Active Web GIS @ IIITM-K

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Introduction

Several decision support situations deal with large volumes of geographical information such as land use, land revenue, soil and water resources, geographic assets like infrastructure and utilities, etc. Conventionally, Geographical Information Systems are implemented in a closed environment, mostly done with isolated desktop computing systems where information is updated infrequently. The major limitation of such a system is that the dynamic information is inaccessible to the target users outside the closed environment.

To enable dynamic spatial information monitoring and management over the Web, the Indian Institute of Information technology and Management – Kerala (IIITM-K) has developed the Active Web GIS based on Open Source Technology. Active Web GIS is accessible over the web by both GIS based services providers and users as a technology platform for a whole new class of community driven E-Governance situations.

Active Web GIS Platform

The Active Web GIS facilitates access to dynamic geographical information and a set of tools for spatial query and navigation, available in a simplified, Web interface. In an active Web GIS, the geographic objects and\or attributes are powered by dynamic database systems that represent the changes in the real world. Thus it allows the visualization, query and analysis of dynamic data with a natural geographic setting. Active Web GIS is very important when the location-specific information is dynamic and decisions have to be made on real time basis.

The advantages of active Web GIS over stand-alone system are the following

- o Concurrent access
- o Dynamic
- o No software\plugin installation required
- o Flexible database – can accommodate wide range of schema
- o Scalable

Technology platforms

Depending on the nature and type of Geographic information and the specific application requirements WebGIS can be designed and configured. In IIITMK's WebGIS is designed essentially with three platforms.

- ❑ WebGIS with Open Source tools (Complying with Open Geospatial Standards)
- ❑ Google API based Mashups
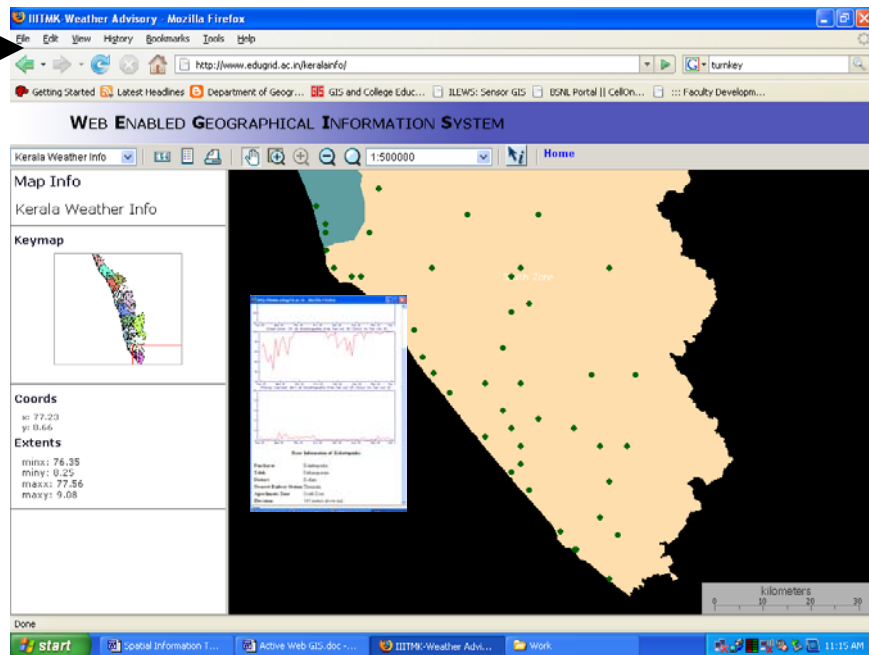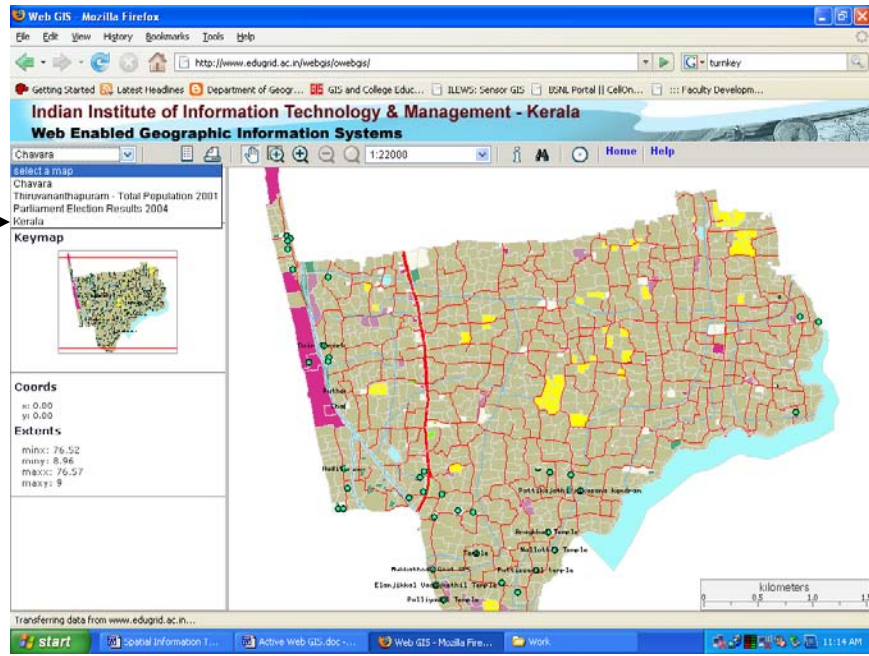- ❑ VRML based 3D Visualization and navigation

