

# Informatics

AN  GOVERNANCE PUBLICATION FROM NATIONAL INFORMATICS CENTRE

- National Knowledge Network
- Interview with Sh.N.K Pradhan (IRS), MCL
- Adoption of ICT in West Bengal
- e-Governance in Arunachal Pradesh
- ICT Initiatives in Muzaffarpur
- Screen Readers
- Pension Payment System in Manipur



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is Published by National Informatics Centre, Department of Information Technology, Ministry of Communications & Information Technology, Government of India

A-Block, CGO Complex,  
Lodhi Road,  
New Delhi-110 003

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Layout & Printed at  
Viba Press Pvt. Ltd, New Delhi  
on behalf of NIC



**C**ollaboration and co-creation are becoming the hallmark of higher education today in an increasingly democratizing and globalised world. Role of National Knowledge Network is of immense importance in sharing of knowledge among educational research institutions of the country. National Knowledge Network is designed to inspire innovation and engage the researchers in development of technologies that uplift the quality of human life with renewed vigour, zeal, and enthusiasm. Our lead story this time gives you an insight into the novel network of networks.

*In the Guest Column, we carry an informative & exclusive interview with Sh. N K Pradhan, IRS, Mahanadi Coalfields Limited, wherein he discusses the implementation of e-Procurement for works and services in Mahanadi Coalfields.*

*Prajavani in Andhra Pradesh is giving an opportunity to citizens to access a bunch of G2C and G2G services in their local language. The other highlights on e-Gov Products and Services include Minerals System in Karnataka, Pension Payment System, a G2C services in Manipur, and e-Gram in Rajasthan.*

*Apart from this, you can get an update on Web GIS and Screen Readers in our Technology Update section.*

*In our States section, we have covered the ICT initiatives in the State of West Bengal and Arunachal Pradesh. ICT initiatives in Kanpur - Dehat District of Uttar Pradesh, Muzaffarpur District of Bihar, and Dumka District of Jharkhand have also been highlighted in this issue.*

*All our regular sections viz., International e-Gov Update, Cyber Governance, In the News, Perspective are there to serve your need to know what's happening in the e-Gov spectrum around us.*

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



*Looking forward to your feedback on this issue. Hope you enjoy reading it. Do write us your views.*

*We would like you to contribute to informatics. You can send your contributions directly to us at the following address.*

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# National Knowledge Network

*It is beyond doubts that creation of National Knowledge Network (NKN) is an absolute necessity for the development of the nation. NKN will enable scientists, researchers and students from different backgrounds and diverse geographies to work closely for advancing human development in critical and emerging areas. NKN will catalyze knowledge sharing and knowledge transfer between stakeholders seamlessly.*



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The benefits of NKN are expected to go beyond the urban elitist groups as the ambience created by NKN is ubiquitous and globally unique. NKN is expected to encourage a larger section of research and educational institutions to create national intellectual assets. NKN is designed to inspire innovation and engage the researchers in the development of technologies that uplift the quality of human life with renewed vigour, zeal, and enthusiasm. Besides, NKN would enable use of specialized applications, which allow sharing of high-performance computing facilities, e-libraries, virtual classrooms, and very large data bases.

The objective of the National Knowledge Network is to bring together all the stakeholders in Science, Technology, Higher Education, Research & Development, and Governance with speeds of the order of 10s of Giga bits per second (Gbps) coupled with extremely low latencies. NKN will interconnect all institutions engaged in research, higher education and scientific development in the country, over a period of time. The architecture of the National Knowledge Network will be scalable and the network will consist of an ultra-high speed CORE (multiples of 10 Gbps), complimented with a Distribution layer at appropriate speeds. The participating institutions at the Edge shall connect to the National Knowledge Network seamlessly at speeds exceeding 1 Gbps or higher. The network architecture and governance structure shall allow the participating institutions an option to connect to the

Distribution layer through a last mile connectivity bandwidth.

The main emphasis in the National Knowledge Network is to establish a strong and robust internal Indian network that will provide a secure and reliable intra-Net connectivity. This fast information highway will ensure that India is seen and felt as one country. All vibrant institutions with vision and passion will be able to transcend space and time limitations in accessing information and knowledge and derive the associated social benefits. The National knowledge Network is designed to support Overlay Networks, Dedicated Networks, and Virtual Networks.

Applications such as Health, Education, Science & Technology, Grid Computing, Bio informatics, Agriculture, and Governance will influence the design principles of NKN. The entire network will seamlessly integrate with global science at multiple gigabits per second speed. NKN is a unique infrastructure which will be a critical information backbone for the nation. Besides, NKN will also be sensitive to the flow of scientific work which has tremendous IPR potential for the country.

## NKN would enable

- Establishing Connectivity for Knowledge and Information Sharing
- Enabling Collaborative Research in emerging areas such as Climate Modelling

- Facilitating distance education in specialized fields such as medicine, emerging high technology areas covering info-bio-nano.
- Facilitating an ultra high speed e-governance backbone for information sharing
- NKN will also act as a test bed for research in the area of network, security and delivery models for various services.

### Stakeholders in NKN

NKN aims at creating a network of networks with presence PAN-INDIA. As NKN is a new initiative, it will leverage from the existing initiatives, to ensure faster roll out with modest investment.

It will also terminate the various international R&D links from various countries (like the TIEN-3, CERN etc.) and the Internet. Figure 1 shows various stakeholders.

