Client and Activity

GIS Based Road Management System for National Highway Authority Of India Ltd, India

Objective

To create a GIS based land Information System using modern techniques of Remote Sensing, Satellite Imagery and GPS based surveys for

NH2 – Project Management & work progress Monitoring

Monitoring (Sikandara-Bara-Bhaunti), 393-470 Km

NH8 – Road Maintenance and Asset Information

System (Delhi-Jaipur), 36.63-107.83 Km

- Web publishing of project data for project monitoring and Highway asset management

- Fast access to project status and other vital project information.

- Allow updation of feature data from field offices by searching them

- Maximizing ease of access through user friendly Graphical User Interface

- Easy Scalability for handling large volume of data access

System Architecture
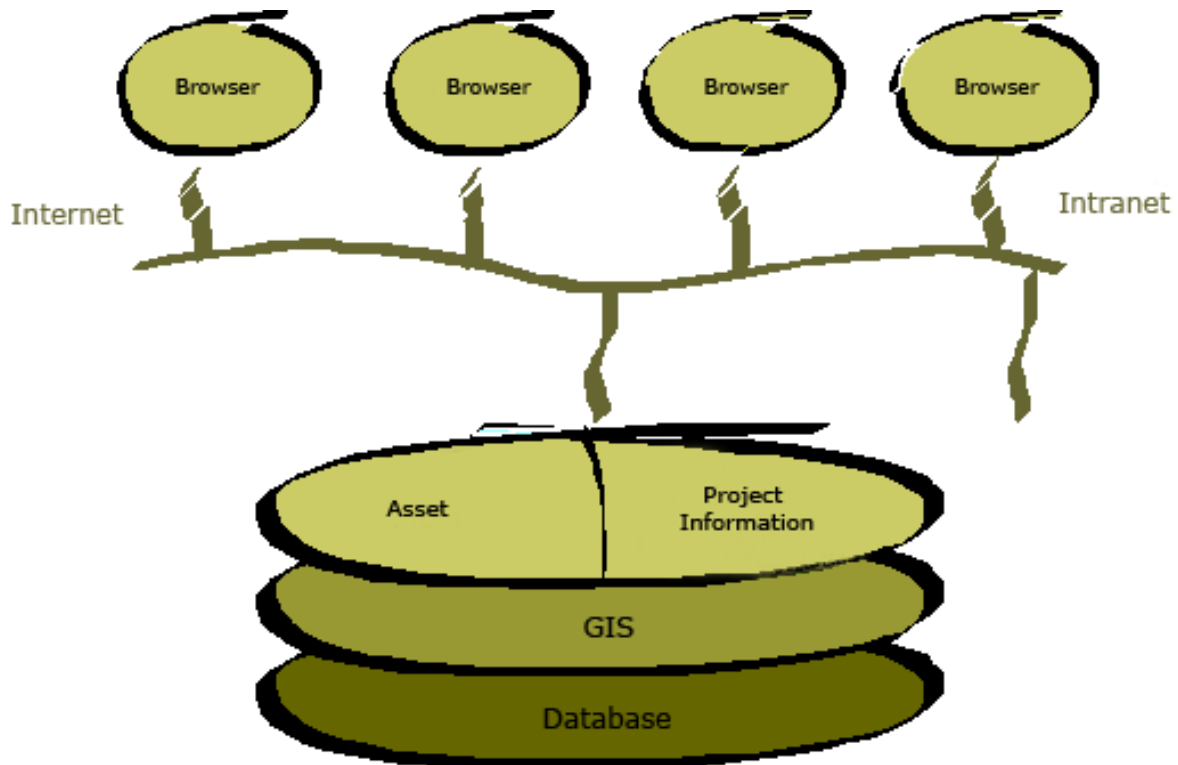
The entire web-based GIS-RMS system was built using ColdFusion, ASP and HTML. The coding involved forms, interactive searches and reports. Some reports involve the use of java Applets for showing charts of different kinds.

