

creating on-line services for their customers.

Then, planning an SDI project means first of all the analysis of context and of SDI products and services demand: what are the products and services customers are waiting for and they consider the most useful; what is the user fragmentation (by field of interest, by professional activity, etc.); what is the added value (in terms of time and/or outlay costs saved) with respect to access to traditional ones.

Only after having collected this information it will be possible to draw up strict business plans regarding various SDI products and services, going on to define the addressed goals (how many traditional users we want to become digital customers and with respect to which services) and the indicators to be used to monitor the plan performances.

Many examples of good practice in SDI development are already available, in particular at the regional level, such as the Catalan and Piedmont Regions SDIs as reported in the following articles of this newsletter.

Within GIS4EU Work package 2 "State of the Art and Requirements Collection" GISIG carried out a specific study about user needs and perspectives, in order to supply a guideline on this matter useful to develop the common data model and for the interoperability and

harmonization rule definition activities. The work was subdivided in two phases. In the first an analysis of the available literature on this matter, made considering the results obtained by previous user requirement surveys, both EU projects and INSPIRE working groups, was carried out.

The information achieved allowed the opportunity to point out the role of users in SDI development. Therefore, a method to improve user role in SDI development was suggested. In particular, a checklist was formulated to be used as a structured and uniform tool for assessing and evaluating the feasibility of developing an SDI and as a hint for deliberation for those public organizations that have already, partially or totally, developed GI services. In the second phase, the same tool was then submitted to various SDI managers and people in charge of SDI organizations to obtain, through the checklist use and the resulting answers, confirmation about user requirements collected from previous surveys, as well as other information about this matter and, in general, comments and suggestions derived from the knowledge of perspectives of their users.

In a next newsletter number the account of the results achieved will be presented: keep in touch!

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## Participation of local authorities in the Catalan SDI

Jordi Guimet Pereña, manager of the IDEC Support Centre

Early in 2002, the government of the autonomous region of Catalonia (Spain) began the IDEC project (SDI of Catalonia). The first year was devoted to general planning and preparation and to creation of the appropriate collaborative framework. The following year the institutional compromises and agreements were made regarding

general understanding about the concepts, architecture and technologies proposed by the initiative.

Implementation began in 2003

The regional SDI offers in its Geoportal (<http://www.geoportal-idec.cat>) several services, the most important of which is the multilingual Catalog Server, with more than 18,000 records of metadata



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available (54,000 in total, including along with the records in Catalan the correspondents in Spanish and in English), describing data available from over 80 providers. Metadata for services (about 40) are also available. The Viewer, a client that implements the OpenGIS® Web Map Server (WMS)

Specification, allows the user to access a growing network of WMS servers from different providers. This services framework is offered to other institutions and organizations as a platform to which others can add value, sharing and reusing the services for specific applications.

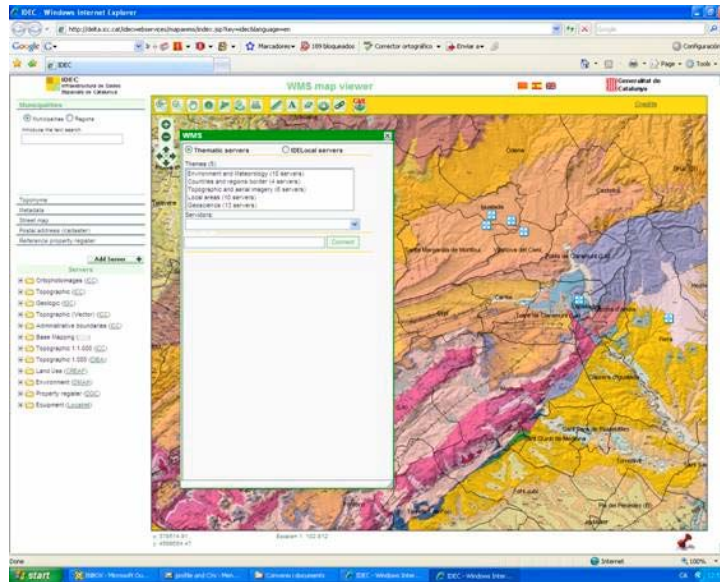


Fig.1 : The IDEC Geoportal

From the onset of the Catalan SDI initiative, the approach adopted has been to maximise the creation of thematic SDIs as much as possible, which are geared to the specific needs of concrete domains. Examples of these include the EUROSION project, a European initiative funded by the EC to promote better management of the coastal zones; UNIVERS, a European project funded by Interreg IIIC to connect the WMS of university departments for sharing of land and geo-information; and IDE.LOCAL, a recently (2006) launched project which aims to bring local municipalities into the Information Society and e-government.

