

# Informatics



## Information and Communications Technology in Elections in India

Efficient e-Governance in Rajasthan

Integrated Online DAK Management System

Nagaland Embraces ICT for Good Governance

ICT in Districts: Gadchiroli, Kurukshetra, Kathua, Supaul

Cufón

Mobile e-Governance Services



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# Editorial



Conduct of Elections in India is an event that involves mammoth complexity and intensive planning considering electorate size, geographical spread and terrain of India. The Election Commission of India is on a mission to integrate ICTs in the Indian electoral process within constitutional provisions and a commitment to hold regular, free and fair elections. NIC has been associated with these initiatives and has been extending advise & support at various levels. Our lead story gives you a detailed insight on this.

Loucha Pathap, the land records information system in Manipur, ICT in West Bengal Assembly Elections, Online DAK management system in the office of the CAG, Standardisation of district portal in Orissa and Citizen Rating for Web Resources are the highlights of our E-Governance Products & Services Section.

In the 'From the States/UTs section', we have covered the ICT initiatives in the State of Nagaland and Rajasthan. Various ICT projects and initiatives in Gadchiroli district of Maharashtra, Kurukshetra district of Haryana, Katua district of Jammu & Kashmir, and Supaul district of Bihar have also been highlighted in this issue.

Apart from this, you can get an update on 'Cufón: Custom Font Embedding Technique' for web and Mobile e-Governance Services in our Technology Update section

All our regular sections viz., International e-Gov Update, Cyber Governance, In the News, Book Review etc. are there to serve your need to know what's happening in the e-Gov domain.

We highly appreciate the contributions of our correspondents without it would not have been possible to bring pan country view of ICT in government. As a mark of acknowledgement of their valuable contributions, we are carrying the list of Informatics Correspondents in this issue.

Enjoy Reading...

We would like you to contribute to Informatics. You can send your contributions to our State Correspondents or can also send directly to us at the following address.

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Conduct of Elections in India is an event that involves mammoth complexity and intensive planning considering electorate size, geographical spread and terrain of India. The advent of ICT in Indian Elections has once again underlined the fact, how technology is a boon to the entire mankind. The Election commission of India is on a mission to integrate ICTs in the Indian Electoral Process within constitutional provisions and a commitment to hold regular, free and fair elections.



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# Information and Communications Technology in Elections in India

**"Democracy is not just a question of having a vote. It consists of strengthening each citizen's possibility and capacity to participate in the deliberations involved in life in society."**

**Fernando Cardoso**

India being the largest democracy in the world, free and fair elections have been held since 1947 at regular intervals as per the principles of the Constitution, Electoral Laws and System. Election Commission of India is a permanent Constitutional Body. The Election Commission was established in accordance with the Constitution on 25th January 1950. The Constitution of India has vested in the Election Commission of India the superintendence, direction and control of the entire process for conduct of elections to Parliament and Legislature of every State and to the offices of President and Vice-President of India.

In 1998 the Commission took the historic decision to computerize the entire electoral rolls of 620 million voters. In an attempt to improve the accuracy of the electoral roll and pre-

vent fraud, the Election Commission ordered the making of photo identity cards (EPIC) for all voters in the country.

Election Commission of India in consultation with the State Government designates/ nominates Chief Electoral Officer to supervise the preparation, revision, and corrections of all electoral rolls and conduct of elections in the state. Election Commission of India in consultation with the State Government designates/ nominates District Election Officer (DEO) for each district to run and monitor election related functionalities at district level. Under DEO, preparation and maintenance of electoral rolls is done by Electoral Registration Officer (ERO) and Assistant Electoral Registration Officer (AERO). During electoral registration and conduct of elections to Parliament and the Legislative Assembly of State, the officials from Civil Administration help the election officials on need basis.

NIC has been providing support for all the elections in all the districts and at state headquarters. These include Parliamentary, Legislative, Local bodies and Panchayat elections. The support is provided at various levels for the election processes during pre-polling, polling and post polling events/ activities/ processes.

Pre-polling activities include ICT support for nomination, polling party formation, counting party formation, sector & zonal magistrate appointments, route chart preparation, Electronic Voting Machine (EVM) randomization, etc. The reports on law & order are transmitted to the stakeholders using NICNET, internet and SMS. Post polling activities supported by NIC centres include computerization of counting process and results processing. In the elections of Assembly and the Parliament the results are transmitted to the office of CEO/ Election commission.

The ICT activities may be classified as:

#### a) Pre-Election activities

- I Electoral Rolls Management System
- II Preparation of Electoral Rolls and EPIC
- III Drafting of Polling Personnel/ Party, Randomization of EVMs and Micro Observers
- IV Know your Polling Booth Application - SMS based, Web based, IVRS based, Voice based, and Voter Slip
- V Implementation of GENESYS

#### b) Election Day Activities

- I Communication Plan for Election Tracking (ComET)
- II SMS based services to monitor Election Process milestones and Polling Progress
- III Web casting/ Video streaming of Poll Proceedings from Polling stations

#### c) Post Election - Results/ Trends dissemination

#### d) Other activities related to Elections

- I Design and hosting of CEO website
- II Hosting of Electoral Rolls
- III Website for redressal of Public Grievances
- IV Customized Web Portal
- V Network support for data and video requirements
- VI Setting up of media centre for print and electronic media at Counting location
- VII. GIS for Election Management, Rationalization of Polling Stations, Election Planning and display of Election Results

There are various ICT initiatives currently going on across states and districts as per local requirements. These have started at different times and have varied maturity level and success rates. Some of these initiatives are summarized below for wider dissemination so that more thrust towards adoption/ rollout and standardization could be planned and taken up for resources optimization.

#### ELECTORAL ROLL MANAGEMENT SYSTEM (ERMS)

Management of electoral rolls is one of the most important aspects in a democratic country for successful elections. Management of electoral roll involves two interrelated processes, namely, preparation and



**DR. ALOK SHUKLA**  
Deputy Election Commissioner  
Election Commission of India

I thank the NIC for providing various IT resource based services for use in election activities like Electoral Roll Management System (ERMS), EPICs, GENESYS, COMet, Trends/Dissemination, Public Grievances Redressal System, customized webportal, SMS based systems to monitor election process, Webcasting / video streaming. With the support and expertise of NIC team, we have been able to make elections more transparent and accountable.







**A. MOHAN**  
Deputy Director General, NIC

It was in the year 1991 that the ELECON software of NIC Nalanda District Centre was released for use in all the districts of the country by the then Chief Election Commissioner Sh. T.N. Seshan. There has been large number of significant initiatives since then at the district, state and national levels for the use of ICT tools in the election related activities.

Apart from providing support for development and implementation of various application systems as per the requirements of Election Authorities, NICNET services of NIC have also been used extensively for messaging, video conferencing, hosting of websites with dynamic contents such as electoral rolls and election results dissemination on counting days.

maintenance. An ideal electoral roll ensures all eligible persons should be included and particulars of persons included should be recorded without errors.

Although there are well defined and detailed procedures & policies around for preparation and maintenance of electoral roll by the Election Commission of India (ECI), the manner in which electoral roll data is collected, processed and maintained differs from state to state. So, ERMS vision is to standardize creation and maintenance of electoral rolls across the country by automating ECI field functionaries through a standardized application and data formats.

### ERMS OBJECTIVES

- Provide enhanced and standardized tools for preparation and maintenance of electoral roll
- Optimize operations by effective use of ICT
- Provide timely information for easier and faster analysis
- Increase Operational Efficiency by removing non-standardized and redundant data
- Automating back-office functions by minimizing human intervention
- Ensure transparency and traceability in electoral roll process and data
- Maintain high integrity of electoral roll data and process
- Improved service delivery to the stakeholders

### APPLICATION FOR DRAFTING OF POLLING PARTIES, RANDOMIZATION OF EVMS AND MICRO OBSERVERS

This application has been designed, developed and implemented for State Election Departments as per ECI's guidelines and compendium of Returning Officer's handbook. It handles the functionalities like randomization and formation of polling parties and counting parties; randomization of EVMs; randomization and deployment of force; and

randomization and deployment of Micro Observers. It also helps in generating the election orders for individual parties and attendance sheet for various constituencies etc. The application engine is capable of randomizing data at three different stages for polling party and counting party formation and two stages for EVM deployment.

It is client/ server architecture based application with discreet business/ process flow. The security features enable data secrecy, transparent and fair deployment of personnel and EVMs. DISE (District Information System for Election) and ELECON (Election Confidential) are two popular flavors of this application with different flavors implemented by different states. DISE has been used and replicated by Punjab, Himachal Pradesh, Delhi, Mizoram, Chandigarh and Karnataka. ELECON has won 11th National e-Governance Award (Silver Medal) 2008. The application has provision to generate a number of check lists and reports for increased convenience and operational efficiency.

### GENERAL ELECTION SYSTEM (GENESYS - PRE COUNTING) - AN OVERVIEW

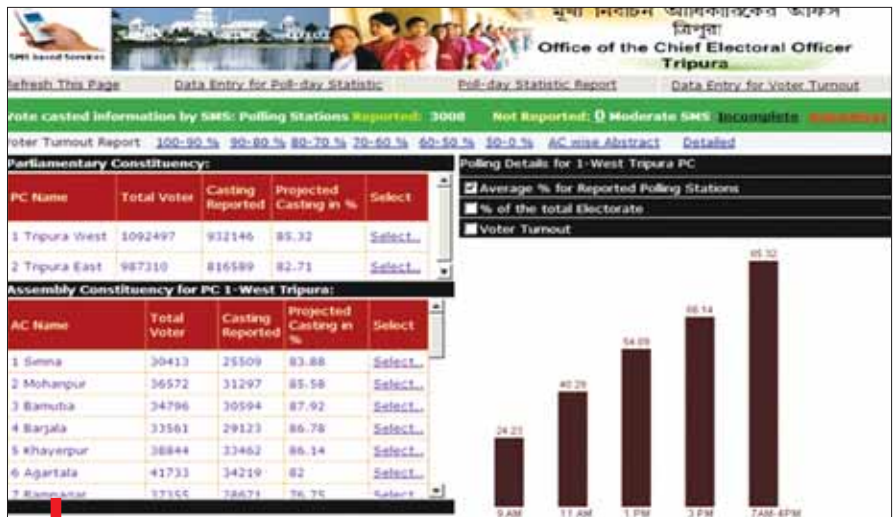
This application is developed by ECI. It is used to capture pre-counting information about the candidates through GENESYS web site (<http://genesys.nic.in>). The forms used and process involved is as follows:

- Forms used for State Assembly Elections
  - Nomination Summary
  - List of Contesting Candidates
  - Number of Electors & Polling Station
  - Final AC wise Result sheet
- Candidate Affidavits scanned at the RO/ DEO level are sent to CEO Office as well as uploaded on CEO's website.

**COMMUNICATION PLAN FOR ELECTION TRACKING-ComET**

A perfect **Communication Plan** is essential for effective **Election Tracking**. ComET enables micro-management of elections, concurrent tracking and evaluation of issues and mid-course corrections. ComET is implemented to computerize communication details of all the polling stations of the country for efficient election tracking. ComET is a search enabled database of polling station level communication contact points for focused tracking on the poll day. The Plan operates through a well structured multi-layer Communication Teams (CTs) at ARO (Assembly segment level), DEO (District Level), CEO (State Level) and ECI (National Level). It creates a huge 'psychological presence', builds confidence in field election functionaries and helps the prioritization for intervention at the moment of crisis. Communication Teams have clear demarcation of geographical areas and communication-related responsibilities geared to quick crisis resolution and grievance monitoring and information flow.

ComET was first implemented in Madhya Pradesh during 2008 State Assembly Elections. In 2009, during



Vote Cast Information - a sample report

General Elections to Lok Sabha, it was rolled out to cover all States/ UTs.

**SMS BASED SYSTEMS TO MONITOR/ MANAGE ELECTION PROCESS MILESTONES AND POLLING PROGRESS**

NIC Tripura for the first time during General Elections 2009 used the cellular and web technology to improve the election process. Mobile phones were used on a very large scale for poll-day monitoring of events and management. A SMS-based Web Application was deployed to collect progress of poll. The application gener-

ated pre-defined Voter Turnout Report (Polling Station wise, Assembly Segment wise and Parliamentary Constituency wise). All the stakeholders like the Assistant Returning Officers, Returning Officers, Observers and the Chief Electoral Officer could directly monitor progress of poll and address any problems immediately. The SMS based system could also be reliably used to track the arrival/ departure of the polling parties, conduct of mock poll, presence of polling agents/ micro-observers, deployment of CPF and use of video/ digital camera at the polling station. The real time information regarding the poll process and two hourly progress of poll at the polling stations was made available online on the CEO's website for the public and the press on the day of the poll.

The enhanced system was subsequently implemented in other state assembly elections like Bihar, West Bengal, Assam, etc.

**WEB CASTING/ VIDEO STREAMING OF POLL PROCEEDINGS FROM POLLING STATIONS**

The Election Commission directed that in order to enable the Commission to have a true and concurrent record of the violations of



Sh. P.K.Thungon, DIO receiving Commendation Certificate from Smt. Swati Sharma, IAS, DC, West Kameng District, Arunachal Pradesh on the occasion of 61st Republic Day 2010 for the successful conduct of Live Webcasting of Assembly Elections





**CEO West Bengal Sh. Sunil Kumar Gupta having a look at the Customized Portal for Video streaming of Poll Proceedings and SMS based Poll Management**

the election law and to assess the impact of its corrective measures, the Returning Officer of each constituency shall make arrangements to record critical events through videography during the process of electioneering, including but not restricted to the period of public campaign, the day of poll, the transport and receipt of polled ballot boxes and other materials, counting of votes and the declaration of results in an independent intelligent and purposeful manner.

During the Lok Sabha elections 2009 for the first time Tamil Nadu did the Live-Recording and Video streaming to the DEO's office for some polling stations in Chennai, Madurai, Kanyakumari and Sivaganga districts.

In the Polling Stations where broadband connectivity was not feasible for live transmission, the proceedings were recorded in the hard disk of the laptops for viewing by the Observer/DEO / RO.

The enhanced system enables to view live video streaming by Election Commission of India (ECI) and respective CEO, DEO and Returning Officers. Subsequently, the enhanced system was used for State Assembly Election of Bihar, West Bengal, Tamil Nadu, and Puducherry.

