

Informatics



- Transaction Terminals in e-Governance
- Audit Status Monitoring System
- Collaboration and Messaging Service: e-Office
- Dissecting a Malware Attack
- NoSQL, No Problem with 'Big Data'
- ICT in Districts: Sirmaur, Shajapur, Dhamtari and Gurgaon

Immigration, Visa, Foreigners' Registration and Tracking

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EDITORIAL

It is said that there is nothing permanent except change. To improve is to change and to be perfect is to change often. And rightly so, for constant re-invention and improvisation spells success in today's fast paced times. I am glad to mention that your very own 'Informatics online' underwent a transformation, the new avatar of Informatics online, retains its soul and mission, that of bringing useful information on myriad aspects of electronic governance for its readers besides introducing tons of new features.



This issue brings forth a bouquet of significant ICT initiatives in different sectors and geographical domains in the Country. The lead story, touches upon the proposed IVFRT system which envisages the information capture from Visa applicants' details till their departure from India and utilizes these information for intelligence decision making at every stage.

Transaction Terminals in e-Governance, eOffice-CAMS and Audit Status Monitoring System are the highlights of our products and services section. Three technology update articles in this issue address the fairly important concept of Targeting and Dissecting Malware Attacks, NoSQL, No Problem with 'Big Data' and Razor Scripting. Our usual columns, of course, are there to apprise you of the latest in the e-Governance arena in the Country and abroad.

State Governance Section, this time highlights the innovative e-governance initiatives by Assam in all facets of e-governance, right from legislative, executive to judiciary. Also highlighted are the various initiatives in different sectors of development by the state of Punjab on its journey towards good governance. ICT initiatives in Gurgaon District of Haryana, Dhamtari district of Chhatisgarh, Shajapur District of Madhya Pradesh and Sirmour District of Himachal Pradesh have also been discussed this time under the District Informatics.

We also carry an extremely informative write-up in the Guest column by Sh. D V Swamy, IAS, Collector and District Magistrate (Keonjhar in Odisha) who provides an insight into the implantation and execution of e-Collectorate in the district.

The entire team of Informatics has toiled hard, often beyond the call of duty, to bring this issue to life. Do let us know your feedback, both raves and rants, so that we continue to strive for a brighter future ahead for Informatics.

Wishing you a great festive season ahead from the entire team of Informatics

Neeta Verma

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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Corrigendum: In July 2012 issue of Informatics, in the article From the State section, Page -18 "Haryana- Impacting life of Citizen through Effective e-Delivery of Services", the summary should have read per capita income of Haryana as Rs. 109,227 instead of Rs. 67,891. The inadvertent error is deeply regretted.

IMMIGRATION, VISA, FOREIGNERS' REGISTRATION AND TRACKING (IVFRT) – AN MMP

The entire IVFRT system envisages the information capture from Visa applicants' details till their exit from India and utilizes these sets of information for intelligence decision making at every stage. This system would facilitate information exchange between MHA, MEA and other agencies such as BoI and FRRO / FRO as role based access control.



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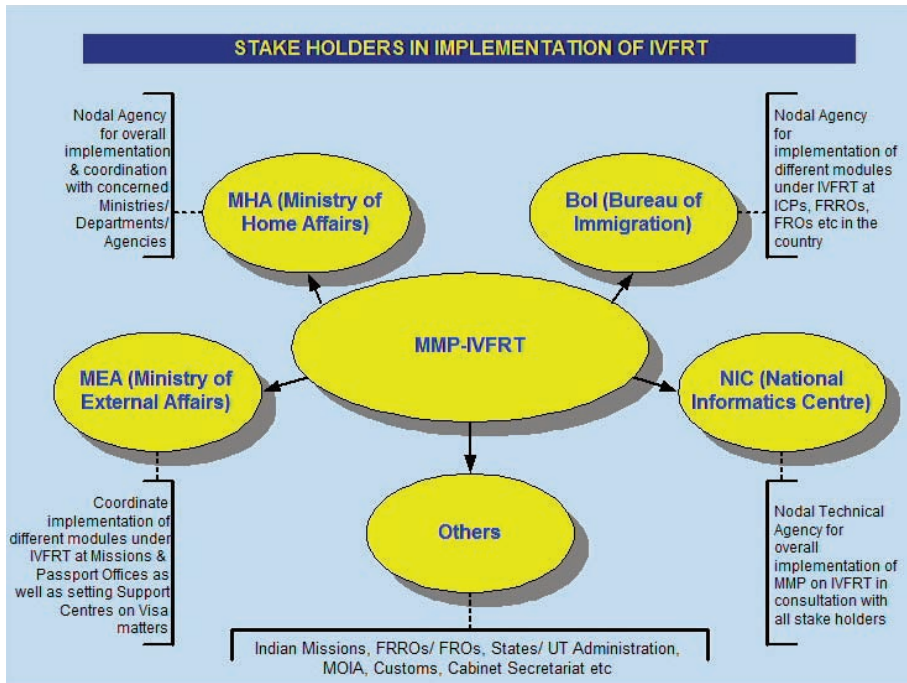
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PRELUDE

The National E-Governance Plan (NeGP) approved by Government of India (GoI) in 2006 comprises of 27 Mission Mode Projects (MMP) that includes 9 central, 11 state and 7 Integrated MMPs spanning multiple Ministries/ Departments. "Mission Mode" implies that the objectives and the scope of the projects are clearly

defined and there are measurable outcomes (service levels) and well defined milestones and time-line for implementation. IVFRT is one of the central MMPs in the NeGP which is conceptualized with an aim to enhance the experience of in-bound and out-bound travelers from and to India by looking into the aspects of Passport, Visa, Immigration, Foreigners'





Registration and Tracking. MMP-IVFRT under NeGP was approved by the Cabinet in May 2010 with a vision 'to develop a secure and integrated service delivery framework that facilitates legitimate travelers while strengthening security'.

PROJECT OBJECTIVES

Based on the vision, the MMP-IVFRT's objectives are based around the core values of security, facilitation and enablement, which includes :

- Improving efficiency and effectiveness of the I-V-FR&T system to facilitate legitimate travelers and prevent illegal immigration
- Developing an integrated ICT system across the functions of Immigration, Visa and Foreigners' Registration and Tracking, as part of a broader emphasis on Immigration Control
- Developing a secure and integrated information collection and dissemination system for intelligence-driven decision making

- Providing data confidentiality and integrity to secure privacy and security of the immigration system

OUTREACH OF THE MMP-IVFRT

The MMP-IVFRT has widest spread within the country and also abroad. Hence, implementation of the IVFRT at multiple locations in secured way is the most challenging job for NIC as well as other stake holders. The Spread is as follows :

- Over 170 Indian Missions abroad
- 81 Immigration Check Posts
- 12 FRROs under BoI
- Central Foreigners' Bureau (CFB)
- Central IVFRT Office, Shastri Park
- Disaster Recovery Centre at Bangalore
- 716 FROs
- 37 Passport Offices
- MEA, MOIA, Customs, R&AW, IB Hqrs, & CBI

PROPOSED IVFRT SYSTEM AND KEY COMPONENTS

The proposed IVFRT system is

envisaged as an asynchronous system with one central system. The system would enable cross flow of requisite data for Unique Case File (UCF) creation and updation including traveler history, biometric and biographic information as well as risk assessment. Additionally, interfaces with external systems such as Airlines, Hotels, Hospitals, and Universities etc. are envisaged. It is proposed that interfaces be built for interfacing with other NeGP initiatives such as passport seva, eMigrate, CCTNS as well as other programs such as UID.

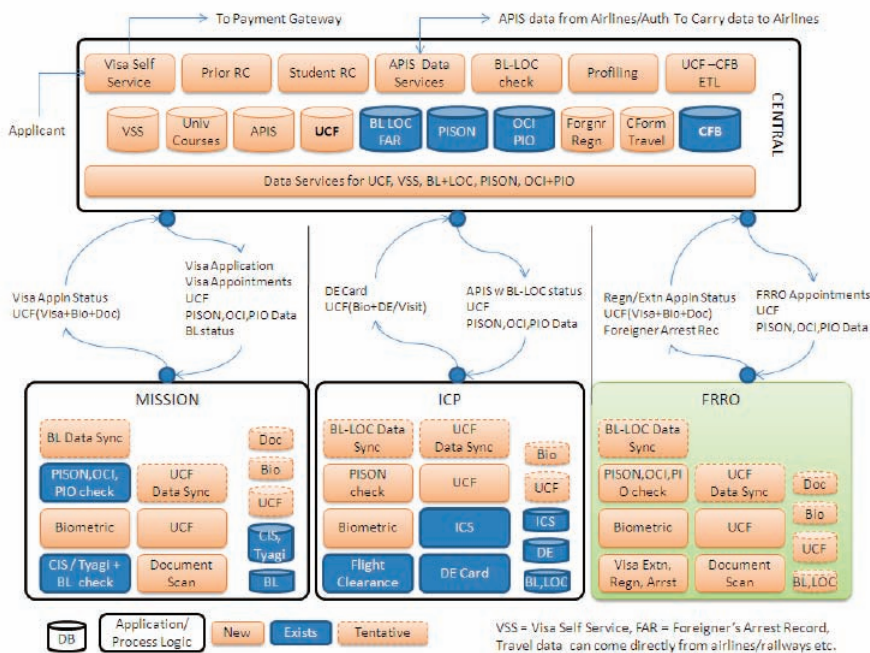
The entire IVFRT system envisages the information capture from Visa applicants' details till their exit from India and utilizes these sets of information for intelligence decision making at every stage. This system would facilitate information exchange between MHA, MEA and other agencies such as BoI and FRRO / FRO as role based access control. The system would facilitate visa information data and its sharing with ICPs (under MHA) to enable viewing traveler's visa information at ICPs.

Similarly, relevant information related to passenger's tracking and registration data, would be shared with consular officials to enable them to make informed decisions.

MODULES OF MMP-IVFRT

Unique Case File (UCF)

The UCF is a construct that is designed to maintain all information about an individual traveler together. The biometric and biographic information is used to create uniqueness. Subsequently all extension pertaining to the person i.e. visa, visa extension, registration and travel history along with special events that



may have occurred, such as arrests, deportations, new passport etc. are also updated in the UCF file. The UCF data is linked to main transactional databases.

Online C-Visa

Applicant fills his/ her visa application online using web based online application submission system on the central system. Similar online facility for VISA is also available at IVAC or at the Consular Office. One can also pre-fix his online appointment for meeting with consular officials and make e-payment where countries have accepted above policy of e-payments. With each subsequent visits the UCF is enriched with latest information like visa details, ICP details, registration details, visa denials, deportation records, arrest records and risk managements.

Likewise, for prior reference check countries (PRC), additional checks are done by agencies at Central, State and District level. Based on these report

the decision for Visa grant is taken by MHA. Subsequently, based on the Visa grant, visa stickers are personalized and printed with inclusion of personalization features such as MRZ, photo, letter scan image and 2 D barcode. Passport collection status is updated on the online web application status indicator.

Immigration Control System

Traveler buys a ticket providing the required information; Airlines (and other modes of travel) creates PNR files using all the travelers' information. 15 minutes after flight departure from foreign airport, Airline sends Flight Manifest Data, APIS and PNR data adhering to UN/EDIFACT standards to central APIS database located at central system. Based on received Flight Manifest Data, the central system transfers all required data pertaining to each of the passengers to respective ICPs. Upon arrival of vessel and disembarkation, passengers fill D/E cards and submit

at ICP counters. Each passenger's passport is scanned on the intelligent document scanner. The system shall be extended for biometric verification at ICPs. Based on the risk assessment each passenger is cleared or processed accordingly. The counter officer stamps the passport and clears the passenger for customs checks. The D/E cards are scanned in the back room for identifying and entering non-system populated fields e.g., port of boarding or change in address in India. The updated UCF for all the passengers travelled through the ICP is maintained at central system.

Foreigners' Registration and Tracking (FRT)

Applicants, who are required to register, fill their registration application online using web based online application submission system on the central system. It will be possible for the applicant to modify data or dates only up to 2 working days prior to the appointment. Appointments apply to all nationalities except for nationals of Pakistan as they are required to register within 24 hours of arrival. Additionally, for any arising small number of emergency situations, foreigners can visit the FRRO / FRO even if they don't have an online appointment.

Online system validates the entered details and accepts fees using the defined online payment modes. With respect to fee payments, the application would currently provide a payment gateway where every FRRO / FRO will need to provide the 'acquiring' bank details. Alternatively, FRRO / FROs will be able to continue receiving payments as they currently do in addition to online payment facilities if they choose to do so with a



Hon'ble Home Minister Sh. P. Chidambaram, Inaugurating the Central IVFRT Office at DMRC Building Shashtri Park



Hon'ble Home Minister Sh. P. Chidambaram during the Group meeting

plan to divert most of the payment traffic to the online channel.

Applicant takes online appointment for meeting registration officials to submit physical copy of the supporting document, provide biometrics and interview for registration. Based on the appointment dates relevant UCF data can be pushed or pulled to the specific FRRO / FRO office. Applicant arrives for interview on specified date. Documents generated during the registration process are also linked to the central record.

C Form

C Forms are also automated and are uploaded through an online medium by hotels, hospitals, hostels, dharmashalas, and universities to the central system. The relevant FRRO / FRO will have access to this data and will be updated in the UCF for analysis purposes, generating risk assessments, tracking as well as generation of alerts.

Other vital Applications

Besides all these, other vital modules like online NRI/ PIO Registration System, Indian Citizenship, Overseas

Citizenship of India (OCI), Arms license database are being operational.

Present Status of IVFRT

- Installation/ upgradation of infrastructure at 78 ICPs.
- ICS software is functional at all ICPs
- Networking of ICPs with CFB.
- Installation of PRMs, QDX machines, Web Cameras & CCTV for Immigration requirements.
- Centralized APIS implemented at Airports.
- Facility made available at important ICPs for access to Passport Visa date.
- Online submission of Visa application module implemented at 81 missions abroad.
- FRRO Registration module implemented at all 7 FRROs & 3 FROs.
- Integration of ICS Software with Visa Module implemented.
- Immigration Support Centre & Visa Support Centre become functional.
- Central IVFRT office established at Shastri Park.
- Online submission of 'C' Form

module implemented.

Finale

As per the set milestones of MMP-IVFRT, NIC has successfully achieved the set targets in the stipulated time frame. But, still many more targets are to be achieved and need based features are to be added as per the emerging requirements of stake holders. The areas where replications/ strengthening are to be done are networking of ICPs and Missions, digitization of D/E Cards, installation of modern ICT equipments at ICPs, implementation of Biometrics, development of SW for integration with Custom establishment of Disaster Recovery Centre for IVFRT.

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AUDIT STATUS MONITORING SYSTEM V 3.0-

A SYSTEM FOR FACILITATING WEB APPLICATION SECURITY AUDIT SERVICES

Edited by
R. GAYATRI

ABOUT WEB APPLICATION SECURITY AUDIT SERVICES AT NIC

Strengthening and enhancing the security posture of systems and services is one of the objectives of any organization dealing with information assets of different organizations and departments of Government of India. The Cyber Security Division of NIC is dedicated to this task, having adopted a multi-pronged approach to security.

This includes deployment of the requisite technical solutions at the Gateway and Network level and associated monitoring of the traffic and alerts raised.

In the other arm of this security approach, Vulnerability assessment and the consequent remediation are being undertaken as a process for the large number of exposed surfaces of the Web sites and Web applications hosted on many of the servers on NICNET. This includes formulation of Web Application Security Audit policy, procedures and their implementation in addition to conduction of awareness building training and hand holding exercises.

Consequently, today all concerned, including all NIC coordinators as well as



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users and site owners of various Government Organizations play an active role in complying with Audit policy and in working towards the goal of a secured Information systems hosting environment. All of the above are now a part of the Web Application Security Audit services being undertaken at NIC.

The primary requirement in rolling out of this service was (1) maintaining the service delivery in the context of an Audit life cycle of a site/application from development to rollout in production (2) maintaining the context and interaction between different agencies/users amidst rising volumes of constant interactions. This had raised the requirement for the Audit Status Monitoring System.

ABOUT AUDIT STATUS MONITORING SYSTEM (ASMS)

The ASMS is a role based workflow system, available on the <https://security.nic.in> for facilitating enforcement of the Audit policy and tracking the progression of a Request for audit from submission to Clearance for Hosting by all participating agencies throughout NICNET. This is an Intranet based system for authenticated and authorized users. Over the years it has evolved to include registered users to non-registered/IntraNIC users and emerged from targeting data center at IDC New Delhi to include other data centers on NICNET.

SALIENT FEATURES OF THIS APPLICATION

- Online submission of audit requests by registered/non-registered users.

- Tracking the status of audit of a site with Search facility and reports
- Maintaining the work schedule of Auditors
- Notification for Reports download, audit status etc. to users
- Generation of clearance note and notifying site coordinators and Data Centre Administrator

TECHNICAL FEATURES

- File System and Database based Report Archives
- Integration with LDAP authentication
- Implementation of role based access control logic
- Graphical Dashboards for statistical data
- E-Mail Integration
- Inclusion of a more consistent and uniform user interface giving a better UI navigation experience.

Audit State: Typically a request may be in the following states: Queued, Assigned, Accepted, Paused, Resumed, completed and Cleared.

The following roles are facilitated:

Auditor: is a professional auditor who takes up the tasks as per the scope of work laid down by Cyber Security division and is responsible for undertaking security audit of the web sites/applications. Report of vulnerability findings is uploaded and site coordinators notified for further remedial action through the system.

