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Better connected: the three Ordnance Surveys improve georeferencing links

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Introduction

It is an accepted fact that the Internet is turning preconceived ideas about our environment upside down. Time now runs twice as fast, the world is getting smaller and geographic information is becoming simply “information”. With this increasingly global perspective many companies today are regularly reaching beyond their home borders to do business.

When they do so they find it hard to come to terms with the fact when they require location based information the process of acquiring that information can be complex and time-consuming and often requires prior knowledge of what data is available. For example if an international telecoms company wishes to deploy a GI system, it is usually difficult, if not impossible, to take an established service used in Great Britain and deploy it in Northern Ireland or Ireland, or any other direction. When one considers that the mapping information provided by the three National Mapping Agencies (NMAs) is very similar, survey resolutions are the same, the format is the same (eg NTF) – and each organisation is called “Ordnance Survey” – one can understand their confusion and frustration.

The world is changing

We are all aware of the impact of the internet and new technology, not just in the workplace but also in our own personal lives. One has only to look back five or even three years to make comparisons to realise just how the internet has changed the way in which many of us obtain information, order goods or book our holidays.

This new way of interacting with day-to-day services demands new data, information that links to other information and new ways of delivering that information. It introduces new players – organisations that embrace a global marketplace such as imagery from space or internet service providers. In turn this develops new standards (such as XML/GML) and new ways of working. And of course things now happen in “Internet time” (see Gower 2001).

The view from Britain and Ireland

As indicated the three NMAs share the same roots but over the years we have moved into totally separate organisations. We now operate in very different political, economic and social environments, but increasingly serve the same customers.

We recognise that we operate in the same global environment as everyone else and need to adapt and develop – just like everyone else. This does not mean that we are going to re-form, or even start developing joint products. We do recognise that as three separate organisations – we make life a little more difficult than it needs be for our customers and potential customers.

Problems encountered by our customers

Typically we find that customers are confused when they have three similar but different organisations to deal with. This can then lead to frustration. What confuses customers?

- Customers expect the same organisation - *we are three separate organisations!*
- Customers presume that the data is the same from OSGB & OSNI or OSNI & OSI – *this is not the case, even though it may look similar!*
- Customers expect us to use the same terminology- *but we don't!*

As a consequence of this misunderstanding implementation plans become delayed, take up of geographic information and therefore business expansion inhibited and the customer can become disillusioned with the concept of joined-up data. This affects us all. Customers time spent on applications to re-engineer systems to take different data & formats is time lost.

What can we do to help?

We believe we can achieve a quick win, with further potential downstream if there is sufficient demand from customers.

In the short term we intend to:

- make it easier to compare current data & products across the organisations
- provide support information including:
 - common glossary
 - technical papers (eg grid and datum information)
- provide central access to common papers and information

In the longer term there may be opportunities to standardise on:

- some data structures,
- identifiers,
- formats etc

However, these aspects would clearly require greater investment to implement and therefore we would be seeking a clear demand from users before we embarked on this.



Team members at the January 2000 kick off meeting.

Collaboration

The Directors of the three Ordnance Surveys agreed to this approach on January 2000 and the organisations each contributed a small core team from which several virtual teams were created to deal with specific issues. The teams work was completed in January 2001. The topics they addressed were:

- Product comparison
- Detailed data comparison
- Identifiers
- Terminology

Product comparison

A comparison of the products provided by each of the organisations has been prepared to give potential users of the data and information an easy way of relating products from one organisation to that of another. This is available across the product range.

Detailed data comparison

Beyond the products the internal content of the most detailed products was compared at feature level. This exercise revealed many interesting differences across the three organisations.

Identifiers

All three organisations recognise that unique identifiers will be the future key to the information. We have agreed a common approach to using identifiers based on the TOID (Topographic Identifier) and we have allocated blocks of identifiers to each of the organisations as shown below. However implementation is a further stage for each organisation. In Great Britain TOIDs will be introduced with the first release of the Digital National Framework in November 2001.

GB	0001 0000 0000 0000 - 5999 9999 9999 9999
IRL	6000 0000 0000 0000 - 7999 9999 9999 9999
NI	8000 0000 0000 0000 - 9999 9999 9999 9999

Agreed identifier ranges based on the 16 digit TOID.

Terminology

A joint glossary has been adopted by the three organisations, using terms already agreed by other bodies such as OpenGIS, or the AGI – only embarking on our own definition if terms do not already exist.

Accessing this information

It became clear early on that we needed a way of making this information easily accessible to users of our products and agreed that the most appropriate method of publishing the information would be the Internet. A prototype set of web pages was developed including a product comparison chart, a detailed data description, the agreed glossary, joint papers and a means of e-mailing each of the agencies either jointly or individually. The operational pages are now available from either of the three agencies web sites (see references).



Prototype front page to the joint web pages.

Goal

The goal has been and will continue to be:

To make it easier for customers & partners to relate, access and use our information.

We now invite our customers to let us know whether the achievements so far are of assistance to them and if they would like any other enhancements to help them further.

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The Team

We are grateful to have had the following expertise and assistance:

OSGB

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OSi

Colin Bray, Fred Finch, John O’Connor, Pat Sheriden & Peter Hallahan

OSNI

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References

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Press Release April 2000 Three Ordnance Surveys reforge historic links to improve data for customers. (via all three organisations)

Bray C., G, Mahood, & Murray K.J., The three Ordnance Surveys collaborate to improve data. Geoinformatics Oct/Nov. 2000

Ordnance Survey Great Britain www.ordnancesurvey.co.uk

Ordnance Survey Ireland www.irlgov.ie/osi

Ordnance Survey of Northern Ireland www.osni.gov.uk

Joint Pages To be announced – see the above sites