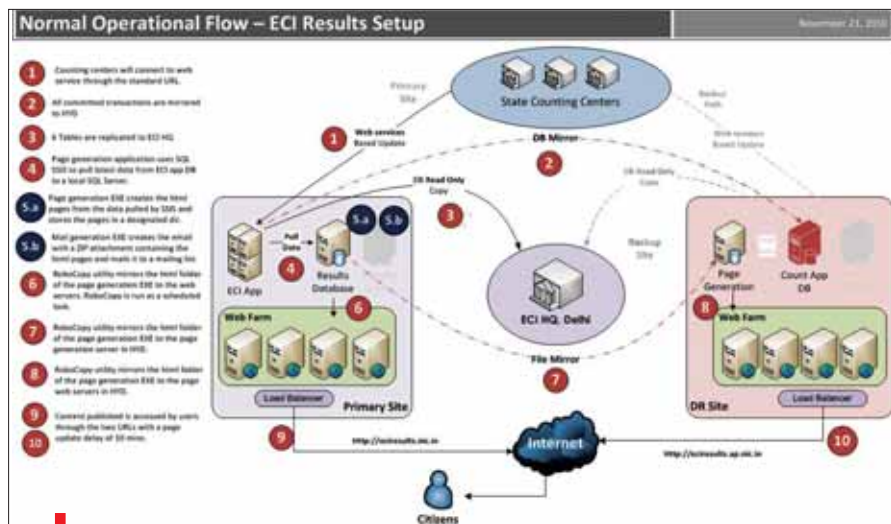
### DISSEMINATION OF ELECTION TRENDS AND RESULTS

NIC was entrusted with the responsibility of hosting the election results and trends on the day of counting for dissemination to public/ citizens by ECI. An application was designed, developed and implemented in high availability mode. The application was hosted at NIC Data Centers (IDC, New Delhi and NDC, Hyderabad) and the trends/ results were made available at two mirrored sites <http://ecire-sults.nic.in> and <http://ecireresults.ap.nic.in>. Dissemination of election results to the stake-

holders across the globe was done using standardized and optimized reports for maximum throughput. The information was also released to media through e-mail at periodic intervals.

During 2011 State Assembly Elections, the data was fed for the 824 assembly constituencies of five states namely Assam, Kerala, Puducherry, Tamil Nadu and West Bengal. The Data was stored in the central database server in IDC, New Delhi and was mirrored to NDC, Hyderabad with the replication done at Election Commission of India. One separate application was developed to pull the data from the centralized server and generate results pages for publishing in real time mode in public domain.

The services of NIC have been utilized and widely appreciated in all the districts and states by the election department. This includes setting up infrastructure for media rooms, uploading of affidavits, support during revision of electoral rolls and polling booths, hosting of applications & web-sites, providing wider bandwidth, security auditing of software, installation of hardware and software procured by the election department. The various systems/applications developed and implemented by in-house, CMC and NICS I programmers for election departments at districts and states have brought efficiency, transparency and accuracy.



**Set-up used for Dissemination of Results/Trends**



# Loucha Pathap: The Land Records Information System in Manipur

The Manipur government embarked on an ambitious e-Governance exercise with the launch of "Loucha Pathap", an application software developed as a standard land records management system in the state. Loucha Pathap, which also refers to the 'Rules governing the land', was introduced in the four valley districts for Computerisation of surveyed lands. Out of nine districts of Manipur the five are in the hills, which are not surveyed unlike the four surveyed valley districts.



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**T**he system 'Loucha Pathap' supports various MIS requirements of state as well as the land owners as per the Rules and Regulations. It also incorporates three level authentications such as Biometric, System and Operator level. The software facilitates automatic generation of Dag no and Patta No. at the time of mutation to avoid duplicate entries. Every record is identified by a unique Dag No. History of records is maintained from the date of implementation. The process of mutation and partition cases starts with printing of fact sheet and completes when the SDC / SDO passes the mutation or partition order. The approved order details of transaction are updated with Land Records.

Edited by  
**Prashant Belwariar**

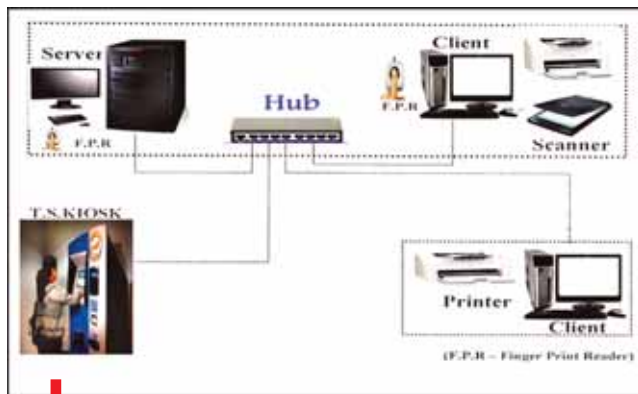
## TECHNOLOGY

The "Loucha Pathap" software, was developed using Microsoft Visual Studio 6.0 as the front end interface and SQL Server 2000 as the back end database over Windows NT server.

The Hon'ble CM had earlier inaugurated the system at Imphal East district where the software underwent its pilot phase. Computerisation has been taken up at twelve SDC circles out of 34 in the four valley districts of the state and for the hilly districts the exercise is likely to be taken up after the completion of the present phase.



Sh. O Ibobi Singh, Hon'ble CM of Manipur along with the Speaker Sh. I. Hemochandra Singh, inaugurating Loucha Pathap software at SDC Central of Imphal West District.



A typical Setup of Land Records Computer Centre

System security is provided by Biometric authentication using fingerprints of the authorized operator as well as the system administrator. Leap Office Lite Version 2.09b and GIST SDK 2.05 enables scripting in regional language. Various reports are generated using Seagate Crystal Reports 7.

### MANUAL SYSTEM

In the manual system, the process of tracing the details of a particular land was time consuming and tiresome. But, with the adoption of the computerized system the process eased considerably promoting timely service, an important parameter for e-governance.

### BENEFITS

Loucha Pathap is an online system of maintaining land records with finger print user authentication. The software provides facilities for searching a particular record by giving the owner name or Dag. No. or Patta No. It enables marking of mortgage/ objection of a particular plot. The software prevents such marked plot from further transaction such as mutation, partition or issue of computerized ROR / Patta etc. It gives important information to banks and public for any future financial encumbrance.

**Single window delivery** - Record of Right i.e Jamabandi and online transaction for mutation and partition along with revenue collection had the desired effect. Scanned order copy of SDC/ SDO is maintained for every

transaction. The process of mutation is fully synchronized with the field-work done by the revenue officials. It facilitates record correction and ownership history reducing the task of revenue record maintenance.

**Transparency** - Services are available to citizens in a transparent and efficient manner. It provides history of land owners and nature of ownership during land related disputes. Searching of land records are possible by name of the family or ownership history of the land can be provided.

**Monitoring** - All the necessary MIS reports in land and revenue administration can be generated for faster monitoring, planning and decision making. It also helps in monitoring the Government lands from encroachment and for easy maintenance and updation of land records.

**Revenue Tax Collection** - No land transaction is possible without necessary land revenue tax clearance.

### ROLES AND RESPONSIBILITIES

The State Revenue Department is responsible for effective land administration and collection of land revenue. The revenue officials fully adopted the workflow based system approach. Regular monitoring and review is ensured in coordination with concerned Deputy Commissioners.

### CHALLENGES

Initially setting up of infrastructure and non availability of adequate power was the major challenge. All activity related to data entry, verification and validation was supported by NIC District Centre with the help of Mandols (village record keeper). The revenue officials were given training and workshops were organized to fully

acquaint them with the system.

### Salient Features

- Facility to scan and keep digital format of the Mutation / Partition order passed by the Revenue Department.
- The system helps in monitoring Government land from encroachments.
- Provision for interfacing the touch screen KIOSK at the office complex so as to enable public to search or query for land records.
- Provision to demand landholding tax from the landowner before updating the transacted plot.
- Provision to view land records by the owners/citizens through Internet.
- Automatic daily backup of land records from Server and all connected PCs before logging out of the Loucha Pathap application software.

The system has facilitated monitoring & maintenance of Land Records, land mutation along with wide access of documents. It is likely to initiate re-engineering of back-end processes and changes that take advantages of Integrating land records with land registration system in a secure environment.



Land Record Centre, Thoubal

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# 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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Edited by  
**Prashant Belwarier**

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  
West Bengal

"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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# Online DAK Management System: Integrating CAG Office in a Smart Way

The Indian Audit and Accounts Department (IA&AD), 150 years old, with strength of more than 45000 employees in about 211 field offices located all over India and abroad is headed by the Comptroller and Auditor General of India (CAG) Office as the Head of Supreme Audit Institution of India. A large number of files and letters are handled in CAG office. So a strong need was felt for a Computerised System to assist in easy tracking of the files and letters. In this backdrop, Integrated Online DAK Management System has been developed and implemented in CAG office.



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**N**ational Informatics Centre (NIC) is providing technical support to the office of CAG in software development and implementation of e-Governance projects besides Network support. NIC has developed and implemented various web based applications to enable the offices of IA&AD to access & upload data to Central computer in the office of CAG, in addition to many other projects for house keeping functions of CAG office.

An Integrated On-line DAK Management System (IDOMS) has been developed and successfully implemented by NIC team in the office of CAG. The system stores all the information regarding the movement of Files and letters received and dispatched from the sections. It is an integrated package which gives administrative support right from login, Diarising, Receipt & Forward, Disposal, Despatch & Posting etc, in addition to various reports for the management and queries to track the status of letters. The system helps the user in tracing the movement of files instantaneously. The system facilitates the office in monitoring the pendency of files/letters.

## DAK MANAGEMENT SYSTEM COMPRISES OF VARIOUS MODULES

- Modules to Diarise the letters in Receipt section, which are received from other offices.
- Modules for diarizing Letters/Note in section/ by officer and sent to other section/Officer.



**VINOD RAI**  
Comptroller & Auditor  
General of India

"By the initiative of Information & Communication Technology (ICT) and with the technical support of NIC in implementation of various e-Governance activities in the office of Comptroller & Auditor General of India, the office has become automated and more productive in carrying out its duties and responsibilities with greater transparency and more efficiency in functioning of CAG office.

I express my deep appreciation for remarkable work done by NIC team in successful implementation of an Office Automation System "Integrated On-line DAK Management System " in this office. I sincerely believe that the DAK System will get speedy disposals of files / letters and reduce the pendency."



- Modules for Despatching the letters received in Receipt section from sections of the office.
- Modules for movement of Files created/received in one section and forwarded to others.
- Modules for maintenance of the system to update master directories, Reset password, etc.

### SALIENT FEATURES OF THE (IDOMS) SYSTEM FOR LETTERS

- Receiving and forwarding of letters by Individual/Section - Letters forwarded from Individual /Section are further received and forwarded or retained for further action.
- Despatch of Letters - Letters to be sent outside the office by Individual/Section through Receipt and Issue(R&I) section are dispatched through package and generate various reports category wise i.e. Messenger, Speed post, Courier, Registered post, Parcel, etc.
- Posting : Update the details of despatch letters after posting for date & Ref. number ,etc
- Queries : Status of the diarised letters on diary , letter number, sender name, etc
- Summary pendency report on opening balance, total received and disposed receipts during a given period of time.
- Periodical Report on pending receipts in a particular sec-

tion/all sections are sent to the Individual and Copy to his/her Reporting officer through email.

- Reports of letters diarised/ dispatched for Individuals, Sections and Management.
- Task Management- letters diarised in R&I section are carried forward to respective sections to further act upon i.e. these letters are not to be re-diarised in the section.

### SALIENT FEATURES OF THE (IDOMS) SYSTEM FOR FILES

- Diarising and forwarding of files by Individual/Section within office.
- Electronically receiving and disposal of files - Forwarded to others or closed the file.
- Tracking of files on any parameter such as diary number, File number, subject, etc.
- Statistical Pendency report on Total files received; Total Files pending in a section / all the sections can be viewed by the Individual /section and his/her Reporting Officer.
- Emails to the individuals about pendency of files and its copy to Reporting Officer.
- Administrative login to activate/deactivate the user , resetting of password, etc

### Portability of the package (IDOMS) in any other Office

In view of requests from many offices for the package to be installed in their offices, the package has been designed in order that the software can be installed in any office without major changes, only with a minor change in office name. With regard to requirement of Hardware and software, the User should have Internet Information server (IIS) and SQL Database Server under LAN. To know more about the package with regard to its implementation, a Demo package with help/guidelines is available at URL: <http://cagofindia.delhi.nic.in/idoms>.



**ANUPAM KULSHRESHTHA**  
Dy. Comptroller and Auditor General

"I write this to place on record our appreciation for work done by NIC team in development and successful implementation of an Office Automation System "On-line Integrated DAK Management System", one of the pioneer e-governance applications in the office of Comptroller & Auditor General of India . The System helps the user in easy tracking of letters/files and monitor pendency of cases. The system has made the Diary registers and Dispatch books redundant resulting in saving of paper. The system has reduced considerable manual work and saved a lot of time and energy; and also enhanced transparency, productivity, efficiency. NIC has been instrumental in implementation of various e-governance activities in CAG office and is also providing various technical support"

### For further information

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# Standardization of District Portal with Web CMS

One of the recent challenges a country faces is preparing its citizens and government for globalization and information and communication revolution. Information and Communication Technology (ICT) plays a pivotal role for instituting effective e-Governance, which essentially bridges the gap between government and citizenry. Standardization of District portal is implemented in six districts i.e. Khordha, Nuapada, Cuttack, Dhenkanal, Angul and Nabarangpur.



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Standardisation of District Portal was exhibited in ELITEX-11, India Habitat Centre, New Delhi

Edited by **R. Gayatri**

**D**istrict is the middle level administrative unit which administers various plans, schemes, policies of the government and provides various services to the citizens. Presently most of the Districts are having websites, which are yet to be built on a uniform structure to address the real citizen centric requirements.

So a standardized district portal framework across the country is being put in place, which is citizen centric, disseminates information about district and sub-district level with Orissa as a pilot State. It acts as a single window platform for all categories of information satisfying G2C, G2B, G2E and G2G services. *The standardization of district portal initiative is based on the content architecture of the National Portal of India (india.gov.in), a mission mode project of Government of India, under the National e-Governance Plan (NeGP).*

One paper was published in ECEG9-European conference on e-Government held at London on the subject "Standardization of district portal: towards e-Government Transaction in India."

## FEATURES

### THE PORTAL HAS THREE PARTS

#### Citizen view

**(<http://ordistricts.nic.in>):**

Offers Single Window Service, Wide-Ranging Content, Citizen Oriented.

The District Portal has been built from the 'users' or 'citizens' perspective, rather than from the perspective of the government. The citizen may visit the District Portal, rather than a number of websites for composite information.

A Content Framework (CF) which covers all categories and sub-categories that becomes a part of District Portal. The CF is structured to collect comprehensive information on all aspects like District Profile, Administration, Who's Who, Profile of Important Sectors, Programmes & Schemes, Services (How Do I?), Forms, etc.

**Web CMS ( <http://ordistportalcontent.nic.in> )**

A comprehensive web based Content Management System (CMS) is designed based on the content architecture of the National Portal of India ([india.gov.in](http://india.gov.in)) under NeGP. The District Portal repository of huge content contribution is managed through a well defined work flow process.

District Nodal Officer → CSP → Moderator → Publisher

**Moderation ( <http://ordistsupadmin.nic.in> ):**

The web CMS follows Workflow management i.e. Content Creators or Content Service Provider (CSP) can submit a story, but it is not published until the moderator clears it up and the Publisher approves it. So the role of the moderator is to accept or reject the content. Then the Publisher approves the content to be displayed on the citizen view portal.

