

W5.1

Realising the benefits of DNF

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The Digital National Framework

Ordnance Survey is releasing Version 1 Release 1 of the Digital National Framework (DNF) this November. The DNF has been independently heralded as 'the most significant event in the UK GIS industry for 20 years, greatly enhancing the use of GIS across the country' (Andrew Duff, Tech Director ESRI (UK), GI News Vol 2 No 1, July/August 2001).

DNF represents a quantum leap forward for both its geographic data content and structure and the service and delivery mechanisms through which the data are made available. These enhancements will realise significant benefits for all users of DNF data and services. They will increase the utility of GI data in non-traditional market sectors by transforming the way that geographic data can be handled and analysed.

The AGI2001 Workshop

This paper gives a very brief, high-level view of the major data and service improvements that are available from November and the benefits that are realised as a consequence. These will be examined and illustrated in greater detail during the workshop.

Customer & National Benefits

The DNF was designed to support a wide range of existing, emerging applications and underpin new applications into the future. The main drivers were seen to be:

- Providing data in a form that is more relevant to the customer, the introduction of area features representing real world features such as buildings, roads etc is seen as an important step forward.
- The development of area features has been a goal for many years; technology has been a limiting factor until recently. This has now been overcome and many of our customers have demonstrated demand by embarking on conversion programmes of their own. This ranges from small design site projects, to local authorities and on to national programmes by HMLR and DEFRA for example. Therefore a single consistent national programme has the benefits of:
 - Minimising the duplication of effort across all those involved, converting the data once and using many times has clear and significant economic advantages at the local and national levels,
 - DNF will be maintained as area features, therefore significantly improving the current situation where restructuring on update is necessary and clearly uneconomic.
- As a themed database DNF customers can select just those themes they require (and further layers in the future) and combine them to meet their business needs. This starts to transfer the direction and development of the database more into the hands of the customer who will choose which themes and layers are important to him/her.

- The topographic layer of Version 1 Release 1 will underpin all other layers to be incorporated in the future, therefore **establishing a level of consistency across national datasets** never seen before. Our failure to achieve this has been a customer complaint for several years.
- And finally through this underpinning framework of area features, each of which is assigned a unique identifier (a TOID - TOpographic IDentifier) greater **data sharing will be enabled and promoted**.
 - This will not only **improve the value of the associated data** but will make it much **easier to analyse and solve problems** by comparing and relating information in a way that is impossible or uneconomic today.

These benefits will be derived through specific data and by making access to the data easier. These improvements are summarised below

Data Improvements

Key areas of data improvement within the first release include:

- The data is divided into nine themes, which can be ordered in any combination, allowing for the selection of the data content most appropriate for each application.
- For the first time the data contains polygons, which represent real world features, and enable more intelligent data analysis and portrayal
- Each point, line and area feature within the data (c. 400,000,000) has a unique topographic identifier (TOID). The TOID facilitates the association of other data sets to these features and the unambiguous exchange of information within and between organisations.
- The data is seamless, i.e. there are no arbitrary map sheet, or tile, edges within the data, which subdivide real world features into two or more parts – features are always supplied in their entirety whether they are fully included within an area of interest or not
- Greatly increased data attribution and classification. All attributes and metadata are maintained at the level of the individual feature, providing more intelligence and allowing greater flexibility of usage
- The data is topologically structured, readily enabling more complex analytical usage
- The data is supplied in Geographic Mark-up Language (GML) format

Service Delivery Improvements

Key areas of service improvement within the first release include the ability to:

- Select and order data on-line
- Precisely define an area of interest and only receive and pay for that data
- Receive data in change-only format, rather than taking complete re-supply
- Take delivery of data on-line, reducing waiting times and data loading times



DNF data – illustrating its seamless nature and area feature properties

Realising the Benefits – the Workshop

The workshop will illustrate how these improvements provide the environment for a range of increased benefits can be realised in practice, including:

- Better quality and more consistent application data
- Lower overall costs in using, creating and managing data
- Flexible and intelligent application of change data
- Increased scope for new application development for both partners and end-users
- Greater ability to pick and mix mapping, merge it with business information, and link it to that of others
- Substantial cost and time savings
- Up-to-date data, offering improved confidence in decision making
- Greater cartographic flexibility
- Access to the data that you want, when you want it