The benefits of this strategy are as follows:

- It enhances the engagement of interested groups in participating in

SDI activities, producing more metadata registries, increasing the number of users, etc.

- It makes known SDI and interoperability concepts among different user's communities in a faster and better way.
- It demonstrates the direct benefits of sharing information and press to public organizations to deliver information.
- One can know more accurately the real needs of end-users as they have common interests in a concrete domain.

IDE.LOCAL is seen as a tool for undertaking new projects, based on its networked information. This sparks the interest of potential users from the public sector, who sometimes inquire as



to the benefits they stand to gain by participating in SDI programmes.

Participation of the private, added-value services companies is also important—not only in the current stage (i.e. for GIS projects, metadata, WMS, etc.), but also for future projects. These companies are being encouraged to support and direct local endeavours.

The initiative is supported and financed by the Catalan eGovernment organization (CAOC) and managed by the Centre of Support of IDEC (Cartographic Institut of Catalonia).

#### e-Government funds:

- The creation of metadata.
- The publication of data in WMS and/or OGC.
- And GIS projects closely related with the project.

#### The Support Centre offers applications based on the SDI resources platform:

- Customised Viewers (e.g. for maps and street maps).
- Customisation of many services (e.g. the Catalogue).
- An editing tool for the creation of geo-objects.

These services help to confirm the utility and demonstrate the benefits of sharing data and services to potential users.

Several re-useable and customisable components based on available resources of the IDEC platform have been developed and subsequently provided to local public administrations in order to help them understand the benefits of a collaborative framework in which different providers share their data to provide geo-knowledge to public administrations and citizens. The applications use the information resources of several governmental departments and other institutions as well as those of IDEC. Owing to additional local data, the information

sources will be expanded in the near future.

To date, the following applications have been developed:

- Map Viewers: A fully customisable component that operates through a form, whereby an administrator can select the WMS to be accessed, included his/her own WMS; from the municipal web page, the user can link to these viewers as a mash up.
- Geospatial Objects Editor: Employing only the browser, it enables access to the WMSCient. It uses elements including any kind of background cartography (e.g. orthophotomaps, topographic maps or street maps), edit points, lines and polygons of geographic features (including their attributes), links and images. These are saved in a dedicated WMS or the IDEC WMS, or on a GIS desktop.

By the end of 2007 the following results had been achieved:

- 161 local authorities were using the viewers integrated in their web pages.
- Online Municipal Street Maps were registering more than 15,000 monthly visitors.
- 30 local authorities were using publication tools and were publishing new layers.
- 46 municipalities had their WMS (620 layers) connected to the IDE.LOCAL network.
- 60 municipalities had published their geodata metadata in the Catalogue service (3,000 new records).
- New projects using WFS transaction technology were being planned.

Hence, local authorities clearly represent a very well defined user group. They are also important because apart from internal purposes, they also use IDEC resources to offer new and improved information services to their



citizens. Therefore, they are contributing to a wider use of IDEC resources and consequently, to

extending the impact of these resources on society.

## The Spatial Reference Data Base

Mauro Vasone - Regione Piemonte, CSI-Piemonte

Piedmont Region went in with a review of its land use planning law, that moves from separated planning processes, on different levels, toward co-planning processes involving all levels together: municipalities, provinces, Piedmont Region.

From this point of view geographical knowledge is a basic key that supports public bodies cooperation; the goal of Project called Spatial Reference Data Base, "BDTRE" - "Base Dati Territoriale di Riferimento per gli Enti piemontesi", is in fact optimizing initiatives on the subject of updating geographical data.