Solution

The System is implemented on a Industry standard Web Based GIS Platform, MapGuide from Autodesk Inc. USA. Implementation and Customisation done by Adroitec In association with IT Division, NHAI.

The database for GIS-RMS system was created in SQL for the following:

1.   Feature Tables for various Assets

2.   Project Related Tables (Project information like project progress and fund information)

3.   General Information Tables (Environment, Survey data etc.)
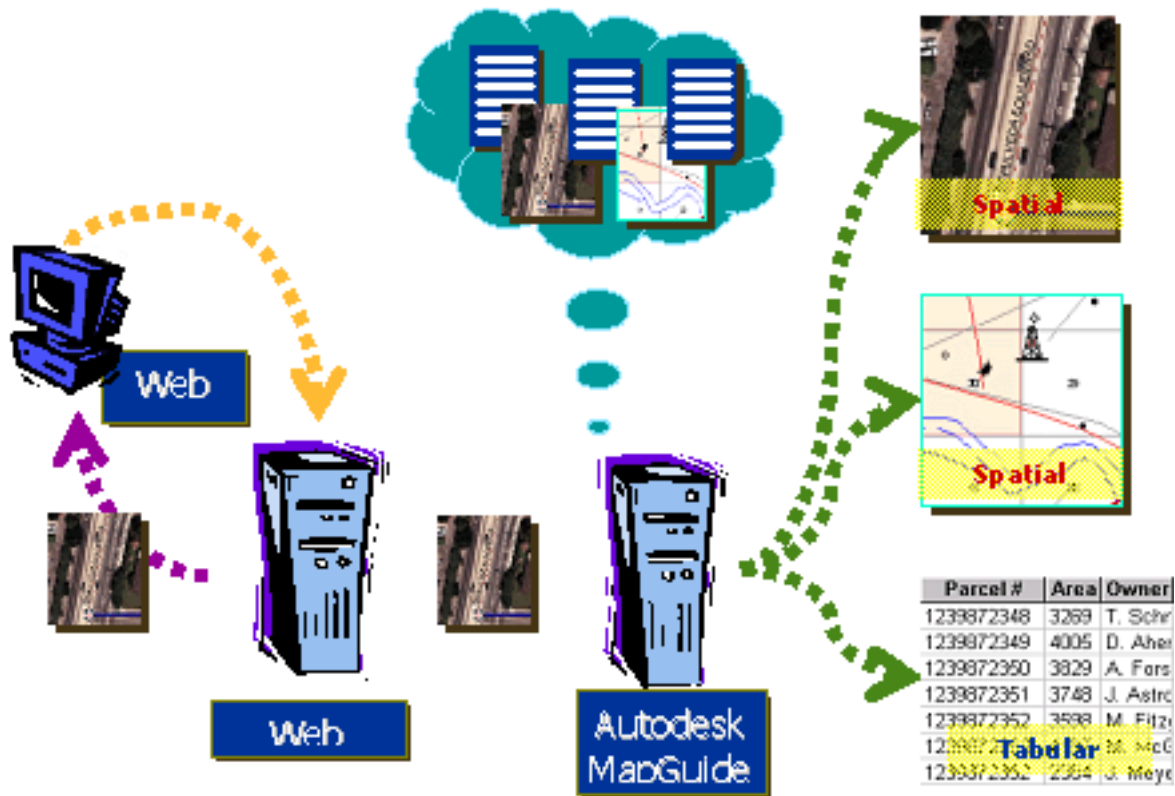
Methodology

- Traversing the spine of the road by means of GPS and control points taken for the total-station

- The Total station survey done with the Control points and covering the periphery of the area i.e. fixing of roads,shoulders, approach roads, Boundary fencing etc.

- All topographical features were mapped using the ETS to a relative accuracy of 10cm or better.

- All attribute information were collected from the field and marked on the draft topographical drawings.

- After downloading the data to the computer the Information is processed to generate Spatial data files with attached database