THE SPANISH CARTOGRAPHY ON MOBILES HAND-PLATFORM: THE MOVILMAP PROJECT

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ABSTRACT

The Spanish National Information Geographic Centre (CNIG) has finish with success a project to push in mobile hand-platform the basic national cartographic digital data of the Spanish NMA: the National Geographic Institute (IGN), a details of scale 1/25.000. The project, know how MOVILMAP en Spain, show to clients the cartographic maps of Spain on the screen of your mobile device: telephone or PDA with a connexion to phone service. The system can show the map in different scales adjust to mobile configuration in the three dimensions: two for planning cartography (x, y) couples of coordinates and another one: the deep. The couple of coordinates permit to mobile client move to around the eight directions of compass and the last one permit at mobile client move to different details scales: zoom plus and reverse using the different scales of details: 1/1.000.000, 1/500.000, 1/200.000 y 1/25.000. The navigation show on the mobile screen the different politics autonomous Spanish regions and the provinces that compounds these ones with and very comfortable and friendly GUI (Graphic User Interface) just to reach the maximum deep of detail incorporated in the National Topographic Mapping (MTN25) of basic series mapping of Spain. The MOVILMAP project permit the user the search and found on the screen the different cartographic elements. At the moment only is in service the urban and village names using the IGN gazetteer. Another very interesting facility of the MOVILMAP project is the localization capability answering the question "Where am I?"

The system is extremely utile how positioning system of receptor device with errors means near 20 meters in urban sites and 100 metes in country sites. These values are high already that the positioning is calculated means of trilateration system between antennas position. The project is realised with the "TELEFÓNICA MÓVILES España" company and plus exactly with your "Movistar: e.motion" service that nowadays is in service to all clients of this international company of phone services. Of course this joint venture the mapping digital data is accessible to any client in anywhere of world.
The MOVILMAP commercial service is means subscription it shelf with a monthly cost without limit of time of use in mapping navigation, searching and localization, or about the use a phone call to system service "e.motion" in the internet page http://www.movilmap.es, in this las case the cost is the standard cost about the time of use in phone call price list.

The MOVILMAP project use the raster image format more appropriate to transfer from the digital mapping data server in CNIG to end-user client: movies phones and PDAs. The navigation flow of client and the Graphic User Interface (GUI) are extremely easy, natural and friendly, and give the user the search and found capacity of selection any urban place-name (city, village, ...) of Spain working with the geo-referenced Gazetteer of data map means of step to step way in deep to differents scales of maps : national, regional and province map in zoom operations already reach the maximum level of details with the MTN25 maps of Spain.

The project is made using *open source* environment and UNIX operative system how server on CNIG centre of data process. The system is a multi-platform client. In this way the system detect the configuration of the end-user device (phone or PDA): size and resolution of screen, version of firmware, capacity of memory or processor, etc., and adapt the size and resolution of digital mapping data to transmit to window-screen size and resolution to client.

The potential users of this MOVILMAP service are multiples. We thinks that the individual and personal user are lot-off, but the public and governmental organizations and corporations are natural end-users of the system. In the private march the system have a wider list of applications with the inclusion the any data of interest to public from the server. The system is well to utilities: fireman, police, civil protection authorities, events, car accidents, natural disasters, they are a hug quantity of events who are to be map positioned and localized. With this process the positioning is clear and the advertisement is more efficient and effective already of all people have a mobile in your hand or in the pocket of course. The applications are multiples and the imagination of each one of ours will give at system functionalities no think at the moment.

The way of service is fully open. This permit to push any type of element on the digital map take on for the client y can to be public and can to be and power tool in the march of the tourism, utilities, point of information, and any points of interest, … The MOVILMAP project is open in your configuration and can to adapt to any type or kind of data in your end-user server segment.