Site owner(SO) / State Web Coordinator(SWC) : is an NIC official who submits a request for security audit and is able to track the progress. The auditor's reports are used by

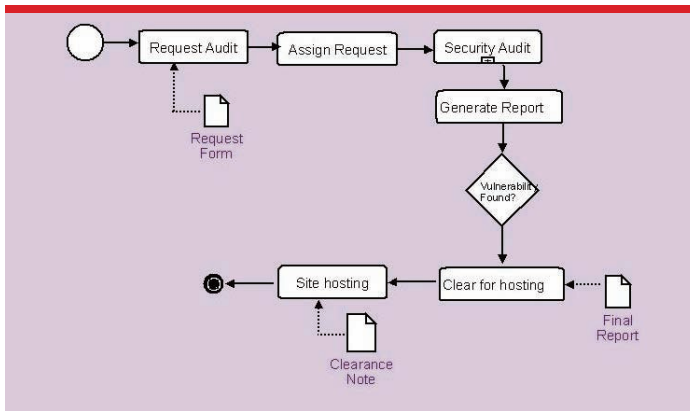


Fig. 1 Audit Process

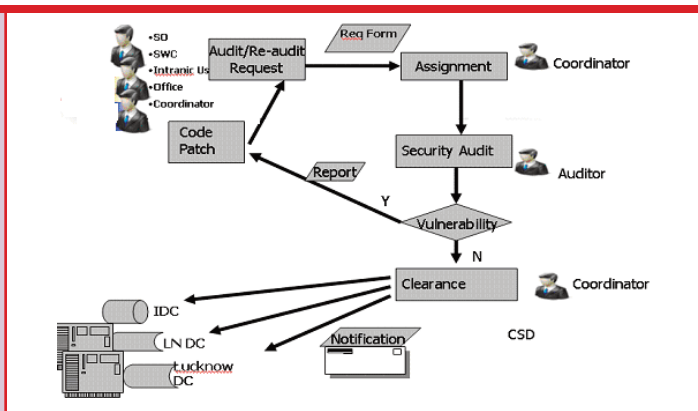


Fig. 2 Audit work flow and the interacting agencies

these roles for remediation if vulnerabilities exist. (Ref. fig. 3 below)

Coordinator: He maintains the flow among the different roles and reflects updates on the system as per action taken and other data keeping activities. Broadly the tasks undertaken include but not limited to Priority determination of audit requests, assignment to auditors, Sending report download notification to users, Generation of Clearance Note and notifying Users and Data Centers, Manage Auditor Work Schedule etc..

Data Center: The data centre administrator responsible for migration of the application from test server into production servers can access the information on sites cleared for hosting and the corresponding clearance notes. Data Centers in this

role include Internet Data Center (IDC) Delhi, Laxmi Nagar Data Center (LNDC), National Data Center (NDC) in Pune and Hyderabad and other Data Centers (DC) in NICNET.

Other roles have been provisioned including Management for reporting purposes, SSL for SSL administrators of the common infrastructure providers, appsec monitoring, advanced monitoring, audit report review by users undertaking compliance check related activities, Office for entry of offline requests and moderation of direct online request. (Ref. fig. 4 below)

BENEFITS

- Helps site owner track the progress in audit of their relevant request

- Helps Coordinators keep track of context of the many requests flowing through the system from source to sink.
- Helps auditors to give due attention to the assignments as per priority information.
- The historical purview of Web Application Audit process of any web application hosted within NICNET domain can be ascertained with ease. If any new vulnerability is traced which is not reported in the Audit process, a performance depth analysis of Audit process activity can be carried out.

FUTURE ENHANCEMENTS

Incorporation of digitally signed clearance notes for issuance to the Data centers.

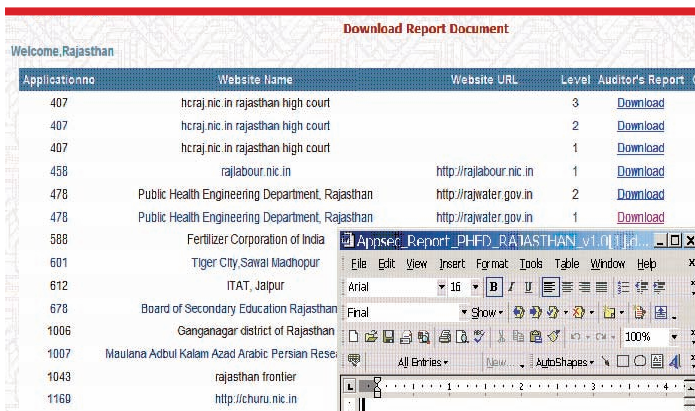


Fig. 3 State Web Coordinator Console

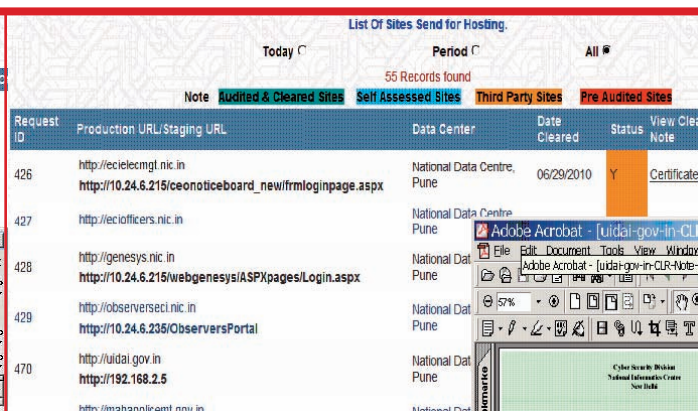


Fig. 4 DC console: View of Green sheet for site clearance

TRANSACTION TERMINALS IN E-GOVERNANCE

("DEVISING" E-GOVERNANCE APPLICATIONS)

Transaction Terminal is a mobile handheld data terminal which has the ability to capture, process and transmit information to host computers in real time. New models of hand held devices come with seamless connectivity options like GSM/GPRS, CDMA and Ethernet. Also, they support all the payment related logical interfaces for Magnetic stripe reader, Smart card reader and optional Contact-less card reader.



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INTRODUCTION

Over the decades, the functioning of the major e-governance applications is aimed at automating the processes of the Government. With the internet came in existence, there is a paradigm shift in the development of applications as they are present in web. The cyber security, electronic payment gateway, business process outsourcing are some of the new terminologies found in our applications as more and more stake holders are present between citizens and government. Invariably, in all these applications, the internet is the basic requirement and the netizens submit his online application, grievance, payments from his office or at home or from a browsing centre either technically dependent or independent.

But, citizen perspectives from Government expect fairness and ease in dealings; let it come to him manually, mechanically or electronically.. In most of the occasions, a computer across the counter requires authentic verification of the individual with various documents for proof. There is always a complaint that this process is time consuming. If the application is online, the server computer authenticates the user at various levels before a secured transaction occur.

In these situations, a "Handy" solution is readily available for the e-governance applications which is the usage of "Hand

held Terminals" otherwise called as Point of Sale(PoS) systems.

WHAT IS A TRANSACTION TERMINAL?

It is a mobile handheld data terminal which has the ability to capture, process and transmit information to host computers in real time. The simple user-friendly design allows you to operate with ease. The device can be integrated with external barcode reader, built in contactless smart card reader. Some of the hand held devices have in-built fingerprint scanner designed to specific applications like PDS, NREGA etc., for biometric authentication for beneficiary transactions.

SPECIFICATIONS

Normally the widely available Hand Held terminals available in India have 128 x 64 pixel LCD Graphic with LED back light. These hand held devices uses processors like Marvell PXA270 , ARM9. Also, the memory ranges from 128MB to 1 GB with flash memory Linux and Windows CE Operating systems are widely used in these devices. Custom keypads are available with function keys for paper feed, cancel and bar code reader options. These devices can be used in Indian climatic conditions for carrying to remote locations. Also, applications are designed integrated with voice response for transactions supporting WAV and MP3 files.

ANSI 378 is the interoperability standard for fingerprint templates and

the hand held devices basically should support the template formats. Similarly, ISO/IEC 19794-4 specifies fingerprints image standard and ISO/IEC 14794-2 for minutiae data standard. Generally, the hand held terminals are compliant to both ANSI 378/ISO 19794-2 formats.

WHERE THE HAND HELD DEVICES ARE BEST FITTED?

Over the last decade, hundreds of web enabled e-government systems have been deployed in India. It needs citizens' participation and transparency in operations. Electronic Payment of Bills including utility services like Electricity Bills, Telephone bills can be paid electronically and thus citizens can avoid going to receipt counters of the corporation or post offices and standing in long queues for payment of their electricity bills. Though these applications are available in web it had evoked partial response.

Apart from these, the major applications like Public Distribution System, Property Tax payments, Disbursement of Aid or materials through camps can be done with Hand held devices. In all these systems, the computers need not be situated or taken to citizen doorsteps. Only the handy PoS devices can be taken by the official for the safe transactions.

The Hand held devices helps the solutions provider in

- Centralized server update and receipt printing
- Productivity enhancement of staff
- Real time inventory management
- Avoid book record keeping
- Reduce fraud
- Secure transactions using biometric authentication
- Transactions updated in real time on central server
- Updated customer data at central

server without carrying a computer system or laptop towards the citizen.

PROBLEM UNDERSTANDING

A well defined work flow is required to implement a successful Hand held device based system. If a system is addressing to a huge records geographically distributed and update the transactions every month by verifying and authenticating the individual, the hand held device is the best tool for implementing the same.

The system requires clear work flow for the following:

HAND HELD TERMINAL IN PDS APPLICATION

A typical application of the Hand held terminal is now can be seen in PDS applications of few states. In PDS application, a state may have a back-end database of card holders, the quantity of commodities issued to each FP Shop. The state PDS system requires an effective mechanism to monitor the delivery of commodities to the ration card holders through FP Shops. Here, the Hand held terminal serves the purpose.

- The system should have the capability to move the enumerated data to PoS or smart card for making transactions.

- If a Citizen is visiting the FP Shop, then he has to bring or produce the relevant smart card based ID card or ration card for verification.

- Biometric fingerprint authentication is done using handheld terminal by comparing the fingerprint data available in Smart card with the individual. This ensures secure transactions.

- If the Hand held terminal is used for issuing commodities from a FP Shop, either a bar code available in the ration card or smart card will be verified for the eligibility or the category of the citizen.

The FP dealer will also have a smart card containing the card holders details, price policy, and quantity of bags lifted from warehouse.

- After verification, the official issues the commodities to the beneficiary and hands over receipt generated using in-built printer in handheld terminal.

- Two receipts can be generated: one for beneficiary and another for official purpose.

- The transaction details can be stored in handheld terminal / smart card.

- Data is uploaded from handheld terminal to central server in ONLINE mode through GSM/GPRS, CDMA, or PSTN mode of communication or in OFFLINE mode using USB drive. Batch mode updation is also possible for bulk updation at any interval on a day.

- Reports at various levels are generated

For the above processes, a customized application is required in Hand held terminal. A custom built MIS can be developed to monitor the online mode updations at the central server and the collections across the districts or a place can be seen online.

With the above features, the registers maintained in FP Shops are made electronic, and closing stock of FP Shop are made online. Simultaneously, the delivery to card holders are tracked online by the department.

Sufficient study is required and design document containing Hand held terminal specifications, smart card specifications and the application specifications are required for the complete functioning of the system.

FOR FURTHER INFORMATION

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A DIGITAL WORKPLACE SOLUTION

COLLABORATION AND MESSAGING SERVICE

eOffice-CAMS is focused on providing effective communication between departmental applications through collaboration and the obvious solution is to have *Collaborative service*. The idea is to facilitate action oriented team to work together over a geographical distance and let internal users, systems and departments to communicate. Collaboration (act of working jointly) is the only way to make users, systems and departments to communicate effectively.



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INTRODUCTION

Communication is an important facet of life. Effective communication centers around the usage of words, speed of delivery of words, media used, place and time of communication. Users need to be updated about transactions or modification from the departmental applications. By providing application update to the users, interest to use the application is generated. The issue is to facilitate action oriented team to work together over a geographical distance and let internal users, systems and departments to communicate. The obvious solution to the issue is to have a collaborative service. Collaboration (act of working jointly) is the only way to make users, systems and departments to communicate effectively and the service to work jointly is called Collaborative Services. The article describes how the eOffice-CAMS will help in collaborating (for communicating and be updated about the applications).

BACKGROUND

There are various definitions for Collaboration with respect to Information technology. There are three primary ways in which human interact: Conversational interaction, Transactional interaction and Collaborative interaction.

Conversational interaction just exchanges information between two participants, where the primary purpose of the interaction is discovery or relationship building like Instant Messaging Service (IMS), email etc. Transactional interaction, involves the exchange of transaction entities where a major function of the transaction entity is to alter the relationship between participants. For example, the user inviting other users to attend a meeting place a role of organizer and the users who attend are called as participants. Collaborative interaction is to alter a collaboration entity (i.e. converse of transactional entity) like document management, threaded discussions etc.

TECHNOLOGY SOLUTIONS AND ARCHITECTURE

The question that arises about HOW, WHAT, WHEN, WHOM and WHERE to collaborate. The obvious answer is using text or media, anything, anytime and anywhere. But WHERE to start collaboration still exists. The most obvious answer was the WEB and we started with Intranet (eOffice). Answering WHOM to collaborate was difficult, as it would be unfair if it is restricted to a specific person or users of a department. There is no restriction with respect to collaborating users and for users of a department. Then comes the WHAT question which needed a little bit of understanding. Consider looking at the

meaning of collaboration from a different point of view. Instead of having users work jointly, it's the modules that will help users to collaborate upon identical operation. Few of the services have been identified which are being used by different modules of Intranet like sharing, alerts, notifying users, updating with new features etc. The identified services answers the WHAT question. The approach was to have application(s) over the existing intranet applications. Two applications namely eTalk and eAlerts were identified. Basic version of eTalk includes Chat and eAlerts notifies users about any changes on documents / appointments / events / files from already existing modules (i.e. KMS, appointments etc.) from eOffice.

The functionality of eTalk and eAlerts actually answers HOW. The application is developed independent of all the intranet applications. In order to have chatting facility anywhere, the design of eTalk was developed in such a way that it was independent of all other applications. For which purpose all the end points (frontend, backend and information exchange) from where these features are accessible are made independent. eTalk was developed as an independent module with basic functionality of Chatting (simple text messages). A JavaScript API (Application Programming Interface) was developed and made openly available to be used by all the intranet applications. Currently eTalk can be seen accessible from all the pages of intranet ("Active Users" at bottom right corner of every page).

HOW IT WORKS?

All the most common functionalities (i.e. Chatting, Send IM, Add Contact, eTalk status, Availability etc) were

identified and made as a page (front end HTML) in eTalk. In order to have these accessible from all applications, an API is written which is made openly accessible to be used by all other applications. Sample template along with JavaScript code was provided to all the modules to be included in their applications. The JavaScript code handled all the functionality from the frontend.

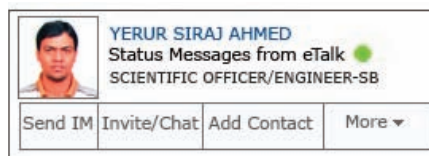


Fig 2. eTalk feature set

In order to have all these features to be called from frontend, the features were inherited in the backend (on the server) and were being called from frontend.

ADVANTAGES

- Active participation of Users - facilitates the users to actively participate to use these resources.
- One stop access point to all disintegrated application and services
- Direct manipulation - users can work & update their contact details from anywhere
- Ease of use - intuitive design and easy to use web interface
- Interoperability - combining of different applications and their data as one instance.
- Flexibility - The application is flexible in nature as new features can be inherited and called upon.
- Reusability of the alert mechanism by other department applications.

IS THAT ALL, THAT CAN BE COLLABORATED?

The obvious answer is NO. So far we have collaborated eOffice

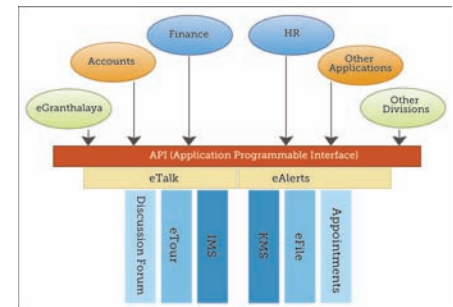


Fig 1: Architecture Diagram of e-Office CAMS

applications and its services. If these services are extended to other services of departments., like eGranthalaya will notify users about list of new books that are being taken or remind specific users about the last date of the books issued (through alerts). Similarly Accounts Division can send alerts to users about their payments or tour bill clearances.

SCOPE

This section defines the scope of these applications. Use of these applications is not limited to either e-Office or other departments. Due to the independent nature of the application it can also be inherited or called using the API from other ministries which have e-Office and the divisions of these ministries.

CONCLUSION

Continuous integration of new features from eOffice applications is still going on. Updating API functions and development of new API functions are being developed to be used by eOffice applications and other department applications. This topic is not just restricted to collaborating users, but rather the data and the documents, which can be called as MASHUP (is a web page or application that combines data, functionality from two or more source to create a new service).

Happy Collaborating!!!

ASSAM - IMPLEMENTING INNOVATIVE ICT PROJECTS

Assam - famous for its tea and one-horned rhinoceros, popularly called the land of red river and blue hills, is the gateway to the northeastern India. The mighty Brahmaputra, one of the most powerful rivers of the world, flows through the state. The major festivals celebrated in Assam are Bihu, Baishagu, Ali-Ai-Ligang, Durga Puja etc.



