ESRI’s web services, management and publishing flagship ArcGIS Server.

Although the first day of the three day conference in Stockholm was stacked with technical information and software updates, the sessions were interspersed with light entertainment by the Swedish musical acrobats Con Ritmo and mountaineer Fredrik Sträng. A tourist guide to Stockholm using ArcGIS Explorer was carried out by two ESRI Sweden

Insurance

ladies, who later claimed off-stage that they were not models.

One exiting sneak preview of things to come was seen in one of the sessions covering Mobile GIS. ArcPad Version 7.1 was seen in 'beta', release date unknown. Highlights include the support of editing related tables, usability improvements for beginners in the form of 'QuickProject' and a new Query Builder.

AXF, ArcPad's relational data format is based on Microsoft's SQL Server. AXF files are created and managed using the new ArcPad tools in Arc Toolbox for geoprocessing and in ArcMap, when it comes to the DataManager toolbar.

Geo Coded Insurance

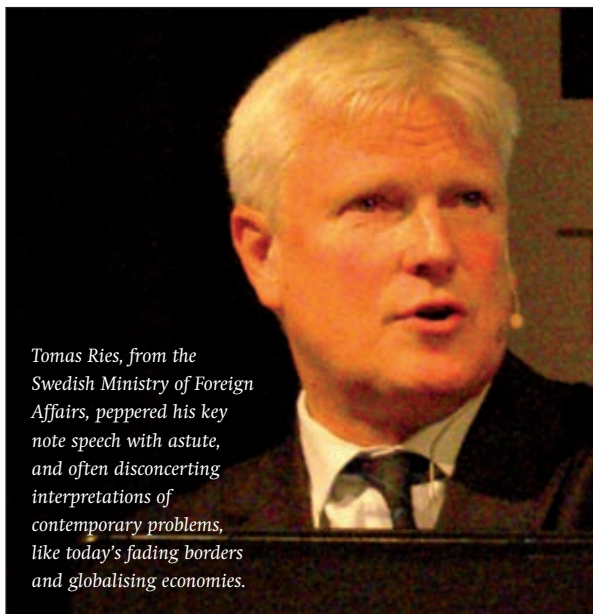
Of the different 'tracks' or 'parallel sessions' during the second day of the conference, intriguing topics were discussed in the 'Insurance track'. Jürgen Schimitschek is working at the Geo Risks Research Department of insurance company Münchener Rück. Their Cat Loss Estimation Service was installed after requests for more transparency in risk management, and higher granularity. It enables among other things 'hot spot analysis'. The solution lies in GIS technology and address level geo coding. With CLES the losses can be evaluated as soon as 48 hours after a severe weather event.

Wind speeds higher than 80 km p/h make insurances pay out claims, so a geo coded portfolio, connected to wind field data are valuable tools for a loss survey and loss estimation. This tool facilitates pro-active claims management and prompt settlement of claims, lowering the expense ratio, says Schimitschek. Also hail storms are dealt with in the same geo coded way, and a prototype on Flood is being developed at this moment.

Defense GIS

Esa Orava is working as a Military Terrain Analyst with his organisation Affect in Finland. Their 'Suitability Mapping' was originally developed for landscape and urban planning in the US, but it also help gives answers to questions raised by 'business needs' in a military environment, like "where can we dig?", "what place should we avoid?".

This type of terrain analysis is somewhere in



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the middle between source data capture and decision making by visualizing the source databases and prepare source data for analysis. Typical source data in northern Scandinavia and Finland includes soil density and firmness including ground frost, ice thickness on water, snow depth, natural barriers and the volume of trees.

One of Orava's examples included the weight and surface pressure of a vehicle to calculate its mobility in a certain area. The result layer showed a possible route for the car, but Orava emphasized the reliance of this type of model builder to good quality specialist information. "We could not make this map live on the spot for places where we don't have good data, like Chad or Darfour."

Web services are linking all kinds of information together, sharing, modelling, real-time risks and traffic. The Web 1.0 environment of IRRIS has 26 security layers in the background, while tracking vehicles and cargo worldwide. FEMA uses it to look where their assets are, and IRRIS presently supports US defense and logistics.

An intriguing question by a US military in the transport division would be "Do I have any trucks carrying missiles in this upcoming storm?"

Robert Marsters of US company GeoDecisions explained how IRRIS is integrating near real time tracking, critical infrastructure data for command and control, situational awareness and incident response.

INSPIRE

On the third day, the call for a European Spatial Data Infrastructure was best summed up by the slogan 'The importance of being interoperable'. "In fact, in any infrastructure, being interoperable is key," said Steve Peedell of the European Commission Joint Research. Peedell pointed out that the Inspire directive is not so much a top-down approach to a desired use of geodata, but more a way to look at what's already there to build an infrastructure. "We all have good information, but it's not necessarily coordinated very well. Think about specific knowledge embedded in data on coastal erosion, sea level trends, droughts, fire risks, floods and so on. Getting one big database of European geo-information is not feasible,

so we just build on what's there."

A big issue within INSPIRE is cross-border operability. 115 million people, that's twenty per cent of the European population, live within fifty kilometers from a border. Still, all those different manners and methods of data capture and storage within different coordinate systems is not the main challenge, according to Peedell. "We can cover the technical part, semantics like how we understand different concepts and data models," he said, "It's all about interoperability between people."

A comprehensive overview of the current status of the National Spatial Data Infrastructures was given by Danny vanden Broucke, of the University of Leuven, Belgium. His statistics (comparing the situation in 2003 with that of 2006) showed how France decidedly caught up after its hesitant attitude in 2003, when it shared a low position with Bulgaria and Romania.

2006's results also showed there's a lot of work to be done by most European countries when it comes to legal frameworks and funding. Portugal, Sweden and The Netherlands rank quite high in the 'INSPIRE Top 5'.

Vanden Broucke observed how regional and local levels were becoming more important, and consequently more stakeholders got involved in INSPIRE. Data sharing is becoming an explicit policy, even though the majority of countries do not apply an integrated approach. There has been a spectacular devel-



A typical view on the Expo during the ESRI User Conference 2007 in Stockholm.

opment of portals, network services and applied standards, albeit that there's not always good metadata available.

GIS and Health

Of the many parallel sessions, along with the local government track, the one on 'Health' stood out for its many local contributions. From GIS support for calculating ambulance respond time in the infrastructural challenged region of Drammen, Norway to Swedish research of animal disease control done in the UK, the Scandinavians held their own perfectly well during this European gathering of GIS Minds.

With a beautiful gala dinner in the world famous City Hall of Stockholm, the Swedish stylishly showed their national pride in a musical programme stacked with ABBA, Roxette and even the drinking song 'Helan Går', during which Jack Dangermond made a rare appearance as a singer.

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