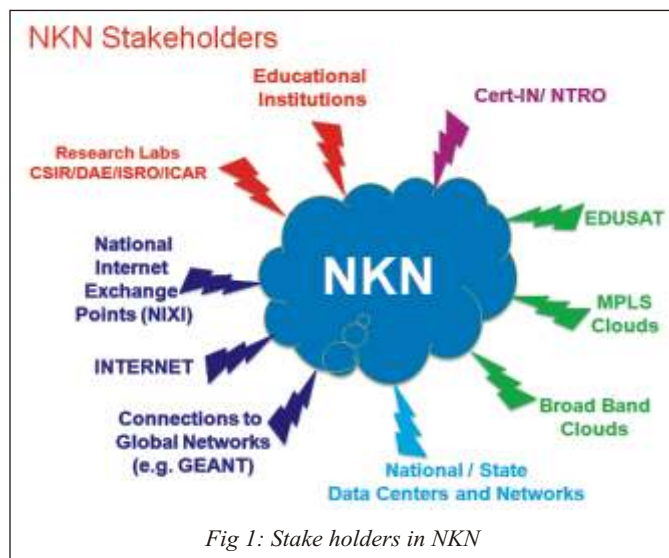


Fig 1: Stake holders in NKN

### Reach of NKN

NKN SUPER CORE will be fully meshed with 7 locations. The rest of the state capitals will connect to at least 3 locations in the super core. Some of the state capitals where the not all the service providers exist, they will connect to at least 2 other CORE locations. Figure-2 shows the reach of NKN. To provide a low cost ultra high availability network NKN has been mandated by the HLC to reach up to all the districts with redundant 1 gbps. This will enable all the stakeholders at the district level to join the NKN with minimum cost and also can be a part of the VPN they so desire. As the NKN will reach as close as 50-

100km from the end user node, the last reliability to the NKN POP would automatically go up tremendously.

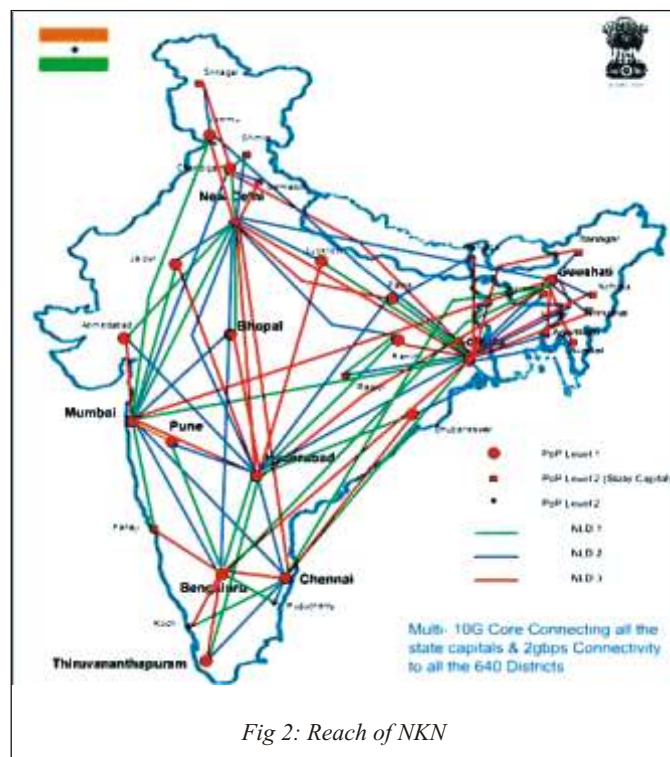


Fig 2: Reach of NKN

### Salient Features of NKN

NKN is designed as a Smart Ultra High Bandwidth network that seamlessly interconnects the leading Scientific & Technological institutions and Government organisations. The design of is inherently proactive; it takes into account the requirements that may occur in the near term and long term. In addition to the above, NKN also demonstrates new possibilities that network technology offers for human development.

The Basic Characteristics of NKN are the following: Innovative; Reliable; Secure; Scalable; Robust

Based on the design objective, geographical spread and the expected usage, the following technical features are envisaged for NKN:

- Network created from multiple service providers to be fault tolerant.
- To carry multiprotocol traffic. NKN is based on MPLS ( Multi-Protocol Label Switching)
- NKN will offer hierarchical Quality of Service (QoS) which is the key for real time traffic (voice and video)

and guaranteed bandwidth for business critical applications.

- NKN supports by design IPv6 transport.
- NKN design, implementation, management, and control is such that service provisioning is internal to the NKN network and does not depend on telecom service providers from whom “raw” bandwidth or fiber is likely to be leased.
- Supports Multicast enabled VPN.
- NKN management is capable of handling provisioning for the central services such as Multimedia Conferencing, e-access, digital library & central data centre to all users.
- Common Data Centers at at-least two locations for providing common services like the DNS, Messaging services, Web hosting, Content Delivery System (E-Learning), Authentication System, VPN services, collocation services etc.

### Virtual Private Network Overlay on NKN

It is a common thing to see an organisation spread across the country with a number of branches geographically spaced. NKN provides a mechanism to provide connectivity to all the branches of an organisation by locally connecting each one of the branch to the local NKN points of presence. This NKN topology provides a scalable mechanism and secure way to connect the branches at a most economical way. The figure-3 shows the NKN core which provides connectivity to various VPNs

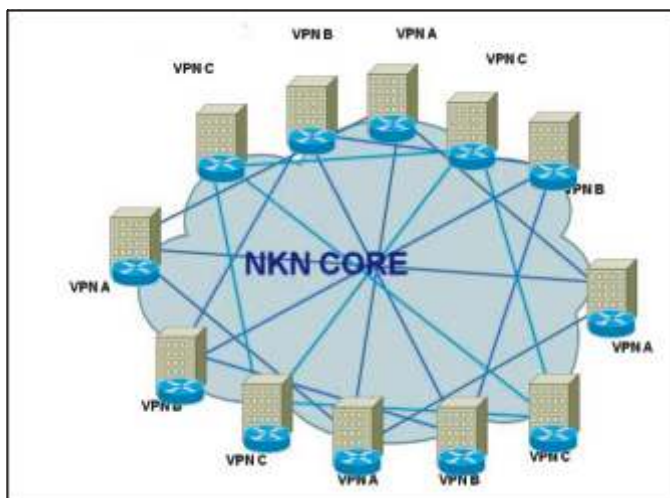


Fig 3: VPNs Overlay on NKN

(closed user group). Figure-4 . The NKN shall provide VPN services at layer 2 and layer 3. As a result of this layering, after connecting to the nearest NKN pop one need not work over the WAN and the long distance connectivity and the cost associated with that. For instance, the CSIR labs after connecting to NKN at various PoPs of NKN need not bother about the WAN connectivity. Each CSIR lab can become a part of the CSIR intranet by implementing a few configurational changes at their end. This change might also require some equipment to be re-oriented at the CSIR level to be able to tap the advantages of the network.