### Overall features

The Standardisation of District Portal follows decentralized maintenance, user friendly web CMS, role based authentication, consistent design and centralised content storage system.

### Security and Universal

#### Accessibility

Security, Scalability and Data Protection has been built in the District Portal both at the Infrastructure and Application (software) level. District Portal is hosted on security audited server infrastructure at IDC, and the application is audited and cleared by Cyber security Division, NIC New Delhi as per OWASP

security guidelines.

The Portal embraces the Accessibility standards with Guide-lines for Indian Government Web-sites. With this the portal ensures interoperability and uses best technical approach like use of markup language cascading style sheet, use of scripting languages and others.

### Technology

- Server-side scripting PHP
- Database: MySQL
- Other scripts and technology: JavaScript/AJAX etc depending upon the page content



District Portal of Nuapada, Orissa

trict nodal officer. The contents after moderation by DIO are finally published by the state NCNP.

### CORE PROJECT TEAM

The core project team consists of Dr. R. N. Behera, TD, Sh. K. C. Pattnaik, PSA, Sh. Sambit Panda, PSA, Ms S.Smita S/T-B under the guidance of Sh. S. K. Panda, SIO with the advise and technical support from NPI Team Sh. D. P. Misra, PSA headed by Sh. Neeta Verma, STD. The team handles the overall design, development, implementation and promotion of the Project.

### IMPLEMENTATION STATUS

In other districts data collection and moderation process is under progress. So standardization of District Portal is one Stop source, which delivers information and services through cyberspace. It has given a new dimension to good governance through ICT. It is generic and can be replicated in other states.

### For further information

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# User Rating for Web Resources

**A Government portal is widely understood and viewed as a single window platform for the integrated delivery of information and services by the Government to its Citizens.**

**Government portals are constituent of a huge content repository which is a culmination of information sourced from and contributed by various government entities, all of which functions under the aegis of a principal body - which could be a central authority or part of a state or district administration.**



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In the past few years, a large number of websites (close to 7000 in number) belonging to various constituents of the government have been published, offering a lot of information and services to the citizens.

However, all of these websites follow different technology standards, design lay-outs and navigation patterns which in turn cause the citizens a lot of inconvenience. To peruse for information and access services available amongst such a wide array of portals requires a lot of learning on their part, thus defeating the very purpose of the initiative.

Need was thus felt to establish a one-stop source for all government information and services, and this is what led to the genesis of National Portal of India (NPI) as a Mission Mode Project under the National e-Governance Plan (NeGP). The aim here was to shield the citizen from the hassles of searching across a large number of sites, with a mind-boggling variety of navigation architec-

ture, for accessing desired government information or services.

In over five years of its existence, the National Portal of India has not only ended up immensely benefiting the end-users, but has also gained significant ground when it comes to fulfilling basic objectives of electronic governance, namely - enhancing transparency and increasing efficiency in service delivery.

The National Portal of India has also turned out to be an effective medium for the participation of common citizens in the process of governance apart from encouraging the NPI visitors to voice their opinion on the information and services provided through the NPI using various interactive feedback tools on the NPI.

## RATING OF SERVICES

In its endeavour to cater to most of citizens' needs, the NPI plays host to over 1900 online services from various states/ministries/ departments which are all bunched under the 'How Do I?' section of the portal.

With an approximate 78,000 registered users and over 24 lakh hits per day - the portal is today scaling new heights of popularity and visibility of



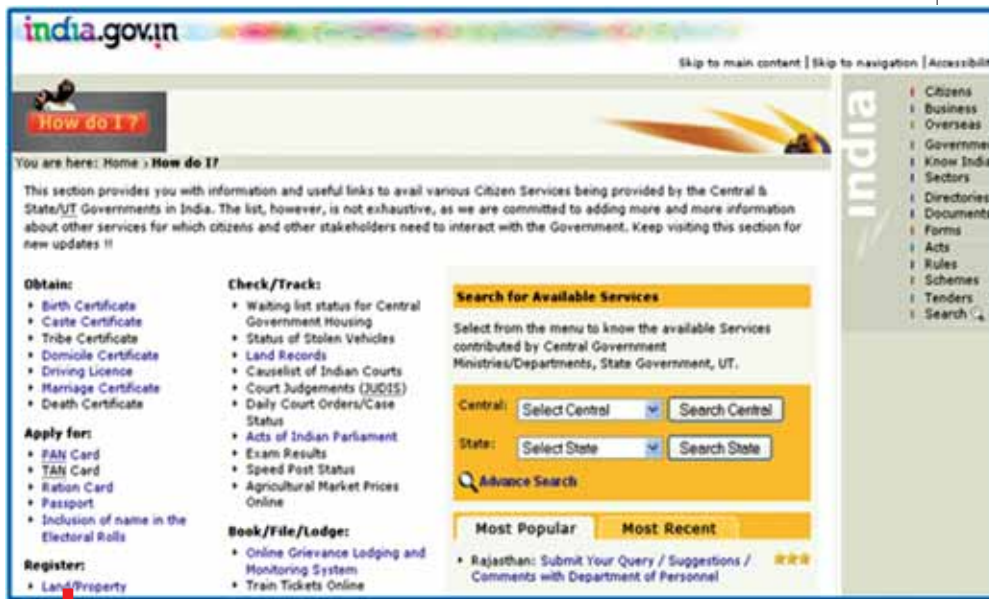
Homepage of the National Portal of India

government services published on the National Portal of India.

With new services being added on a daily basis to the huge repository already available, users' feedback plays an all important role to monitor health of the published services. To harness the same, a Rating Module has been introduced in the 'How Do I?' section on <http://india.gov.in>, which will enable users to consume and then rate the services published therein.

The users are prompted to rate a particular service on the basis of two main aspects, these being 'Usefulness' and 'Ease of Access'. A provision is made within the interface for surfers to be able to see the current rating and number of votes on each of the mentioned aspects enjoyed by the said service.

'Usefulness' judges the actual value of a service in terms of the benefit it afforded the user, while 'Ease of Access' is meant to rate how easily and conveniently was the user able to access the facility provided by the service in question. Just by selecting the number of stars/rates (full or half) relevant to the corresponding aspect and pressing 'Submit' button it records the rate apart from increasing the vote count. Comments or suggestions from the users' end can also be posted within



'How Do I?' section's landing page

the same application window.

User feedback not only facilitates NPI in improving and improvising, but also helps the team enhance manifold the end-user experience of the National Portal of India.

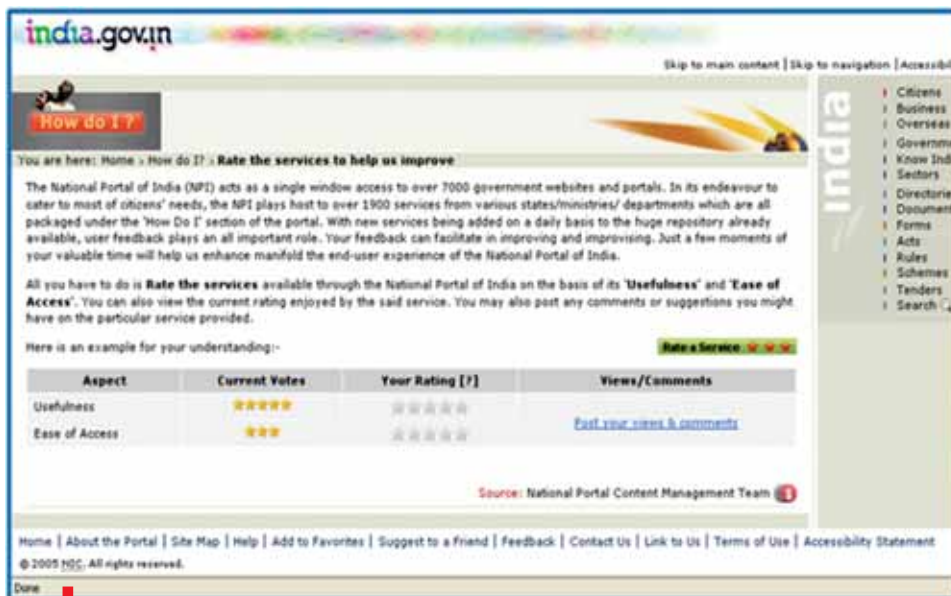
Apart from being accorded space on individual service pages, description and details on the Rating Module has also been displayed upfront on the NPI homepage as part of the 'How Do I?' section to ensure optimum visibility of

the functionality.

The Rating Module implemented on the <http://india.gov.in> is generic in nature and developed using open source tools. The front-end functionality can be easily controlled or customized using various parameters of the back-end module viz. Rating Aspects can be widened to more than two parameters which are currently being used, or number of sections on which this rating functionality is to be incorporated or the rating scale required to be taken up etc.

A citizen's single-window access to all there is to know about the Government and its subordinate bodies and authorities, <http://india.gov.in> stands at the apex of India's ICT pyramid. The information in the Portal has not only been well classified into distinct modules, but also interlinked at relevant places to provide the visitor with a holistic view.

With numerous interactive tools, services and static content repositories - the National Portal of India is the one and only cyber face of the Government of India which is complete in all aspects.



Rating Module's landing page

# Nagaland - Towards Digitally Vibrant and Responsive Governance

**Nagaland is largely mountainous with hilly topography throughout and the highest peak being Saramati (3841 metres). Many rivers cut through the mountainous terrain, like sharp swords slicing through rocks. Nagaland being a land of myths and festivals, has been officially named as 'Land of Festivals'. Life and culture is interwoven. Festival is a part of culture and most of these festivals revolve round agriculture. The state is rich in flora and fauna and about one-sixth of the area is under the cover of tropical and sub-tropical evergreen forests.**



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**V**isit to the state website makes one realize how deep ICT has percolated with multitude of information and services it host for the common man. Its richness and professionalism takes a visitor by surprise as it gives a subtle indication of commitment of the state for adopting ICT and promoting e-governance towards the goal of a transparent and responsive administration.

Edited by  
**Prashant Belwariar**

## NIC NETWORK & INFRASTRUCTURE

NIC, established itself at all the eleven district Centres and the state capital - Kohima has been the pioneer of ICT activities in the state, is connected with 45 Mbps Leased Line. Secretariat LAN with structured OFC backbone supports 350 Nodes extending up to the main sec-

retariat building. It also has a RF connectivity covering 40 State Government Directorates using Speed LAN Modems. The Executive Video Conferencing System (EVCS) at Chief Secretary Office and DGP Office provides effective audio-visual communication.

At the District level, 2 MBPS Lease Line connects seven districts while the remaining four districts namely, Mon, Kiphire, Peren and Longleng are connected by DVB VSAT. 34 MBPS Lease Line for Dimapur, Phek, Tuensang, Mokokchung and Wokha connectivity are under progress. Wimax connectivity is available at five Districts - Kohima, Dimapur, Mokokchung, Wokha and Phek.

**Video Conferencing:** The fourteen Video Conferencing studios in the state connects all the 11 District Hqrs, Nagaland House New Delhi, Chief Minister's Residential office and Chief Information Commission Office, Kohima. The Multi



State Website





Hon'ble Governor of Nagaland at NIC State Centre, Kohima

Conferencing Unit (MCU) installed at State Centre provides smooth and seamless connectivity especially during monthly review of various schemes over VC setup.

**Data Centre:** NIC Data Centre at Kohima is equipped with 3TB SAN system with three nos. of Blade Server enclosures having 13 Blade Servers, and 11 Rack servers. Several applications such as Weather Information System, Village Profile, Online Hardware Inventory Management System, Sarathi and Vahan for Transport Department, File Tracking System, Windows update services, MS SQL 2005 & 2008 server, Oracle 10g, Postgresql, Project Management Software, SAN Management System software, centralised Anti-virus software and Network management software had been hosted which provides

necessary support and services.

**CICs:** With the establishment of 52 Community Information Centres, one each at all the block headquarters, the rural people were the first to benefit from the extensive use of communication facility and ICT based services. It was mainly through CIC that the rural people came to know and learn about the ICT facility and its advancements which also served the aim of bridging the digital divide.

**E-GOVERNANCE APPLICATIONS**

Major ICT Projects implemented are:

**Inner Line Permit Computerisation**

Under the Eastern Bengal Regulation Act of 1873 and Government of Nagaland Notification NO.REV/T-

9/91, any person who is not a local inhabitant and desiring to cross the Inner Line into Nagaland is required to have Inner Line Permit (ILP). ILP Cells were established by the government of Nagaland at all the Deputy Commissioner's Offices and Nagaland House located in different parts of the country. A Monitoring Cell was set up in the office of the Commissioner, Kohima where each ILP Cell submit reports pertaining to issue of ILPs and action taken against defaulters on a fortnightly basis.



ILP Cell functioning at Kohima

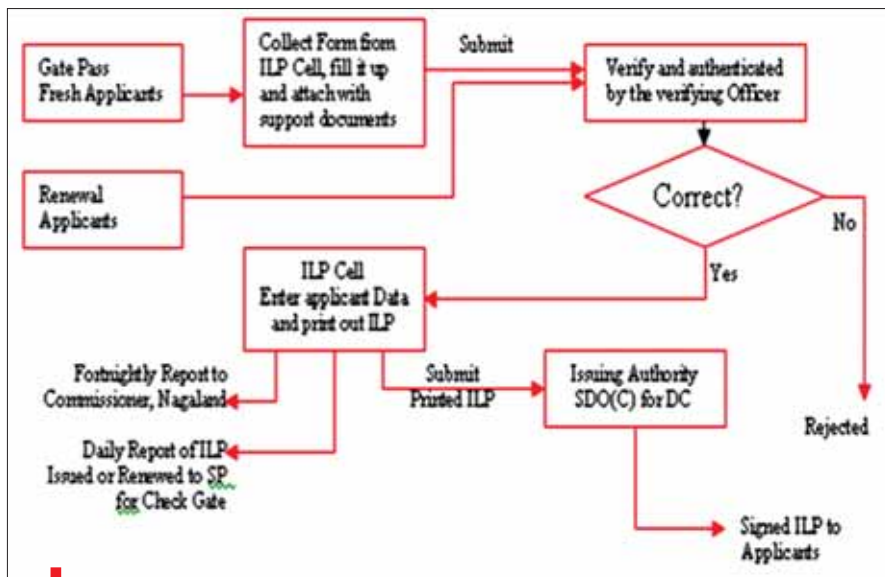
NIC Kohima developed ILP Management System which has been implemented at the eight districts except the newly created three and at Nagaland House Kolkata. Upgraded online ILP computerisation is set for launch this year.

**Impact**

- State administration can effectively monitor ILPs issued, renewed, defaulted etc.
- Revenue earned from ILP registration and renewal has grown manifold.
- State authorities can get various kinds of reports in required format.
- Different types of analytical reports can be generated from the system.

