

Session 2: The importance of national mapping in a changing world

Barbara Ryan (US Geological Survey) presented the paper Maps as Infrastructure: The National Map

- Following events of 9/11 the role of geo-spatial data has been critical in the exchange of government information.
- Partnerships and trust-building between agencies are required prior to a disaster.
- A consistent mapping base supported by both government and private sector partnerships.
- Advantages of maintaining a seamless map base of up-to-date data; ensuring the benefits of new delivery systems are maximised while not forgetting the benefits of human interaction.
- Government agencies are required to maintain a historical map base that can be preserved for future use.

The following questions of clarification were asked:

Ravi Gupta (GIS Development, India) mentioned that Bryson Morebodi talked about collaboration between public and private sector organisations and asked how the US Geological Survey are working with the private sector in the development of the National Map. The role of the private sector is only limited by the creativity of the US Geological Survey. Where the private sector have existing products and these become out-of-date, they look to the government organisations for updates. Collaboration with the private sector will be important for all public institutions; this will deliver real economic returns.

Bengt Kjellson (Lantmateriet/UNECE Working Party on Land Administration, Sweden) asked how the National Map was being funded?

Barbara explained that the US Geological Survey used their base appropriation from Congress (\$130m) however another \$40-50m per year was also required. Therefore, USGS has begun approaching other data providers to negotiate the use of their resources for data collection to help build the National Map.

Scott Baggie (Survey Department, British Virgin Islands) asked whether any difficulties had arisen with this arrangement?

Barbara: The challenge in the US is with the standard topographic maps which no longer meet customer requirements. Customer focus provided through partnership with other agencies or partners. Barbara explained that essentially the arrangement was a 'zero-sum game'. It is a strategic partnership to help build the National Map.

Bryson Morebodi, Department of Surveys and Mapping, Botswana, presented the paper "Botswana – Visionary Geo-Information Development Programming"

The focus of this presentation was on the National Vision for Botswana and on how the Department of Surveys and Mapping, Botswana's National Mapping Organisation, realigned its own vision to meet the demands and expectations of a New World situation. Collaboration formed a substantial part of successes to date.

The following questions of clarification were asked:

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David Coleman (University of New Brunswick, Canada) asked how, given the realities of Botswana as a developing country, its NSDI will differ in comparison to the ones in place in developed countries?

Bryson explained that this was difficult to answer given that his country is only beginning to put in place a NSDI. However, there are less users and producers than in developed countries and this makes the development of a NSDI more difficult. He also added that they are looking to bring in people to help his country appreciate the advantages of developing a geo-spatial data infrastructure.

Peter Holland (GeoScience Australia) commended Mr Morebodi's leadership within his country, his efforts in re-focusing his organisation in a contemporary way and his leadership of the GEOCODI community. He asked Mr Morebodi how he felt that other developing countries could gather support from other countries to achieve what has been achieved in Botswana.

Mr Morebodi outlined the success of Botswana's National Development Plans and explained his approach towards securing funding for his organisation's activities from government. Mr Morebodi needed to fight for the required funding. In addition to this, finding a champion, SEDA being used as an example was used as a way to gain government buy-in and associated funding.

Muhammad Salim Sulaiman (Ministry of Water, Construction, Energy and Lands, Tanzania) asked Mr Morebodi what constraints he anticipated in achieving his vision?

Funding, tender delays and lack of skilled manpower were all identified as constraints. However, the National Vision is supported by government and Mr Morebodi believes that his own organisation's vision will be achieved.

The session chair, **Qassim Al Ghanin** asked where the National Vision originated from.

Mr Morebodi explained that Botswana's last President, before his retirement, created the vision for the country.

Hirochimii Maruyama, Director, Geographic Department, Geographical Survey Institute, Japan, presented the paper "Responsibility of NMOs for Sustainable Development"

The World Summit on Sustainable Development (WSSD) was held in Johannesburg in August 2002, ten years after the Earth Summit (UNCED). Global Mapping, led by the International Steering Committee for Global Mapping (ISCGM) is an action for sustainable development in line with the "WSSD Plan of Implementation". ISCGM asks NMOs to contribute to this initiative as a contribution to sustainable development and as part of their overall responsibility.