Traditional overlay schemes require you to create tunnels between various endpoints (connection based and not network based). Not only does this limit connectivity, QoS & BW efficiency, it also requires a new network design for each user connection. Adding any new services becomes a big challenge and hence human error prone. In contrast, NKN leverages MPLS and allows one to build a VPN-based on networks, not connections. This makes it easy to add valuable services. Common services such as content hosting, web casting, multicast services becomes easy to realize. This also enables millions of VPNs to co-exist and also would be able to maintain the identity of each group.

In case the user group requires more security with respect to the data exchanged between their branches then it can implement bulk encryption system at their own end and the branches. This will provide confidentiality to the data that traverses through the network. While encrypting, one must take care of what exactly is getting encrypted. NKN

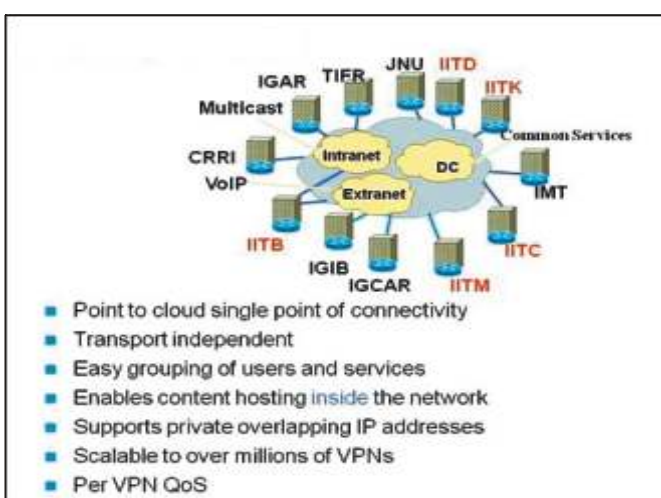


Fig 4: MPLS L3 VPNs



Initial Phase NKN

As a design philosophy of NKN, it provides the connectivity and a routing equipment with full support of MPLS to the end user organisations/ institute. NKN would have an MOU with the each one of the member organisation to have a NKN PoP at their premises. This allows reach out / Fan-out for the NKN and hence at a later stage these points could also be used for providing connectivity to others too from that locations. This will enable the NKN to provide a better reach out at a very low cost/ labour.

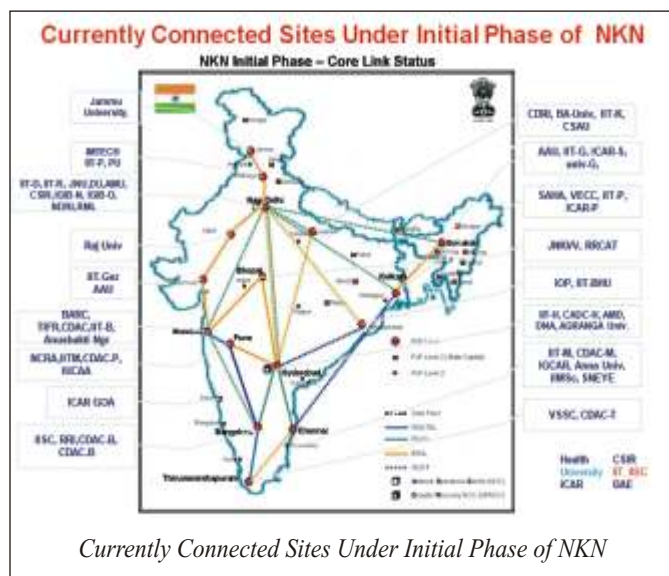



Fig 5: Institutes having their own Public IP from APNIC/ARIN

The diagram illustrates the connectivity between two or more organisations. On the left, two organisations are shown: Organisation #1 and Organisation #2. Each organisation has a 'NON-ROUTER' (represented by a building icon) and a 'Private Central Ring Created between the two single P2P Networks' (represented by a cloud icon). The rings are connected to a central 'NKN' cloud network. The connections are labeled '1 Gbps Link to NKN P2P from NED #1' and '1 Gbps Link to NKN P2P from NED #2'. The NKN cloud is connected to several other clouds, representing a distributed network.

## Final Phase NKN

The Final Phase would connect about all the districts and the state capitals and would connect approximately 1400-1500 end user organisations at either 100mbps / 1 gbps. The cabinet has already approved the project in principle and the phasing of the financial outlay of Rs.5990/= crores is awaited. The project would be fully funded by the Government of India and would be supported for 10 years initially. The Core and the end nodes would be completed by 18-24 months. 

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# Prajavani : An e-Gov initiative for People's Voice through Local Language in Andhra Pradesh

*Prajavani is an e-Governance initiative by the combined efforts of District Administration and National Informatics Centre in Ranga Reddy District (AP, India). The initiative is not only giving a practical shape to the Right to Information Act, but it is also creating job opportunities for the educated but unemployed youth of Ranga Reddy. Prajavani is a unique public private partnership program, which gives citizens an opportunity to interact with the Government without coming to any government office.*



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NIC A.P. State Centre has developed and implemented this first of its kind e-Governance initiative in local language - Telugu. It has been Started as a Pilot at Mominpet in Ranga Reddy District on 16th Dec 2005 and it is now running successfully in 15 (out of 23) districts. It all happened only because of the ease of use and the Collectorate's active participation.

