

Urban Information System for Jaipur, India: An Open Source Web-GIS Approach

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Abstract: Development of an Information Systems in the urban sector is one of the major initiatives taken as part of urban planning and urban management. Urban Information System (UIS), through a simple, user friendly interface, is customized to meet the specific requirement at the user end by integrating geospatial and attribute databases to support various levels of planning within urban areas thereby strengthening the process of decision-making. UIS-Jaipur study has been initiated by following specifications and methodology prescribed in the design and standards of National Urban Information System (NUIS) - 2006. The Open Source Web GIS technology concepts were used for development of a proto type web enabled UIS to share the data with authentic user access among decision-making authorities. The spatial data along with attribute data sets is organized in a centralized server system. The original spatial data is accessible through web map services (WMS) only. The user friendly GUI facilitates display of raster datasets of different spatial resolutions seamlessly with overlay and query of vector datasets. The UIS provides basic GIS tools along with enhanced query, dynamic graph creation for query outputs, searching spatial and non-spatial datasets with download facility of raster data at client end. In the development of UIS, non-spatial datasets play equal role like spatial datasets. That is, the information system becomes more useful in the operational use and decision-making when it is populated with more and more spatial and non-spatial databases. In the present study the UIS is made available for Jaipur city, which can be extended to any other urban-areas/city of India.

Keywords: Urban mapping, Geoinformation management, Open Source GIS, Visualizing spatial information, Mapserver, Web GIS