**WEATHER INFORMATION SYSTEM (WIS)**

The climate of Nagaland varies at short distance which is mainly due to the terrain features. The department of Soil & Water Conservation is responsible for maintaining and collecting the daily weather report from



ILP Process Flow

its meteorological stations in different parts of the state at varying altitude. Presently 14 (fourteen) 2nd Class Meteorological Stations are fully functioning including 1(one) under the Indian Meteorological Department, with its headquarter at Pune.

Based on the requirement of the department, a web based application - Weather Information System was designed, developed and hosted by NIC, Nagaland State Centre. The data is fed by the department from 14 Meteorological Stations in different parts of the state which can be accessed at <http://wis-ngl.nic.in/genwis/>

**Objectives and its**

**Impacts:**

- To collect daily weather data such as rainfall, temperature, relative humidity, wind speed and direction, barometric pressures, etc. and provide data to user agencies.
- Crop weather watch.
- Climatic data is a major parameter for soil classification in soil Survey.
- Right selection of crops, plants species best suited to climatic conditions.
- For designing and construction of engineering structures.
- Data banks for monitoring environment changes like rainfall behaviour, global warming, occurrences of natural calamities.

**EMPLOYMENT EXCHANGE COMPUTERISATION**

An online application developed and hosted by NIC Hqrs, New Delhi provides G2G, G2C and G2B services pertaining to the vacancies of the government departments and business organization. Employers can search the availability of qualified

and suitable candidate(s) from the database. The job seekers can register their name on-line and search the availability of vacancies in various government departments and other organisations. The application is functioning at the Regional Employment Exchange, Kohima and District Employment Exchange, at Dimapur.



**Inauguration of Employment Exchange Computerization by Er. T. Saku Aier, Parliamentary Secretary for Housing, Labour & Employment**

**TRANSPORT COMPUTERISATION**

Vahan & Sarathi software for Registration of Vehicles and Driving Licenses respectively has been installed and commissioned at all the eight licensing and Registration authorities in the state. At present the Driving Licenses and Registration of vehicles document are issued as Smart Card SCOSTA compliant from six locations. The Smart Card printing and issuance is being done in-house by the transport department.

The State Consolidated Register and the State Register has been prepared at the NIC Data Centre. Citizen services through the National Transport Web portal is under progress.

**Election Support:** NIC Nagaland has been actively involved in giving support to the election process for the Lok Sabha as well as the



**K.T. SUKHALU**  
IAS, Secretary  
Government of Nagaland

Since its inception in 1989 the National Informatics Centre, Nagaland has been working very close with the State Government in promoting and providing Informatics & Communication Technology (ICT) services. NIC has successfully implemented various ICT projects in the State and has been instrumental in changing the work culture of the government employees. NIC, Nagaland has provided Network connectivity to all the Districts. Video Conferencing facility, computerization of Passport Cell, Inner Line Permit computerization, computerization of Driving licence and vehicle registration, Arms licence computerization, Agriculture Produce centre computerization. The role of the NIC in the General State and Lok Sabha Elections processes is also highly commendable. The effort put in by NIC, Nagaland in improving ICT services to the people is highly appreciated and I wish them the best as they continue rendering effective and successful ICT services to the citizens of Nagaland





Services provided under Transport Project

Legislative Assembly. The randomization software of Polling Officials is successfully implemented. Technical support for Online Election Trends and results for all the districts were provided during the elections. State electoral roll database has been hosted and Photo Electoral Roll management Systems (ERMS) is in progress.

**Common Integrated Police Application (CIPA):** Computeri-

sation of the police station activities like registration, investigation, prosecution, reports etc. are covered under the project. The Project is functioning at Kohima district which was inaugurated by the Hon'ble Chief Minister.

### OTHER MAJOR ACTIVITIES

**Village Profile:** A web based searchable comprehensive database on village profile is available to the citizens through the URL <http://nagaland.nic.in>.

**National Social Assistance Programme (NSAP):** Under the National Social Assistance Programme - Old Age, Widow & Disability Pension Scheme are implemented in the state. The pensioner details are uploaded on the site <http://nsap.nic.in> and is available online to the citizen.

**Personal Information Systems (PIS):** Web based PIS software is functioning at the State Secretariat since 2005.

**Passport Cell Computerisation:** The state Passport cell was setup at Nagaland Civil Sect Home Department to facilitate the collection of new applicants for Passport of the state.

**Rural Development :** Software was developed for monitoring the progress of centrally sponsored schemes. It was implemented for MGNREGA (52 Blocks) and BRGF (5 Districts) project. Block Backwardness Index for Planning Department required for planning process is also monitored.

**Library Computerisation:** Library Automation solution from NIC implemented at the Assembly Secretariat and JNV schools in Nagaland. Training imparted to various state department and the State Library officials.

**AGMARKNET Project:** Computerisation of Agricultural Produce Marketing Centres in the state was taken up in phase manner and 15 APMCs were successfully covered.

**Tele Education:** Tele Education facilities was set up at all the Govt Higher Secondary Schools having Science Stream including Kohima Science College and three private schools in Dimapur.

**Training:** NIC has been actively involved in the state training programmes. Guest Faculty lectures are given by NIC Officials on e-Governance Training Programme conducted by state Departments.

With the support of the state Government in implementing the ICT tools and applications, NIC Nagaland looks forward to a better and digitally governed environment to provide better services to the citizen.



Hon'ble CM of Nagaland- Sh. Neiphu Rio inaugurating CIPA Project

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# Rajasthan: A Journey to Excellence in ICT in Government

Colorful Rajasthan is a fairy tale of majestic palaces, fortresses, cities, and buzzing bazaars with the confluence of history, chivalry, romance, rugged natural beauty, art, crafts and culture. With the rich historical and cultural background NIC in the state had taken off in 1988 has started showing its true colors. Today with the efforts of team NIC the state of Rajasthan is surging ahead as a leader in e-Governance and ICT developments covering a wide gamut of applications.



**INDU GUPTA**  
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**N**IC Rajasthan in close coordination with the state government agencies has undertaken various ICT projects efficiently and effectively. In terms of establishing the ICT Infrastructure, analysis, design, development, consultancy, deployment of ICT solutions, capacity building and innovations in evolving ICT solutions. NIC has lead from the front with its highly dedicated and motivated officials.

With a view to provide smooth, transparent and efficient service delivery within government and to citizens various software and infrastructure development efforts have been made. Few major projects of NIC are:

**Rural Connectivity (GPNIC) for Panchayats:** Government of India had conceptualized a pilot programme for connecting rural India with high speed fiber backbone directly to Panchayats. Riding on fibre backbone a service delivery solution, web based GPNIC software has been designed, developed and implemented for few panchayats in Srinagar Block in Ajmer district to facilitate Panchayat office in accessing various online services in simplistic manner. BSNL provided optical fiber based connectivity at ten panchayat offices which was then extended to other gov-

Inputs from  
**Chandan Sen**

ernment offices, schools with the help of wireless system. The villages for the first time held video-conferencing with the advisor to PM from their own native place. So impressed was the US delegation seeing people use this system that President Barack Obama decided to have a peek into the future of India on 7th Nov 2010. Advisor to PM Sh. Sam Pitroda briefed the President about benefits of the project.

**Integrated Financial Management System (IFMS):** The Integrated Financial Management System is a web based system for complete government financial accounting. It includes budget planning, estimates preparation, distribution / allocation, fund management, treasury functions etc. It improves government's financial management and expedites operations making it more transparent. The budget was prepared using the IFMS. IFMS consists of **Budget Preparation, Budget Distribution, Online Treasuries**. IFMS has been initiated with the concept of 'Any-Where-Treasury'. The Project is taken up by Finance Department



**Hon'ble MoS C&IT Sh. Sachin Pilot with Sh. Jagdish Bairwa Surpanch at Kanpura**



Launch of IFMS by MoS Finance Sh. Namonarain Meena during Banker's meet

in Rajasthan with NIC. A robust network has been set up to connect all treasuries, sub treasuries to web based IFMS portal. IFMS aims to take care of majority of the common requirements maintaining uniformity of procedures, adopting the best practices and networking of all the offices i.e. Finance Department, Directorate of Treasuries & Accounts, Pension Department, all treasuries and sub treasuries. It will also address issues related to interoperability between G2G, G2C and G2B. Presently all 39 treasuries and 221 sub treasuries are using this online application with the facility for the banks to upload the daily scroll.

### **OASYS (Online Answering Information System) for Rajasthan Legislative Assembly:**

Going green with OASYS (Online Answering Information System) was a natural culmination of the long association of NIC with Legislative Assembly and all the departments of Rajasthan Government to facilitate faster & secure communication pertaining to assembly questions. All answers received through the system are also accessible through the web portal of Legislative Assembly immediately after the Question Hour. The detailed replies can instantly be viewed by media or citizen. It is first such application ever deployed by any legislative body in India. This is an eco-friendly solution as it results in savings of more than 10 million paper sheets every year.

**SUGAM: "SUGAM RPG"** the single point public Grievance Redressal portal of Government of Rajasthan is a web based system, currently used in 750 offices is an effective tool for grievance redressal for citizens.

**SUGAM-Single Window Service Delivery system** has a multilevel implementation including all 33 district Collectorates and all the 247 Tehsil offices of Rajasthan. The system facilitates timely delivery of various citizen services such as; Issuance of Bonafide Resident certificate, Caste Certificate etc. About different 40 services are being extended through this system. The system is now being extended to Common Service Centre nodes with a digital signature facility.

**Pregnancy, Child Tracking & Health Services Management System (PCTS):** This web based online system developed by NIC Rajasthan for Medical, Health & Family Welfare department, Govt. of

Rajasthan, for improving its services right upto Health Sub centre. The system is extremely useful in ensuring better health for women, minimizing maternal mortality, neo natal mortality and in tracing areas with decreasing sex ratio at birth. It is also useful in monitoring functioning of all health institutions across the state numbering more than 13, 000. Presently it has 23.5 lacs beneficiary records. It is operational from more than 500 locations across the state. Process re-engineering was done at various levels. Repeated efforts required in data compilation at different levels have been eliminated completely. Data transportation sheets have been designed to minimize data capturing efforts. Swasthya Sandesh Sewa has been linked to the PCTS, which is reminder service for the parents for vaccination of their children and also to the Service Providers (ANM). The system also helps in ensuring adequate medicine and vaccine stocks at every health facility.

**Sarva Shiksha Abhiyan (RAJSSA portal):** Rajasthan Council of Elementary Education undertook the project of CTS (Child Tracking Survey) along with NIC Rajasthan in 2010. As a massive exercise, village/habitat level details of each child were surveyed. The data was captured through the ICR technology. A comprehensive online module was developed for the survey monitoring and to collect booth wise summery data. In and out school children counts were published in the



Hon'ble CM of Rajasthan along with Hon'ble Speaker of Rajasthan Legislative Assembly during OASYS launch

public domain within 10 days of completion of the CTS survey. A total of 1210917 children were found as Out of School Children in the state. Rajasthan is now amongst the few states which is providing the village/habitat wise Village Education Register in the public domain.

#### **Patient Management for Chief Minister's BPL Jeevan Raksha Kosh**

Is a web based on-line application, intended to facilitate free medical treatment to poor patients in any Government health facility at state, district or sub district level. The system extends right up to the CHC's and PHC's. The system is developed by NIC, Rajasthan and is part of HEALING which is a comprehensive e-governance tool for the department. The system was launched on 15-09-2009 by Hon'ble Chief Minister Rajasthan and is operational since then. Presently the system is being accessed by more than 550 hospital facilities spread all over the state. Forty lac patient records are available online.

**Pre Teacher's Entrance Test Counseling:** The main objective of this web base application was to minimize the travel burden on counselees and for better transparency in the system. About 1.25 lac candidates had participated in the counseling process to take admissions for about 90000 seats available in 790 colleges every year. One website is the candidate site, to get all required information and fill his/her choices. Other is the intra site, where concerned institutes may see their list of allotted candidates and provide online reporting.

**Online BPL Census:** This is one of the massive database creation exercises where each of the rural household has been surveyed and micro details were captured including attributes about each and every family member. For the first time the OMR/OCR

sheets were used in the BPL census survey conducted in 2002. NIC State unit since beginning helped the department in formulating tender documents for the data capturing work. NIC State unit has extended support in validation of the data and necessary application has been built to provide various analytical reports on interim and final data. There has been wide usage of the data by various departments and agencies for upliftment of the poor. The data reflects current BPL position tracked till the village level. Data is used by Rural Development department, Department of Food, Education, Medical and Health, LIC, World Bank, ICICI bank, IL & FS in formulating and monitoring important schemes.

**Primary Agriculture Cooperative Society (PACS):** Extending core banking solution to PACS is an important step as it acts as Mini bank at the village level and delivers various rural citizen centric services like NREGA payment, agriculture loan disbursement etc. Hathoj & Mundia Ramsar PACS in Jhotwara-Jaipur block were selected for pilot implementation of Cooperative Core Banking System (CCBS). Apex bank RSCB has provided necessary infrastructure for this pilot implementation. It is a hosted application at NIC Data Centre and caters to all three levels of Short term cooperative structure. Salient features of **CCBS** are Core Banking Solution, SOA architecture, multilingual support and requirement based customization at the time of installation. CCBS is developed by NIC HQ team and NIC Rajasthan supported its successful implementation. Recently NABARD team visited these PACS to get a feedback of its replication in other PACS in India.

**Public Health Engineering Department:** An integrated workflow based system is used for planning and monitoring activities and resources including materials, man-

power, projects and finance. This is accessed from more than 240 offices of PHED of the state. The system covers 151 Divisions, 43 Circle Offices, 13 Region Offices, 33 Water Quality Labs & the PHED HQ. Data is captured into the system from all divisions, circle offices, region offices and water quality labs etc.

Annual funds of around 1000 crore are being managed through this system and works account are generated since 2007. Work Flow based Materials Management System links all the material stores of PHED. Projects and Works Management Systems allows comprehensive monitoring of projects for physical & financial progress. Personnel Information System provides service records online for all the employees. Other modules include Water Quality Monitoring, Audit Para Monitoring, Schemes & Assets Management, Tender Management and Documents Management. As extension of 1st phase, now computerisation is planned right upto the subdivision level.

**Wider Perspective and new Horizons of erstwhile LRC - Apnakhata:** The computerization of land records and Strengthening of Revenue Administration and Updating of Land Records has been merged with the National Programme known as National Land Records Modernization Programme. Its major components are Land Records, Digitization of Khasra Maps, Settlement Survey, Registration & Stamps and Integration of processes. As it has been implemented in the Rajasthan state in a systematized and organized manner, it has proven to be one of the most popular services to citizens.

**Rajasthan State Pollution Control Board (RSPCB):** The project is beneficial to the Government, Central Pollution Control Board, RSPCB itself, Industries and the Indian Community by providing the correct and authentic



online Information. The project scope was to develop, deliver, install and implement automated application systems for the various sections in the department to fulfill the need of Reliable, Auto-Responsive, Semi-Decision, Paperless and cost effective computer based transparent system for Information Compilation, Dissemination and Sharing throughout the department and the customers.