## Excerpt of the letter from Collector and DM Dr. B. Janardhan Reddy, IAS, Anantapur.

*“Through Prajavani Transparency increased, accessibility to information increased, response levels have gone up, time taken to address reduced.”*



Prajavani operates through a citizen interface Kiosk or any internet node. In some districts the applications are fed at a separate counter in the Collectorates, while in some other districts the guest login is not allowed. Prajavani can be accessed at <http://prajavani.ap.nic.in/>

In some districts the Kiosks are operated by unemployed educated youth selected by the Collectorates.

Prajavani was conceptualised by the then District Collector, Ranga Reddy in November 2005, who earlier commissioned a study of similar initiatives in the districts of Sitapur(UP), Jhalawad (Rajasthan) and Dhar(Madhya Pradesh). The study revealed the strengths and weaknesses of these efforts; Prajavani was so designed to improve upon them.

These youth are given loans to establish the kiosks. In any mode of implementation, a back office Call Centre at the collectorate acts as an interface between the Kiosk and the district administration. The User ids and passwords are allotted by the DIOs at the respective NIC Centres and the NIC State Centre gives over all support to all these districts implementing the Prajavani.

## Highlights

- First G2C, G2G application in Local language
- Grievance can be lodged from kiosks
- Online status from the website
- Streamlined action by officials
- Employment opportunities



Single point gateway for all Districts



## Advantages

- Fast redressal of the petitions
- Citizen interaction with the Government online without physical presence at the office
- Saves Time and Money for the common man
- Improves bureaucratic efficiency and transparency

## Types of users in Prajavani

**Kiosk Operators** are spread in whole district i.e., Division Level, Mandal Level and village Level etc (e.g. existing RSDP, Rural E-Seva Centres can act as Prajavani Kiosk Centres). They enter the petition into the Prajavani and generate the receipt to the petitioners, assists the petitioners to know the status of their petitions.

**Prajavani Operators** work under supervision of Petition Monitoring Section at Collectorate. They play a major role in timely disposal of complaints. They check daily unmarked petitions and they send to concerned officer and also make time frame for disposal. Prajavani operators feed the disposals in the computer and complaints get disposed off.

**Officers-** Login ID and Password has been allotted to officers like MROs, MDOs who enter the action taken reports on complaints directly in Prajavani site using officer's logins. Those who do not have internet facility can send the action taken reports to PMC Section for updation. They can perform Technical administrative activities including Create Logins, Add and Modify Officer information etc.

**Super Users and Guest:** Each District has one Super User login, under the control of District Informatics Officer. A guest login is created for general public; anyone can enter using a guest account, as designated by the respective district authorities. One can lodge the petition from this user and also know the status of the petition, accordingly.

## Workflow of the application

### Petitioner

- Submits a grievance/petition at the nearest kiosk and gets acknowledgement
- Can know the status of the petition at any Kiosk
- If petitioner is not satisfied with the response from the government, he/she can re-submit the petition for review

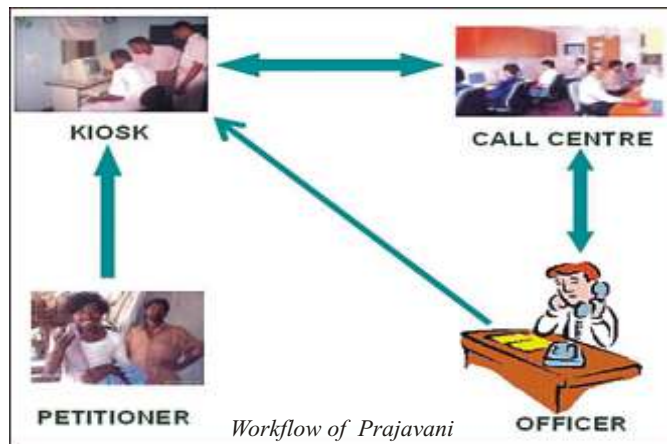
### Kiosk Operator

- Enters the petition into the Prajavani through internet

- Generates acknowledgement to the petitioner
- Assists the petitioner to know the status

### Departmental Official

- Accesses the Prajavani regularly for new petitions referred to his department
- Monitors the target dates
- Updates the Prajavani portal with interim or final replies



*This e-Governance application is implemented on State SAN and the districts can use the existing personal computer and internet to implement it.*

### Implementation Status (as in Jan' 2010)

**Districts which have successfully implemented Prajavani are:** Rangareddy, Kadapa, Adilabad, Nizamabad, Karimnagar, Guntur, Anantapur, Medak, Warangal, Nalgonda, West Godavari, Srikakulam, Visakapatnam, Krishna, Mahabub Nagar.

In Anantapur district, Prajavani has been augmented with an SMS application, through which the citizen can know the status of the grievances by sending an SMS.

Prajavani was showcased as one of the smartest e-Gov application in Local Language in Elitex-2008 at New Delhi. In coming days it is sure that the remaining districts also will implement Prajavani. **i**

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# Minerals Activities Administration System in Karnataka

*Department of Mines and Geology (DMG), Government of Karnataka is the nodal government department administrating the mining and mineral development activities in the state. Minerals Activities Administration System (MAAS) has two independent and tightly integrated systems: Intramine the web based, workflow and Intranet driven application software for the management and administration of mineral activities and PMS (Permit Management System) the workflow based Internet/ Intranet driven software for the issue and management of Permits for the transportation of minerals.*



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Intramine and PMS together constitute MAAS and these two packages are integrated with web services so that master data changes like new leases / permits, renewals, surrender, royalty rates and other critical data like court cases information are reflected in the PMS as soon as they are updated using Intramine.

