

Electoral Data Analysis & Management

A GIS based Electoral Management solution

Solution Summary

Electoral Data Analysis & Management is a GIS based end-to-end solution that enables all voters and election officers to visualize relationships, patterns, and trends to deeply understand their constituency and manage electoral processes effectively. The stakeholders can access information with respect to all facets of electoral management like voter registration, polling stations locator and election data on demand. The solution has separate interface for citizens and officers.

While the citizen centric interface of this GIS based solution focuses on enriching the voters electoral experience, Election officer interface focuses on the herculean task of election management and monitoring. Through a web-based interface from the home page, election officers are able to access a highly sophisticated GIS Application that enables them to perform a wide array of duties and responsibilities. The solution is a backbone to aid election officers to manage their jurisdictions as well as coordinate operations.

Solution Description

The solution is based on the state-of-the-art technologies, including GIS and beyond, to bring to the election machinery a system that is easy to use, reliable and immediately accessible.

The solution has separate interface for citizens and officers that refine the electoral experience for voters and enables officers to execute their tasks in a coordinated manner. Through spatial analysis, multiple databases and validated data elements, electoral officers and voters are provided access to a full spectrum of information about critical constituents such as voter data, voter registration information, polling stations, personnel posted at each location, directions to polling station clusters and a host of other information available with only a few mouse clicks. The entire solution can be accessed on smartphones and tablet PCs through customizable apps.

Key features :

- Device agnostic, multilingual, web-based intuitive interface that serves as a complete information gateway for voter and officers
- Capability to query the spatial data and the election data on demand
- Create routes to the polling station on maps and store for future reference
- Create map-based view of several key elements such as district boundaries, locations of polling booths within an assembly constituency as well as a parliamentary constituency and other related data.
- A high level of functionality for officers interface such as base map toggle, map pan, zoom in, zoom out, layer toggle and legend display
- The functionality of the ArcGIS application to help election personnel expertly manage election logistics
- Webcasting feature with live video, to help polling officers monitor the entire voting process and identify any discrepancies



The solution is built using

- Esri ArcGIS API for Java Script 3.7, WCF services, ARC SDE, ARC GIS server 10.2
- J2EE, WebServices, JBOSS Application Server, SQL Server 2008 R2
- iOS, Android, Windows Mobile, PhoneGap.

Key Benefits:

Benefits of the Citizen Interface

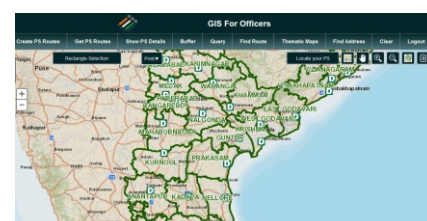
- **Easy access to information**
The solution provides instant access to polling logistics information to millions of voters through smartphones, tabs and other access devices.
- **Voter Transparency**
Registered voters can claim their voter records and even correct any discrepancies by interacting directly with the Election Commission. They no longer need to go through polling agents and other non-governmental support staff with possible vested interests.
- **Multilingual Interface**
The solution can be customized in multiple languages, thus even voters from remote villages can check their voter records in their vernacular language and take timely action to update their records.

Benefits of the Officer's Interface




- **Near instant decision-making**
With millions of bytes of real time data at their fingertips, officers can take decisions swiftly and confidently. The solution provides them direct access to data, which supports their decisions in every way, shape and form.
- **Ease of Coordination**
The GIS based solution enables hundreds of booth level officers to coordinate with one another in the virtual space by sharing data and forwarding relevant information extracted from one or more of the various databases.
- **Significant Cost Savings**
The functionality of the GIS technology in the solution helps reduce cost of managing the election logistics.
- **Monitoring**
Using the webcasting feature polling officers can monitor the entire voting process and identify any discrepancies.
- **Deployment of Polling Personnel**
The solution facilitates the deployment of polling personnel such as polling officers, staff, security officers and others to manage the election process efficiently.

About the Partner

ASMAN Software Solutions Private Limited is a provider of cutting edge software consultancy, design and development services with headquarters in Hyderabad, India. The company made its inception into the IT arena in 2011 and offers a comprehensive range of Software and IT solutions on a wide range of Hardware and software platforms. In partnership with Esri, we create spatial information systems to help accelerate client businesses forward. The broad range of services that are offered includes map customization, custom tool development, application migration, web GIS, mobile GIS etc.



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