How Active Web GIS works

The Active Web GIS interface contains a browser page (with a specific URL) embedded with GIS maps, data and tools. The Web GIS does not require any software\plugins to be installed. The user can work with these data and tools on an Internet browser just the same way as he\she works on stand-alone software. The Web Map Server application configured on the Server processes the request from the client and retrieves the information from the geodatabase. The browser interface contains GIS navigation tools using which user can access the geographic information intefractively.
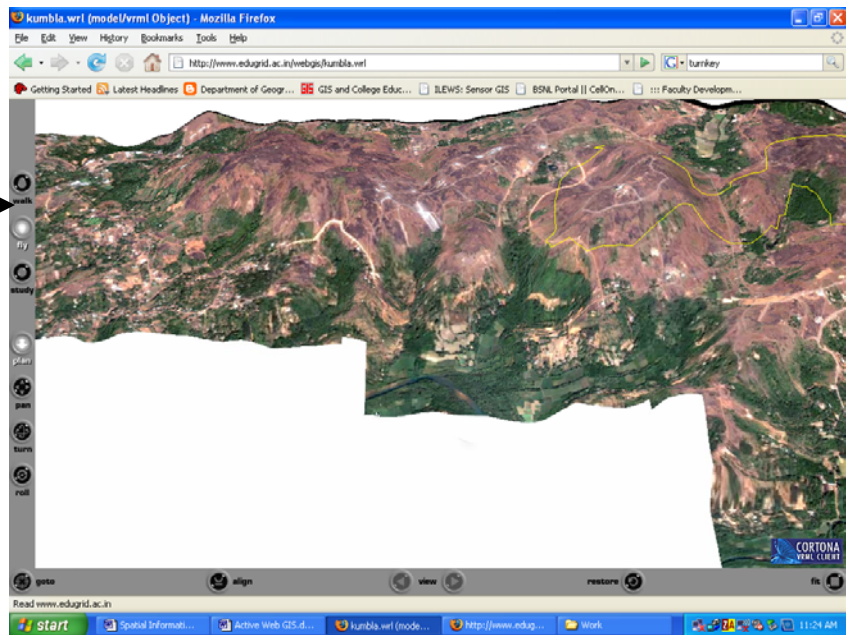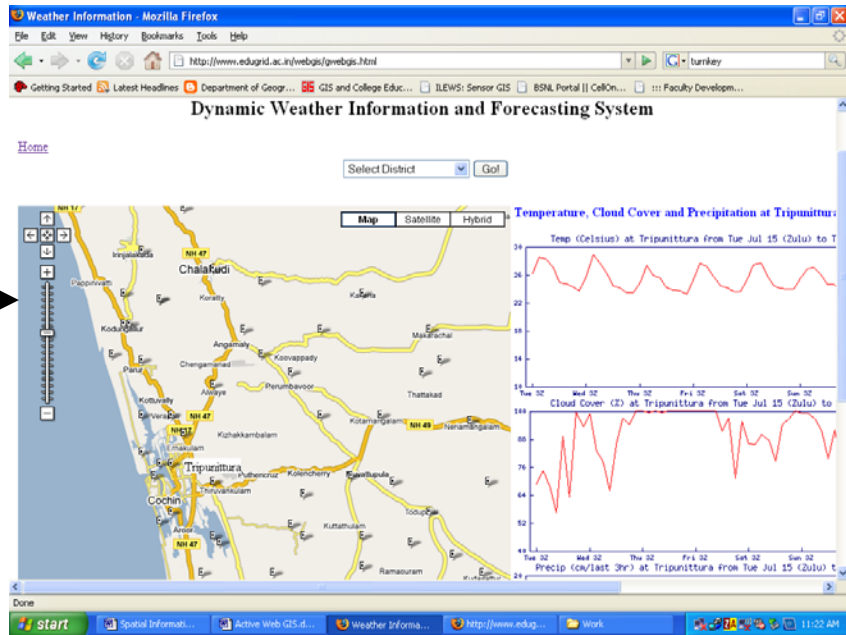
Web GIS Screenshots (www.edugrid.ac.in/webgis)

When you click WebGIS, it breaks into Kerala and Weather

For 3D visualization if you are not able to see the model, you need to install a small plugin for your browser. The installation can be done online.