Project activities are to be linked with SIGr - regional Geographical Information System - for supporting land use policies and land use regulation, with particular respect for continuous updating.

Project's final objective is to put up a spatial reference data base that is going to be feed and used by piedmontese public bodies. This data base is founded on CNIPA(\*) rules, that retrieve Intesa GIS(\*\*) Spatial Data Base Specifications. Each public body participating in the Project updates its own features in the Data Base, no others update those features; savings are expected.

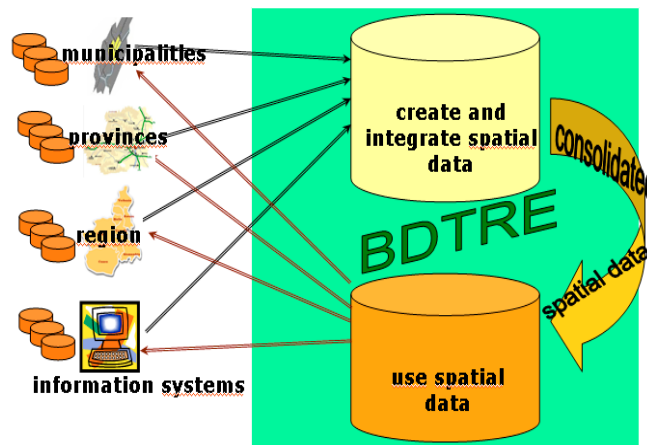


Fig. 1 data flow logical schema

For getting to final objective a path is needed, it counts on four important steps:

I) architecture definition, with two main environment: one for creating, receiving, processing, integrating data, the other one for publishing data, where users can read updated and correct data;

II) analysis and data flow definition, able to guarantee data updating and correct operation of data base; about this last item it has to be pointed out that the first environment must be able to let get in de-structured data and non topologically verified data, so that they can be processed, verified and, if wrong, sent back to provider; only topologically

correct data can move from the first to the second environment, where they will be available for different uses: updating other data bases, making spatial analysis, output in maps, etc...

III) structuring data base that stores spatial data, setting up features in a land continuity coverage; above these, other features are present: aggregated features, networks, point features; a metadata structure is present, too, necessary for understanding data;

IV) first spatial data loading, starting from data in the care of municipalities,

(\*) CNIPA - Centro Nazionale per l'informatica nella Pubblica Amministrazione: Italian Center for Informatics in Public Bodies

(\*\*) Intesa Stato-Regioni-Enti locali sui GIS: Agreement Contry-Regions-Local Public Bodies on GIS

provinces, Piedmont region, e.g. road network and river and channel network.

Continuous updating of "BDTRE" is a main purpose; updated spatial data will get into the receiving environment directly from providers, e.g. municipalities, which are going to use regional specifications for creating and providing data; providers are going to be at the same time users of the whole, updated and consistent, spatial reference data base, from the publishing environment.

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## News and Events

- EUGISES 2008 - 6<sup>th</sup> European GIS Education Seminar, 11<sup>th</sup> -14<sup>th</sup> September, 2008 Cirencester, U.K. (<http://www.eugises.eu>)
  - AMFM 2008 Conference - September 24th and 25th , 2008, Rome, Italy (<http://www.amfm.it> )
  - ECOM&EGOV 2008 - 8<sup>th</sup> International Multidisciplinary Conference on e-Commerce and e-Government, Wisla, Poland, October 20-22, 2008
  - ICT Event 2008 - "Opportunities for small and medium-sized enterprises in the Innovator Village", Lyon, France, 25<sup>th</sup> - 27<sup>th</sup> November 2008.
  - Workshop on Archiving in Digital Cartography and Geoinformation - Preserving and Enabling Permanent Access to Cartographic Cultural Heritage - Berlin, Germany, 4-5 December 2008
  - AGILE 2009 in Hannover, 2-5 June, Leibniz, Hannover (<http://www.agile-online.org>)
  - UDMS 2009 - 27th Urban Data Management Symposium, June 24-26, Ljubljana, Slovenija ([www.udms.net](http://www.udms.net))
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