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PRASHANT BELAWARIAR

The state of Assam has a large number of tribes each unique in its tradition, culture, dresses and exotic way of life. They have their own colorful festivals like Bihu, Baishagu, Ali-Ai-Ligang, Durga Puja etc.

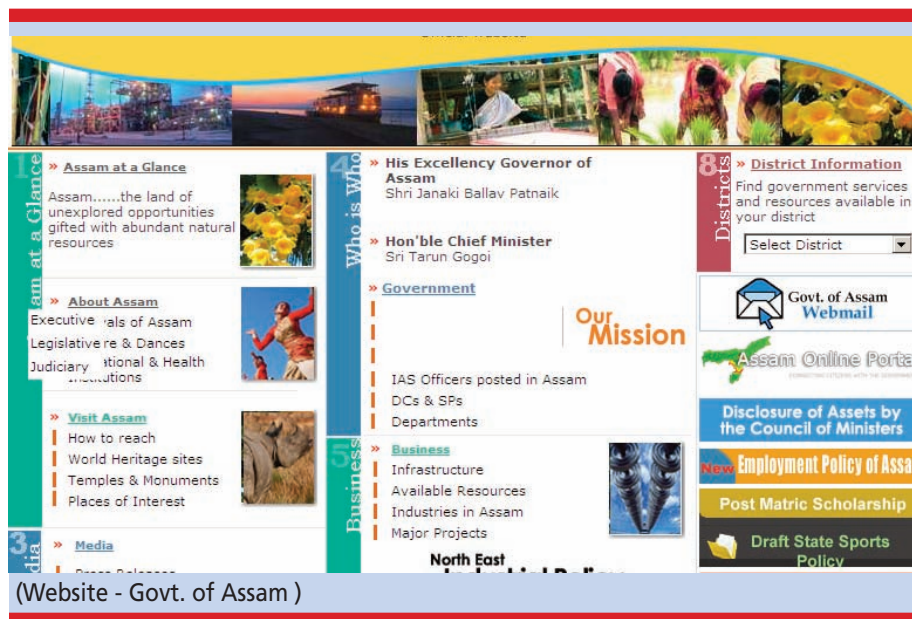
NIC Assam State Centre is equipped with state of the art Network Operation Centre and a Data Centre at New Sachivalaya Complex in Dispur. The official website (<http://assam.gov.in>) of the government of Assam is a rich source of information and highlights many e-governance activities of the state. The Assam Online portal

(<http://online.assam.gov.in>) provides link to several e-services launched by the state apart from currant events, Business activities etc.

MIS FOR STATE LEVEL BANKERS' COMMITTEE (SLBC)

State Level Bankers' Committee (SLBC) is an important forum for co-ordination between the State Government and banks on matters relating to development banking. The forum takes the lead in initiating, streamlining and accelerating the process of development in close co-ordination with various government departments, Reserve Bank of India, NABARD and others.

The SLBC with its head quarters at Guwahati meets once a quarter to



review/monitor the following activities-

- implementation of various Government sponsored programs by the financial institutions operating in the NE states.
- quarterly progress of the implementation of Annual Credit Plan and other agencies sponsored credit-linked programs in the districts.
- flow of credit into rural areas and to the small borrowers in the neglected sectors.
- recovery performance.
- Credit Deposit Ratio, Priority Sector Advances to Weaker Sections, financing of Minority Communities etc.

To meet the requirement of the SLBC an online Management Information System for SLBC has been developed by NIC, Assam State Centre, for reviewing and monitoring of all the activities of member banks. The system uses Open Source Stack i.e. PHP technology with MySQL as RDBMS and Apache as Application Server to maintain portability to any platform with minimum effort.

THE QUARTERLY INPUTS FROM ALL THE MEMBER BANKS ARE AS FOLLOWS

1. Public Sector Banks provide necessary inputs like Agricultural Loan (Direct/Indirect), Financial Inclusion, Progress and Recovery under various govt. sponsored schemes, Finance/Disbursal to/Under Micro, Small and Medium Enterprise (MSME) Sector, Details of Annual Credit Plan, Advances details of all sectors, Coverage of un banked Villages etc.

2. District-level Lead Bank provide inputs like performance and progress

STATE LEVEL BANKERS' COMMITTEE
ASSAM ARUNACHAL PRADESH MANIPUR MIZORAM MEGHALAYA NAGALAND

Home **SLBC** District Level About Us Contact Us Notification

DATE: 17-08-2012

Analysis of Priority Sector Advances Under CROPLOAN of Assam in the Year 2011 and Quarter 2

(Rs In Lakhs)

Sl No.	Bank Name	No. of A/C	Total O/S	Demand Raised	Recovery		Overdues		Gross NPA		New Loans
					Amount	%	Amount	%	Amount	%	
1	BOM	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	UCO	31654	21936.52	1248.52	1066.26	85	182.26	15	1805.52	8	1642.30
ASCB Total		31654	21936.52	1248.52	1066.26	85	182.26	15	1805.52	8	1642.3
Grand Total		31654	21936.52	1248.52	1066.26	85	182.26	15	1805.52	8	1642.3
Last Quarter Data											
Total		10767	4210.07	514.65	61.95	12	452.7	88	77.4	2	159.04

Save this report as Go Back

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NATIONAL INFORMATICS CENTRE

The SLBC web application showing Analysis of Priority Sector Advances.

of various Govt. sponsored Schemes, Crop Loan, Annual Credit Plan (ACP) etc.

VARIOUS REPORTS GENERATED BY THE SYSTEM ARE

i) Analysis of Total Priority Sector, Advances under Agriculture, Industry, Services and Crop Loan.

ii) Advances to Sensitive Sector, Other Sensitive Sector, Minorities Community.

iii) Recovery position under Swarna Jayanti Gram Swarajgar Yojana (SGSY), Prime Minister Employment Generation Program (PMEGP), KVIC Margin Money Scheme, Swarna Jayanti Sahari Rojgar Yojana (SJSRY), Transport Operator Scheme, BAKIJAI Cases,

iv) Financial position under Tea Sector and Rural Housing Scheme.

v) Financing under Self Help Group (SHG) and Housing Scheme.

vi) Finance disbursal under Micro, Small and Medium Enterprises (MSMEs)

vii) Progress under Financial Inclusion – Issue of General purpose Credit Card (GCC), Opening of No Frills Accounts, Coverage of Un banked Villages.

viii) Performance under PMEGP, SJSRY, SGSY, Transport Operator, Annual Credit Plan.

ix) Target and Achievement of Annual Credit Plan (ACP).

ELECTORAL ROLL MANAGEMENT SYSTEM (ERMS)

The Electoral Roll Management System (ERMS) enables the State Chief Electoral Office to maintain 'Electoral Roll' of the state in a standardized and uniform database as specified by the Election Commission of India. The ERMS developed by NIC, Assam in ASP.Net 3.5 and SQL Server 2005 comprises of the following modules:-

- Porting of data –The module facilitates porting of existing data from Access database to the corresponding tables of Assembly Constituency.

- Conversion of font to Unicode and Transliteration to English - To comply with the instructions of the Commission to have a bi-lingual database in all states the module facilitates conversion to Unicode compliant font using the encoding class of asp.net 3.5 and transliteration of Unicode data to English
- Summary Revision and Continuous Updation of Electoral Rolls – this module allows addition of new names to the Electoral Rolls (Form-6), deletion of existing names (Form-7), modification of existing names (Form-8) and Transposition of names within the same constituency (Form-8a) where an existing name in a polling station gets deleted and is added to a new polling station.
- Integration of Supplementary data with Mother Roll – this module integrates the supplementary data of summary revision and continuous updation with the existing Electoral Roll for publishing of final Electoral Roll.

The Chief Electoral Office has started the process of Photo merging for electoral rolls. The Kamrup



Photo Electoral Rolls Assam

Select Part No.

Photos uploaded for AC No. 94, Part No.1

Photo	Elector's S.No.	Name	Relation's Name	Age
	1	চালেয়া খাতুন	শ্রী কাজল আলি	59
	2	চাহিদুল ইচলাম	কাজল আলি	37
	3	আবিদুল ইচলাম	কাজল আলি	35
	4	নূনন নিচা	মহঃ আৰিফ আলি	60

(metropolitan) district was first short listed for the launch as the pilot project which was later rolled out throughout the State.

The Photo Merging module developed in Asp Net 3.5 and Sql Server 2005 consists of :

- Electoral Details Form – Forms having individual electoral data (except D-voters) were generated and distributed by the Booth Level Officers (BLOs) for collection of electors photographs.
- Photo upload – After collection of electoral details form the photographs are merged with the existing electoral roll database. Photographs are captured from the form using a web cam and the software resizes the captured photograph as per the ECI specification. The photographs are uploaded in binary format with size not more than 20KB
- Report for verification of uploaded photos.
- Weekly report for monitoring progress of photo merging constituency wise.
- Printing of Electoral Rolls with photographs.

MIS FOR PPP PROJECTS

Public Private Partnerships (PPP) is about bringing together social priorities and the managerial skills of the private sector, relieving the government from the burden of large capital expenditure and the risk of cost overruns to the private sector. Instead of transferring public assets to the private sector, as in case of privatisation, the government and business work together to provide services under PPP mode. Broadly PPP refers to an agreement between government and the private sector for



Hon'ble Chief Minister of Assam Shri Tarun Gogoi inaugurated the MIS for PPP Projects on February 14, 2012.

providing public services and /or infrastructure facilities.

A web-based software (<http://misassamppp.gov.in>) was developed for the Public-Private Partnership (PPP) Cell under the Planning & Development Department, Government of Assam.

SALIENT FEATURES

The application was developed on open sourced platform of PHP/MySQL using Code Igniter a PHP standard MVC framework which provides multiple features.

- The application maintains a directory of all the stake holders and agencies involved in the all the PPP projects.
- It enables various stake holders of the projects to upload the progress data online thus replacing the tedious and time consuming manual process.
- All the stake holders can view each other's project information without any hassle.
- The public interface of the application enables citizen to have an update on the details and progress of any project thereby bringing in complete transparency.
- The software serves as a monitoring

as well as reporting tool for the P&D Department.

- The system enables various users to submit their feedback.

Various participating government departments and private organizations have been imparted necessary training for using the application. Presently the application is available in the public domain and is fully operational.

CALL ANALYSIS AND TRACKING SYSTEM

Tracking and analysis of Mobile Phone calls of suspects plays an important role in investigation of crime and thus identifying the suspects/criminals. In order to track and contain them, the police department needs to analyze Call Detail Report (CDR) of the suspects received in varied formats from the mobile service providers. Thus availability of relevant and timely information attains utmost importance in investigation. To meet the requirement of the police department a computerized system - Call Analysis and Tracking System (CATS) has been developed by NIC, State Centre for analysis, tracking and timely retrieval of information based on CDR.

The primary objective of the system is to help the Assam Police to track and monitor the usages of mobile phone by any criminal based on the Call Detail Report (CDR) received from the mobile service providers.

The CATS uses Open Source Stack i.e. PHP technology with MySQL as RDBMS and Apache as Application Server hence providing portability.

CATs is a comprehensive and flexible phone call tracking system. It provides an integrated solution for mobile phone call analysis and tracking with:

- Conversion of Subscriber, Tower and CDR data from the excel format to CSV format for facilitating imports and export of data in a common format.

- Creation of Unified data directory with the details received from all the service providers in varied formats.

- XML based information exchange for interoperability with Google Maps.

The system is user friendly and can be operated with basic knowledge of computer. Call tracking facilitate:

- Which number was called.
- The Tower location of a caller.
- Time distribution of incoming/outgoing/SMS calls

MAIN FEATURES

- Creation of unified Mobile Subscriber's directory with the details received from all the service providers.
- Creation of unified mobile Tower's directory of the service providers with the details received from all the service providers.

- Importing CDRs of varied formats received from the service providers to a Common CDR format.

- Maintenance of suspected mobile phone numbers and IMEI (International Mobile Equipment Identity) numbers for further mapping during analysis.

- Tracking of relative position of the mobile users with the help of tower location mapping using Google map.

- Generation of dynamic reports based on time and date criterion.

- Graphical report on Call Frequencies.

- Other statistical reports.

- Comparison of any given suspect's CDR with another CDR.

- CDR archiving for future uses.

The screenshot shows the CATS 1.0 interface with a table titled 'View Imported Callers Data'. The table has columns for S# (1-4), Date (27/07/2012), Time (00:38:36, 00:41:49, 00:47:14, 00:48:37), CDR (OUTGOING), Calling No (9864142804), Caller Name (Royal Marketing Associate), Caller Address (Flat No-03 2nd Floor, Madhab Sarbar Housing Complex, Borjara, Guwahati), Called No (8731914011), Called Name (Royal Marketing Associate), and Call Addr (Flat 103 2 Floor, Madhab Sarbar Housing Complex, Borjara, Guwahati).

BENEFITS

- Respond and take immediate corrective action by tracking and analyzing the suspect's mobile call in real time.

- Monitor the movement of the suspects by mapping the tower location.

- Make assessment on the movement of the suspects by analyzing the CDR with date and time.

- Instant identification of possible contacts of the suspect with the other potential suspects either on the basis of the Mobile Number or the IMEI number.

At present there are approximately 256 lakhs subscribers and 41 thousands tower locations records available in the CATs database and utilized for CDR analysis and tracking. Presently, on an average 15 CDRs are analysed per day through the system in two different offices in Assam.

FOR FURTHER INFORMATION

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PUNJAB -

ESTABLISHING TRANSPARENT AND ACCOUNTABLE GOVERNANCE

Located in "Pentapotamia" [Greek word for Area with Five Rivers] in the north-west part of the sub-continent, Punjab - "The Granary of India", came into existence in Nov, 1966. One of the most prosperous, wealthiest and vibrant states of the country with typical language, food habits, attire and music, it comprises of 22 well connected administrative districts each having its distinct historic and locational importance.



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INTRODUCTION

Punjab has maintained its growth momentum because of a number of policy measures by the state government, implementation of several vital projects and most importantly never-say-die attitude of Punjabis. ICT projects have been a significant contributor in improving citizen-government interactions, modernization, improving government processes, administrative reforms and gaining people's confidence. The focus of state government in creating conducive environment for building efficient and cost-effective government is bearing fruits now with the implementation of a host of ICT projects and Right to Service Act.

E-COUNSELING FOR PUNJAB STATE TECHNICAL EDUCATION BOARD AND PUNJAB TECHNICAL UNIVERSITY

Web-based online Off-Campus eCounseling has been implemented successfully for PSBTE and PTU admissions. This year eCounseling was done for admissions to 55000 seats and

74000 seats for PSBTE and PTU respectively.

ePROCUREMENT

GePNIC has been implemented in PWD and PMGSY scheme to publish tenders, bid submission, bid Opening and Award of Contract to help bring in transparency and efficiency. Since July 2010, more than 2600 tenders worth Rs 3761 crores have been successfully processed.

Single User-friendly Window Disposal Help-line for Applicants - A highly successful and acclaimed ICT initiative for the convenience of citizens, SUWIDHA has been successfully running at 95 sites for the last many years improving and upgrading with each passing year. Application status dissemination is done through E-Kiosks, SMS as well as Web. It has received several accolades.

SUWIDHA has been refurbished now as SUWIDHA-Web, a web-based centralized system, to offer integrated solution for services like Marriage registration, Bus Passes, Arms License Issuance, Certificate issuance, Identity Card issuance etc.

MOTHER AND CHILD TRACKING



State of art SUWIDHA centres at Jalandhar and Patiala

SYSTEM

Web-based system for tracking pregnant women and children for their Ante-Natal Care Check-ups, Post-Natal Care & immunization in order to reduce IMR/MMR/TFR has been successfully implemented. A series of trainings for more than 250 field staff has been held. On an average, 6000 entries are done per day in more than 220 health facilities. Around 7 lakh mothers and around 5.7 lakh children have been registered till date.

PROPERTY REGISTRATION INFORMATION SYSTEM MODULE

An ISO-certified project running successfully for more than 10 years at 150 sites, it automates all major activities of Sub-Registrar office and covers 27 deeds. Its major features include token issuance, online capturing, storage, printing of photographs on stamp paper, valuation of property, scanning of deed documents online/offline, issuance of mutation notice, etc.

NATIONAL ANIMAL DISEASE REPORTING SYSTEM

Initiated in 141 blocks for which hardware has been deployed and VPNoBB has been provided. Trainings have been organized for all the field staff and a State level workshop was organized in March 2012.



Dr. M. Moni, DDG-NIC addressing NADRS workshop organized at Chandigarh.



RAKESH SINGH
IAS, Chief Secretary, Punjab

I am glad to learn that "Informatics" in the forthcoming issue, is focusing on the eGovernance initiatives in the state of Punjab. In recent times, IT has pervaded the Government setup and has radically changed the way our Government establishments function. Committed to provide people-oriented, transparent and effective governance, our state has taken up a number of ICT initiatives in order to make qualitative change in the lives of the citizens and improve the governance mechanism.

NIC Punjab has played a pivotal role in improvising a number of government processes by developing and implementing ICT based solutions tailored to meet our requirements. These changes have increased efficiency, made information more accessible, and increased the level of communication with citizens. NIC has successfully facilitated ICT deployment in a number of eGovernance projects such as SUWIDHA for district administration services, eCounseling in Technical Universities and Technical education board, eProcurement in PWD Punjab, Elections (DISE), eCourts, Health (MCTS), ePanchayat application suite (PRIASoft etc), Agriculture (NADRS), Rural Development and Panchayat, Property Registration (PRISM), Transport (VAHAN, SARATHI) and many other ICT projects.