**Rajasthan High Court Computerization:** Comprehensive Judicial Software System has been developed which caters to all Judicial activities viz, Case Filing, Paper Filing (Power, Reply etc), Reporting of Lower Court, and FIR details, Classification, Scrutiny, Bail Trapping, Registration, Peshi, Track the Peshi Date of a case, Causelist, track the cause listing details of a case with item no, date and court no., Disposal, Consign to Record Room, Comprehensive MIS Report Generation.

**District Court Computerization:** Laptops and printer have been provided to all the Judicial Officers at various districts. Broadband Connection has been provided to Judicial Officers and e-mail account has also been provided on NIC server. Training has been provided to judicial officers and staff on the computer application and usage.

**Computerization of Police Department:** NIC Rajasthan is playing a key role by extending guidance as members of state level and programme level committees for **Crime & Criminal Tracking Network Systems** after implementing CIPA at 566 police stations. NIC Rajasthan has developed & successfully implemented a web based Personnel Information System (PIS) for the Police Department. Massive database pertaining to general information, personnel details, educational qualification,

nominations details, postings, awards, rewards, punishments, trainings for the officials & officers of the Police Department have been entered in the application. Nearly 65,000 records entered as on date speaks the efforts put in by the NIC & the Police department.

### Other Projects implemented successfully in the state are:

**VAHAN & SARTHI Project:** Work of Registration of Vehicles and other related works like Issue of Permit, Issuing Fitness certificates, Tax calculation, Challan monitoring etc are to be done on the "VAHAN" software developed by NIC. SARTHI software for issuing Driving Licenses is presently implemented in 7 transport offices of the state.

**MG-NREGA Implementation:** Rajasthan is leading state in MG-NREGA implementation, where all the Job-card holder details along with their photograph are uploaded on central server. The Muster Roll is now issued using NREGA soft only. Similarly the payment is made through Bank/Post office and every such information is available on NREGA soft.

**Mid Day Meal Monitoring System (MDM):** To monitor the Grants, transfer of funds and grains from Govt. of India, Distribution of funds and grains to the Districts, blocks and schools, progress and utilization, a web based application was developed and deployed to get the online status of the monthly progress of the program. There are more than 270 active users. Monthly reporting is from all the Blocks and data entry percent from schools is more than 95%. Monthly entry of records from each school is done at the block level. New Entry module for Cook Cum Helper and AMSS has been implemented in application. More than 95000 cook cum helper master data in

different category and cast is available online.

### AWARDS:

- Project 'Pay Manager' has received eRajasthan-2009 Public Choice award under G2C Category.
- Awarded at eINDIA 2010 - "Pregnancy, Child Tracking & Health Services Management System" received the first prize under the e-HEALTH Government Policy Initiative of the Year category.
- "Mukhya Mantri Jeevan Raksha Kosh" (under Health Insurance Initiative of the Year) and "Water Cess for Rajasthan State Pollution Control Board" (under G2B) were also shortlisted for award at eINDIA 2010.
- Computer Society of India- Nihilent e-Governance Awards 2008-09 for SUGAM (Jodhpur) under district category.
- Manthan Award South Asia '2009 for eGram & Appreciation certificate for project "Pregnancy & Child Tracking System."
- eRajasthan-2009 AWARD - "eGram" has received eRajasthan-2009 Jury Award under G2C Category.
- BPL Census- PCQUEST BEST IT Implementation award of the year 2008 by PC-Quest.
- Apna Khata (Land Revenue Computerization Project)- First runner-up award for excellence in IT Government Sector by Govt of Rajasthan.
- Finalist for CSI-Nihilent 2010 - PCTS & NIC Pali District.

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# Cufón: Custom Font Embedding Technique for Web

**Cufón, pronounced as Kofo, is one among the popular font replacement techniques of its kind, which has attained much attention and popularity among web developers. Thanks to Simo Kinnunen, a Finland-based web guru who developed this technique, which has evolved and enabled us to use non-web, based fonts on web pages with much ease.**



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**M**any of you would have been curious to know how some websites and blog pages display awesome choice of fonts with smoother curves on your browsers. You would have also noticed that such web pages stand out visually attractive and mind grabbing. Well, kudos to the several researchers and web developers for their efforts in making it possible for us to embed numerous customized fonts so as to make the page look unique and special. Now, with some extra effort along the process of website development, you too can make this happen on your website. Needless to say, all these come with some concerns of fonts licensing and certain technology limitations for accessibility and user experience. Like many other designers who admire and get inspired of the beauty and function of fonts, which significantly enhance the web surfing experience, I happen to be one who is curiously observant about how emerging technologies draw and extend boundaries for expanding possibilities.

## CUFÓN

Cufon is a JavaScript based font replacement technique, a popular of its kind and an effective alternative to the earlier techniques such as sIFR (Scalable Inman Flash Replacement) and FLIR (Face Lift Image Replacement). Cufon emerged trumps among the others for many, being faster, by using normal CSS (Cascading Style Sheet) to change the

attributes of Cufón font selectors. Well, such other techniques, even with their certain merits, still remain painfully tricky to set up and use. Prior to these developments, web sites were constrained by pages displaying only the web-safe fonts, which are still a handful. Though designers and developers used images and splash as alternatives (many still do the same), these are either non-accessible, non-scalable or require plug-ins to display such variety of fonts on web pages.

## WHY CUFÓN?

Cufón has a better edge over the others due to its specific merits:

1. It uses features that are natively supported. Hence the client machine requires no plug-ins.
2. It has better Browser Compatibility. Cufon works on every major browser available on net now.
3. It is easy to use. Cufon requires no or almost zero configuration for standard use cases.
4. Speed of rendering is fast, even for sufficiently large amounts of text.

## HOW DOES CUFÓN WORK?

Cufón setup and use consists of two individual parts - a **Font Generator**, which converts fonts to a proprietary format and a **Rendering Engine** written in JavaScript.

## THE FONT GENERATOR

This is a bit more than a web-based interface to FontForge (a typeface editor program). Initially, the generator builds a custom FontForge script based on user input and then runs it, which saves the font as an SVG

(Scalable Vector Graphic)font. The SVG font is then parsed and its path converted to VML (Vector Markup Language) paths. The resulting document is then converted to JSON (JavaScript Object Notation) with a blend of functional Javascript. This has many advantages:

- To include a font, one just needs to load it with the standard `<script>` tag as any other JavaScript file and it would be registered automatically.
- No requirement to manually parse the file on client-side repeatedly.
- External JavaScript files block execution until they are loaded, which helps us to achieve a flicker-free, clean replacement.
- It compresses fonts extremely well. A compressed font usually weighs 80 to 60% less than the original. The process is then repeated for the rest of the fonts provided to the Generator and the resulting JavaScript file is sent back to the client with a distinctive file-name.

### THE RENDERER

In comparison, this part is slightly tougher. The Renderer consists of further 3 parts: **A Core** and **two Rendering Engines**. A Core provides the API (Application Program Interface) and common functional aspects. One Renderer out of the two, renders VML shapes, while the other Rendering Engine uses the widely supported HTML5`<canvas>` element. Since the path data is already VML, a bit of work is needed in the VML engine. The canvas engine thus must convert all paths to the corresponding

sets of drawing commands provided by the canvas API. This turns out to be somewhat tricky initially, but a solution emerged after the second Engine complete rewrites in the form of code generation and caching, resulting in a very fast renderer. Inline SVG is surprisingly slow in a few browsers that really supported it properly.

### CUFÓN AND ACCESSIBILITY ISSUES

Along with many advantages of using Cufón over other alternatives, there are also issues regarding web accessibility which are yet to be resolved. But the initial inability of text selection in

tion visually but when you select it and hit ctrl+c you will be able to paste it.)

In screen readers, each word in text rendered by Cufón being a separate span element, it makes several screen readers such as VoiceOver, FireVox, ORCA, Window-Eyes and Opera Voice read: The. Text. As. If. Each. Word. Was. Separated. By. A. Full. Stop. In some cases the screen reader will stop after reading the first word of a Cufón-replaced sentence. Setting the separate option to 'none' in the Cufón API is found to be a way to avoid this problem. By doing this, Cufón does not wrap each word in a separate span element.

### CONCLUSION

Despite having some yet to be resolved issues of font security, for a huge lot, Cufón still remains a favourite technique for font embedding. For some who feels '@font-face' or a 'TypeKit' style of service better for usage of large number of fonts, they are still constrained with certain font rendering issues on some OS's or browsers. Fonts that look brilliant on Chrome in OSX (mac), look terrible in Windows XP Firefox, for example...

With the evolving research activities and innovative web font managing techniques, we can anticipate newer developments and surprises from Cufón and other font handling techniques supported by robust technology. In general, embedding websites with fonts enabling accessibility,

which enhances user experience for all, will always be an integral part of an ideal process of web development, thus supporting the well-accepted thought of Inclusive Web design.



Cufón has been worked out to a considerable extent. In IE(6-8), Safari 4, Chrome and FireFox3 you are still able to select the original HTML text. (FireFox3 won't show the text selec-



# Mobile e-Governance Services

**Mobile e-Governance services is an integration technology. It best demonstrates its value when integrating heterogeneous systems because it supports many kinds of programming languages, run times, and networks. When there is a need to connect applications from incompatible environments, the stage is set for Mobile e-Governance services.**



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The mobile computing environment poses several challenges to those who offer services in terms of operating system, browser environment, connectivity, Geo-reference, security etc. The services that are offered over the mobiles can be classified into online and offline services. Online services are synchronous and demand continuous connectivity. Offline communications are asynchronous and use the connectivity whenever available. The mobile browser based services are online and connects to the website and services that are offered on internet. SMS, One-Time-Password (OTP) etc. are offline services. Open-X-data, mobile client programs such as midlets, android applications, iPhone applications etc. can be programmed to work both online and offline.

## SMS

The text messages such as SMS is being used in variety of ways to confirm to the user about the service availability, status of the service, credit/debit details, service acknowledgments, reference links etc. The citizen application can incorporate SMS interface through a local modem or through the SMS gateway. The local modem solutions are limited in terms of message handling, queuing, scalability, maintainability, both push and pull handling etc. Open source solutions such as Kannel SMS gateway solutions have been implemented at the collectorate, high-court level by NIC in many states. The preferred way of incorporating SMS services is through the SMS gateway and NIC offers the SMS gateway solution. NIC

facilitates SMS traffic between all service providers and mobile subscribers, including mission-critical messages, SMS for enterprises, content delivery etc.. Considering SMS messaging performance and cost, as well as the level of messaging services, SMS gateway provides aggregators or SS7 providers. The Central or State Government department can register themselves with NIC SMS gateway and integrate the push/pull messages as per requirement in their applications. This has been extensively used in variety of applications at the central and state level with the technical support from NIC.

## ONE TIME PASSWORD

One-time password (OTP) is a password that is valid for only one transaction or authentication session and expires after the defined time period. OTP is not vulnerable for replay attacks as they are not valid after the short period defined. OTP has open standards like

**HOTP** (HMAC-based One Time Password algorithm; **IETF-RFC 4226**) from Initiative For Open Authentication (OATH).

**TOTP** (Time-based One-time Password Algorithm; **IETF-RFC**) an extension of HOTP to support time based moving factor. This is also from OATH.

OTP technology can be used in combination with the usual password based authentication to provide strong authentication, in this case two factor authentication.

Mobile-OTP is a free Open Source based "strong authentication" solution for java capable mobile devices like phones or PDAs. The solution is based on time synchronous one time passwords. It consists of a client component and a server component. The mobile client generates one time

passwords by hashing the following items using MD5:

- the current epoch-time in a 10 second granularity
- the 4-digit PIN that a user enters
- a 16-hex-digit secret that has been created when the device was initialized (Init-Secret)

When entering a PIN, the mobile client displays the first 6 digits of the MD5-hash. This is the One Time Password. The One Time Password can be verified by the server, as the server also knows the current time, Init-Secret and PIN of the user. To compensate time differences, the server will accept passwords from 3 minutes in the past to 3 minutes in the future. In addition, different time offsets can be specified for each user on the token and/or the server. Each password will be accepted only once. After 8 successive failed authentication attempts a user gets locked out. Authentication is based on two factors: a PIN known by the user and the Init-Secret stored on the mobile device.

Applications implementing OTP can thwart authentication token reply attacks and password sniffers.

### ONLINE MOBILE SERVICES

Online mobile services are mostly enabled through the mobile enabled web-sites. The guidelines for development of rich and dynamic mobile web applications can be obtained from <http://www.w3.org/TR/mwabp/>. The basic principles of mobile web applications recommended by W3C are

#### ■ Set Users Free

- Ensure the user is informed about use of personal and device information
- Enable automatic sign-in
- Offer users a choice of interfaces
- Don't change focus when dynamically updating page sections

#### ■ Design for flexibility

- Design for multiple interaction methods
- Ensure text flows
- Prefer server-side detection

where possible

- Use client-side detection when necessary
- Use device classification to simplify content adaption
- Support a non-JavaScript variant if appropriate
- **Remember web principles**
  - Replicate local data
  - Ensure consistency of state between devices
  - Do not execute unescaped or untrusted JSON data
  - Use fragment Ids to drive application view
- **Spare the network**
  - Use transfer compression
  - Cache resources by fingerprinting resource references
  - Cache AJAX data
  - Minimize external resources
  - Avoid redirects
  - Optimize network requests
  - Use cookies sparingly
- **Exploit mobile-specific features**
  - Make telephone numbers click-to-call
  - Consider mobile-specific technologies for initiating web applications
  - Use the meta view-port element to identify the screen size
  - Use appropriate client-side storage
- **Optimize response time**
  - Aggregate static images into a single composite resource (sprites)
  - Include background images inline in CSS
  - Keep DOM size reasonable
  - Minimize perceived latency
  - Optimize for application start-up time

### MOBILE CLIENT PROGRAMS:

Mobile client programs need to use the best practices recommended by W3C for online applications. However there are few challenges while offering the client programs they are Multiple platforms, Mobile spe-

cific variations for features and limitations, Client-side version management and deployment.

Care should be taken when implementing mobile web services because only a subset of the API is supported by the mobile Web services specification

The Mobile client has to be developed for multiple platforms such as Nokia's Symbian, Google's Android, Apple's iOS, RIM's BlackBerry OS, Microsoft's Windows Phone, Linux, HP's webOS, Samsung's Bada, Nokia's Maemo and MeeGo. Java Platform, Micro Edition, or Java ME, is a Java platform designed for mobile phones (especially feature phones) and set-top boxes. Java ME was formerly known as Java 2 Platform, Micro Edition (J2ME).

Java ME technology consists of three elements namely configurations, Profiles and optional packages. The configuration for small devices (less capable) are called Connected Limited Device Configuration (CLDC) and for more capable devices the configuration is known as Connected Device Configuration (CDC).

It is always preferable to have the client programs which needs less revisions on the client side as frequent updates on the client side is not rec-



Mobile Client Programs

ommended. This can be achieved by consuming services for every requirement from the server-side so that the variants are managed at the server-side instead of altering the client-program. Preferably REST services can be used. If the client needs to be secured, a client serialization with the IMEI (International Mobile Equipment Identity) number of the device is recommended so that the client program does not work on other devices.

