PlanningGridGateway -

e-Science and e-Government Integration: A Northern Ireland Planning process perspective

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Abstract

In general, government bodies and agencies are currently experiencing extensive pressure to modernise the way they interact and provide public services to Citizens (or customers) as part of the ongoing e-Government strategy. The Northern Ireland Planning Service and its associated public bodies is an example of a typical organisation facing such challenges.

A central premise of the “Modernising Planning Process Implementation Plan” [1], published by Planning Service on 3rd February 2003, is a radical review of the use of Information and Communications Technology (ICT) in the planning process. Under the auspices of the ePlanning Information for Citizens (ePIC) project, the Agency plans to procure and implement a comprehensive, new e-Planning solution by the end of 2005 to underpin the challenging business objectives outlined in the plan.

In addition to the Planning Service other agencies hold vital planning related information of relevance to the planning community including planning appeals and Geographic Information System (GIS) mapping information, namely.

i) The Planning Appeals Commission (PAC) is an independent appellate body established under statute to deal with a wide range of land use planning issues and related matters. PAC holds an archive of appeal case information including case decision letters and commissioners’ reports.

ii) Ordnance Survey (OS) is an integral part of the planning process providing GIS and mapping details to applicants, planners and government agencies. Traditionally A4 sized maps are purchased from OS over the counter from the Ordnance Survey Map Shop. However, more recently OS has converted its mapping information into digital format in addition to using more electronic based collection mechanisms including satellite global positioning systems, aerial photography and hand held computers.

iii) On the commercial side, value-added service providers, such as PlanningOnline Ltd, integrate and index such public planning information and for a charge make it available online to planning professionals including surveyors, solicitor, planning consultants and the wider general public.

It is anticipated by all organisations that increasing levels of information exchange and collaboration will be fuelled by the increased use of Information and Communications Technology (ICT). However, with such a vast and increasing array of distributed planning data sources held in various enterprises there is a need to provide a seamless strategy to allow secure, reliable and scalable access and integration.
Similar problems are being experienced by enterprises worldwide, observing continued decentralisation of software, hardware, storage and resources in addition to increased people mobility. As a result, growth has been experienced in the area of Grid technology based solutions. Since Grid technology proposes an infrastructure that enables flexible, secure, coordinated resource sharing among dynamic collections of individuals, institutions and resources it is viable and appropriate solution to the Planning process problem outlined above.

The PlanningGridGateway project at the BeSC aims to prototype an infrastructure based on Grid technology that will allow Planning information to be integrated across multiple domains and enterprises. This will allow new applications and business processes to be developed based upon such an adaptive on-demand infrastructure.

The main aims of the project are as follows:

- Investigate the use of a service-oriented infrastructure to create a gateway for all public NI Planning information.
- Demonstrate secure reliable access to distributed data sources from Planning Service, Planning Appeals Commission, Ordnance Survey and PlanningOnline Ltd.
- Include an array of planning related material such as case details, decision notices texts, informative texts, appeal information such as decision letters and commissioner reports and GIS mapping details.
- Create a demonstrator application services encompassing all data sources using GIS/location based search criteria.
- Investigate interoperability of e-Government technical standards with Grid computing standards.

This paper will present, from an e-Government perspective, the business drivers that acted as a catalyst in creating this project. In addition, the service oriented architecture, results from initial proof-of-concept experiments, challenges and a roadmap for a Grid based e-Government infrastructure will be presented.