I take this opportunity to express my best wishes to the editorial team of Informatics and appreciation for the contributions made by NIC Punjab.

ePANCHAYAT

e-Governance in Panchayati Raj Institutions to make them efficient, transparent and accountable, modules namely Local Government Directory, PRIASoft, PlanPlus, National Panchayat Portal and Area Profiler have been successfully implemented.

NATIONAL SOCIAL ASSISTANCE PROGRAMME

BPL beneficiaries are given a minimum social assistance through different pension schemes. Legacy Data entry has been completed and process for Pension Disbursement is under process.

PUBLIC DISTRIBUTION SYSTEM

Recently initiated central project, master details of various stakeholders

has been completed using the SIMS. Digitisation of 68 lakh ration card holders has been taken up using the eRCMS. Thereafter, the issuance of Smart Cards, system of Supply Chain Management and rations cards management system shall start.

PRISON MANAGEMENT SYSTEM & VISITOR MANAGEMENT SYSTEM

Successfully implemented in Central Jail Ludhiana, the system is working as a deterrent to undesired and frequent visitors. The government is now planning to replicate the system in eight major prisons in the state.

NATIONAL KNOWLEDGE NETWORK

A state-of-the-art multi-gigabit pan-

India network conceived to enable scientists, researchers and students engaged in the generation and dissemination of knowledge has been established with 21 nodes.

TRANSPORT

VAHAN, for Registration of Vehicles, Fee & Fine Collection and Fitness Validity and SARATHI, for Learner's/Permanent/Conductor/Driving School License is implemented at 65 locations providing Smart Card based RCs and Licences. An initiative to issue Learners' License through Schools and Colleges has also been taken. Data consolidation to form State and National Registers is also done to provide online services to citizens, issuing authorities and investigating agencies. National Permit Portal, for issuance of National Permit, Stage Carriage Permit and Contract Carriage Permit, is implemented at all the Four Regional Transport Authorities.

ELECTION

Punjab Poll Day Monitoring System, to capture activities on polling day through SMS from authorized mobile numbers for monitoring reports on CEO's website. District Information System for Election, a randomization software, to facilitate formation of polling parties, counting parties, EVM randomization, election orders for individual polling parties, micro-observer parties and EVM orders, constituency-wise distribution of employees, department-wise & sub-department wise orders, attendance sheets, Election Duty Certificate, issue of ID Card, etc as per ECI guidelines. In use since 2007, it has also been used by many other states. DISE-MC and DISE-NP have been developed for State Election Commission for

Municipal Corporation and Nagar Panchayat elections respectively.

WEB BASED COURT CASES MONITORING SYSTEM

eCCMS Web (<http://ccmspb.gov.in>) facilitates departments / officers to manage and monitor court cases. They can track cases, prepare cause-list in advance, and maintain complete history of the case.

FILE TRACKING SYSTEM

A system to enable tracking and monitoring of file movement in electronic form, has been successfully implemented in Police Housing Corporation, Local Government, Police Hqrs, State Infrastructure Board and Department of Information Technology.

eFILE AND eOFFICE

eFile is for enablement of paperless office by scanning, registering and routing inward correspondence with creation of file, noting, referencing, docketing, attachments, draft for approvals and movement of files as well as receipts. eOffice enables employees to create their own document online and submit the same for review and publication on the portal. eFile and eOffice implementation has been initiated in Punjab Technical University.

AGMARKNET

Under AGMARKNET, 199 market nodes are computerized and are reporting daily prices of commodities reaching these markets which is updated and reflected on portal.

CENTRAL PUBLIC PROCUREMENT PORTAL

Implemented in CPMG office, Punjab circle to publish their Tenders,

Tender Enquiries, Corrigendum and Award of Contract details with an objective to provide single point of access to information.

SOCIO-ECONOMIC AND CASTE CENSUS

2011 of the national population in the year 2011 has been carried out by state. Trainings, creation of users, data transfer were the main activities and more than 1900 GB of household wise image data has been uploaded on the SECC servers.

ONLINE SCHOLARSHIP MANAGEMENT SYSTEM

Merit-cum-means scholarship for the post matric students belonging to Scheduled Castes, Other Backward Classes and minorities. Eligible students can apply online and the scholarship amount is deposited directly in their bank accounts.

Eighth All India Education Survey has been started in all the districts of Punjab. The input for planning new schools, upgrading existing schools, and for enhancing essential facilities, is being collected and captured through a web based application.

Border Area Development Plan for development of areas falling on international border, has been implemented for balanced development of border districts by way of infrastructural facilities and promoting sense of security amongst citizens.

WAQF MANAGEMENT SYSTEM OF INDIA

It is successfully implemented for the Management of Properties Registration, Muttawalli Returns, Leasing of Properties, Litigations

Tracking, Documents Archiving & Retrieval, Funds to Mosques, Durgah, Kabristan, Imams, Muazzins, Widows, Girls Marriages, Scholarships, Schools, Hospitals, Dispensaries, Musafirkhanas, Skill Development Centres, Loan Management for Development Of Urban Waqf properties etc and GIS of Waqf Properties.

E-GRANTHALYA

E-Granthalaya, a library automation system, has been initiated in various State Libraries and College libraries of Punjab. A 3 days workshop was also conducted recently conducted.

COMPUTERIZATION OF MEDICO-LEGAL AND POST MORTEM REPORTS

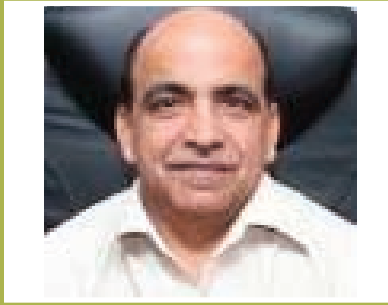
Conceived under the directions of Hon'ble Punjab and High Court, MedLEaPR is to be implemented at all concerned Health facilities. Successfully tested at Mohali and Ludhiana, MedLEaPR is due for launch for which state data centre infrastructure is being upgraded.

eENTRYPASS

A web-based solution for issuance of entry passes to visitors to Punjab Civil Secretariat and Punjab Technical University has been implemented.

Web Presence / Coordination for 70 Punjab government and 19 District websites covering interaction with users for finalizing the structure / contents of site, cost estimates, URL registration, Remote publishing facility, etc. Technical support is also being provided for the development, deployment & maintenance of web-based projects.

Some of the other initiatives are Consumer Courts, Agriculture department, Health Department,



Dr. RAJNEESH ARORA
Vice-Chancellor
Punjab Technical University

I am pleased to know that Informatics - an e Governance Publication from NIC has decided to cover IT activities in Punjab State under its "State in Focus" section.

Over the period IT has taken long strides in State of Punjab and in particular at Punjab Technical University. PTU is committed to give best services through IT to its stakeholders i.e. Students, Faculty Members, Institutes and University staff. In this regard, PTU has taken many steps forward by providing online services to its community like online payments, online transmission of question papers, interaction with students through its portal etc.

PTU joined hands with NIC in the year

Passport office, Regional Provident Fund Commissioner, PIB, Sarv Siksha Abhiyaan, Midday Meal and Sakshar Bharat MIS, FCI, General Post Office/Postal Life Insurance, Registrar of Companies, Director General of Foreign Trade etc.

CONCLUSION

With the dynamic & visionary support of the state government and efforts of NIC Punjab, an impact has been made in the lives of the citizens. The commitment of NIC to explore

2009 for conduct of Online Counseling for Engineering and Pharmacy Undergraduate courses. Till that time, Counseling was a very major event, which consumed lot of manpower and logistics. With start of Online Counseling, there has been a sea change in Admission procedure and it has reduced burden considerably. At the same time, it has brought transparency in our system.

Today counseling for each AICTE approved courses is being done by NIC. We have taken a step further by introducing eOffice product of NIC in our University. It is being used by whole of the staff and it has made our life lot easier in searching Information.

Recently PTU awarded another project to NIC Punjab namely "DPR study for University Management Solution". We are very eager to get develop an ERP system based on this study. I am proud to say that officers of PTU and NIC work in tandem with each other for bringing in new technologies to PTU.

Let PTU and NIC be a team in bringing the much needed change in Education Fraternity.

I would like to place on record the work done by NIC Punjab Officers and wish them Success in coming days.

new vistas of ICT-enabled government processes is continued and shall be perceptible in the shape of further projects with the sole objective of establishing transparent and accountable governance in the state.

FOR FURTHER INFORMATION

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E-COLLECTORATE

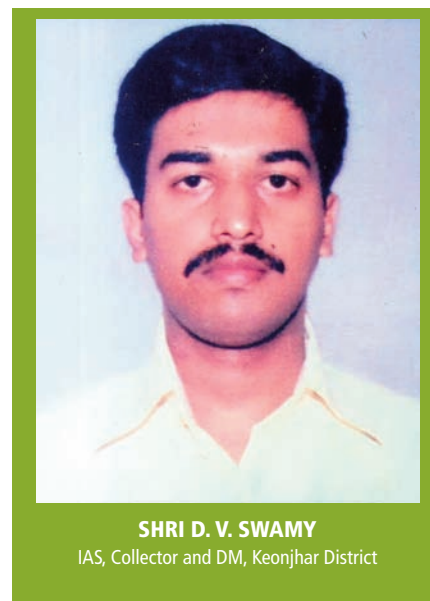
A vision shared by Shri D V Swamy, IAS, Collector and DM, Keonjhar District, Odisha

e-Collectorate takes care of the scanning of all communications received by the District Collectorate and then through the inbuilt workflow mechanism traverses to various sections till the files are disposed off. Various file creation for particular application / subject and electronic file movement has been taken care of in the software. A common man can easily track/query the progress of his application through SMS / internet / installed kiosks, thus involving less human intervention and faster delivery of service.

Keonjhar must be a pioneer to have such a service for its citizens in the state of Odisha.

D. V. SWAMY:

Certainly! We are adopting such a mechanism of Collectorate Automation and associated services to people of Keonjhar through eCollectorate since April 2012. With the total computerisation of the letter and file monitoring of the Collectorate, people would be able to track the status of a file or an application relating to various issues in the Collectorate from anywhere in the world. Citizen can Access through Internet as well as via SMS. Transparent administration and service delivery etc. are the key features of the project thus providing greater avenues to people, especially



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those who have mostly been deprived of the benefits of Good Governance, to participate in their own development process.



INTERVIEWED BY

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These are encouraging words and please elaborate on the Origin of such an innovative concept of service delivery in a backward district of Odisha.

D. V. SWAMY:

With the everincreasing service delivery expectations of a Common Citizen and being the epicenter of administration, the District Collectorate is entrusted with the task of handling law and order, revenue collection, taxation, planning project executions, and the handling of natural and man-made emergencies etc in a district. It is like an enterprise dealing with variety of subjects concerned with lakhs of people. The office became increasingly occupied with the general welfare of the people in the district and lakhs of people with diverse issues are interacting with the district administration daily and numerous files of these issues are getting originated on different subjects, which are handled by 200 employees. So we

thought of seamless integration of various sections and over it put the s/w applications for various processes and services and thus the evolution of eCollectorate happened suiting the requirement of the district collectorate.

What are the processes and associated services that you initially aim to provide to your people through this programme.

D. V. SWAMY:

First we plan for the automation and integration of Diary receipt and Despatch section. Necessary networking and role assignment also has been taken up for each and every seat of the collectorate campus officers like Deputy Collector, Head Clerk, Senior Clerk and Junior Clerks. The software is well equipped with online processing of files, letters from its point of origin and receipt to the final disposal by the collector through various sections and hierarchy both with top to down and down to top approach. Once file movement

automation process has been established, we plan to process the services directly rendered by collectorate like Arms Licenses, Police Verification, status of grievance petitions by a citizen through kiosks etc.

There is a whole gamut of applications that can be built on this and may be taken up in future. Integration with future outside applications can also be facilitated by e-collectorate with use of web services concepts. The current aim of this G2G application is for total collectorate workflow automation with inbuilt modules catering to the need of a full fledged eCollectorate.

Can you be more specific about the actual functionalities of eCollectorate.

D. V. SWAMY:

eCollectorate takes care of the scanning of all communications received by the District Collectorate and then through the inbuilt workflow



mechanism traverses to various sections till the file is disposed off. Various file creation for particular application / subject and electronic file movement has been taken care of in the software. A common man can easily track/query the progress of his application through SMS / internet / installed kiosks thus involving less human intervention and faster delivery of service.

How do you plan to achieve the mammoth task for such a change to happen?

D. V. SWAMY:

This is certainly a challenge for us keeping in view the function, framework, Technology, Capacity Building and adaptation. To make all these happen Collectorate Keonjhar restructured itself with necessary structural and functional changes. The district administration with suitable selection of ICT (Information and Communication Tools) has initiated the adoption of this unique process flow based software application called eCollectorate. For the change to happen, necessary change management strategies were adopted like phase wise identification of sections and training staffs, sensitization programmes, empowerment with better working environment and infrastructure and scope to handle modern technology to bring out a sense of ownership among the staffs etc. The process that is being followed from centuries has its own inertia towards the change which had to be tackled carefully. Mapping the process flow and switching to a completely automated workflow and doing away with physical papers and files required more concentrated effort of removing the psychological block



rather than a technology issue. This was properly managed with participative approach which proved to be a success.

Are you sure that the whole arrangement would work for the betterment of the society through this use of ICT for the common citizens while fulfilling your vision.

D. V. SWAMY:

Certainly, Yes. The product of NIC is one of the well tested & robust applications mapping to most of the essential processes of the Collectorate and converting the output of these processes through desired service delivery model. It is a suite of applications based on an integrated solution architecture covering most of the functional areas and activities of the Collectorate.

Being a web enabled solution built on industry standard open source based software technologies and best practices, it envisages covering all areas of work in the collectorate at the first instance and later aimed at extending the service to blocks, tehasils, villages, and panchayats where the actual beneficiaries reside. The front end application has been developed with open source PHP with My SQL database on Redhat Linux.

Please tell us about your team and their involvement for success of the project.

D. V. SWAMY:

I sincerely express my thanks to Shri S.K Panda, State Informatics Officer, Shri A. K Hota, Technical Director & District Co-ordinator and Shri Ajit K Pattanayak, District Informatics Officer who have made a dream into reality. My best wishes to other members involved in the project from NIC Odisha - Shri D Madan Prabhu, Shri Sidhartha Mandal, Shri Ajay Mohapatra along with the NIC Kerala team members Shri Andrews Varghese, Shri Manoj P.A who have spent their valuable time for the project at this part of the country.

I also thank Dr. D. Brunda, IAS Probationer, Sri B. Nayak, ADM, all Dy. Collectors and all staff members of our Collectorate for their significant contribution for success of the project.

I also thank Jindal Steel and Power limited, member of District eGovernance Society for providing necessary infrastructure for eCollectorate project.

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WEB PAGES WITH RAZOR SCRIPTING

NEW VIEW ENGINE IN ASP.NET

Razor syntax is based on technology from Microsoft called ASP.NET, which in turn is based on Microsoft .NET Framework. The Razor syntax gives you all power of ASP.NET, but using a simplified syntax that's easier to learn and it can be used with existing ASP.NET Web Site.



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ASP.NET is a Web application framework developed by Microsoft to allow programmers to build dynamic Web sites and is successor to Microsoft's ASP technology. ASP.NET is built on CLR, allowing programmers to write ASP.NET code using any supported .NET language. ASP.NET supports three different development methods. All three are ASP.NET technologies for creating

dynamic web applications:

- ASP.NET Web Pages focuses on adding server-side code and features simple and lightweight syntax.
- ASP.NET Web Forms is based on a page object model. Web Forms uses event-based model.
- ASP.NET MVC implements Model-View-Controller pattern.

In ASP.NET MVC3, Microsoft introduced RAZOR, a new view engine, designed to simplify the current syntax used in asp.net pages. Razor was designed as an easy to learn, compact and expressive view engine that enables a fluid coding workflow.

ABOUT ASP.NET WEB PAGES

When .NET Framework 1.0 was released you could create web sites using Web Forms. It became a success and many shifted from classic ASP and other languages to ASP.NET.

In web forms since the code were tightly coupled, it became hard to test code as you had to have access to current HttpContext and controls used by aspx file. Because of this Microsoft released ASP.NET MVC in 2007 and it solved problems by de-coupling the code and putting it to a controller, and have full control over rendering.

There are though still a lot of developers who still use classic ASP, PHP etc style approach. These developers want to have dynamic code on server side, and sometimes also have business logic directly in view pages since it makes easy to distribute and

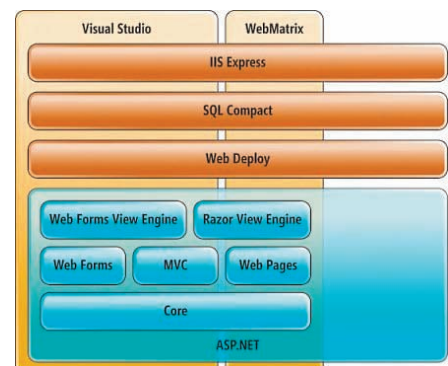
modify pages without need of compiling.

Microsoft released third alternative called ASP.NET Web Pages. It makes it possible to use new dynamic functions in .NET 4.0 and the rest of the .NET Framework as before. ASP.NET Web Pages can be created using C# or Visual Basic, and requires .NET 4.0. When creating Web pages you use new syntax called "Razor".

WHAT IS RAZOR?

- Razor is markup syntax for adding server-based code to web pages
- Razor has power of traditional ASP.NET markup, easier to learn and easier to use
- Razor is server side markup syntax much like ASP and PHP
- Razor supports C# and VB

Even though this syntax is simple to use, its family relationship to ASP.NET and the .NET Framework means that as your websites become more sophisticated. ASP.NET web pages with Razor syntax have the special file extension cshtml (Razor using C#) or vbhtml (Razor using VB).