Intramine covers all lifecycle activities from application for leases / permits (new or renewal) to issue of leases / permits and administrate and manage these leases and permits as per the government rules, procedures and systems. Permit Management System (PMS) is used for the issue of permits and monitoring the transportation at check posts.



*Sh. M E Shivalingamurthy, IAS, Commissioner & Director, Department of Mines & Geology accessing the Dashboard over Intramine*

PMS is being extended to lessees along with Payment Gateway so that lessees will be able to load applications from their places and after approval (with digitally signed permits), lessees print the digitally signed permits for transporting minerals.

Department of Mines & Geology, Department of Revenue, Forest and

Police Departments, Pollution Control and Environmental Authorities, District and Sub-district administrative departments, Central Government Departments like Ministry of Mines, Ministry of Atomic Energy, Department of Environment & Forests, Indian Bureau of Mines (IBM), Public, and lease and permit holders are the stakeholders of the project.

Both INTRAMINE and PMS have been integrated with Payment Gateway / Net Banking, SMS , Mobile Check Posts and Mobile Enforcements with mobile / laptop / palmtop based applications and GIS applications with maps integrated with the lease / permit master data.

These features of the software enable anytime, anywhere, convenient and location independent services.

## Salient Features

Intramine is driven by workflows covering all procedures and norms of central and state acts and rules towards the administration of mineral administration and covers

the following major functionalities:

- Mining Leases, Quarry Leases, Reconnaissance Permits, Prospecting Leases (New / Renewal)
- Patta Land, Sand Transport, Minerals Permits
- Collection of Royalties, Fees and Taxes

- Suspension, Cancellation, Surrender, Amalgamation, Appeals, Death Cases, additional minerals, and other lifecycle activities of leases and permits
- Demand Collection Balances (DCB)
- Court Cases Management
- Payment Gateway with Double Verification
- SMS & GIS Maps Integration
- Integration of Finger Print Devices and e-Tokens based Digital Signature Certificates
- Mobile Application for Virtual Check Posts

**Following are the major features of the software:**

- Multiple levels of security and Role Based Application Security (SECURE Word for Internet Users)
- Finger Print Devices and Smart Card / e-Token based Digital Signature for employees
- Permits are Digitally Signed with Barcodes, random-numbers, water-marking, etc
- Payment Gateway / Net Banking Integration
- Mobile Systems / handheld systems for Check Posts & Enforcement
- Intranet Portals and dashboards for DMG Employees
- Internet Portals for Lessees and Public
- SMS enabled for instant information on approvals, payments etc.
- Convenience, choice, location-independent and transparent access to software
- Enforcement and Monitoring Modules for other Government Agencies like Forests, Revenue, District Administration etc.

### Key Benefits, Advantages and Success Factors

The key success factor is the availability of services and the transparent manner in which these services are provided to both DMG remote locations and public like lease holders and permit holders. This availability factor along with INTERNET technologies provides a unique opportunity for the public to leverage the technologies and

derive the maximum benefit. The hard fact is that once a system is in place and once the stakeholders begin to taste the benefits it is very difficult to do away with the system. In the manual system, lease holders or their representatives had to visit the DMG office several times in a day to have the permits to transport minerals which they had produced. With PMS, lessees could file applications from office / home and print the permits and transport minerals (convenience, choice, location-independent access to software). Workload in DMG has been significantly reduced and officers are able to devote more efforts towards enforcement.

*Main Screen Capturing Applications for Permits*

Services like Payment Gateway, SMS integration and filing applications online and printing permits will definitely improve the services and both DMG and the Lease / Permit holders will benefit a lot. Thus we are extending the benefit of Internet like convenience, choice, reduction of cost, availability etc to the public. The mobile applications as well as Internet portals pave the way for Mobile Check Posts (Virtual) and Mobile Enforcements without the requirement for any immovable infrastructure like check posts with systems etc.

The product can be integrated with external stakeholders like Ministry of Mines, Environment and Forests, Pollution Control Boards, Police and Revenue Department. **i**

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**Edited by:** R. Gayatri



# Pension Payment System : G2C Services in Manipur

*The government expenditure towards payment of pension in Manipur constitutes a major component of annual Non-Plan expenditure. The manual system of pension payment suffered from several procedural gaps resulting in forged Pension Payment Order (PPO), impersonation, miscalculation, over payment, non-recovery of excess withdrawals, non-surrender of PPOs after the demise of the pensioner etc. Furthermore, it was difficult to track the number of pensioners that were converted to family pensioners. The payments through token system made it possible to draw pension without proper verification. The overall process was extremely slow and inefficient.*



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The State Government after consulting NIC, Manipur decided to modernize the system with the help of ICT in pension management. After the release of the first version of Pension Payment Software by NIC, Imphal Treasury was chosen for the pilot implementation which was later extended to all the remaining 12 pension paying Treasuries of the State.

During April 2006, the State Government in consultation with NIC, Manipur decided to take advantage of ICT which marked the initiative to introduce pension reforms in the State. In October 2006, the first version of Pension Payment Software was released by NIC, Manipur. Pilot implementation was successfully made at Imphal Treasury by February, 2007 and it was extended successfully to all the remaining 12 pension paying Treasuries by November, 2007.