The following questions of clarification were asked:

John Latham, (Sustainable Development Department, UN) asked:
What is the potential contribution of the European land cover project to the Global Map project?

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What mechanisms have been looked at for the harmonisation of land cover information?

How will the data be updated?

Mr Maruyama explained that it would be beneficial to establish closer relationships with the project mentioned. A Land Cover Working Group has been established and he would expect that their activities would include seeking closer relationships with the EU and developing mechanisms for improved harmonisation of land cover. It is planned that the Global Map will be updated every 5 years however it is not certain that this plan will be implemented. Through the process of implementation, the ability to produce data will be improved.

**Preetha Pulusani (Intergraph) presented the paper
“Meeting Global Human Needs with the Geospatial Enterprise”**

Presentation Summary:-

The presentation focussed on the Geospatial Enterprise. Data, its Integration and the power this brings.

The paper covered an open data architecture and established ideas of disparate data, but provided this in a fresh light. Preethra believed Geospatial data is undervalued, which lead well into the next point which was “Should data be free?” If you require data that is reliable, accurate, maintained etc, “Is it then reasonable to expect it to be free?”.

The presentation covered how GIS needs to move into the mainstream. As Oracle, IBM and Microsoft now have spatial data options these provide GIS with the opportunity to be accepted as everyday technology.

**Szabolcs Mihaly (National Mapping in Hungary) presented the paper
“Shaping the Future”**

Presentation Summary:-

This paper covers in some detail the development of the National Cadastre Programme in Hungary which was started in 1997.

The following questions of clarification were asked:

Irwin Itzkovitch (National Resources Canada)

When considering data and the different types, what does the panel think about the idea of FREE data. Should the Tax payer pay for the data, or should it be the end user that pays? Irwin went on to say that data was generally captured for a reason, be it military or otherwise. National mapping in a changing world is having to move faster, asking how we create the new vision required to enable the move into the database environment? In addition how do you see the movement from a representation based world into the database world?

Answers:

Preethra said that the current position was fuzzy due to the transition to the new data structures of the new data rich products like OS MasterMap. In addition to this some of the existing users do not make the most use of their existing data.

Vanessa Lawrence (Ordnance Survey GB) said that many national mapping agencies have made business by building a backdrop for other user data – for example the printed paper map on the wall covered in pins. The new GIS data and

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products are now viable for all users as the cost of computers has tumbled in recent years and you no longer need expert users. GIS analysis is within reach of the average user. The new spatial data options help with this. New customers and partners are now using GIS within standard mainstream IT decision making tools. As this continues GIS will be seen as mainstream and common place. The NMA's need to provide high quality data, that provides additional data to the customer; and not simply be seen as a backdrop mapping provider. The Ordnance Survey provides the UK government with an at cost model for the rural areas, that would not be viable to survey from a commercial point of view. In addition the government procures data for the Pan Govt agreement under the user pays model.

Szabolcs Mihaly said that it is not enough just to give away coordinates, but that NMA's must map constructed elements in a digital database. Map making is a skilled task but larger parts of future map capture will be automated. Human interaction will always be required to some degree. In addition to this data cooperation between private and public sectors is set to help in future data capture projects.

Fraser Taylor (International Steering Committee for Global Mapping): The concept of an object oriented database is very important as all objects are located in space. Maps are however a good way to disseminate data to the public, Geospatial databases are good but we will still need to be able to visualise data on a map. We need to integrate GIS and IT and move GIS into the mainstream, but how are we going to get from here, to there?

Answers:

Preethra said that technology was not the issue, as the required technology exists today. The decisions simply need to be made; the task is to convince the policy makers of the value the GIS brings.

