Chapter 46
Last Online Deposits Spatial Data in the Web

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ABSTRACT

The posting of interactive mapping is essential for the dissemination of information to the general public and in all areas. All the elements constituting a spatial object are represented by agreements with symbols. Each element is represented at the level of reality. The posting of maps on the Internet can take many forms. It can be static maps, as a picture. Interactions with the user can be included on the maps produced. These are movements and functions of the zoom presentation (display information, change of scale, global view). At this level, it is also possible to examine, by selection of the objects represented on the map (common facilities). This level is commonly known as Web mapping. The dynamic mapping is used when information is to be renewed or if the geographical extent of the area is large. In this case, a server handles in real-time updated database to provide users answers to their complaints. The functions proposed in this case are close to those of GIS software (acquisition, manipulation, management and processing of geographical data). In this chapter we will explore the possibility of integrating a dynamic mapping on the Web.

INTRODUCTION

For over thirty years, the cards are offered as a faithful reproduction of a geographical space object. All its components are represented by agreements with symbols. Each is represented on the scale of reality. The maps posting on the Internet can take many forms. It can be fixed cards, as a picture. As a result, the site or any part thereof is not connected to a database. The pages are already built and are displayed (e.g. PDF) on the user as they were originally created. Interactions with potential users can be included on the maps produced. These are movements, and zoom functions as the display presentation of information, the change of scale, the global view, and so on.

It is also possible to examine, by selection of geographical space on the card, such as municipalities, schools, etc. This level is commonly known as Web-mapping. The dynamic mapping is applied when the information is to be constantly updated or if the coverage of the area is great. In this case, allows a server to query real-time database updates to give users answers to their complaints (De Blomac F, 2009), (Dupasque X, 2005), (Dupont G, 2004) and (Mauvière E, 1999). The functions proposed in this case approximate those of a geographical information system (GIS) for the acquisition, handling, management and processing of geographic data. The publication of the geographical information as numeric cards takes more and more interest because of the progress reached in the domain of the new technologies of information and the communication and the arrival to maturity of the software of spatial representation of the data or geographical information system (GIS) [De Blomac F, 2001].

In this chapter, we will focus on the possibility of integrating a dynamic mapping on the Web. Our aim is to provide an overview of the potential of the Internet for GIS and to give what he wishes to put their GIS dynamic web to choose between different opportunities (AFIGEO, 1998).

STATE OF CARTOGRAPHY ART

The mapping allows the use of techniques for achieving the cards. It is used to better understand and define the space, territories and landscapes. It is also used in related sciences, demography and economy in order to propose a reading of the geo-phenomena. How can we be a part of the irregular shape of the spherical earth on a globe? To be able to give a reliable description of a territory and to locate objects in space, it is essential to know the exact shape of the earth. That is the purpose of surveying and mapping work. The ellipsoid is the reference surface to represent the best shape of the earth. It is useful to perform the

necessary calculations, if you want to perform the topographic location of objects by using measures. The physical figure which best represents the shape of the earth called geoids. This is the form of the mean sea level. After the location of each point in space measurements of angles and distances, calculations of the projections means from the three-dimensional reality to the representation plane (Dupont G, 2004).

ONE POINT ON THE TERRESTRIAL SURFACE LOCALIZATION

The altimetry permits to determine the height of one point that is expressed by the difference between the point and a surface of reference as the sea level. The geoids are the surface of reference for the observations of altimeter. The measure of the heights called levelling makes itself by lines, whose intermediate points are marked with the help of ankles implanted in the facades of the buildings. The set of these reference marks constitutes the network of levelling of the studied geographical zone. All information on these reference marks is listed by the direction of the land-registry of the wilaya.

The plane coordinates of one point are calculated near to the centimetre with the help of triangles, where we measured the angles and the distances with tachometers. To orient their observations, the geometers determined the coordinates of the mosques minarets or the water castles that represent very visible reference marks from afar. The administration of the land-registry and the topography manages the geodesic basis network composed of score thousand points. The system of positioning by GPS satellites (Global Positioning System) permits the precise determination of the coordinates of one point quickly on earth. To be able to produce a card or a plan from the measured data, we conduct calculations of a mathematical projection. Several geodesic systems exist. An

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