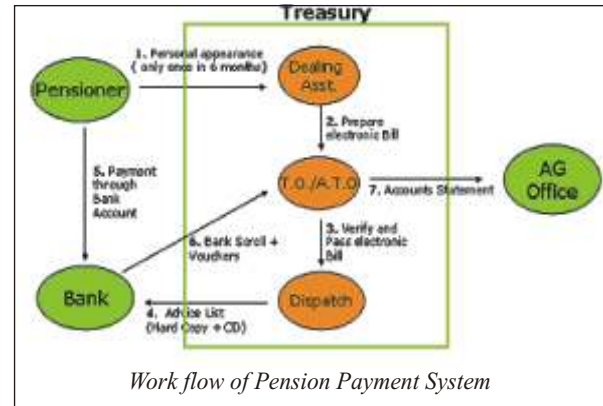
## Objectives:

- Direct credit of monthly pension to the pensioner's bank account
- Facilitate fast and efficient processing of pension bills
- Check miscalculation and overpayment.
- Weed out fake PPOs / pensioners
- Track pension payment and check fraudulent and irregular withdrawal of pension
- Remove inconvenience/discomfort to the pensioners
- Improve data exchange between Treasury, AG office and State Finance Department

## Strategies adopted:

- Abolish cash payment to pensioner through banks
- Every pensioner should have a bank account at an authorized bank
- Disbursement of monthly pension strictly through pensioner's bank account
- Exclude pensioner from further payment unless photograph and certificate is furnished once in every 6 months
- Bank should honor the monthly advice list generated by computer system

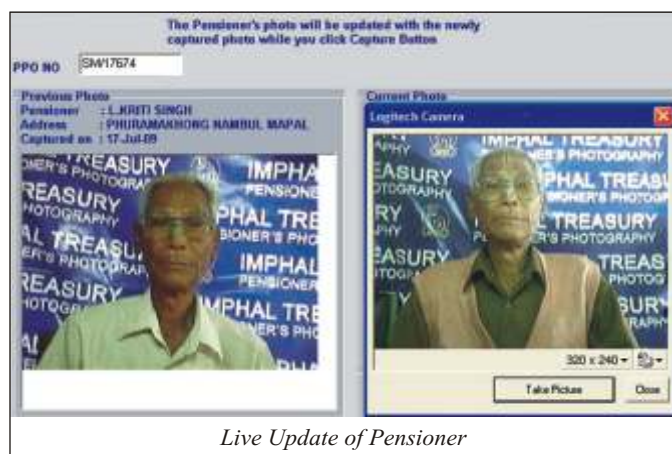
## The Software:



The Pension Payment System was developed using Visual Basic 6.0 as User Interface and SQL Server database and operates in Client-Server mode. The software is role based and access to the system is based on the privilege/role assigned to the user during its creation. The types of roles are: Treasury Officer, Operator, Dispatch, Photographer and DBA. This prevents unauthorized access to the system and defines responsibilities of the staff. To ensure genuineness and

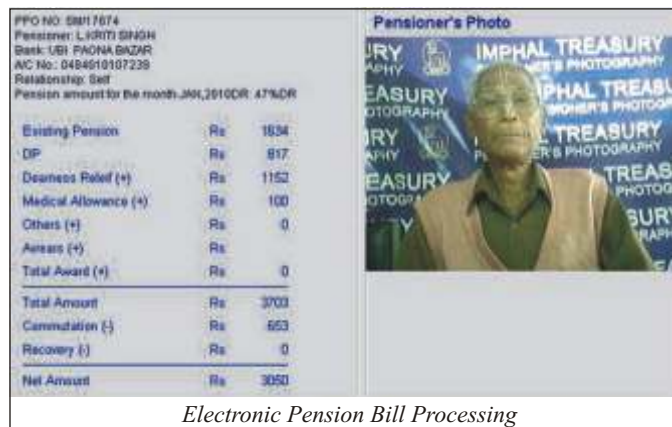
check impersonation, biometrics is used for recording fingerprints while taking photograph of the pensioner through web cam.

Re-engineering of the processes was done and a workflow based computerized system was adopted. Major transformation of the process includes : payment of monthly pension to the pensioner's bank account, taking digital photo (using web-cam) and fingerprints (using biometrics) of the pensioner once in every 6 months and completely abolish the system of preparation of monthly pension using bill forms.



Live Update of Pensioner

Pensioners whose photographs are not captured and details of bank accounts not entered in the database are excluded from payment of pension by Treasuries. With the adoption of the new system, there is minimal paperwork and filing.



Electronic Pension Bill Processing

Data accessibility and accuracy, analysis, systematic collation of information and report generation has enhanced accountability of Treasuries. Productivity of officers/staff has improved with access to data on real time basis.

## Benefits:

Computerization of Pension Payment in Manipur has brought about a systemic change in the functioning of the Treasuries. The system controls the processing of pension bills leading to efficient and enhanced treasury operations. Some of the positive outcomes are as follows:-

- Pensions released through bank accounts based on electronically generated treasury advices.
- Classification of the pensioners under SM (superannuated pensioners), SF (family pensioners), SP (special pensioners), MLA, those converted to family pensioners etc. at any given point of time.
- Reduced pressure on the Treasuries and faster and efficient processing of pension bills.
- Rationalization by transferring pensioners to Treasuries that are nearest to the respective bank branches from where the pensioners are drawing their pensions.
- Disappearance of queues at Banks and Treasuries since the pension can be drawn by the pensioner through ATMs.
- Timely submission of monthly accounts to Accountant General.
- Transparency is achieved which has contributed towards curbing of malpractices, extension of an efficient G2C services for senior citizens.
- Pensioners' data and status of release of monthly pensions made available on the web (<http://webmani.nic.in/pension>) for convenience of pensioners constitutes a major step towards promotion of e-governance for a State like Manipur.