ADVANTAGES OF RAZOR

The idea behind Razor is to provide an optimized syntax for HTML generation using a code-focused templating approach, with minimal transition between HTML and code. The design reduces the number of characters and keystrokes, and enables a more fluid coding workflow.

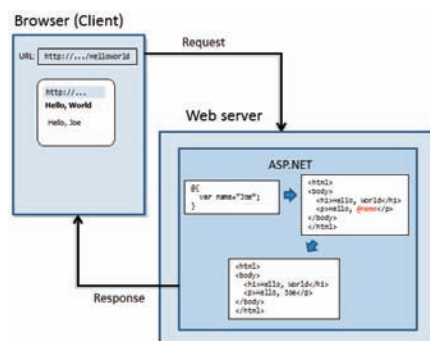
- Is not a new language (no major changes to learn)
- Supports IntelliSense (statement completion support)
- Unit Testable
- Supports "layouts" (an alternative to the "master page" concept in aspx pages)

HTML ENCODING

When you display content in a page using the @ character, ASP.NET HTML-encodes the output. This replaces reserved HTML characters (such as < and > and &) with codes that enable the characters to be displayed as characters in a web page instead of being interpreted as HTML tags or entities. Without HTML encoding, the output from your server code might not display correctly, and could expose a page to security risks.

HOW DOES IT WORK?

Razor is a simple programming syntax for embedding server code in web pages. Razor web pages can be described as HTML pages with two kinds of content:



HTML content and Razor code. When the server reads the page, it runs the Razor code first, before it sends the HTML page to the browser. The code that is executed on the server can perform tasks that cannot be done in the browser. Server code can create dynamic HTML content on the fly, before it is sent to the browser.

MAIN RAZOR SYNTAX RULES FOR C#

- Razor code blocks are enclosed in @{ ... }
- Inline expressions (variables and functions) start with @
- Code statements end with semicolon
- Variables are declared with the var keyword
- Strings are enclosed with quotation marks
- C# code is case sensitive
- C# files have the extension .cshtml and VB files have extension .vbhtml.

RE-USABLE CONTENT

You can have reusable blocks of content (content blocks), like headers and footers, in separate files. You can also define a consistent layout for all your pages, using a layout template (layout file). Many websites have content that is displayed on every page (like headers and footers). With Web Pages you can use @RenderPage() method to import content from separate files. Content block can be imported anywhere in a web page and is just like any regular web page.

ASP.NET inserts the content blocks at the point where the RenderPage() method is called. The merged page is then sent to browser.

Another approach to creating a consistent look is to use a layout page. A layout page contains structure, but not

the content, of a web page. When a web page is linked to a layout page, it will be displayed according to the layout page (template). The layout page is just like a normal web page, except from a call to the @RenderBody() method where the content page will be included.

ASP.NET HELPERS

ASP.NET helpers are components that can be accessed by single lines of Razor code. You can build your own helpers using Razor syntax, or use built-in ASP.NET helpers. Some useful Razor helpers:

1. Web Grid and Graphics
2. Google Analytics
3. Facebook & Twitter Integration
4. Sending Email
5. Validation

NUGET OVERVIEW

If you want to use a library or tool that someone else has developed, you retrieve the package from the repository and install it in your Visual Studio project or solution. Everything necessary to install a library or tool is bundled into a package (a .nupkg file).

DEVELOPMENT TOOLS

WebMatrix is a free tool that integrates a web page editor, a database utility, a web server for testing pages, and features for publishing your website. It also works for just plain HTML pages, as well as for other technologies like PHP. To install WebMatrix, you can use Microsoft's Web Platform Installer. You can also create pages by using text editor and test pages by using your existing. You can also use Visual Studio 2010 or later to work with ASP.NET Web Pages. If you don't want to use either WebMatrix or Visual Studio, you can install the component products individually using Microsoft Web Platform Installer.

DISSECTING A MALWARE ATTACK

A malware can sneak into a system in the guise of a mail-attachment or the system can get infected by simply visiting a malicious website. User is often taken off-guard while the malware sneaks into the system and compromises its integrity.



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Malware (short for malicious Software) is the main player behind most computer security incidents. It is a code/program that disrupts normal computer operation or steals information from computer without user's knowledge. Malware Analysis is one of the key defenses employed to contain and mitigate the security incidents in cyber space.

Govt. of India has a huge IT user base handling critical data. The constant malware attacks make it imperative to have a general understanding of how the malware works. A malware cannot get into a system by itself and can neither execute of its own. It always requires a user intervention to execute its mission. The malware attacks can be reduced/ minimized to a large extent by understanding the nature of malwares and this is where the "Malware Analysis" plays its role.

In the event of an attack, Analysis of Malwares provides valuable intelligence for gearing up and developing signatures for the security devices in place. The signatures applied at gateways help to identify infected machines and to deter/stop

further occurrences of similar attacks. And signatures updated in the enterprise security solutions are percolated to the end-points to remove the infections.

MALWARE A CAMOUFLAGE

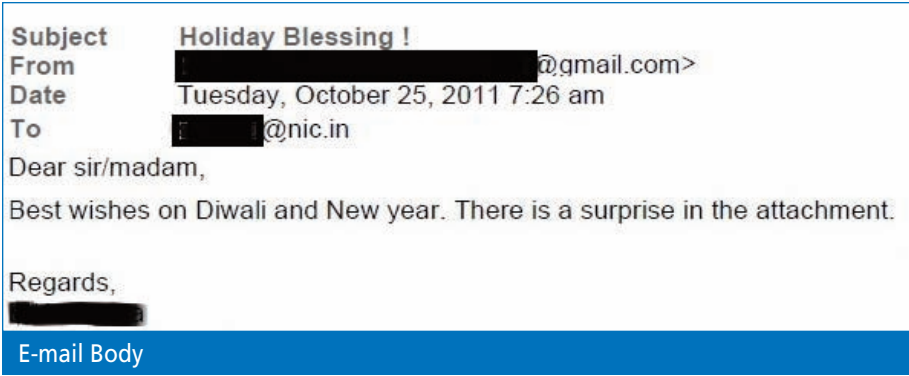
Malware disguises in packages such as Games, Cool Animations, FAKE Anti-virus, a Pornographic image/movie on the web. These packages entice the user to unlatch the regular security of his system. A malware can also sneak into a system in the guise of a mail-attachment or by simply visiting a malicious website. User is often taken off-guard while the malware sneaks into the system & compromises its integrity.

MALWARE ATTACK – A CASE

The Dissection of a malware will give you an insight into how a malware peeps into a system and steals the information wonderfully.

This particular malware attack used mail as the transport mechanism for targeting users working at sensitive places in NICNET. The email appeared to be coming from a known high ranking officer and contained instructions which would tempt the recipient to open the attachment that the mail contained.

An e-mail bearing subject "HOLIDAY BLESSINGS" was received by a large number of users



from a mail-account apparently belonging to a high level Officer in Government of India. The mail contained an attachment “DiwaliGift.doc” which was screened OK by all Antivirus solutions in place as on given date/time. The body of the e-mail contained the message that had direct relevance to the attachment.

ATTACHMENT

The mail attachment in the form of a doc file was specially crafted so that the system with a vulnerable MSWORD application gets compromised by opening a backdoor for the remote attacker, allowing the remote attacker to collect useful information from the system and transmit the same to the master.

The doc file “DiwaliGifts.doc” had an embedded malware that exploits CVE2010-3333 vulnerability in MSWORD 2007 and below.

DYNAMIC ANALYSIS REVELATIONS

On opening the attachment, a one-page greetings message is displayed with the title “HAPPY DIWALI”. The message appears a genuine one correlated with the festival timing. It does not infuse any doubt in the mind of the user about the intentions of the embedded malware in the document.

While the document opens with a festival greeting, certain files get dropped in the victim’s computer’s “%temp%” directory in the background. The system attempts for DNS resolution and connects to one of the following domains:

- kittyshop.kilu.org- hosted on- 78.46.104.43
- www19.subdomain.com- hosted on- 78.46.104.43
- treeshop.kilu.de- hosted on- 78.46.103.46
- www13.subdomain.com- hosted on- 78.46.103.46

The system further starts sending and receiving information. The dropping of the files and then initiating connections happen in the background without users knowledge.

After some time, the files in %temp% directory get automatically deleted, a ploy by the attacker to remove the traces.

The actual process sequence is shown below:

CODE ANALYSIS -- FINDING

Static analysis of the word file shows that the doc file attachment has three (3) files wrapped into one.

1. An executable file
2. A VB script file
3. A MS word file

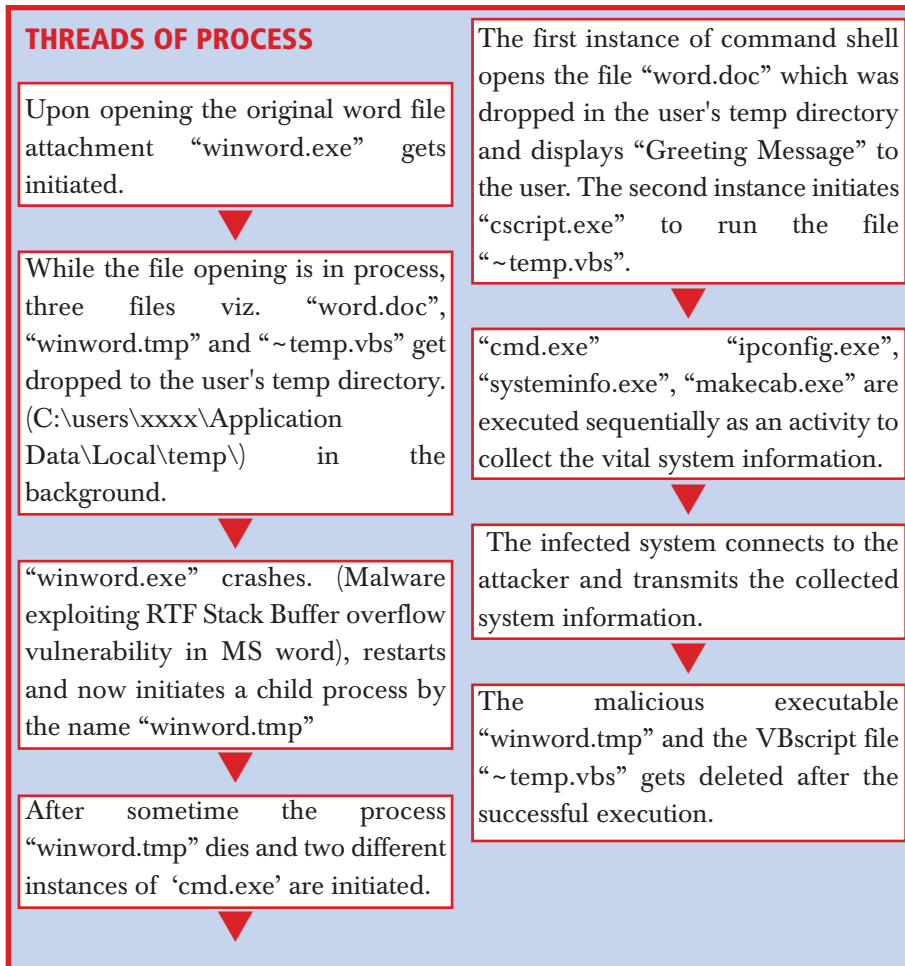


Ms. ANJANA CHOUDHARY
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Multitude of malicious samples confronts NICNET on a regular basis. While Antivirus solutions help to detect and eradicate most of the infections, some malwares have the capability to bypass the security solutions and find their way inside the NICNET. These malwares belong to the category of targetted attacks and/or zero-day-attacks.

When these attacks are encountered or informed, the cyber security team identifies and collects the malware sample. This sample is subjected to thorough analysis to understand how malware tries to fulfill the harmful intent of the attacker. The Malware Analysis results help us to gear up our security solutions to identify the infected machines and plan for the removal of infection from these systems.

It is mostly observed that an infected client is without an Antivirus Solution or has an outdated signature file. We constantly educate & recommended to have a latest Antivirus solution installed and have the system software and application softwares patched as a precautionary measure to overcome the malware threats to a large extent.



The executable has some encrypted portions which when decrypted indicate the domain where the information is posted by the malware and also has reference to the file “~temp.vbs”

Why Malware Analysis?

- Know how malware works
- Contain an ongoing attack
- Identify the Infected Clients
- Assess any data leakage
- Plan removal of infection from clients



"If you ever encounter a suspicious file or Email, please forward the same to Malware Lab. mallab@nic.in for analysis"

The file “~temp.vbs” is a VB Script file and its code reflects the activities that the malware is designed to carry out. The analysis of “~temp.vbs” indicates the malware activities in chronological order as:

- Saves directory listing of all drives in each respective drive as “[drive letter].tmp”
- Saves network information of the machine in a file “j.tmp”
- Executes “systeminfo” and saves the result in a file “k.tmp”.
- Saves Tasklist output (running

processes information) to the file “m.tmp”

- The content of tmp files so created is combined in a new file “L.tmp” and then “makecab.exe” command is used to compress it in a new file “l.cab”
- The result of these commands is now posted (transmitted) to the attacker using HTTP POST
- All the .tmp files created are deleted from the system
- Code to delete the dropped malicious files “~temp.vbs” and “winword.tmp” is also in the script file indicating the automatic removal of these malicious files after they are executed.

The code analysis collaborates the earlier findings that the malware collects vital information from the system and posts it to the attacker. It further removes the traces and this all is happening in quick succession and without users’ knowledge.

CONCLUSION

A malware attack is very difficult to be sensed by an end-user as it does not leave any trace of the information robbery and yet the system stands robbed. The only way we can safeguard our data/machines from Malware attack is through cautious approach in web-surfing, handling our mail attachments, and not falling prey to the temptations of free software like fake Antivirus or music/videos and last but not the least by keeping the software’s patched and Antivirus updated.

FOR FURTHER INFORMATION

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NoSQL- NO PROBLEM WITH 'BIG DATA'

Tabular data remains tabular and the spreadsheet is still a business's favourite data modeling tool. SQL is not going away any time soon. However until now we've been creative in working with and around the constraints of a typical relational datastore. NoSQL offers the chance to think differently about data and that is a tremendously exciting prospect.



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WHAT DO WE MEAN BY 'BIG DATA'

'Big data' is a term applied to data sets whose size is beyond the ability of commonly used software tools to capture, manage, and process the data within a tolerable elapsed time. The explosion of data volumes, sometimes needing real-time processing are often not lending itself to the structuring rules and processes implemented by RDBMS. To address this problem the solutions such as Google's Map-Reduce and the Hadoop open source solution etc have been developed which are widely known as 'NoSQL'.

WHAT IS NOSQL?

NoSQL is not the name of any

particular database. It refers to a broad class of non-relational databases that differ from classical relational database management systems (RDBMS) in some significant aspects. They do not use SQL as their primary query language, instead providing access by means of Application Programming Interfaces (API).

NoSQL can be considered "Internet age" databases that are being used by Amazon, Facebook, Google and the like to address performance and scalability requirements that cannot be met by traditional relational databases. NoSQL databases and data-processing frameworks are primarily utilized because of their speed, scalability and flexibility. Because of these reasons, sometimes NoSQL even refers as 'Cloud Databases'.

Feature	Description
Schema-less	"Tables" don't have a pre-defined schema. Records have a variable number of fields that can vary from record to record. Record contents and semantics are enforced by applications.
Shared nothing architecture	Instead of using a common storage pool (e.g., SAN), each server uses its own local storage. This allows storage to be accessed at local disk speeds instead of network speeds, and it allows capacity to be increased by adding more nodes. Cost is also reduced since commodity hardware can be used.
Elasticity	Both storage and server capacity can be added on-the-fly by merely adding more servers. No downtime is required. When a new node is added, the database begins giving it something to do and requests to fulfill.

Sharding	Instead of viewing the storage as a monolithic space, records are partitioned into shards. Usually, a shard is small enough to be managed by a single server, though shards are usually replicated. Sharding can be automatic (e.g., an existing shard splits when it gets too big), or applications can assist in data sharding by assigning each record a partition ID.
Asynchronous replication	Compared to RAID storage (mirroring and/or striping) or synchronous replication, NoSQL databases employ asynchronous replication. This allows writes to complete more quickly since they don't depend on extra network traffic. One side effect of this strategy is that data is not immediately replicated and could be lost in certain windows. Also, locking is usually not available to protect all copies of a specific unit of data.
BASE instead of ACID	NoSQL databases emphasize performance and availability. This requires prioritizing the components of the CAP theorem that tends to make true ACID transactions implausible. BASE (Basically Available, Soft state, Eventual consistency) means that given a sufficiently long period of time over which no changes are sent, all updates can be expected to propagate eventually through the system and all the replicas will be consistent

FLAVORS OF NOSQL

Today's open source NoSQL data stores fall into several different categories as follows:

KEY VALUE STORES

Enables populating a database using keys, such as "Joe" and associated values such as his address

Examples: Tokyo Cabinet/Tyrant, Redis, Voldemort, Oracle BDB

Typical applications: Content caching

Strengths: Fast lookups

Weaknesses: Stored data has no schema

GRAPH DATABASES

This kind of database is designed for data whose relations are well represented as a graph (elements interconnected with an undetermined number of relations between them). The kind of data could be social relations, public transport links, road maps or network topologies

Examples: Neo4J, InfoGrid, Infinite Graph

Typical applications: Social networking, Recommendations

Strengths: Graph algorithms e.g. shortest path, connectedness, n degree relationships, etc.

