



Web-based interoperability: a key enabler for e-government at Hounslow

Local authorities' continuing efforts to improve their customer service levels and to meet e-government objectives are being aided by GIS software that enables high levels of interoperability with existing systems and data. Neil McLeod reports.

To those people within local authorities who are charged with the task of delivering IT systems that contribute to greater efficiency and improved levels of customer service, it might seem to be stating the obvious. But it's worth saying it anyway. One of the major obstacles to efficient e-government is the 'legacy' of local authorities' previous investments in information technology – or more significantly, the data they have created. That's not to say that these existing systems are worthless, quite the contrary in fact. The problem is that the data they hold is very often proprietary and therefore not readily available to other systems and more importantly, to a wider audience within the authority.

The issue is compounded by the fact that different software developers, particularly in the field of digital mapping/GIS where we are dealing with graphic representations of spatial information, use their own, internally-developed data formats to process and store information. And nine times out of ten, one software developer's data format is incompatible with the next – and so on.

But happily, it's not all bad news. Most GIS software developers have written their own translators (or licence and supply them from or via third-party specialists) to enable their own software to read and write other developers' data formats. However, these are often provided only as an additional-cost item, not to mention the on-costs associated with the time required to undertake complex translation workflows and on-going data maintenance tasks. Typically, users are obliged to find additional funds for data translators to convert data from one system into a format that their chosen GIS can handle – or conversely, to export data from their

chosen GIS for use in an existing system. Perhaps not surprisingly, some suppliers are better at – and more committed to – providing these translation facilities than are others.

One GIS software developer that has enthusiastically embraced the idea of 'data interoperability' is Cadcorp. The company's digital mapping/GIS software suite, Cadcorp SIS – Spatial Information System, incorporates the ability to directly read and write over 120 native GIS, CAD and database formats, on-the-fly – and as a standard facility within the software, at no extra cost. Because each product within the Cadcorp SIS range is based on the same GIS engine, or core, this complete data interoperability capability is also available to the company's internet/intranet GIS solution, Cadcorp GeognoSIS.NET. This product extends the dynamic functionality of Cadcorp SIS for use over the Internet or a company-wide intranet, using the .NET development environment, or other HTTP- and SOAP-based languages, such as Java. It can be deployed in a multiple server and multiple server architecture and operating system setting.

This capability has enabled the London Borough of Hounslow to maximise its investments in existing data, having previously identified GIS technology as one of the key enablers of local e-government service delivery.

How it helped Hounslow

The main business driver for implementing the technology on a corporate-wide basis at Hounslow was the requirement to satisfy e-government targets and to achieve fully connected electronic service delivery. Its new corporate GIS will provide improved access to services and

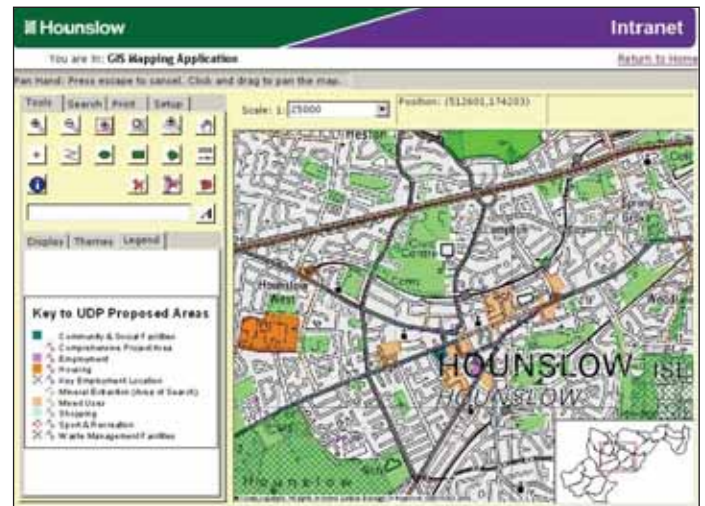
“The corporate intranet GIS is acting as a catalyst in facilitating the creation and sharing of GI across the council”

better interoperability across the organisation to the benefit of citizens, government and business organisations. The system will deliver good quality, reliable, definitive geographic information from one central source and users will be encouraged to make the best use of this information to support decision making.

An essential element of the council's corporate GIS development project was the need to ensure that the existing spatial data that had been created for various projects, in different formats and over many years, could be used and delivered as efficiently as possible through the new corporate GIS.

At the end of January 2005, the London Borough of Hounslow launched its corporate GIS based on Cadcorp SIS and Cadcorp GeognoSIS.NET technology. The new GIS/mapping application is now available via the council's internal intranet for up to 3000 staff and councillors to enable them to access geographic information stored centrally. Frontline staff working on the reception desks in the council's offices are now able to access immediately the maps and related information they need to answer queries from customers.

The majority of the demand for this service has been from Hounslow's planning and street management and public protection departments who have traditionally relied upon maps and spatial information to meet their



business needs. However, since the launch of the intranet GIS, other departments and services, such as borough solicitors (land charges), housing, education, social services, community safety and regeneration, are realising the benefits of sharing and disseminating information from one central, coordinated source and are keen to contribute to the project. In practice, the corporate intranet GIS is acting as a catalyst in facilitating the creation and sharing of geographic information across the council.

Desktop GIS software (Cadcorp SIS Map Editor and Map Modeller) is used in the council's drawing office to enable the unit there, which was responsible for developing the system, to perform the role of managing and integrating geographic data corporately. Desktop GIS licences are also available for the data owners in different departments, who retain responsibility for updating and maintaining their spatial information. Geographic information will be captured once, managed and maintained consistently to agreed standards and then shared corporately.

The corporate intranet GIS application is directly linked to the council's Local Land and Property Gazetteer. This enables users to perform address searches and to find a location quickly and efficiently. The next phase of the corporate GIS implementation will involve developing links to the council's core business and information database systems, such as planning and the CRM. Both the intranet web application and the desktop products link directly to Oracle Spatial (Hounslow's central data store) to deliver Ordnance Survey MasterMap files both to intranet and to desktop GIS users.

“The ability of Cadcorp SIS and GeognoSIS.NET to read other GIS files and Ordnance Survey files directly has enabled us to get our intranet application up and running very quickly,” said Fiona Willis, corporate GIS project manager for the London Borough of Hounslow. “We didn't have to waste time translating and reformatting existing files. Instead, time was spent checking the quality of the data and specifying the delivery of the information”.

The next phase of system development aims to widen the audience and to deliver the corporate GIS via the internet so as to provide a gateway to council information, giving all citizens, councillors and staff immediate, user friendly access to geographic information. “The most beneficial feature of our corporate GIS,” stated Willis, “is the ability it gives us to unlock the potential of spatial information and to provide every computer user access to a common source of maps and related geographic information about the London Borough of Hounslow, from their desktop, through a user friendly web browser – and irrespective of the original source”.

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