The payment of pension is an example of successful G2C services. Pensioners are no longer required to fill up bill forms on the basis of which pensions were drawn and accounts compiled. The system has facilitated generation of various MIS reports and has ensured timely payments through bank accounts. Enhancing the system by introducing IVRS and SMS facility will go a long way to serve the people of the State in a better way. **i**

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**Edited by:** Prashant Belwariar

# e-Gram : An ICT Initiative to Transform Rural Governance

*Information plays a very crucial role in overall development of the society, and easily accessible information results in a healthy and dynamic democracy. The growing innovations in the use of Information and Communication Technologies have opened up new era of information dissemination. This becomes all the more challenging, but possible, if it is targeted towards catering to the information needs of rural communities.*



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With an objective focused on satisfying the information needs of the poorest among poor and those who face difficulties in access to information necessary for improving and securing their life, Rajasthan embarked upon the Project “e-Gram”, which primarily was meant to serve as a tool to do a reality check on the status of amenities being provided by government departments, especially in the rural areas. Through a web based application (<http://egram.raj.nic.in>),

the village-wise amenities and their monthly status is directly being captured right at the grass root level. A 'Gram Prabhari' is entrusted with the responsibility of filling in the form, in consultation with villagers. More than 12 sectors like Health, Education, PHED, Woman & Child Welfare, Power, Social Justice, Agriculture, Animal Husbandry, PDS, Cooperative and Rural Development were covered in a single format, thus saving a lot in terms of time and cost.

## Excerpt of the letter from Sh. C K Mathew, Principal Secretary Finance, Govt. of Rajasthan

*The e-Gram setup has been initiated with an objective of obtaining a reality check. Administration and citizens both are benefited in terms of user friendly feedback channel and better service delivery respectively. NIC's Rajasthan's efforts are really commendable.*



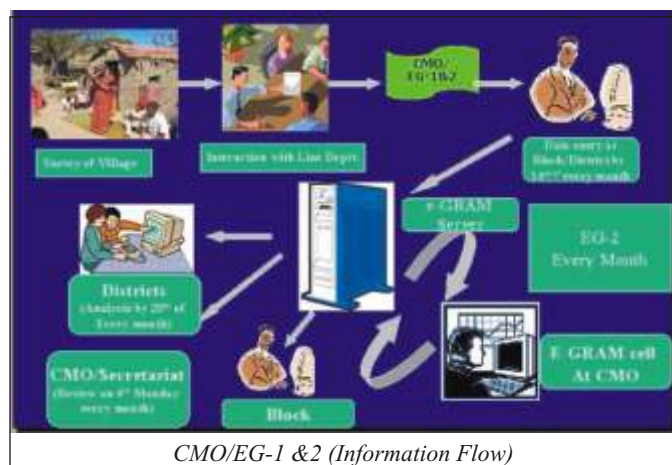
The target sectors and the attributes for these sectors have been segregated into two parts. A relatively permanent CMO EG-1 and other requiring information capture on monthly basis CMO EG-2. The two formats for each information cluster were designed after detailed deliberations with field functionaries, planners and administrators.

**Highlights :** The web enabled software has an easy entry / report module with a Local language interface. There is a single data repository of around 400 attributes of each of the 43337 villages. A high bandwidth (2Mbps) connectivity is operational in all districts. To make the whole initiative more responsive to the village level requirements,

feedback on the services is collected directly from the villages every month.

Data entry is done upto block level from any kiosk having internet connectivity. Field level functionaries of the line departments and all other stakeholders have an access to the report module. Success of this initiative lies in the monthly review where the block level functionaries provide the information instantaneously. District level monitoring is also done at the subdivisions and at the revenue officials meeting regularly. It has also served as a source of employment generation for unemployed, trained youth who are engaged as data entry operators at different nodes across the state.





**Information Collection:** There are 33 district headquarters with 249 blocks and information collection is facilitated by NIC's ICT setup. Only data entry process has been outsourced, which has benefited the rural mass multifold. Information collection is completed by 6th of every month and then data entry is completed by 14th. Reviews are being organized using NIC's Video Conferencing facilities available in Districts. These reviews are chaired by Apex level of administrative hierarchy. The village directory created on the basis of Census 2001 location codes has become a standard for all other location specific implementations in the state. The ICT tool with its impact from the Dhani to the Rajdhani has thus proved to be a boon for the entire strategic planner, the tactical manager and for the operational manager in many ways.

The objective was to have a simple and regular feed back mechanism to ensure effective service delivery to the final beneficiary residing at remotest place of the state. e-Gram

as a single window interface, to monitor the status of service delivery, ensures remedial actions promptly by all concerned departments. Since, the most under-served the rural poor, live in the most expensive to-serve areas, this initiative has left a sizable impact as it has helped in easy flow of information for the decision makers thus benefiting the rural masses.

*The project was recently awarded under the e-governance category at Manthan Award South Asia 09 (MASA) at New Delhi and also at the e-Rajasthan Summit held at Jaipur.*

The Development Team of e-Gram consist of the following NIC officials: Sh. P.K. Mittal, TD; Sh. Manoj Nagar & Sh. Arun Mathur, PSA's

### Quotes of Appreciation for e-Gram

*e-Gram application of Govt. of Rajasthan is an excellent tool for monitoring not only the progress of schemes at grass root level but also for conducting reality checks at the village level where it matters the most. Its usefulness and utility can be enhanced manifolds by integrating it with the GIS application as was envisaged in the original scheme.*

**Sh. Tanmay Kumar, Secretary IT Govt. of Rajasthan.**

*e-Gram is very useful for both long term and short term planning; especially in addressing problems being faced in remote locations in the state. I found the data bank very handy for planning and implementing rural drinking water schemes.*