Weaknesses: Has to traverse the entire graph to achieve a definitive answer. Not easy to cluster.

TABULAR STORES

Similar to a relational system, designed to hold data in a spreadsheet-like format where entries can be searched and retrieved

Examples: Cassandra, HBase, Riak

Typical applications: Distributed file systems

Strengths: Fast lookups, good distributed storage of data

Weaknesses: Very low-level API

DOCUMENT DATABASES

Similar to a content management

system, designed to store documents and index the documents for quick access

Examples: CouchDB, MongoDB

Typical applications: Web applications

Strengths: Tolerant of incomplete data

Weaknesses: Query performance, no standard query syntax

XML DATABASES

Specifically for XML content, using a query language for XML documents, such as Xquery

Examples: Exist, Oracle, MarkLogic

Typical applications: Publishing

Strengths: Mature search technologies, Schema validation

Weaknesses: No real binary solution, easier to re-write documents than update them

OBJECT STORES

Designed specifically to store and retrieve objects based on their associated metadata

Examples: Oracle Coherence, db4o, ObjectStore, GemStone, Polar

Typical applications: Finance systems

Strengths: Matches OO development paradigm, low-latency ACID, mature technology

Weaknesses: Limited querying or batch-update options

ADVANTAGES OF NOSQL DATABASES

- Supports BigData
- Elastic scaling
- Fast key-value access
- Schema migration without downtime
- Easier maintainability, administration and operations of Database
- No single point of failure



- Supports Agility
- Programmer ease of use
- Distributed systems support and much more.

POPULAR INCARNATIONS OF NOSQL DATABASES

Apache Cassandra

Apache Cassandra is an open-source, distributed database-management system designed to handle very large amounts of data spread out across many commodity servers while providing a high degree of service availability with no single point of failure. It is particularly fast at write operations as opposed to reads and might therefore lend itself best to applications that require analysis of large sets of data with write-backs.

Hadoop / HBase

HBase is an open-source, distributed database modeled after Google's BigTable. HBase technologies are not strictly a data-store, but generally work closely with a NoSQL database to accomplish highly scalable analyses. HBase scales linearly with the number of nodes and can quickly return queries on tables consisting of billions of rows and

millions of columns. India UID, Aadhar Project uses Hadoop for handling 1.22 billion citizen's BigData.

BigTable

BigTable can be defined as a sparse, distributed, multi-dimensional sorted map. BigTable is designed to scale into the petabyte range (a petabyte is equivalent to 1 million gigabytes) across hundreds or thousands of machines and to make it easy to add more machines to the system and start taking advantage of those resources automatically without any reconfiguration.

MongoDB

MongoDB is open source document-oriented NoSQL database system. Instead of storing data in tables as is done in a "classical" relational database, MongoDB stores structured data as JSON-like documents with dynamic schemas (MongoDB calls the format BSON), making the integration of data in certain types of applications easier and faster.

Coherence and Ehcache

Coherence and Ehcache are equipped with In-Memory caches. Coherence is in

heavy use at financial industries where network latency (the time it takes to cross a network connection from sender to receiver) is a factor.

Possible applications of NoSql Databases

NoSQL databases should generally be considered as potential options when any high-intensity computation or analysis of large data sets is required, especially when performing real-time analysis. This can easily make their use in many sectors e.g.

- Nationwide Medical Prescription, a comprehensive drug treatment history of every citizen, available to patients, doctors, and medical systems
- Open Government Initiative platform, where all datasets are available for public. like data.gov.in
- Managing GIS data with NoSQL
- RTI portal
- e Voting
- Fraud detection by comparing transactions to known patterns in real-time.

CONCLUSION

Relational databases, especially the columnar variety, do not generally perform well on updates. As a result, a NoSQL database might present itself as a viable alternative in cases where massive updates are required. In situations involving variable-record templates or sparse data, NoSQL document databases can offer a welcome alternative.

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Sirmaur-

ICT REVOLUTIONISING GOVERNANCE

Sirmaur, situated in south-east of Himachal Pradesh, was founded in 1616 as an independent kingdom in India. It is largely mountainous and rural, with 90% of its population living in villages. It includes the towns of Nahan (District Headquarters), as well as the Shivalik Fossil Park at Suketi, where fossils of over 85 million years old have been found. Agriculture is the backbone of economy here. People worship deities (Devtas) just like people in many other districts of the state. Hindi and Pahari are the languages spoken here. Nati is the popular folk dance.



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NIC Sirmaur District Unit was established in 1988 at Collectorate Office Nahan. Since its inception the District Unit is a pioneer in implementing many successful e-Governance Projects with an objective to rollout the ICT awareness in the district for greater transparency and efficiency leading to good governance.

MAJOR E- GOVERNANCE INITIATIVES

Sugam Services Centres: The Citizen Services Center named as SUGAM have been established at Sub Divisional locations (Nahan, Paonta & Rajgarh) & RTO Office Nahan of the District. There are different services being provided under single roof. Some of the main services are:- eSamadhan-online complaint registration and status,

SARATHI- Issuance/Renewal of Computerised Driving Licenses,

VAHAN- Registration of Vehicles, Certificate issuance, Telephone bill payments, Electricity bill payment, Passport Application Collection, Pension/Salary information etc.

Electronic Gazette: The online software to provide the notifications to the Controller of Gazette for publishing these in the Gazette (Rajpatra). The final gazette is published on the Internet at <http://himachal.nic.in/egazette>. The citizens and departments have access to the search interface by selecting department, date, keyword etc.

Personnel MIS: The Personnel MIS is a convenient and effective monitoring tool for employees to view their service book details covering personal, professional, family, education, training, leave, loans, ACR, Service History etc. at a click of button. It is of immense benefit to the employees since they can view it from even the remotest corner of the state.



SUGAM Centre, Nahan

District Official Web Site: The official website of district <http://hpsirmaur.gov.in> is designed & maintained by the NIC District Centre in coordination with the district administration. The detailed information on the web site about the district is a major source of information for citizens.

REVENUE DEPARTMENT

Land Records Computerisation: In the district all 10 Tehsils have been made operational. The base entry of the Jamabandis of all the Tehsils has already been done. The mutation data entry & updation process is going on and new Jamabandis created automatically by HimBhoomi software. Computerised copies of RoR are being issued to citizens from various Tehsils and Citizen Service Centres of District.

HIMRIS (Registration of Land Deeds): The computerized registration of Land Deeds has been done at all Tehsils. The advantage of this software is that the software is integrated with land records software (Himbhoomi) where automatic updation of mutation and remarks are shown in the Nakals.

eParman (Issuances of Certificates): The Web Based eParman software is running in all the 3-Sub Divisions & all the 10-Tehsils/Sub Tehsils for issuance of various types of certificates like Bonafide, SC/ST, Legal Heirs, Backward Class, Character certificates etc.

COMPUTERISATION OF TREASURIES DEPARTMENT

eSalary (Integrated Pay & Account Office computerisation): The eSalary software, for processing and generation of salary bills, covers all employees of the State Government. The DDOs just need to update only the changes in the software and salary cheques can be taken. The employees can view the salary details at <http://admis.hp.nic.in/esalary>.

HPOTIS (HP Online Treasury

Information System): Online Treasuries Information System (OLTIS) has been implemented in the District Treasury Office Nahan & in all of its Sub Treasury offices.

ePension : ePension software has been implemented in the District Treasury Office, which is managing the Pension Scrolls Arrear calculation etc for the State Government pensioners drawing their pension in district Sirmaur and providing them with a citizen interface at <http://himachal.nic.in/epension>.

COMPUTERISATION OF WELFARE DEPARTMENT

eKalyan Software : eKalyan Software is a new Windows Based Software which is generating Pension MOs and Bank Scrolls to around 20000 pensioners of the beneficiaries on quarterly basis. The data is also accessible on internet for the citizens.

ePehchan Software: ePehchan software is Online software to issue the Senior Citizens Identity Cards & Handicapped Identity Cards which is running at District Welfare Office Nahan.

COMPUTERISATION OF DISTRICT COLLECTORATE OFFICE (DC OFFICE)

Under the DC office Computerisation

REFNIC - Software for the diary & dispatch section.

Web Pass Software: Web based software for acceptance of Passport applications in the Passport Cell of the DC office and further management and monitoring as the data is sent to the State Passport Cell for further processing. Online status is being provided on the internet for the benefit of the citizens.

Planning Cell (Scheme Management Software): A Windows based software at District Planning Cell through which all the Proposals & Schemes are entered under various heads. The further



PADAM SINGH CHAUHAN
IAS & Deputy Commissioner
Sirmaur

The NIC District Unit has played a pivotal role not only in implementing e-Governance projects successfully but also act as a backbone for district administration by providing data and information for better planning and decision making.

monitoring of the scheme is done through the software itself. Various MIS reports are also generated for executive decisions making purposes.

NETWORK SERVICES

NIC District Centre Nahan is connected with 34 Mbps OFC (Optical Fible Cable) for Internet, Email, Video Conference and web-services. A Local Area Network (LAN) has been established in DC Office covering all the branches of the Complex. Video Conference facility is also available.

FOR FURTHER INFORMATION

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SHAJAPUR –

Upcoming IT hub of Madhya Pradesh

Shajapur is a town in Malwa region of Madhya Pradesh India named after the Mughal emperor Shahjahan. The district is spread across 1069 villages in 4 sub-divisions and 8 Janpad Panchayats. It is one of the fast developing districts in Madhya Pradesh.



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Edited by
Anshu Rohatgi

NIC District Centre Shajapur has gradually expanded the ICT based services in the district. It has played a key role in development and implementation of Management Information Systems and Decision Support System for various activities of the district administration. The network and communication infrastructure has been strengthened and extended till the block level on NICNET backbone and the district centre has made valuable contributions towards computerization of DWCRA (Development of Woman and Child in Rural Areas), NAROO Unmoolan and other IT projects. All these applications have received widespread appreciation at state and central level. The district centre has also played a key role in making general public aware of these ICT applications.

ONLINE JANSUNVAI OF NISHAKT PEOPLE AN INNOVATION USING ICT

Online Jansunvai of Nishakt people is a commendable project of NIC Shajapur for physically challenged people. The project aims to assist people in easy access to the government schemes and programmes. It is an initiative to remove the communication barriers between the physically challenged people and the district administration. The project was initiated by former Collector of Shajapur Mrs. Sonali Vayangankar.

Desktop video conferencing facility of NIC has been used to establish the communication channel at the block level. Necessary software and web cameras have been installed on existing computers system at all block headquarters and the physically challenged citizen just needs to walk into these centres and talk to the collector directly through video conferencing and explain their problems without the need of visiting the district hqrs. This system was appreciated by Secretary Panchayat & Social Welfare Department GoMP.

With the overwhelming success of the project for physically handicapped citizens a web enabled application has



Mrs. SONALI VAYANGANKAR
(IAS)
Former Collector Shajapur

With the help of NIC district Centre, we involved the physically challenged citizens in regular JANSUNVAI program. Now they need not travel long distances and wait in long queues to participate in weekly grievances redressal program. They can participate from their nearest block head quarter using NIC's desktop video conferencing facility.



PRAMOD GUPTA (IAS)
Collector Shajapur

Online Nishakt Jansunvai is an excellent example of ICT innovation and citizen participation. It is very popular among citizens and we will definitely make it more effective.

been introduced, for registration of grievances from normal applicants also under Jansunvai, The applications allows the government departments to enter their follow up online and helps the collector to monitor the follow up of departments on weekly basis. The status of application is also available on the district website so that an applicant can know the status of his/her application by entering the registration number of application.

RECORDS MIS

This is an application for management of documents related to disposed revenue cases and revenue records. Details of a revenue cases like date of filing, applicant name, date of disposal, description of case, court name, village, RI circle, location details i.e. rack number, bag number etc are entered into the system and various queries and reports are generated based on this data. Till, now more than 1 lakh records have been entered and the system also tracks the transfer details of a case to other courts for reference. It is very difficult to manage such a huge number of revenue records manually and the project has

been appreciated by the President Madhya Pradesh Revenue Board. The system has also been implemented in Office of the Chief Election Officer, Madhya Pradesh for their records management.

LAND RECORDS COMPUTERIZATION

All the tehsils of the district are generating Khasara and Bhu-naksha report with the help of Land Record software. The manual process of Khasara has been totally replaced by computerized system. Web services have been deployed for uploading the latest Khasara information on the state level land records portal. This enables the citizen to view his or her ROR online on Internet without the need to run around government offices for the same.

MIS FOR TIME LIMIT PENDING LETTERS

NIC has implemented an application for monitoring the letters marked as time limit by Collector. All such letters are entered and forwarded to concerned officers. A weekly report for the collector and all other officers of district administration is generated by the system. On every Monday a meeting is held at the collector's office led by District Collector to review and dispose of the letters.

MAHATMA GANDHI NATIONAL RURAL EMPLOYMENT GUARANTEE ACT

Effective computerized monitoring of Mahatma Gandhi National Rural Employment Guarantee Act-2005 (MNREGA) is functional in the district. All the eight blocks of the district have completed the offline data entry and are now carrying out the entries in an online mode on regular basis.

AGMARKNET

Under this project daily entry of arrivals and rates of various agriculture products are entered and sent to AGMARKNET portal. It is successfully running in Shajapur, Moman Badodiya, Shujalpur, Kalapipal, Akodiya, Agar, Badod and other agricultural product market committees of the district.

ELECTION COMPUTERIZATION

NIC, Shajapur has always played a key role during the Lok Sabha, Vidhan Sabha and Municipal elections. Almost all the election processes like polling personnel deployment, EVM management, and random allocation of booths to polling parties have been streamlined and automated. In addition, the district centre also facilitates and ensures online transmission of 'counting and results data' to the Election Commission of India (ECI), Doordarshan and State Election Commission at the time of elections.

OTHER IMPORTANT PROJECTS RUNNING IN THE DISTRICT

Apart from all these projects e-scholarship for tribal department, e-khanij for mining department and e-court project for district court are also functional in the district.

ICT SUPPORT TO OTHER DEPARTMENTS

NIC District Centre provides technical support to other departments in basic computer training, application specific training, implementation, recruitment process, presentations and networking.

FOR FURTHER INFORMATION

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DHAMTARI –

Citizen Empowerment through IT

National Informatics Centre, Dhamtari came into existence in the year 2000 and since then it has been tirelessly working to promote e-governance in the district administration. In the last 12 years the district has witnessed tremendous growth, in the field of Information Technology thereby improving the accessibility and delivery of various government services to the citizens.

**UPENDRA SINGH
CHANDEL**

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Edited by
Anshu Rohatgi

Dhamtari, a district of Chhattisgarh is about 78 kms from the state capital Raipur. It has a rich cultural heritage and is famous for its dance styles, cuisine, music and traditional folk songs. The total area of the district is 2029 sq. kms and it is about 305 meters above the mean sea level. The district has a total population of almost 8 lakhs (as per the 2001 census) with the gender ratio of 1012 females for every 1000 males and a literacy rate of 78.95 percent. From the administrative point of view the district is divided into four tehsils, four blocks and 651 revenue villages.

The district has global IT presence through the website <http://dhamtari.gov.in> which assists the citizens in accessing information about the district. The website also contains public interest information like ongoing development schemes in the district, tenders, recruitments, weather forecast, contact information of various district level officials and links to other important government websites.

ICT INFRASTRUCTURE

Network services provided by NIC: A 100 Mbps link connects the district centre with state head quarters at Raipur, while LAN connectivity is extended to District Collector Office, SP Office, Post Office, Zila Panchayat, Block Panchayat and VC Room and other administrative offices within the collectorate.

Video conferencing facility: The

Video Conferencing facility available in the district plays an important role in redressal of public grievances and monitoring departmental activity and projects. It allows the district administration to interact with state head quarters on regular basis without travelling and in a cost effective manner.

ICT Training: Training programmes are regularly conducted for the officials of various departments on various schemes like MGNREGA, Smart Kerosene Delivery System, PlanPlus, PRIASoft, CPSMS etc.

e-GOVERNANCE INITIATIVES

Computerization of ICDS Scheme (Integrated Child Development Services): ICDS is a World Bank assisted project, headed by Department of Women & Child Development, Ministry of Human Resource Development, Government of India. The purpose of ICDS is to improve the health status of children between the age-group 0-6 years and to lay the foundation for proper psychological, physical and social development of the child.

While implementing the project in Dhamtari huge anomalies were found in the food grain allocation, erratic distribution of food coupons, irregular disbursement of funds and calculations. In order to remove these anomalies, NIC Dhamtari developed the Early Child Care & Education (ECCE) software to channelize, systematize and re-engineer the complete distribution cycle. This online software records the attendance of children, calculates the cooking cost, prints required number of food coupons,

monitors the supply of nutrition supplements to all 1050 Aanganbadis, across the district, thereby ensuring transparency and accountability in the system. SMS services have been integrated with the application to transfer data on daily basis while sector wise ready to eat food requirement are automatically calculated by the software based on online data. Numerous MIS reports are generated to help the supervisors and other authorities to have a proper check on the whole process.

The implementation of ECCE software has resolved many issues pertaining to anomaly in food grain distribution from PDS shops, discrepancies in cooking cost, delay in data entry and fund spent on the project, etc. The new online system ensures immediate accountability & transparency in the system as the complete data is available online.

Mid-day Meal Online Monitoring System (MoMS): Under Mid-day Meal scheme, the whole process from data collection, student's attendance to salary disbursement has been computerized. The success of the project has prompted the state government to consider state level rollout of the software application. (<http://cg.nic.in/pdsonline/cgmmdm>)

Misal Record Online: Digitization and computerization of very old misal records was done under the supervision of District NIC and have been uploaded to <http://cg.nic.in/Dhamtari/misal> for citizen's use.