Vanessa agreed with Preethra saying that we were ready to become information providers and move into the database world. However education is still needed in some market sectors. This is improving as GI moves into the mainstream and is set to improve with the name data rich products and spatial databases. We must not forget though that the map may be powered by specialist technology at the back end, if the customer can not see the value it brings then we have problems. We have made good progress to that end at OS and now have several ministers understanding the value the map brings and the power of the picture in conveying a message to a wider audience.

Szabolcs Mihaly said that the information and the content must be seen as the main elements and that the delivery technology is not the main element.

Dietmar Gruenreich (Federal Agency for Cartography and Geodesy, Germany) Interoperability is key as we move forward and the NMA's must provide support links to other data providers.

Vanessa said that Ordnance Survey is a great supporter of the OGIS standards. Funding is difficult as ministers can understand health, transport and there political power but GI needs to have a very clear value proposition to make it a compelling project addition. We talk to other ministers on the value of mapping. Connections to other organisations with data are important enabling local data bodies to help both with collection of large amounts of the data but also help them to understand the value. We are looking at other areas within government, understanding the data they collect and the duplication of this process between departments. Then we can help

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them to understand the value of information rich data with detailed meta data. It comes back to forming the right connections and influences.

John Spittal (Land Information New Zealand): All data is paid for by the taxpayer.

Vanessa did not agree, as some 18% of OS revenue is now coming from partners developing niche applications such as one for monitoring expensive animals. Another example was that of retailers using maps on e-commerce sites; both of which need to be paid for by the customer. Our customers will play a large part in our future.

Jean-Phillippe LaGrange (IGN-France) felt that the NMA's should focus on being content providers, we can not be just another content provider, but must also be seen as the framework provider at a national level. In the medium term we could harmonise both data and content.

Szabolcs Mihaly said that content is important.

Vanessa agreed that content is vital but the users do not pay for all the data collected. The Ordnance Survey collect alot of data for the remote areas that may never be used outside emergency or disaster situations.

Vagn Laursen (Geoforum Denmark): In terms of building multi scale data from a complex model, are you ready as the important thing in the public sector is the different levels of scale?

Preethra The technology is ready now to display the data from such systems, to both view and store the data.

Szabolcs Mihaly said that from his point of view in Hungary it is a good approach, cartography, inevitably brings problems, either legislative or technical.

Vanessa The data model for any NMA is essential. Ordnance Survey is moving from multiple to a single database model by 2004, then using this to build other data scales.

Preethra Several data layers can be can be handled in standard databases to allow rollback if required.

Jarmo Ratia (National Land Survey of Finland) How much of your revenue comes from the Pan Govt agreement?

Vanessa About 6 years ago the Ordnance Survey had customers in 40 government departments paying for data. As each new organisation joined they paid more. The pilot pan government agreement was met with huge scepticism. Following much negotiation with the government's financial advisors, the govt dept Office for the Deputy Prime Minister (ODPM) paid an additional 18% for a Pilot Pan Govt Agreement in addition to the fees paid by the existing 40 customers. There was a risk element on both sides and you could argue that we have lost as we now have some 144 new customers now active under the Pan Govt Agreement (PGA). We have recently signed a three year agreement forming around 19% of our £109 million revenues for last year. Our largest growth area is from our partners and new growth areas. The PGA is a good basis for us to grow our business in the new sectors. The funding will come from the 40 original customers with ODPM funding new members. At the end of March 2006 the contract will be in a position for tendering under OJEC rules.

Jarmo commented that the 19% is the taxpayers money.

Vanessa said that under the Pan Govt Agreement the data was only for internal use and that if revenue generating services were to be provided with the data then additional licences and fees would be payable.

Trevor Shaw (Surveys & Mapping Division, National Land Agency)

Do government departments ever break licence rules?

Vanessa said that a government department was considering a project that would have broken the terms of their licence. However following a meeting with the head of the civil service it was made clear to the department concerned that should the service be launched then they would need to pay the commercial rate.