e-Pathai - GIS in Tamil Nadu Highways

Esri India, a strategic joint venture between Esri Inc., USA and NIIT Technologies Ltd., has deployed the e-Pathai project for the Tamil Nadu Highways Department (TNHD), centered around a Geographic Information Systems (GIS) solution. The TNHD is primarily responsible for the construction and maintenance of about 60,000 kms of the road network.

Esri India (NIIT GIS Ltd.) is an end-to-end Geospatial Information Systems (GIS)-based solutions provider and enjoys a leadership position in India with a large customer base of Esri suite of software. The transportation network of the TNDH meanwhile, is the back bone of all developmental activities in the state of Tamil Nadu. With exponentially increasing motorised vehicles, TNHD was experiencing the need to support road and related infrastructure and continuously monitor and manage its vast road network to make quick, reliable and rational decisions on upgrade and maintenance.

TNHD envisaged a web-based GIS Road and Bridge information system (based on the client-server architecture), under its e-Pathai (Electronic Project, Administration, Traffic, Highway Assets and Information management) system. This aimed to integrate the GIS solution with the TNRMMS and the Project and Finance Management System (P&FMS).

The project involved the integration of spatial and non-spatial data into the e-Pathai GIS from several sources such as the Survey of India (SOI) Open Series Maps (OSM), demographic details from the Census of India and average annual rainfall data from the India Meteorological Department. It required the development of customised querying and analysis tools developed specifically for the TNHD and multi-lingual support, allowing users to switch between English and Tamil. There was also a need for video integration with the web GIS interface.

The solution was implemented using Esri's ArcGIS software and Silverlight APIs. Owing to the solution, the GIS map can retrieve and analyse the data on roads and bridges visually, helping decision-makers in planning, monitoring and maintaining of roads and related assets in a better way. The web-based system is additionally enabling the TNHD to take timely and accurate decisions on an anytime-anywhere basis.

The solution provides a common operating picture to the TNHD and other related agencies associated with road management and maintenance, thus improving their ability to manage road maintenance efficiently and effectively. It also provides an interface to the public to access details about roads, bridges and other projects implemented by the highways department.

Customer speak:

"The ArcGIS platform's extensive capability has helped to rationalise our decision-making in planning, programming, funding and allocation of resources, allowing us to make the best use of public funds in preserving the road networks at an acceptable level of serviceability".
--**G. Kumar,** *Chief Officer (IT)–TNHD*

Contact details

Er. G. Kumar, Chief Officer (IT) – TNHD	Esri India (NIIT GIS Ltd.)
+91-94441-17162	Vishal Sharma
kumarg56@gmail.com	+91-4057-0957
http://www.tnhighways.org/	vishal.3.sharma@niit-tech.com
	http://www.esriindia.com