Jandarshan

(<http://cg.nic.in/jandarshan>): Jandarshan program is organized at Chief Minister's residence and district collectorate for redressal of citizen's grievances. Complete process of redressal system has been computerized right from application filling to disposal of the application.

Gramsuraj (<http://cg.nic.in/gramsuraj>): Gramsuraj program is organized by the

state government every year in the month of April to reach out to the people at the grass roots level, application form of demands and complaints are entered online for quick response and redressal.

e-COURT

NIC Dhamtari provides all technical support to implement the Court Information System (CIS) software in the District Court. A website has also been developed for district court and all cause lists and important court orders are regularly updated on this website.

Bhuiyan (Land Record Computerization): The project is developed with an objective to computerize the land record at all Tehsil. In order to ensure proper functioning of the project client-server architecture has been adopted. Printed copies of B-I, Khasra and Land Map in digitized form are being delivered to citizens.

E-kosh (Treasury computerization project): E-Kosh is a key eGovernance project implemented by NIC district centre in the G2G area. The project intends to provide accurate and effective financial accounting of various departments at the district level and the state level.

Employment Exchange: Online Registration of unemployed youths is done through this website. Both the Job seekers & employer can register themselves online on this website. Based on the registrations the employment exchange is issuing computerized registration slips.

Transport Office Project (Vahan & Sarathi): Vahan and Sarathi are major projects of state road transport department. Vahan functions for vehicle registration and Sarathi for providing driving licenses. NIC is assisting RTO office in connectivity and operational issues.



S. PRAKASH (IAS)
Collector & District Magistrate,
Dhamtari, Chhattisgarh

Information Technology brings about a prominent change in the field of e-governance. It gives me immense pleasure to present the e-governance initiatives undertaken in the district of Dhamtari, Chhattisgarh with the help of NIC. These initiatives have brought about radical change in the process of governance in the district enhancing transparency and betterment of citizen centric services. I appreciate the district administrative staff and Mr. Upendra Singh Chandel, DIO, Dhamtari, for their regular and dedicated efforts in making e-governance initiatives successful in the district.

Paddy Procurement System:

NIC helps the state agency MARKFED in the Paddy procurement process done every year in the district. In paddy procurement season 2011-12, District Dhamtari saved 5.7 lakhs rupees by using online system. All 80 paddy purchase centres are connected through broadband, Wi-Max, Data Card and other communication media.

NIC, Dhamtari is also implementing many other state and national level eGovernance projects for Excise, Election, Rural Development (MNREGA, Planplus, YuvaSoft etc).

FOR FURTHER INFORMATION

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GURGAON-

EFFECTIVE UTILIZATION OF IT TO SERVE THE COMMON MAN

Once known as "Guru Gram", due to its linkage with Guru Dronacharya during the times of Mahabharata, Gurgaon is now the industrial and financial centre of Haryana. Gurgaon district comprises 3 Sub-Divisions, 5 Tehsils, 4 Blocks, 215 Panchayats and 291 Villages, having a total population of 1,660,289 as per 2011 census. It has third highest per capita income in India next only to Chandigarh and Mumbai and is the second largest city in the State of Haryana. Having established itself as the industrial hub, with the turn of the millennium, it is also known as the Millennium City of India.



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e-GOVERNANCE EFFORTS OF THE DISTRICT ADMINISTRATION

Living up to the image and spirit of the city, the District Administration has demonstrated tremendous interest in implementing IT based governance and delivery of services to the citizen. With technical support from NIC Gurgaon, a number of G2C, G2G, G2E and G2B initiatives are being implemented in the District. Notable among these are the G2C services being provided through the counters of e-Disha Centre and Tehsils. The e-Disha Centre and Tehsil Counters are equipped with all modern facilities and IT infrastructure to deliver services to the common man, well within the defined Service Levels. The major G2C services being delivered include:

- Property Registration (Haryana Registration Information System - HARIS)
- Certificates (Caste, Domicile, Income) (Haryana Certificate Information System

- HARCIS)

- Affidavit Attestation & Verification
- Vehicle Registration (VAHAN)
- Driving Licenses (SARATHI)
- Record of Rights (RoRs)/Copies of Nakal (Haryana Land Records Information System - HALRIS)
- Public Grievances (Harsamadhan Portal) etc.

Number of Transactions/entries recorded for major citizen centric services through the respective software applications since the beginning of the current Financial Year till date is given below in Table 1. The volume of transactions indicated in the Table is a good indicator of successful implementation of G2C initiatives in the District.

One of the other key initiatives undertaken by NIC Haryana, which is also being implemented in Gurgaon is the integration of Land Records Data in HALRIS with Land Registration data captured through HARIS to enable dynamic linking and displaying of

Table – 1 Status of Major G2C initiatives during current financial year (April'12 to August'12)

S.No.	Service	Delivered through S/W	Location	No. of transactions (Apr'12 to Aug'12)
1.	Property Registration	HARIS	All 5 Tehsils	19267
2.	Certificates Issuance (Caste, domicile, income)	HARCIS	All 5 Tehsils	16022
3.	Affidavit Attestation & Verification		All 5 Tehsils	30471
4.	Vehicle Registration etc.	VAHAN	4 (covering 3SDM offices and 1 RTA)	39498
5.	Driving Licenses etc.	SARATHI	4 (covering 3SDM offices and 1 RTA)	27872
6.	Record of Rights (RORs)	HALRIS	All 5 Tehsils	343
7.	Public Grievances	HARSAMADHAN	Accessible to citizens using internet for lodging grievances and used by DC Office and all Departments at District level for redressing the grievances pertaining to respective Deptt.	389

Khewats' and owner details from HALRIS, while entering Land registrations through HARIS. The subsequent mutations w.r.t the linked Khewats is carried out through HARIS, keeping the HALRIS database updated to avoid any data inconsistency between the two applications. Another integration of Land Records data is also being carried out with <http://jamabandi.nic.in> for on-line availability of jamabandis in the public domain.

As a step further towards integrating non-spatial with spatial data, HARIS and HALRIS software applications are being linked with Bhu-Naksha as part of National Land Records Modernization Programme (NLRMP). This allows the common man to view his Record of Rights (RoRs) by just clicking his Land Parcel on the digitized Cadastral Map.

Above initiatives have led to significant increase in revenue collection w.r.t Gurgaon District. Besides, measures like use of Biometric devices and photograph of sub-registrar along with buyer & seller in HARIS have brought about greater transparency in the system. The District Administration pays special attention towards smooth functioning of these centres and keeps them up & running even during power outages through dedicated Generator Sets. Adequately trained by NIC Gurgaon on the operational aspects of the software applications, the computer operators work incessantly to serve the public through these G2C counters. The District IT activities are being managed on a self-sustainable basis through the District IT Society.

NATIONAL AND STATE LEVEL E-GOVERNANCE PROJECTS

Some of the other projects being supported by NIC Gurgaon include:

- AGMARKNET
- NADRS (National Animal Disease

Reporting System)

- Arms Licenses
- MEDLEAPRS (Medico Legal Examination & Postmortem System) etc.
- PriaSoft (Panchayat Accounting)
- Panchayat Directory
- Panchayat Web Sites as part of National Panchayat Portal (NPP)
- Dynamic Police Web Portal as part of CCTNS
- OTIS (On-line Treasury Information System)
- e-Salary
- Government e-Procurement System
- Revenue Court Case Monitoring System (RECORD)
- Senior Citizen Cards Issuance
- Birth & Death Registration System
- Socio-Economic Caste Census (SECC) -2011

Besides, technical support is also being provided in implementing the software applications for various developmental schemes including MGNREGA, SGSY, IAY, TSC, Pension Schemes etc. Gurgaon district's web site i.e. <http://gurgaon.gov.in> is also being effectively utilized to publish relevant information provided by the District Administration.

KEY ENABLERS

Gurgaon District is witnessing a very high use of IT as a key tool for facilitating its governance activities and delivering services to the citizens. The key enablers in this regard are:

- High degree of motivation among District Officials to use IT in day-to-day official activities.
- Building of human capacities by NIC Gurgaon through regular IT training programmes thus ensuring sustained use and awareness of IT applications.
- Availability of software applications in Local Language i.e. Hindi.

- Incorporation of feedback from NIC District Centres in to the software applications based on users requirements through a systematic change management system by NIC HRSC
- Keeping the NICNET and IT infrastructure up & running all the time through regular maintenance, thus ensuring smooth functioning of software applications by NIC Gurgaon.
- Regular monitoring of e-Governance applications by NIC-HRSC through Results Framework Document.

RECENT IT ACTIVITIES

- Jalsa-e-aam in village Bakainka under NLRMP on 18.07.2012
- HSRP implementation as part of VAHAN w.e.f 12.07.2012
- Setting-up of Emergency Operations Centre (EOC) in Mini Sectt. as part of District Disaster Management Plan in July, 2012
- Initiation of Centralized Foreigner's Registration Offices (C-FRO) Module under MHA's Immigration, Visa & Foreigners Registration & Tracking (IVFRT) MMP at Foreigner's Regional Registration Office, Gurgaon on pilot basis in August, 2012
- Initiation of e-Procurement application at Haryana Police Housing Corporation in Gurgaon in August, 2012
- Conducted Training Programmes on e-Procurement, HARSAMADHAN and Arms Licenses during July-August, 2012
- E-Services from e-DISHA Centre
- Active Support for Video Conferencing, NIC e-mail IDs, Digital Certificate Issuance and upkeep of IT infrastructure

FOR FURTHER INFORMATION

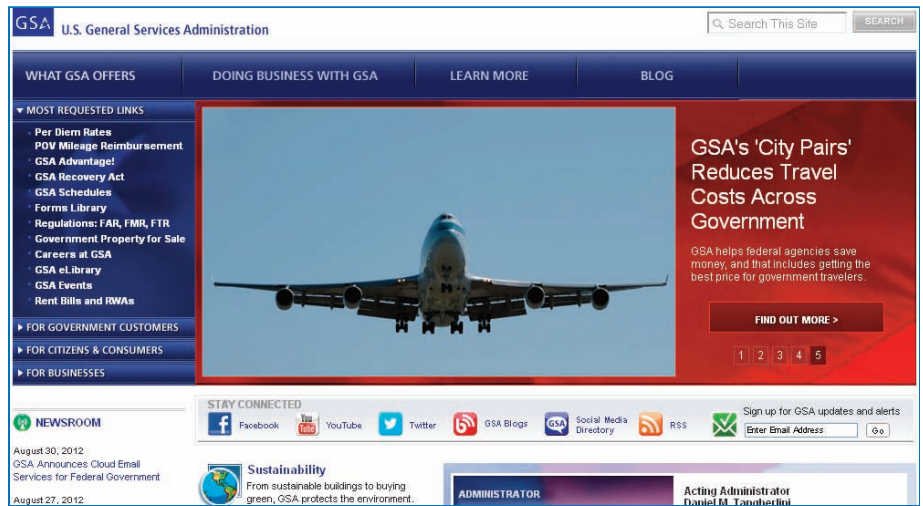
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USA LAUNCHES 'DIGITAL SERVICES INNOVATION CENTER'

Digital Services Innovation Centre, a setup to ensure effective delivery of services by agencies of the federal government with the help of web services and mobile applications, has been launched by General Services Administration, an agency in the US government that helps manage and support the basic functioning of federal agencies.

The Centre comprises of staff from GSA's Office of Citizen Services and Innovative Technologies, USA's focal point for data, information and services offered by the federal government to citizens. In addition, it plays a leadership role in identifying and applying new technologies to effective government operations and excellence in customer service in the government.

The Centre, described as a 'key piece' of the White House's new digital government strategy released in late May, is headed by associate administrator David McClure, and will include contributors from other agencies. It will have to meet a number of specific digital strategy milestones over the



next months, serving as a virtual hub to engage different agencies and 'accelerate' innovative digital services. With the work undertaken and strategies build by the Centre, the American public will expect an improved customer experience from digital government services

Over the next 10 months, the Center is charged with meeting a number of specific digital strategy milestones to deliver digital services and government information anywhere, anytime and on any device.

The Center will engage agencies across government by serving as a virtual hub to accelerate innovative digital services. Initial efforts are underway establishing shared solutions and training to support infrastructure and content needs across the Federal government, and identifying and providing performance and customer service satisfaction measurement tools to improve service delivery.

For Further Information
<http://gsablogs.gsa.gov/>

SEOUL LAUNCHES 'SMART COMPLAINT CENTRE' MOBILE APPLICATION

South Korea's Capital city has launched a location-based mobile application, the 'Seoul Smart Complaint Center' which enables users to register complaints regarding community issues that affect public safety and infrastructure by linking to the relevant websites by smart phone, allowing access anytime anyplace.

Users can download the application from the leading App stores to map the reported location and allow photos of the location to be attached and submitted via smart phone. Seoul City also plans to link the newly introduced application to the 'citizen complaint reporting' web page on the GIS map portal site (<http://gis.seoul.go.kr>)



The application developed by the Seoul Metropolitan Government allows citizens to track the progress of their complaints through their smart phones in real time, and an SMS is promptly sent to the user to inform them in detail of every step of the complaint resolution procedure.

According to an official statement, complaints registered through the "Seoul Smart Complaint Centre" app are immediately transferred to the '120 Dasan Call Center' and are then directed to the

appropriate city service. As the 'Seoul Smart Complaint Center' app maps the location of a complaint, the data thus collected through the "Seoul Smart Complaint Centre" app will serve as a valuable reference to be used in future municipal decisions. Frequent complaints in different regions will be collated and used to inform local government operations.

For Further Information
<http://gis.seoul.go.kr>

BROAD ASSESSMENT OF VIETNAM GOVT. WEBSITES REVEALS MAJOR SECURITY LAPSE

A Workshop held on 'Information Security Policies towards Developing of E-Governance' by Vietnam Information Security Association (VNISA) and Vietnam Computer Emergency Response Team (VNCERT) revealed major cyber security concerns for the nation. The workshop was conducted in order to implement Prime Minister's Instruction and the Guidelines of Ministry of Information and Communications (MIC) on the protection of websites against attacks and data thefts.

Underlining the importance of e-government development in Vietnamese public sector agencies, and information security as the primary concern, the workshop was attended by Hon'ble Dr. Nguyen vice Minister, MIC and Dr. Vu Quoc Khanh, Director General, VNCERT besides other important dignitaries.

Major General Dr. Nguyen Viet, the former Head of the Informatics Agency



under the Ministry of Public Security, identified that network security would continue to be a burning problem in 2012, and may even lead to large-scale cyber-warfare.

Most of the Vietnamese government websites are yet not interactive and lacks full electronic case handling and other formal in-person procedure. Moreover, a survey of VNCERT reports that 53 per cent of state agencies units, which have information security systems cannot record attack behavior.

It has also estimated that 78 per cent of the websites are vulnerable to attack at any time. With such loopholes, if an attack is carried out, it would be very difficult to

continue with the operations of the whole system. The Vietnam Information Security Association carried out an assessment of 100 websites of government agencies (.gov.vn), and found that 80 per cent of websites do not apply safeguards such as intrusion prevention systems.

According to a new report a local Internet security firm Bkav last year, Computer viruses cause Vietnam "time damage" worth VND559 billion (US\$26.7 million) every month. It further says there were 6.9 million computers affected by malware in April 2012.

For Further Information
<http://english.mic.gov.vn/>

SOUTH KOREA INTRODUCES FINGERPRINT RECOGNITION E-BIDDING SYSTEM

South Korean Public Procurement Service (PPS) has introduced the Fingerprint Recognition e-Bidding System (FRBS) to effectively prevent corruption such as illegal proxy bidding and bid rigging. PPS has designed the Fingerprint Recognition e-Bidding System (FRBS) to invite only qualified and registered bidders with enhanced measures to protect bidders' information.

With the introduction of FRBS, those who wanted to register a proxy bidder had to submit a certificate of employees' insurance to confirm their affiliation. With the new technology in effect, there was no single case of illegal lending of certificates reported compared to 1,777 cases (worth about \$30 million) prior to the implementation. The system has also reduced signs of illegal e-bidding attempts and secured transparency and fairness. Not having to monitor illegal



bidding activities, organizations saved about \$5.5 million, besides the establishment of a new market valued at \$7 million, where it is actively used.

The new system allows users to submit bids only when users' fingerprint matches with pre-registered fingerprint in the Biometric Security Token. Unlike other authentication certificates, it can't be utilized by others except the user as it is based on their biometric information.

Earlier to this 'Korea On-line E-Procurement System (KONEPS)' was being used and there were cases reported

that bid brokers borrowed the registrants' certificate and participated in the bid illegally to gain profit when the contract was awarded, raising concerns about the reliability of e-bidding, as well as a waste of national budget. All other precautionary measures such as Bidders Identification System, Informant Reward Policy and Corrupt Activity Analysis System took too much time and effort to investigate and impose administrative measures on fraudulent bidding practices.