Mobile client programs can be written for both online and offline use. Open source solutions such as openXdata for data collection is widely used which supports low-cost mobiles, includes visual designer and supports multimedia and GPS. Location based services are possible using the GPS data. One can start downloading from <http://www.openxdata.org/demo> and start experiencing this solution on their low-cost mobile. Only requirement is the Java enabled mobile and GPRS/3G connectivity. This is widely used for location based survey/activity record needs.

In the offline mode the application can collect data and the data can be send to the server using SMS or via Internet using a Desktop intermediate. Continuous network coverage is not required for offline applications.

As the mobile camera can be used for multiple requirements, the client programming based on the camera are numerous. One such open source solution is the 2D barcode reader. The encoded data in the 2D barcode which can carry more than 8K of data using the open standard 2D bar codes such as QR Code, DM Code and PDF417 can be decoded using the mobile bar code readers which are freely available for downloads. This can be used for variety of anywhere, anytime services where the encoded data can point to an URL containing the information that is required. The URL can be open URL for public information such as status of service request and the URL can carry server side authentication for private data

such as individual health records, financial transactions etc.

### MOBILE BANKING

Using IMPS (Inter-Bank Mobile Payment Service) one can send money instantly from the savings bank account using one's mobile number along with a 7 digit MMID (Mobile Money Identifier) number. To receive funds one has to generate MMID. In order to transfer money using IMPS the user has to follow the following steps

- Use the client application provided by the service provider and select Transfer Funds option
- Enter 10 digit mobile number, 7 digit MMID and the Amount and confirm
- Follow the authentication method used by the service provider and the money is transferred instantly

The SMS will inform the transaction status. One can transfer upto Rs. 50,000 as this is encrypted method as per RBI regulations

The same facility is available over SMS instead of the client program where the limit is Rs 5,000 as per RBI regulations

### LOCATION BASED SERVICES (LBS)

The idea of location based services has been catching up for the past few years. Location is a very important data point when it comes to mobile computing, and your lat/long coordinates and even what direction you are facing and what particular object you're looking at are important parameters for your searching. This solution can be used in fleet management, tracking, optimised routes, current status of movement, inventory movement within campus/factory etc. Every smartphone company these days wants to offer you something that would couple you with your nearby cellphone towers, local resources and people in your immediate area. When the Government Service Centres such as nearest CSC, Post-



Office, Police Station, Hospital, RTO office, Taluk Office, Collectorate are available as spatial layers with point features for individual locations, Location based Services become more useful on the move. The LBS can answer the queries such as how far, where, route, direction with added public transport facilities to reach the service or the utility centre.

Google's 'What's Nearby' is a location-based search that's part of an updated Google Maps app on Android devices, and soon to be available on the web-based Google Maps on other devices. What it does is to simply give you a list of the ten closest places (restaurants, shops, points of interest) that are near your location. While doing the search the voice enabled query or search is also enabled using Google's 'Search by Voice' feature

Mobile client programs can also carry out search based on the pictures taken from a location. 'Google Goggles' is a picture-based search tool, wherein you can take a picture of something and have Google return search results based on it. This could be good to identify something you don't recognize, or learn more about something you do.



# Gadchiroli: Embracing ICT in the Tribal District

Situated in the southeastern corner of Maharashtra, Gadchiroli is categorised as a tribal and undeveloped district with more than 80% of its land covered with dense forest and hills. Information Technology has paved the way to development and good governance in this economically and industrially backward district. The District Administration in partnership with NIC, Gadchiroli has set the goals for use of ICT for speedy development and delivery of essential services to the common man in an easier and simpler manner.



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Sh. Atul Patne, Collector Gadchiroli receiving the award

Gadchiroli was awarded the prestigious 14th National eGovernance Award for its innovative project - "District Disaster Management Plan" and other IT based initiatives in the district. The project was initiated by Sh. Atul Patne, Collector, Gadchiroli and supported by Sh. Moiz Hussain Ali, SIO NIC, Maharashtra

Edited by **Anshu Rohatgi**

As part of the IT framework for the district, NIC, Gadchiroli prepared a blueprint specifying the priority areas for computerisation and automating the processes for the benefit of the district administration and the people of the district. A spectrum of services have been extended by NIC to the district administration which includes - Video Conference support, System study & software development, Consultancy in hardware & software, Training to the users, e-mail, Internet support to District Administration, All Technical support to implement IT based Projects.

NIC, Gadchiroli has developed & implemented many projects in the district based on the requirement of

people and district administration. These projects have been instrumental in bringing transparency in the development works across the district and improving the life of citizens.

**e-Vidya:** This innovative project launched for development of education system and introducing IT technology among the students of district. Under the project VC facility has been provided in 36 schools of two talukas namely Dhanora & Kurkheda. Lectures over VC sessions are delivered by experts from the central VC hub located at ITI, Gadchiroli educating the students and creating awareness amongst the citizens/villagers on various government schemes, health issues, literacy programmes etc. The entire technical support to the project has been provided by NIC, Gadchiroli.

**Rozgar Kundali:** The district administration launched a portal 'Rozgar Kundali' to address the issues of unemployment due to industrial backwardness and naxal activities in the district. The portal provides information on government schemes for financial assistance and skill development to the educated unemployed youth of the district helping them to be self reliant and start their own businesses etc.

**Forest Rights Beneficiary Information System:** This system has computerized the information pertaining to beneficiaries of Forest Rights Acts. The aim is to provide information of government schemes to citizens for their financial development. It holds information of FRC beneficiary such as family details, available irrigation facility, land possession, having own home etc., which are mandatory for processing of applications for granting benefit.

**MREGS Help Line System:** This system provides information regarding various types of developmental works being carried out by various departments in the district over a telephone line. Any individual can make a call on the toll free number to get information on the status of work, musters, village administration, Panchayat Directory etc.

**ICT Training & Technical Support:** NIC Gadchiroli frequently organizes training programmes to impart training on MS Office, e-mail & Internet to the officials from revenue & other departments in the district to enhance ICT culture among the offices and to improve efficiency while working on various IT supported projects. In addition trainings are also conducted on various applications implemented in the district.

**Video Conference Support:** VC services are being provided to District Administration and various depart-



Hon'ble Home Minister of Maharashtra Sh. R.R. Patil interacting with villagers from remote villages in the district using VC system under e-Vidya Project

ments by the district unit. Senior Officials from Secretariat and HODs use this facility to review the status of various departmental schemes or ongoing projects through their field offices in the district.

**Web site for Collector Office:** NIC Gadchiroli has also developed the web-site for the district which provides history, district profile, administrative setup, tourism and other useful statistical information on the district. Various MIS have also been linked to the website to provide information of beneficiaries and other details related to various schemes implemented in the district.

**Left Wing Extremism Scheme:** The Left Wing Extremism Scheme has been initiated by the Government for the Naxal affected & remotely placed district of the state. Under this scheme, the Central Government has decided to provide financial assistance to 12 departments for development of district to minimize Naxal Activities. NIC Hq. developed MIS is implemented effectively by reporting monthly progress of various schemes data into the web based application in time and supported the district administration.

Numerous other National and State Government projects have been implemented by NIC, Gadchiroli. The district got 3rd Prize for effective implementation of MNREGA scheme and operationalisation of NREGA MIS. The Land Records Computerisation Project is effectively implemented in all the tehsils for Revenue Department. The CON-FONET application is successfully implemented for District Consumer Forum and data entry for consumer cases, judgments is being done using the software. The AGMARKNET project with online reporting of APMC data by concerned APMC into the site <http://msamb.com> is regularized while the Property Card Information System and the National Social Assistance Programme projects have also been implemented in the district.

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# Kurukshetra: ICT Root Deepens In District through NIC

Kurukshetra is a place of great historical and religious importance, revered all over the country for its sacred associations. The battle of Mahabharata was fought here and Lord Krishna preached his philosophy of "KARMA" to Arjun as enshrined in the Holy Geeta. In the very first verse of Bhagwat Gita, Kurukshetra is described as DHARAMKSHETRA i.e. field of righteousness. Mythologically, the name Kurukshetra applied to a circuit of about 48 KOS or about 80 miles (128 Kms) which includes a large number of holy places, temples and tanks connected with the ancient Indian traditions and the Mahabharata War and Kururu, the pious ancestor of Kaurvas and Pandavas.



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DieDCs

**T**he NIC district centre, established at Mini Secretariat, has a dedicated redundant Leased Line connectivity with NIC-Haryana State Unit, under NICNET and SWAN, for uninterrupted network services. Two e-DISHA centres and six HALRIS centres for G2C services with comprehensive computing and communication facilities and a comprehensive LAN of 300 nodes is also functional. NIC setup also covers one Training Lab with roof mounted projector, well equipped Video Conferencing room and 03 Touch Screen kiosks for the convenience of residents.

## MAJOR E-GOVERNANCE PROJECTS

**e-Delivery of Integrated Service to Citizens (e-DISHA):** Various citizen centric services are provided hassle free through a single window in a transparent way and few of them are:

- Registration of Vehicles ( New, Duplicate, NOC, HPA Addition and Cancellation, Re-passing) - using VAHAN software
- Issuance of Permanent and

Learning Driving License and Conductor License (New, Duplicate, Renewal) - using SARATHI software

- Affidavit attestation Ensure the presence of Applicants, Witnesses by taking the Thumb Impression using Biometric Device and photograph
- Issuance of Certificates viz: SC, BC, OBC, Haryana Residence, Income, Rural Area
- On Spot Medical Examination Facility for Driving License and Conductor License
- Issuance of Senior Citizen I-Cards
- Collection of Application and Delivery for all types of Nakals by Coping Agency related to Revenue Court Cases

**Dynamically Integrated HALRIS (Haryana Land Records Information System) & HARIS (Haryana Property Registration Information System) -** A complete Integrated Workflow Automation system of Land Record components has been implemented at all 06 tehsils & sub-tehsils. It provides a single Window Interface for Deed Writing, Registration, Mutation, Jamabandi and copy of Records-of-Right, which is also avail-





Word Bank Team members with G.S. Saini, SSA, NIC at Halris Centre, Kurukshetra

able on website <http://jamabandi.nic.in>. The Department of Land Resources, Govt. of India has identified HALRIS Centre, Kurukshetra as a nation wide best practice and has been deputing officers, teams from other states to undertake study of HARIS, HALRIS Integration. Various teams from different states (UP, Punjab, Himachal Pradesh, Tripura, Assam, Karnataka) & World Bank visited Kurukshetra to study the initiative.

**Automation of the Branches in Deputy Commissioner Office (e-Office)**

- Attendance Marking System through biometric device: More than 150 officials daily use this system to mark their attendance. (also implemented in ADC Office & SDM Office)
- Public Grievances Redressal & Monitoring System
- Payroll, Budget Preparation (Form BM10), Expenditure & Budget Allocation Statements (BM2629)
- Vehicle Requisition
- Dairy & Dispatch Register (VRK Branch)
- Receipt/Issue of all Files related to Various Courts in Coping & RKE Branch
- Distribution of Grants (DA Branch)

**Touch Screen Kiosks based Citizen Facilitation:** 03 Touch Screen Kiosks are installed at Kurukshetra Mini Secretariat, which are being used for e-services like Queries related to Land Records based on Owners as per Khewat/Name, Cultivators as per

Khatoni/Name, Registration Deeds, Mutations Status, Field Book, Mausawis, Awareness through PPT, Vehicle Registration & Driving License Status/Awareness, Voter List Enquiry , Haryana School Board Results, Sr. Citizens Id. Cards, to query about Below Poverty Line Households, Query about the Panchayats Directory - name of Sarpanch & Panch, DC Office Employees Attendance Marking System.

**OTHER IMPORTANT PROJECTS**

**General Elections to Lok Sabha-2009, Haryana Assembly - 2009, and Municipalities & Panchayats General Elections 2010:**

The software for Duty Assignment and Randomization of Polling booths, polling parties, EVMs, Micro observers and Result compilation was developed in Kurukshetra, implemented in all constituencies in district & replicated in entire state of Haryana. Four types of Help lines were also established and operated successfully.

**Results Through Binocular:** The project of Board of School Education, Haryana for Result Declaration & On-line in-depth analysis (i.e. a compendium of millions queries) of results of all students of Middle, Matric and Plus Two exams was also developed and implemented through NIC, Kurukshetra, having a feature of E-Psychologist for instant counseling. In addition, all assigned state level and central projects are being implemented and active ICT support is being provided to district administration and user departments.

**For further information**

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C.G. RAJINI KANTHAN, IAS, Deputy Commissioner, Kurukshetra

To promote e-Governance and improve delivery of various citizen services using ICT District Administration with the technical support of NIC, District Centre has taken several initiatives. Moreover, all Government offices have been asked to carry out necessary process re-engineering in order to simplify office procedures to make them suitable for an efficient and transparent delivery of public services through use of available ICT tools. I appreciate the efforts of Sh. Vinod Singla, DIO & Sh. Kamal Tyagi, DIA and complement them for continued motivated performance in the future.

# Kathua: ICT enabled Initiatives Leading to Good Governance

Kathua - gateway to the northernmost state of Jammu and Kashmir, lies just 88 kilometres south of the state's winter capital of Jammu. The District is surrounded by Punjab in the South-East, Himachal Pradesh in North-East, District Doda and Udhampur in North and North-West, Jammu in the West and Pakistan in the South-West. Dogri & Pahari are the main languages spoken. Hindi, English and Urdu are the main medium of education. Official language is Urdu.



**RAJESH KUMAR GUPTA**  
District Informatics  
Officer, NIC Kathua  
[kathua@nic.in](mailto:kathua@nic.in)



Residents of Kathua accessing the benefits of HILMS at District Hospital

**N**IC District Centre became operational in 1989 with an aim of improving and accelerating the planning process and implementation of socio-economic programmes. The first step in this direction was to create mass awareness among officials of District Administration and other departments, through a series of training and awareness programmes. As a result of this the usage of computers in the District showed a tremendous increase and gradually various areas of District Administration were covered. By now almost all major departments of J&K State Government as well as Central Government in the district are reaping the benefits of ICT and the NIC office has gradually come out as Nodal Office for the horizontal and vertical propagation of this culture.

edited by  
**Vivek Verma**

## **HOSPITAL MANAGEMENT INFORMATION SYSTEM, (HMIS)**

A Centre for e-delivery of services at District Hospital has been established which runs HMIS under a

team comprising of Chief Medical Officer, Medical Superintendent and doctors who are very well versed to the problems that come across the healthcare management. All sections of the hospital have been brought under single umbrella for the convenience of residents. It shall shortly be implemented in all the Sub-District Hospitals of the district.

**Key Features:** Complete and automatic operating of District Hospital Kathua, OPD and IPD Management, Store/inventory management, Laboratory tests/ Ultrasound ECG/ X-rays/ Blood Bank etc., management, Built-in backup and restore facilities.

