e-Pathai

A Web Based Bi-Lingual GIS Road Network Solution

Solution Summary

e-Pathai (Electronic Project, Administration, Traffic, Highway Assets and Information management system) GIS, is a web-based bi-lingual GIS that assists in decision making and rationalizing the planning, programming, funding, procurement activities and allocation of resources in road network, to allow the best use of public funds in preserving road networks at an acceptable level of serviceability.

Solution Description

e-Pathai GIS is a cross-browser, cross-platform web-based application that has been developed specifically for Tamil Nadu Highways Department (TNHD). The solution is built on Esri ArcGIS Server and supported by a set of powerful customized query and analysis tools. It runs on all popular web browsers including Microsoft Internet Explorer, Mozilla Firefox, and Google Chrome.

e-Pathai GIS:

- Assists TNHD to rationalize decision making in planning, programming, funding, procurement and in the allocation of resources in the road sector.
- Make the best use of public funds in preserving the road networks at an acceptable level of serviceability.
- Assists in establishing the prioritization of tasks as well as visually reporting on its condition using thematic maps.
- Improved support for decision-making through GIS analytical tools.
- Eases evaluation of the roads and related infrastructure for planning & programming purposes.
- Provides a common operating picture to TNHD and other related agencies associated with road management and maintenance, thus improving the overall ability to manage road maintenance and improvement activities efficiently and cost-effectively.
- Provides an interface to public to access details about roads, bridges and other projects implemented by the highway department.

Key Features

- **Bing Maps Integration:** is a web mapping service provided as a part of Microsoft's Bing suite of search engines and powered by the Bing Maps for Enterprise framework. The service is available in the application as a backdrop layer besides Open Series Maps of Survey of India. Bing aerial view overlays satellite imagery onto the map and highlights roads and major landmarks. Utilizing Bing services, it is possible to locate a point or address of interest and find the shortest route between two places by distance or travel time.

- **Bi-Lingual Interface:** e-Pathai GIS has a bi-lingual interface allowing users to switch between English and Tamil language.

- **High-Resolution Map Printing:** GIS analysis/maps can be printed and downloaded as high-quality PDF files in customized templates.

- **ROMDAS Video:** e-Pathai GIS have ROMDAS videos of the road conditions and road assets integrated with it. The camera icon is visible only at locations where ROMDAS video is available. Clicking on the camera icon plays ROMDAS video for the selected location.

- **Vehicle Damage Factor Tool:** VDF tool is provided to switch on the census stations having VDF information. On clicking the VDF tool, the census stations display the VDF icon on the map. Clicking on the VDF icon provides the relevant VDF information

- **View Elevation Profile:** This is a handy tool to understand elevation or profile of the terrain lying adjacent to the road stretch. It is also possible to generate longitudinal profile along the user-defined alignment, which is useful for route planning.

About the Partner

e-Pathai GIS has been developed and implemented by Pixel Softek, an Esri Silver Partner for Tamil Nadu Highways Department.

PIXEL SOFTEK PVT LTD, is an ISO 9001-2008 certified, CMMI Level 3 company, headquartered at Bangalore with offices in Chennai and Delhi and in operation for close to two decades now. It is an Indian emerging GIS, IT, consulting, software & services organization offering unique enterprise solutions for impactful insights & effective decision making. They are proud winners of India Geospatial Excellence Award under Infrastructure category at the India Geospatial Forum 2013 and Esri 2015 Special Achievement in GIS (SAG) Award.