

Bengal Assembly Elections: Utilizing ICT based Services

The recently concluded West Bengal Assembly Election- 2011 has once again underlined that ICT can be successfully employed in providing services towards management of election processes and activities. The various ICT based services, designed and developed by NIC Services Inc. (NICSI) in consultation with Chief Electoral Office and Election Commission of India played an important role in conducting free and fair elections in the state.



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A mechanism was developed for collecting and compiling various field level information/reports deriving the benefit of latest technology during the preparatory work for general elections of West Bengal Legislative Assembly - 2011. A wizard based designing of Forms, reports etc. was conceived along with the SMS based Poll Management System, Webcasting of Poll proceedings from polling station level and other innovative electoral centric services were integrated in an enterprise based portal.

WEB PORTAL

The Chief Electoral Office, West Bengal collects various kinds of field level data and compiles it for generating reports for monitoring/ decision making as well as its onward transmission to the Election Commission of India. The nature of data/ information are in structured format/ template, some are of rudimentary and few are not in standard template which are to be devised as per requirement basis. The periodicity of such information is regular and some are required to be collected on an emergency basis. The input are received from the field level such as District Election Officers (District Magistrates), Returning Officers/ Electoral Registration Officers (Sub-

Divisional Magistrates/ Dy. Magistrates in case of Assembly Constituencies), Assistant Returning Officers/ Assistant Electoral Registration Officer (Block Development Officer), Booth Level Officer (Polling Station Level).

In view of the above, a Web based Portal was designed so that users at various level may login to the system



OSD(IT), CEO Office West Bengal Sh. Somnath along with Motiur Rahman, TD, NIC W.B having a look at the Customized Portal for Video streaming of Poll Proceedings and SMS based Poll Management

and edit/view/access data/information which comes under their jurisdiction. This has been ensured through a properly defined control table and its mapping with User Management module. This decision support application software is a wizard based customized generic web-enabled product and this was utilized at multiple level down the line for compilation of micro level data to prepare reports through Smart



SUNIL KUMAR GUPTA
IAS, Chief Electoral Officer
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"I am happy to learn that 'ICT support for Electoral Management System' for the conduct of Poll in West Bengal Legislative Assembly, 2011 is going to be published in 'E-Governance Services & Product' section of coming issue (July, 2011) of e-Governance News Letter 'INFORMATICS'.

I would like to place on record my appreciation for the innovative ICT support and services provided by NICSI, Kolkata through empanelled vendor M/s Indus Net Technologies especially Web reporting from field level (AROs/ROs/DEOs) through Enterprise level customized Web Portal, SMS based Poll Management, Web Casting of Poll Proceedings from Polling Stations and other ICT and Web-enabled services for the smooth conduct of General Election to the West Bengal Legislative Assembly, 2011."

Report Engine for its onward transmission to higher level. The following major features have been embedded into the system to make it user friendly.

Forms Module: All the forms created dynamically were available for the web data entry / edit.

Excel Import /

Export: There is an added functionality to ensure that all the users are able to import the data directly from the excel files and they are also able to export the same.

Web Reports: Some of the reports can also be published online, such that there will be static link to the data reports from various other websites.

SMS BASED POLL MANAGEMENT SYSTEM

The SMS based Poll Management/Monitoring System gets the various predefined events related to Poll from Poll-1/Poll-2 days from the Polling Officials in order to capture the data from its primary source through SMS using pre specified simple syntax. Sector Officer/ ARO /RO of respective sectors were also authorized to send SMS/Web Interface for the default Polling Station under their Jurisdiction. These SMS are pushed through dedicated robust SMS Gateway Server to Application Server and updated in the database almost instantly. The Application was hosted in a Cloud based Data Centre with Virtualization environment and multiple VMs (Virtual Machines) were created for the purpose to ensure zero downtime. Both SMS Server and Application Server were capable of taking tremendous load in peak time and worked in perfect synchronization and fail over arrangements which were made for this mission critical application.



Sh. Sunil Gupta, IAS, Chief Electoral Officer, West Bengal inspecting the election process

WEB CASTING OF POLL PROCEEDING

■ **Encoding (Live feed of Video & Audio) at Polling Station:** The real challenge came up when a very simple interface was required for the polling stations so that they could seamlessly connect and upload the live streams in available low bandwidth at the booth level. A special software was devised which could stream the video by logging into a central server and making it completely web based ensured that the Polling Stations are completely left hassle free. It is a "Flash" based system.

■ **Multiple Polling Stations viewing at the control room:** An interface application was developed to facilitate selection of viewing particular Polling Station (PS) without any IP address. A central login system was made which allowed the various levels of users just to view the PS designated under their jurisdiction. The system allows that the users could select multiple stations and view them all at the same time.

For further information

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