**Advantages of HMIS :** Enhancing better administrative control, Improving response to patient's waiting time by smooth flow of information, Provides proper keeping of medical records such as patient history, diagnostic details etc., Generates various MIS statistical reports in terms of OPD, IPD, Drugs stock inventory etc.

## **E- SAHOOLIAT CENTRE (SINGLE WINDOW SYSTEM)**

Single Window System is intended to bring together all the departments

under one umbrella and give residents a "Multi Service - Single Window" convenience. All inputs are captured at a single point, a specified delivery date is defined depending upon the type of service and after internal processes the service is delivered. Services like Arms Licenses Renewal , Certificate Issuance - Caste, Marriage, Legal heir, Dependency under SRO\_43, Character etc., Fard-Intekhab System, Permanent Resident Certificates, Issue of NAKAL (Voter list), Complaints monitoring system are being offered.



A working day at E-Sahooliat Centre

**GENPROFITS**

Software for the computerization of **General Provident Fund** subscriber's data successfully implemented at Funds Office Kathua. Schedules for the current financial year have been issued. The different reports being sent to the AG office are unpost balance, unpost cleared, compilation reports etc. It has facilitated more than 5000 employees of J&K Government in Kathua district to see their subscription on internet.

**Panchayat Elections 2011**

Conduct of Panchayat Election is a mammoth task for the District Administration, which by effective use of, has been made very easy. Activities like Employees Data Base, Randomization and Deployment of Polling and counting staff, List of Polling Stations, Printing of Ballot Papers and Training materials for ROs/AROs are computerized.

NICNET has been effectively used for

transmission of information between DPEO and Office of Election Department. Results are displayed on the website of the district administration.

**Levy Information System**

The Collection & Disbursement of levy was a major area of concern for revenue department, as there was no proper system of keeping accurate and updated records and preparing reports to show the actual position of Levy. Keeping in view all this, the software was developed having all the features like data entry, help, query and report generation. With the implementation of this software it has become easy for the Revenue Department to present correct and updated information to higher authorities.

**Computerisation of RTO Lakhampur**

Lakhampur is gateway to J&K thus RTO Lakhampur had been chosen for pilot implementation of Vahan and Sarathi software for vehicle registration and licencing respectively. The Vahan and Sarathi software, provided by NIC HQ and customized as per the requirements of RTO, has been successfully implemented at RTO Kathua since 2005. Connectivity has also been established for the transfer of Vahan and Sarathi data on daily basis to State and National Register.

**Video Conferencing**

A state of the art VC studio has been established in the district office complex. It has enabled DDC and other districts level officers to attend the various review meetings with their senior officers.

Besides the above mentioned projects, NIC Kathua has provided effective support for the implementation of some of the coveted National level projects like e-Court, CIPA, Computerization of Electoral rolls, Multi purpose National Identity Cards (MNIC) (Kathua is one of the place where MNIC project has been successfully implemented as the guidelines of RGI), Community Information Centre (CIC).



**ZAHIDA PARVEEN KHAN**  
Deputy Commissioner  
Kathua (J&K)

Information technology holds tremendous potential to extend and enable access to critical information and delivery of public services in a far more efficient and effective manner. NIC District Centre Kathua has contributed in promoting the e-Governance and ICT culture in Kathua District which has brought transparency and efficiency in the system. I appreciate the efforts made by Sh. Rajesh Kumar Gupta, DIO NIC Kathua for his contribution and active support to district administration in all spheres to make e-governance a true success.

**For further information**

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# Supaul: Implementing ICT Projects for e-Governance

Supaul district is one of the 38 districts in Bihar. The district is bounded by Nepal to the north, Araria district to the east, Madhepura and Saharsa district to the south and Madhubani district to the west. Supaul district is a part of Kosi division. The Koshi River flows through the district which regularly causes floods resulting immense damage to crops, loss of lives and property. Agriculture is the main occupation and mainly paddy is grown in the region.



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Various e-Governance projects in the district were taken up by NIC Supaul which has brought benefits of ICT and modern technology to the district administration resulting transparency and efficiency in governance for the benefit of the masses. The important among them are Biometric based attendance system, SMS based scheme monitoring system, Flood Information System etc. Moreover, a large number of ICT projects were implemented in the district towards establishing an efficient e-Governance system some of which are as follows.

edited by  
**Prashant Belwariar**

## DISTRICT WEBSITE

The district website (<http://supaul.bih.nic.in>) has proved to be useful and informative towards timely dissemination of information which was also acknowledged by local people and media during Koshi Floods, Parliamentary and Assembly Elections apart from other district level announcements. The district administration is leveraging ICT-led developments to provide accurate, transparent and responsive information and services to citizens of the district. The objective is to make the district website dynamic, updated, accurate and act as an important medium of communication with the people.

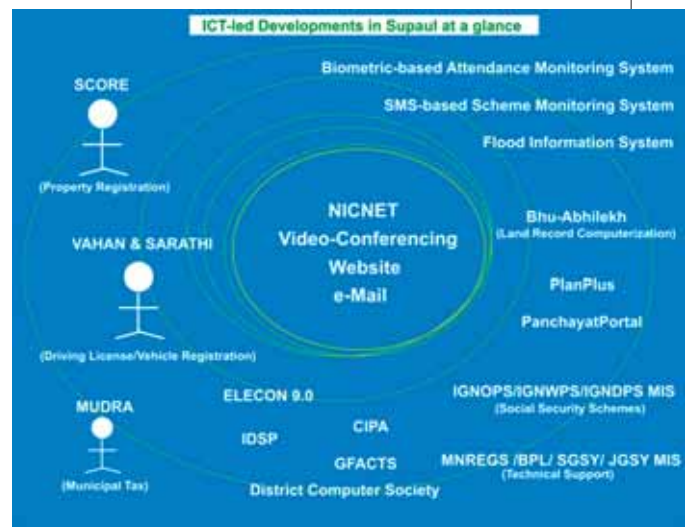
## System Of Computerized Registration (SCORE)

The software has been implemented to make registration process simple, transparent and fast. The salient features are auto valuation of property based on Minimum Valuation Register (MVR), auto calculation of stamp duty, additional stamp duty, registration fees and other subsidiary fees, capture of Photo and finger prints of parties (executants and claimants) and identifiers. The computerization process also includes scanning of documents and their preservation in digital form. The software has been implemented at all registry office located at Triveniganj, Ganpatganj, Nirmali and Supaul.

## COMPUTERIZATION & E-GOVERNANCE INITIATIVES

### NICNET & Video-Conferencing :

NIC District Unit, Supaul has a Video-Conferencing facility, and is being used frequently by various departments for review & monitoring of the government schemes and programmes including capacity building for the various e-Gov appli-





A working day at District Transport office

**Transport Computerization:** The VAHAN & SARATHI are national level application software for Transport Department is fully operational at District Transport Office, Supaul.

**Vahan** is related with registration of vehicle, its validity and fitness and tax details.

**Sarathi** is related with issuing of various types of licenses.

The unique feature is issuance of driving license and registration certificate book on smart card.

**Municipal Corporation towards Digital Revenue Administration (MUDRA) -**

This software offers G2C service by the Urban Local Bodies. The key features are access to house holding information, automatic assessment of holding tax, demand note generation etc.

**Other Projects** that has greatly helped the administration for its quest towards e-Governance are CIPA, PlanPlus - Software for micro level planning, computerization of District Rural Development Agency, Mahatma Gandhi National Rural Employment Guarantee Scheme etc. in the district.

cations. The VC facility is over 2 Mbps leased line circuit with implemented QoS and STM-1, and is being upgraded to 34 Mbps, besides DAMA and Sky blaster redundant system. In addition, 2 Mbps leased line circuit is also extended to Department of Post for implementation of Arrow project and various sections of different departments in the district for NICNET facilities.

**ELECTION CONFIDENTIAL (ELECON)** application software, extensively used in the district towards management of election related activities like deployment of polling & patrolling personnel, booth allotment to polling parties etc. It is a standard software and has rich features e.g. Personnel Randomization, EVM Randomization, Force Randomization, RO/ARO Counting, MIS Repots that provides support to Returning Officers (RO) during Parliamentary/Assembly election. This software was well acknowledged by the users. NIC District Unit Supaul contribution during counting of Votes in Parliamentary Election 2009 was well appreciated by the concerned authorities.

**For further information**

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**KUMAR RAVI**  
IAS & District  
Magistrate,  
Supaul (Bihar)

"National Informatics Centre, Supaul is playing a critical role in implementing citizen centric good governance in Supaul district since its inception in 1999. The district unit of NIC has taken significant strides since then & has contributed immensely for providing quality services to the people in this remote part of the country despite various infrastructural constraints. The district website maintained by NIC has proved to be very useful and informative for the local people and media in information dissemination related to Koshi Floods 2008, Parliament Elections 2009, Assembly Elections 2010, Disaster Management, Tendering, recruitment etc. Supaul District being located in difficult Koshi region, the role of Information technology and e-Governance will further strengthen and widen in future for providing accurate, transparent and responsive information and services to the people of the district. The fact that the efforts are going to be featured in 'Informatics', an e-Governance bulletin from NIC will give further momentum to the team."

## Free Public Procurement e-Course for Businesses: UK

**Department** for Business, Innovation and Skills (BIS) of UK Government has launched a free public procurement e-Course for businesses.

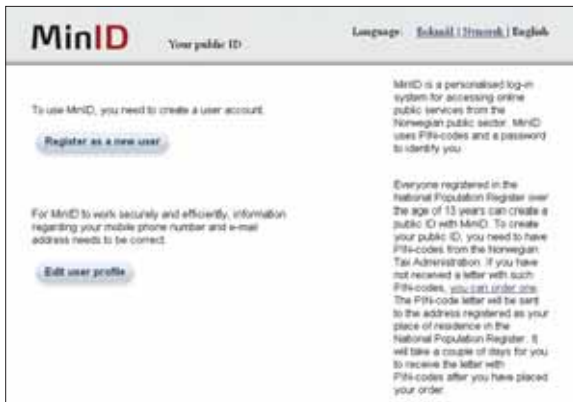
"Winning the Contract", an on-line public procurement course is a free resource to help businesses learn about public procurement and how to bid for public sector contracts. It introduces businesses to the key procurement processes including the advantages and disadvantages of dealing with public bodies; different types of contracts; understanding approved supplier lists and framework agreements; searching for and finding public sector opportunities; and identifying the key stages in the tendering process.

The e-Course is divided into six modules and presented in an interactive format. There is an optional audio track to aid learning. Resources such as case studies, a glossary, a 'Hints' and 'Tips' download and website links are also facilitated for the ease of the learners.

This e-Course is available via the Business Link webpage, which is the Government's online resource for businesses. It targets people with responsibility for developing their business, such as business owners, managers and business development managers. It is aimed at growing businesses in all sectors.



**For information:** [www.businesslink.gov.uk/procurement](http://www.businesslink.gov.uk/procurement)



## MinID Provides safer Online Public Service: Norway

**MinID** is a personalized log-in system that provides access to many public services on the internet from the Government of Norway. Now, it offers citizens new options which provide secure access to public authorities' services dealing with highly sensitive personal information.

MinID is developed and maintained by the Agency for Public Management and eGovernment and currently gives million people secure electronic access to a gamut of public services e.g. delivery of tax returns, services of the Norwegian Labour and Welfare

Organization, applications for student loans and scholarships and may more. These services do not require high security, since they do not process sensitive personal data nor have special security requirements.

The new MinID options are an eID smart card and an eID USB stick. They provide eID at the highest security level, and are designed for public services that deal with sensitive information e.g. health information and other services with especially high security requirements. They can also be used for all services for which MinID is currently used, as well as for future services which involve the electronic signing of documents and the encryption of messages that contain sensitive information.

Though, MinID is designed with safety and convenience, yet future services might require even higher security, which might involve a different type of ordering method. So to obtain a MinID at the highest level of security might require attendance in person in order to conduct an identification check. Currently the MinID PIN code is sent to the user's home when the service is acquired.

**For information:** <http://www.startupgreece.gov.gr/>



## Government Asks for Citizens' Views on Over-Regulation: UK

**The UK** Government launched the Red Tape Challenge website in order for the general public to give their views on unnecessary regulations, with the ultimate aim of reducing bureaucracy. This site is designed to promote open discussion of ways in which the aims of existing regulation can be fulfilled in the least burdensome way possible.

Over the years red tape and bureaucracy have become excessive leading to over-regulation which has a negative effect on businesses, economy and society. With the aim of ultimately streamlining regulation, the government has published all the current regulations for one specific sector or industry. The public would give their views regarding the respective sector i.e. what regulation is working and what is not, what can be simplified and what can be scrapped. After receiving the feedback, Ministers would decide which regulations should be kept and why.

This initiative has been welcomed as an "opportunity to help drive changes". Making this work has been put as a "high personal priority" and meetings are held regularly to ensure real progress is being made.

It is proposed that all government departments use 'Red Tape Challenge' to deepen their engagement with businesses, the public and all other stakeholders on regulatory issues, and ensure that creative and credible options for reducing regulation are put to Ministers.

The Red Tape Challenge site is open for the public's comments on regulation in Road Transportation. Other sectors include Hospitality, Fisheries, marine enterprises and internal waterways, Equalities, Health and safety, Manufacturing, Healthy living and social care, Media and creative services, Utilities and energy, Rail and merchant shipping, and Mining and quarrying etc.

**For information:** <http://www.redtapechallenge.cabinetoffice.gov.uk/home/index/>



## Online Youth Entrepreneurship Platform Focuses on Knowledge Sharing: Greece

**In what** is considered a first for the Greek public administration, digital information, networking functions, as well as all the required material for anyone currently doing business in Greece or wish-

ing to do so, are being incorporated into a single platform 'Startup Greece'.

The youth entrepreneurship initiative 'Startup Greece' contains a database of laws and regulations, procedures, support structures, incentives, success stories and failures and interaction with public and private institutions. Citizens are invited for membership and assist in fostering an entrepreneurial culture.

Startup Greece is aimed at creating a new generation of entrepreneurs in Greece, bringing together people and ideas and changing the country's perception of doing business and entrepreneurship. It combines an online entrepreneurship community with knowledge and information database specialized in the field of doing business.

Startup Greece is supported by the Ministry of Regional Development and Competitiveness and the Greek Government, in collaboration with communities of young entrepreneurs.

**For information:** <http://www.startupgreece.gov.gr/>

## Roshni-A Green Innovation for sustainable Habitats

(<http://roshni-rb.gov.in>)

The website Roshni is an initiative taken on the directions of the President to make the President's Estate a green, energy efficient and zero waste model township. The content rich and visually appealing website delivers information on the environmental policies and the projects of the Estate which are designed with an effort to make the residents of the Estate more aware about the challenges faced and to be concerned about the degradation of the natural eco-system. It also addresses the concepts of promoting models for creation of eco friendly urban habitats through active participations of stakeholders and convergence of partnership programs. A video and photo gallery is also uploaded to keep its visitors abreast with the latest events or initiatives. The site has accessibility features for differently abled users.