For Further Information
<http://gis.seoul.go.kr>

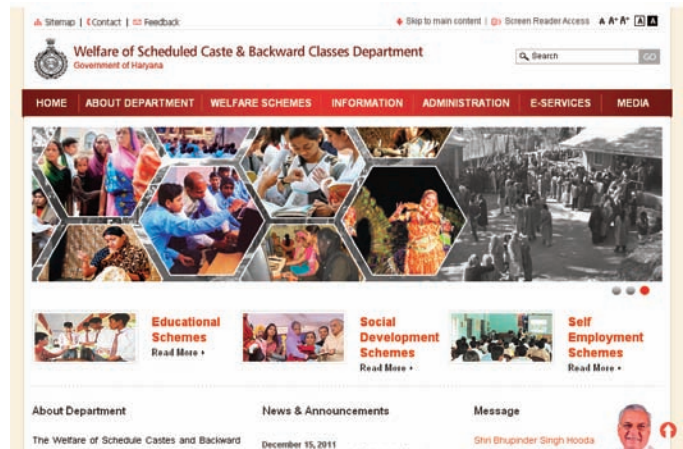
WELFARE OF SCHEDULED CASTES AND BACKWARD CLASSES DEPARTMENT

The Department of Welfare of Schedule Castes & Backward Classes coordinates and supervises the activities of other Departments in the matter of implementation of various schemes designed for the Welfare of Scheduled Castes, Backward Classes and De-notified Tribes.

The website is rich and updated with information, categorized under impeccable navigation architecture. Wide coverage of welfare schemes with documents available for download helps users to seek and save desired information. E-Services Section includes plethora of information on various schemes and policies.

The Website is well designed with elegant colour schemes, style sheet and use of quality images. The Home Page clearly establishes the ownership with a big banner logo and the motive of the website runs through the image slider on the homepage.

The navigation is smooth and the availability of sub-menu's on internal pages adds consistent navigation for the users. The sitemap and help sections add value to the browsing. The website is compatible with all major browsers and it has proper response to standard screen resolution.



<http://haryanasbc.gov.in>

CONTENT: ★★★★★

DESIGN, NAVIGATION & COMPATIBILITY: ★★★★★

INTERACTIVITY: ★★★

The website has a contact page with contact information and a feedback form to collect user reviews. Downloadable forms are also available to help the user group apply/enquire under various welfare schemes. Proper and weighted placement of links to national portal and other state ministries, with compliance to guidelines for Indian government websites and w3c standards makes it an ideal website.



<http://industries.cg.gov.in>

CONTENT: ★★★★★

DESIGN, NAVIGATION & COMPATIBILITY: ★★★★★

INTERACTIVITY: ★★★

DEPARTMENT OF COMMERCE & INDUSTRIES C.G.

Major Responsibility of the Department of Commerce and Industry in state's all around development is to contribute to industrialization and trade promotion. The Department plays a catalytic role in establishment of micro, small, medium, mega and ultra mega projects, to create employment opportunities and to contribute to the

development of all areas by increase in investment, trade and export.

The website is full of relevant and updated information pertaining to policies, acts, events, annual reports, projects and documents. Overview of initiatives taken by the Department, Photo galleries, notifications and orders, budget reports and statistical data provide enough insight into the efforts being taken by the Department.

The design is simple with pleasant colour scheme. Large banner logo on the header looks attractive. The site wide drop-down navigational menu on the top provides quick navigation. Links to the related pages in the left-sidebar on internal pages maintains the flow of navigation. A site-wide image slider serves as a major attraction and defines the motto of the Department. The website is compatible with all major browsers and it has proper response to standard screen resolution.

The website mentions a toll-free number at the top right corner along with link to the contact page. The contact page enlists email address and contact number of the major government officials, and it may be useful to those looking for immediate access.

DEPARTMENT OF EX-SERVICEMAN WELFARE

The Department of Ex-servicemen Welfare is dedicated to look after the welfare, resettlement and rehabilitation of ex-servicemen (ESM), war widows and their dependents.

The content rich and visually appealing website has been built with an aim to provide maximum accessibility and usability to its visitors by facilitating quick access to schemes and forms available for download. The website is continually updated with news and information, circulars and notifications, press releases and policy updates pertaining to the target beneficiary group. Detailed information on guidelines, policies and plans of Directorate General Resettlement, Kendriya Sainik Board, Scholarships and Health Schemes, Training Programs, Self Employment and Concessions etc is well presented and easily navigable.

The design is attractive with use of pulsating colours. Large banner logo with the national emblem on the header look elegant besides site wide navigational menu on the top provides quick and consistent navigation. Two content boxes serve updates in a striking manner. The third block on the home page is of great importance as it links to all the important pages of the website.

Links to the related pages in the left-sidebar on internal



<http://desw.gov.in>

CONTENT: ★★★★★

DESIGN, NAVIGATION & COMPATIBILITY: ★★★★★

INTERACTIVITY: ★★★

pages keeps a visitor stick to the navigation. The website is compatible with all major browsers and it has proper response to standard screen resolution.

The website contains a FAQ section and a contact page to assist user seeking information. The contact page enlists email address and contact number of the important officials. A search bar at the header and font adjustment are other attractive elements on the website.

The site also holds a galley of other streams on the Home Page that displays recent webcasts and streams from national events, cultural events, conferences and seminars from different sources. Banner images that link to the national portal and other major sites are being displayed in the bottom bar on home page.

A banner image with the national emblem on right establishes Govt. identity. An email contact link with help area is available assist new users. The website is compatible with all major browsers and it has proper response to standard screen resolution.

The website offers interactivity in terms of live webcast. A user who clicks a link to a live clip joins the live event in progress. Because the event is happening in real time, fast-forward, rewind, and pause capabilities are not available. Live Webcasts are most suitable for high demand live presentations to large geographically dispersed audiences. Users can attend these virtual presentations from their desktop by visiting a web site.

Further, pre-recorded clips are also delivered, or streamed, to users upon request. A user who clicks a link to an on-demand clip watches the clip from the beginning. The user can fast-forward, rewind or pause the clip. Therefore on demand streams can be created from archived live events or recorded clips



<http://webcast.gov.in>

CONTENT: ★★★★★

DESIGN, NAVIGATION & COMPATIBILITY: ★★★★★

INTERACTIVITY: ★★★

GOVERNMENT VIDEO PORTAL

Webcast.gov.in is hosted and maintained by National Informatics Centre, Department of Electronics and Information Technology, Government of India. It webcasts International and National events of national interest, speeches made by President and Prime Minister, cultural programs, conferences and seminars.

The Website with vibrant colour scheme and clean layout has links to four major live streaming channels viz. Lok Sabha, Doordarshan, Vyas UGC CEC and Rajya Sabha, placed in the top right content box.

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LAUNCH OF STATE PORTAL, SSDG & E-FORMS IN UTTAR PRADESH

Hon'ble Chief Minister of Uttar Pradesh Sri Akhilesh Yadav launched the State Portal and e-Forms on 1st August 2012. The State Portal (uponline.up.nic.in) and e-Forms are developed by NIC UP State Unit. With the launch of the e-Forms, Citizens can now avail a total of 26 services of the 8 departments from their nearby CSC/ Lokvani Centres. On this occasion Hon'ble Chief Minister praised the efforts being made by NIC Uttar Pradesh and State

IT department.

The Senior Cabinet Ministers of Government of Uttar Pradesh Sri Azam Khan, Sri Shivpal Singh Yadav, Sri Ambika Chowdhary, Sri Ahmed Hasan and Sri Abhishek Mishra graced the occasion. Various Senior Administrative Officers of Govt. of UP were present during the launch. The Commissioners and District Magistrates from the state also inaugurated the services from CSC Centres in their respective Commissionary and District.

Anshu Rohatgi, Uttar Pradesh

E-GOVERNANCE SERVICES LAUNCHED BY JAMMU MUNICIPAL CORPORATION FOR THE CITIZENS OF JAMMU

Principal Secretary Housing and Urban Development Department J&K, Mr. Suresh Kumar, IAS officially dedicated the E-Governance Services to citizens of Jammu in a very simple and impressive function held at Deputy Commissioner Office in Jammu on 6th August 2012 in presence of media personals and native masses.

Among those who were present in the function were Vice Chairman, JDA Mrs. Sarita Chouhan IAS, Deputy Commissioner of Jammu; Mr. Sanjeev Verma IAS, Municipal Commissioner of Jammu Mr. Kuldeep Khajuria, Technical Director & Projector Co-coordinator Mr. Jit Raj, Officers of Municipal Corporation and prominent Citizens of Jammu. Other NIC Officers present during the occasion were Mr. Harbaksh Singh,

Project Associate, Mr. Rakesh Jamwal, Project Associate, Mr. Sanjay Gupta, District Informatics Officer Jammu, Mr. Sanjeev Kapoor and District Informatics Associate of Jammu.

In a brief interaction with the citizens, Principal Secretary emphasized the need for such E-Governance models for the speedy delivery of services to the citizens like Birth Certificates, Building Permissions, and Public Grievances etc. Earlier, demonstration of the work flow based applications was provided to the officers of the various departments and the citizens present on the occasion and their queries were also re-addressed. Principal Secretary enjoined upon all the departments to adopt the system for easing the movement of citizens.

Principal Secretary finally acknowledged the hard work of the entire NIC team at Jammu & Kashmir and Pune for their un-tiring efforts in bringing up such a transparent system



Principal Secretary, H&UDD, J&K, Officers of NIC and other Departments during the Launch Ceremony

for the benefit of common masses. With initiation of such a model, citizens can now get access to their birth record anywhere around the globe. Even in case of Building permission system citizens are updated about their movement of permission cases through SMS services, which is first of its kind in the state of J&K and also through WEB portal <http://jkhudd.nic.in>.

Jit Raj, Jammu and Kashmir

INAUGURATION OF TEHSIL COMPUTER CENTRE BY HON'BLE CHIEF MINISTER, HIMACHAL PRADESH

Hon'ble Chief Minister of Himachal Pradesh, Prof. Prem Kumar Dhumal inaugurated the Computer Centre of the newly created Tehsil of Tauni Devi in Hamirpur District on 1st September 2012. During the inaugural ceremony, Sh. I.D. Dhiman, Education Minister, Sh. Rajender Singh IAS, Deputy Commissioner, Hamirpur and other senior officers were present.

The Tehsil Computer Centre provides a number of services through NIC developed software. These software were made operational by the NIC District officers in a very short

time. The following software have been implemented:

HimBhoomi, Integrated HimRIS , HimBhoomi-LMK Nakal Interface, LokPraman Patra, RCMS, GenPMIS and eSamadhan

The Deputy Commissioner, Hamirpur presented the Bonafide Himachali Certificate and Nakal Jamabandi to Prof. Dhumal on the occasion. The Chief Minister assured the general public about the availability of various services at their doorsteps. The citizens will not have to visit the District headquarters for the above services which will be available to them through the Tehsil Computer Centre.

Prof. Prem Kumar Dhumal appreciated the efforts put in by the



Hon'ble CM, Prof. Prem Kumar Dhumal inaugurating the Tehsil Centre

NIC officers in implementation of these software and bringing into operation the citizen services in the Tehsil office.

Ajay Singh Chahal, Himachal Pradesh

THE NEHRU TROPHY BOAT RACE WEBSITE TURNS TRILINGUAL

The seven years old, Nehru Trophy Boat Race website has now been made available in two other languages, Hindi and Malyalam. The trilingual website (<http://nehurutrophy.nic.in>) was launched by the Union Minister of State for Power Sh. K. C.Venugopal on

3rd August 2012 in a function held at Alappuzha Collectorate Conference Hall. The trilingual website is the brain child of the District Collector Sh. P Venugopal IAS.

"Adoption of ICT in Governance can give a facelift to the District Administration by increasing the efficiency in service delivery and governance. District NIC with the support of the NIC Kerala State Centre has launched a multi lingual website for the world famous Nehru Trophy Boat Race conducted under the aegis of District Administration through a Society known as Nehru Trophy Boat Race Society. The lofty mission behind conducting the race is the national integration and communal harmony" says the District Collector.

The website statistics over the years shows the enthusiasm and vigor with which the boat race lovers view the

site. Every year it increases by lakhs and this time within 10 days in August the site hits crossed 265000.

The Nehru Trophy Boat Race named after Pandit Jawaharlal Nehru is conducted on the Punnamda Lake, Alappuzha, on the second Saturday of August every year. The event manages to draw tourists - foreign and domestic - in flocks, turning the peaceful town of Alappuzha into a seething bee-hive of activity. On the day of this fiercely fought boat race, the tranquil lake front is transformed into a sea of humanity with an estimated two lakh people, including tourists from abroad for watching it. For the people of each village in Kuttanad, a victory at this race for their village boat is something to be celebrated for months to come.

Parvathi Devi.P (DIO) & Mohanan K K (DIA) - Alappuzha, Kerala



Hon'ble CM, Prof. Prem Kumar Dhumal inaugurating the Tehsil Centre

ONE DAY TRAINING PROGRAMME ON E-MUNICIPALITIES HELD AT DC OFFICE, KUPWARA (J&K)

A

one day training-cum-demonstration programme on e-Governance applications viz. Online Building Permission System, Birth & Death Registration System, Double Entry Accounting System, Public Grievances Monitoring System, being implemented in all the Urban Local Bodies of J&K was successfully conducted on 30th August 2012 at Deputy Commissioner's Office Kupwara by the NIC J&K, Municipalities Project Team comprising of Sh. Harbaksh Singh, SSA and Rakesh Jamwal, SSA. The training session was attended by all the



Participants attending the training session

NOC issuing authorities for Building Permissions like ADC Kupwara, AC(R) Kupwara, and Executive Engineers from PHE, PDD, PWD, ED and I&FC Departments. Executive Officers of Municipal Committee Kupwara, Handwara and Langate also

attended the training. A question-answer session was also held and the queries raised by the participants were replied by the NIC Officers and Executive Officers of the Municipalities.

Jit Raj, Jammu & Kashmir

ONLINE SYSTEM FOR SUBMISSION OF APPLICATION FOR REGISTRATION INAUGURATED IN COLLECTORATE, RAIPUR C.G

T

Taking a leap forward in IT enabled citizen centric service delivery, the District Collector, Raipur Dr. Rohit Yadav has recorded yet another achievement to his credit. The system of application submission for

obtaining certified 15-Point RoR statement and initiation of mutation has been made online in Raipur district. The Revenue Commissioner of Raipur Division Dr. B.L.Tiwari inaugurated this ambitious service on 11th July 2012. The web enabled application has been developed at NIC District Centre, Raipur by a team headed by Mr. Pradeep Kumar Mishra, DIO. With the beginning of this system, now the people need not

run around Patwari for days in order to get the certified document necessary for registration. One has to obtain an application form, from the single window set up for this purpose in the collector office and deposit the filled-in form at the same counter. The details are then fed immediately online by the clerk and a receipt will be given to the applicant mentioning the date for obtaining the certificate. Under this arrangement, online submission of applications has been made mandatory and Patwaris have been instructed against accepting applications directly. To begin with, this facility has been started on pilot basis in Raipur Tehsil. In few months to come, remaining Tehsils of the district will also be covered. The website can be accessed at <http://raipur.nic.in>.

Y.V.Shreenivas Rao, Chattisgarh



Mr. Pradeep Kumar Mishra, DIO demonstrating the system after inauguration. To his left are Dr. Rohit Yadav, Collector and Dr. B.L.Tiwari, Commissioner

NIC CHAIRS A SESSION IN WORLD BANK CONFERENCE

The International Open Government Data Conference (IOGDC) was held at World Bank headquarters in Washington, D.C. early July this year.

The conference, attended by world's foremost Open Government experts and enthusiasts from more than 50 countries, for thoughtful, dynamic discussion around the historic opportunity presented by open government data to foster collaboration, transparency, and interactive public participation. Ms. Neeta Verma, Senior Technical Director NIC chaired the session on "Platforms and Technology for releasing Open Data". Joined by the world's foremost experts on open government



Ms. Neeta Verma, STD, NIC Delhi (4th from left) during the panel discussion in Washington

data, Ms. Verma discussed platform challenges and best practices for governments to move in the direction of Open Data.

The IOGDC this time with the theme of "Putting Data to Work" held twenty panel discussions in Washington focused on open data policies, technologies, and the power of putting

open data to work. These dialogues featured a global cadre of experts, leaders and policy-makers. World Bank Group President Jim Yong Kim, U.S. Federal Chief Information Officer Steven Van Roekel and representatives from different countries across the world were also present on the occasion.

NIOS SIGNS MOU WITH NIC TO DEVELOP WEB DESIGNING COURSE BASED ON GIGW

A Memorandum of Understanding (MoU) was signed between the National Institute of Open Schooling (NIOS) and the National Informatics Centre (NIC) with the objective of developing skill-based Certificate and Diploma courses on web development and designing in accordance with the Guidelines for

Indian Government Websites (GIGW) using the Open and Distance Learning (ODL) system. This will provide vertical and lateral mobility of learners from the school level in the web designing course.

The MoU was signed by Mr. Uday Narayan Khaware, Secretary, NIOS and Deputy Director General, NIC Dr. Gautam Bose in presence of Hon'ble Union Minister for Communications and Information Technology and Human Resource Development Shri Kapil Sibal and Hon'ble Union Minister of State for Human Resource Development Smt. D. Purandeswari.

In the process, NIC will be providing technical support in terms of training the course development team and the master trainers of the courses.

NIC will also provide support on various aspects of the course formulation and implementation. Meanwhile, NIOS will develop and manage the study material, Study Centres, fee structure and certification to the successful learners.

The two organizations are working together to design a credit based Certificate and Diploma course in Web Designing and Development. A class 10th pass out will be eligible for the Certificate course, whereas 12th pass or Certificate in Web Designing and Development will be the eligibility for the Diploma course. The course duration will be six months and one year for the Certificate and Diploma respectively.

D.P.Misra, Delhi



Project members of NIC and NIOS with Hon'ble Union Ministers Shri Kapil Sibal and Smt. Daggubati Purandeswari at the MoU signing ceremony