## Agriculture Department of Mizoram

(<http://agriculturemizoram.nic.in>)

The agricultural department of Mizoram hit the cyber world with the launch of its official website. The homepage of the website display an array of information on the basic roles, functions and responsibilities of the department. One important feature of the website is the Remote Sensing and GIS section which is helpful in analyzing and displaying of complex data for various district wise projects and geographically transferring the information. The website also keeps the citizens and its beneficiaries informed about the various projects/schemes running and implemented in the district. Besides a Photo Gallery and a Download section (for downloading forms and documents) are also available.

## High Court of Uttarakhand

(<http://highcourtofuttarakhand.gov.in/>)

NIC Uttarkhand has designed, developed and hosted the website of Uttarkhand High Court in compliance with the Guidelines of Indian Government Website. It provides information on the functions of the High Court and the details about present and former Hon'ble Chief Justices, Judges and Registrar-Generals. A separate "Mediation" section is also there for dispute resolution. Citizens and all concerned can also see the Cause-List and various Judgments of High Court through the online links available on this website. The home page of the website also has links to all the 13 Districts and Subordinates Courts which can be reached just at the click of the mouse. Apart from it, a RTI annexure, contact information, Annual Calendar of High Court and District Courts are also available. News & Events, Tenders and Recruitment sections along with Notifications and Circulars issued from time to time are regularly updated.



Contributed by: **LOKESH JOSHI, NIC HQ**  
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## DIO, Yamuna Nagar, Haryana received National Award



Sh. Ramesh Gupta receiving the award from Hon'ble Sh. Raman Singh, CM, Chhattisgarh and Hon'ble Sh. Mallikarjun Kharge, Union Minister for Labour & Employment

DIO Yamuna Nagar Sh. Ramesh Gupta received National Award for outstanding individual contribution in programme implementation of Rashtriya Swasthya Bima Yojna (RSBY). Yamuna Nagar was the first district to implement RSBY in Feb 2008. Since then RSBY scheme has been running successfully in District Yamuna Nagar. Sh. Ramesh Gupta DIO, Yamuna Nagar was made State level project coordinator

for facilitating state wide roll out of RSBY. DIO, Yamuna Nagar has been providing active implementation support and capacity building for roll-out of RSBY in other districts of Haryana. NIC Yamuna Nagar has also been involved to extend support to other states like Uttarakhand, Himachal Pradesh, Delhi, UT Chandigarh and Punjab.

Poonam, Haryana



Hon'ble Minister of Minority Affairs Sh. Salman Khurshid launching OSMS

HON'BLE Minister of Minority Affairs, Sh. Salman Khurshid launched the 'Student Module' of the Online Scholarship Management System (OSMS) for Merit-cum-Means based scholarship scheme of the Ministry of Minority Affairs recently. Sh. Vivek Mehrotra,

## Launch of Web based Merit cum Means Scholarship System for Ministry of Minority Affairs

Secretary, Ministry of Minority Affairs, and other Senior Officers of the Ministry were present on the occasion. Using this facility the students can apply for Scholarship online from anywhere, anytime.

A web based system has been designed and developed by NIC-Tamilnadu State Centre as part of the e-Scholarship project in coordination with NIC HQ. The site can be accessed through URL <http://momascholarship.gov.in>.

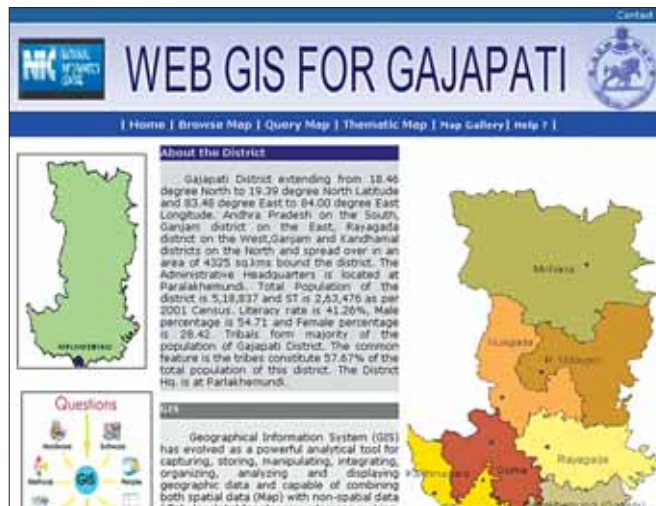
It is a complete work flow system that handles scholarship applications from receipt of online application, processing at the State level and disbursement of the same to Minority students and it has been developed using Open Source software tools. The system is being implemented across the country.

R.Gayatri, Tamil Nadu



## Inauguration of Web based GIS Portal of the Gajapati District, Orissa

Recently NIC District Centre Gajapati moved into its new building duly inaugurated by Sh. P.C. Das, District Collector. On this occasion, the GIS portal <http://gis.ori.nic.in/orissanew/gajapati/frontpage/default.htm>, specifically designed for Gajapati district under guidance of Dr. Manjurani Routray, Scientist-E & Head, GIS Division, NIC Orissa State Unit, was inaugurated by District Collector. Sh. Bijaya Kumar Samal, Scientist-D, GIS Div., NIC Orissa presented various features of the Web-GIS to all district heads. Role based user credentials have been provided to the district administration for updation of the database on the server. The programme was coordinated by Sh. T. Balakrishna Murty, DIO & Scientist-C & Sh. R. R. Majhi, S.O/Engr-SB.



GIS Portal of Gajapati District

A.K. Hota, Orissa

## Online Summon Delivery & Monitoring System - Muzaffarnagar(UP)



DM Muzaffarnagar briefing SC Justice Sh. Satha Shivam, Chief Justice HC-Allahabad and Admin. Judge about Online Court Summon Delivery System

ONLINE Summon Delivery & Monitoring System software has been developed by NIC-Muzaffarnagar under the able guidance of Sh. Annant Kumar, District Judge, Sh. Pankaj Kumar, District Magistrate & Sh. Praveen Kumar, Senior Superintendent of Police, Muzaffarnagar.

Technological demonstration of this software was done before Hon'ble Supreme Court Judge Sh. P. Satha Shivam.

Hon'ble Judge SC Sh. B.S.Chauhan, Chief Justice of Allahabad High Court Sh. F.I. Rebelo, Administrative Judge HC Sh. D.P.Singh & other dignitaries in an impressive function organized here by district court on 2nd April 2011.

Sh. Pankaj Kumar District Magistrate briefed the shortcomings of manual summon delivery system & advantage of online summon delivery system.

Chief Justice Allahabad Mr. Rebelo has shown keen interest in the quick summon delivery mechanism used in this software. Supreme Court Judge Sh. Satha Shivam highly appreciated idea used in the software for quick deliveries of summons. He said that this kind of software will help the lower courts in the quick disposal of Cases. Administrative Judge of HC Sh. D.P.Singh lauded the innovative

approach of NIC.

DM Muzaffarnagar appreciated the efforts of Sh. Gaurav Tyagi, TD/DIO & Dr. Hemant Gaur, SSA, Sh. Arun Mishra, Sh. Ajay Kumar, Sh. Suresh Kumar & Sh. Sumit Kumar of NICNET/SWAN support persons for the timely development of this software and technical support extended by them in this demonstration.

**Gaurav Tyagi**, Uttar Pradesh

## Training Programme on eProcurement in Himachal Pradesh

**I**N order to make the officers and bidders conversant with the process of the eProcurement and to gear them up for the implementation, a three day training programme was conducted for the officers and bidders recently. Around 225 officers along with Nodal Officers and 115 bidders were called at Shimla from various places in Himachal Pradesh and they were shown the software. They were also explained in detail about Digital Signatures.

Sh. Rajneesh (IAS), Director Information Technology, GoHP explained to the participants the importance which the state government has given to its implementation besides the benefits likely to be there after its implementation. Sh. Rajesh Bahadur, Senior Technical Director and SIO(HP) informed the participants how the NIC Himachal Pradesh will cooperate and assist in this endeavour of the government followed by a detailed presentation by Sh. Mukesh K Ralli, Technical Director. He then joined Sh. Bharat Kaushal, SA during detailed presentation. The officers were presented with all the steps of tendering process starting from the creation, publishing and opening of the biddings. The post lunch session was reserved for the bidders. They too were given a presentation explaining the eProcurement process, necessary requirements and Do's and Don'ts.

Overall the demonstration cum meeting was well taken by the department officials and the bidders and they showed the faith in the system developed.

**Mukesh K Ralli**, Himachal Pradesh



Officers and Bidders during Training



Citizens are in queue at Single Window Clearance Systems

## Single Window Clearance Systems implemented at DC Office, Jammu

**N**ATIONAL Informatics Centre District Centre Jammu has taken a lead in implementation of Web Based Single Window Clearance Systems in Deputy Commissioner Office Jammu. This system will help in fixing accountability on the part of individuals at each level and for providing better services to citizens to eliminate unnecessary delays.

The system was envisaged as a complete work flow application wherein the individuals concerned can also update the application status with respect to any citizen service request. Presently, two web based software have been implemented in DC Office Jammu for monitoring and supporting various functions in DC Office. One is Generic Single Window Citizen Service Request Delivery Management System and another is Single Window Citizen PRC Management System.

The structure of both the systems was appreciated by Deputy Commissioner Jammu and has congratulated the NIC Team for rolling out these two systems in the shortest possible time in DC office Jammu.

**Jit Raj**, Jammu & Kashmir



## Launching of SUGAM, Jaipur



Hon'ble CM of Rajasthan Sh. Ashok Gehlot launching SUGAM in Jaipur

IT was yet another feather in the cap for NIC Rajasthan as the much awaited single window system for grievance redressal and service delivery - Sugam - was launched by Sh. V. Naraynsami, Minister of State, PMO and Administrative Reforms & Public Grievances, GoI and Hon'ble Chief Minister of Rajasthan Sh. Ashok Gehlot in Jaipur on 12th May 2011.

The Operational manual and brochures of the system were also released by the dignitaries on the occasion. A pres-

entation on Sugam Grievance Redressal system was made by the SIO, Rajasthan Smt. Indu Gupta while Secretary IT & Communications, Govt. of Rajasthan Sh. Sanjay Malhotra made a presentation for the SUGAM single window service delivery system, developed by NIC Rajasthan and implemented in collaboration with DoIT and Communications, GoR.

As part of the project a call centre has been established at Jaipur. Hon'ble MoS Sh. Narayansami visited the call centre to see its operations. The SUGAM RPG system provides multiple channels for grievance lodging to the citizen. A complainant can lodge grievance related to any department, corporation, Urban Development Authorities, etc. through SUGAM-RPG web portal, telephone, letter, mail or by approaching any govt. office upto Tehsil level.

The SUGAM-Single Window Service delivery system has been implemented in all 33 district collectorates and 247 Tehsil offices of Rajasthan. The system facilitates timely delivery of various citizen services eg; Issuance of Bonafide Resident certificate, Caste Certificate etc. The system would result in huge savings of time and efforts by citizen in obtaining services from various govt. offices as all the services would be available under one roof.

**Chandan Sen**, Rajasthan

## SESAM Software Training at IPEC- Ghaziabad

THE Mechanical Engineering Department of Indraprasta College of Engineering (IPEC), Ghaziabad, Uttar Pradesh purchased the five Educational Licenses of NIC Version of SESAM Software from CAD (SESAM) Group of NIC, New Delhi through NICS. The 4 - days training program was conducted at IPEC-Ghaziabad, on the usage of the Finite Element Engineering Software by Sh. R. Rajendra Kumar, Technical Director & Sh. P.V. Lakshminarayan, Senior Technical Director of CAD (SESAM) Group from 16th May to 20th May, 2011. The training program was well attended by the Post Graduate Students, PhD Students and the Faculty members of the Mechanical Engineering and Civil Engineering Departments of the College. The SESAM Software is extensively used in Finite Element Analysis of Civil, Geo-technical, Offshore, Hydropower and Mechanical Engineering problems.

**R. Rajendra Kumar**, NIC HQ



Sh. P.V.Lakshmi Narayan, STD, providing training on the SESAM





**Title:** Programming WCF Services, Third Edition

**Author:** Juval Löwy

**Publisher:** O'Reilly Media

**Year:** August 2010

**Windows Communication Foundation (WCF) is a part of the .NET Framework that provides a unified programming model for rapidly building service-oriented applications that communicate across the web and the enterprise. WCF was first released as part of the .NET Framework 3.0 in 2006, and then updated in the .NET Framework 3.5, the most recent version of this technology is included in the .NET Framework 4.0.**



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## Programming WCF Services

**P**rogramming WCF Services by Juval Löwy is one of the premier books on WCF. This is the 3rd edition of this book that includes .NET 4.0 and Azure AppFabric Service Bus. It is a good book both for developers who would like to migrate from conventional web service / windows service to the new paradigm and for programmers who are well versed with the technology. The book is structured well and covers everything from design, development to maintaining.

The book is organized into eleven chapters and seven appendices to give a complete, and comprehensive, coverage of WCF. The chapter '**WCF Essentials**' discusses the basics of WCF and gives an insight into WCF concepts and architecture. The chapters on **Service Contracts** and **Data Contracts** talk about some useful techniques for service contract overloading, inheritance & designing of contracts that cater to reuse, maintainability, and extensibility. There is a chapter on **Instance Management** - a technique that impacts scalability, performance, programming model and business workflow, different chapters on **Exception Handling**, **Transaction Management** and **Concurrency Management** highlight callback, thread affinity and managing asynchronous calls. The chapter on **Queued Services** shows how clients can queue up calls to services, thus enabling asynchronous, disconnected work.

However, one of the most critical aspects of Service Oriented Architecture (SOA) is security whether intranet/internet based, any service is open for malicious attacks, assessments of delegation and impersonation etc. An exclusive chapter on **Security** explains various scenarios of attack and goes on to explain the various suggested

- **Learn about WCF architecture and essential building blocks, including key concepts such as reliability and transport session.**
- **Use built-in features such as service hosting, instance and concurrency management, transactions, disconnected queued calls, security and discovery.**
- **Master the Windows Azure AppFabric Service Bus, the most revolutionary piece of the new cloud computing initiative.**
- **Increase your productivity and the quality of your WCF services by taking advantage of relevant design options, tips and best practices in Lowys Service ModelEx Framework.**

security implementation to automate security setup and to considerably simplify managing security. Finally, the chapter eleven presents the **Windows Azure AppFabric Service Bus**.

Normally, people just glance through or skip appendix section of the books. This one is an exception where topics covered under appendices make excellent reading, and are very informative. Introduction to Service Orientation, WCF Coding Standard, Generic Interceptor are worth mentioning here, while another great aspect of the book is the extremely powerful diagrams that have reduced complex topics into easily understood drawings.

The book does an outstanding job of systematically and thoroughly uncovering practically all aspects of WCF programming. Not only it presents a simple to understand architectural picture of WCF in general and various architectural and functional subsystems, but also abandons with practical and thorough explanations of the details of virtually all aspects of WCF.

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