**Sh. Yaduvendra Mathur, IAS  
(Former Secretary Planning)**

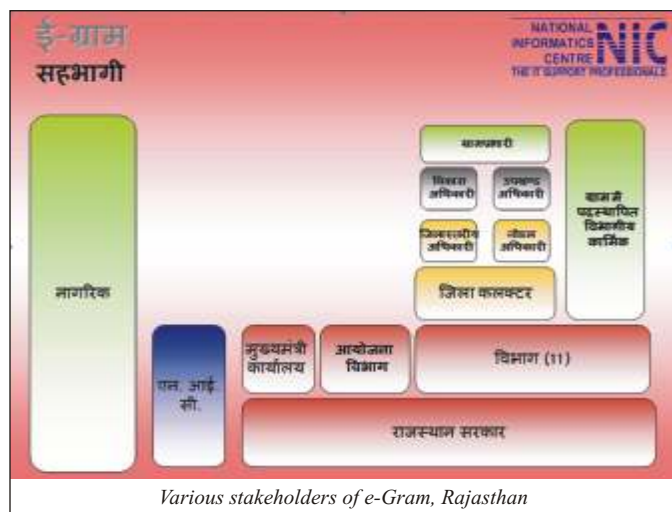
*I was very impressed with the e-Gram project, everyone involved in the project need to be congratulated.*

**Smt. Kushal Singh  
(Former Chief Secretary)**

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**Edited by: Vivek Verma**



# West Bengal: Transforming With Widespread Adoption of ICT

*West Bengal a leading state in Eastern India, famous worldwide for Darjeeling Tea produced in the northern hill region and Royal Bengal tigers found in the Sunderbans on its southern part forming the worlds largest delta by the mighty rivers Ganges, Brahmaputra and Meghna. It is also the world's largest estuarine forest. The state has a geographical area of 88,752 square kilometres. An agriculture-dependent state, occupies only 2.7% of the India's land area, though it supports over 7.8% of the country's population, and is also the most densely populated state in India. West Bengal can boast of its rich socio-cultural heritage, which makes Kolkata, the cultural capital of India. In the recent past many ICT based companies have flourished, transforming it into a major IT hub in the east.*



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West Bengal State Centre (WBSC) of NIC has been actively involved in promotion and penetration of Information Technology towards e-Governance in the State as well as at the district levels. The centre has developed & successfully implemented many Citizen centric service delivery systems and e-Governance applications touching nearly all sectors of the administration.

## Land Reforms Sector

**BHUCHITRA:** The software integrates ROR (Khatian) data with spatial data (digitized mouza map data) and provides copies of plot maps to citizens along with the certified copy of khatian. Online operations include Mutation, Conversion, Bargadar Enrolment, Homestead Benefits, Warish Enrolment, Vesting, Divesting and Pattadar enrolment.



*Distribution of Registered document (Deed) is in progress at Hooghly, WB by the DM.*

**CORD:** It handles the process of Registration of documents and delivers deeds on the same day. State-wide assessment of market value of

land is accessible to citizens. Presently, CORD is functional in 225 out of 237 Registration offices across the state.

**BHU-ADHIGRAHAN:** Land Acquisition process can be expedited with accuracy if the digitised ROR is available for the desired locations. BHU-ADHIGRAHAN software caters features like: capturing proposal details, case details, owner identification, generation of notices, awards and orders and compensation details by integrating Land Records data available at the blocks.

## Finance Sector

**Commercial Tax & VAT:** Information Management and Promotion of Administration in Commercial Taxes IMPACT software aims at improving revenue administration and enhancing collection. After introduction of VAT regime, IMPACT was made VAT compliant. Registration of dealers, Recording of Tax payment and Revenue administration, Return filing and processing, Audit, Assessment, Monitoring of Goods Movement including import into the state and transit of goods using the state as corridor, Issue/utilization of central declaration forms

are some of the important services delivered through IMPACT. VAT/CST Return defaulter lists, new registered dealers, List of dealers

\* From the States (January'10 issue) – Haryana, in introductory paragraph, the software exports from Haryana for the year 2008-09 should be read as Rs. 21000 Crores instead of Rs. 17000 Crores.

selected for assessment are also available on the web (<http://wbcomtax.nic.in>). Services like e-Registration, e-Return under VAT/CST, Issue/utilisation of waybill/CST declaration forms have been introduced. The VAT-compliant software was replicated in the states of Sikkim and Meghalaya also.

**XPERT:** An e-Governance system hosted at [www.wbexcise.gov.in](http://www.wbexcise.gov.in) involving creation, storage, analysis, dissemination and use of information to perform and monitor day-to-day activities of the Excise Directorate. The system has been in use by the Directorate, Licensees including Bottlers, Distilleries, Trades and Retail shops, SBI personnel, Consumers, Applicants for licenses and citizens.

**State Budget:** The process of compiling & preparation of state budget for the ensuing financial year and revised budget of the previous financial year are electronically handled. Re-Appropriation of budget allocation, answering queries raised by departments and NGOs, Statistical Analysis of different account heads, Web-casting Budget Speech, distribution of budget on CD-ROM and releasing the same on the website [www.wbfin.nic.in](http://www.wbfin.nic.in) are the other major activities involved.

Other initiatives in the sector include Treasury Computerisation System and Rural Infrastructure Development Monitoring System.

## Agriculture Sector

**AGRISNET:** AGRISNET, a centrally sponsored DAC project, implemented in the state delivers six types of citizen centric services. The portal to deliver services to the farmers can be accessed on <http://wbagrisnet.gov.in>.



Website of West Bengal Agricultural Department

The major services include Soil health card, pesticides licensing, fertilizer licensing, seed certification, seed licensing and project monitoring.

**Agricultural Portal:** The agriculture portal “Matir Katha” - designed and developed by NIC (WBSC), caters to five Departments viz. Agriculture, Agricultural marketing, Animal Resources, Fisheries and Horticulture. The information covered includes name and kind of seeds, availability, price and quality control, suggestions for Season / Area / Crop / variety wise cropping (based on crop calendar), information related to soil and fertiliser, cultivation technique of different crops, crop diseases and their remedies, Agro-Climatic Zones and schemes for cultivation of different crops in local language.



Inaugural function of Pesticide Licensing System in Kolkata

**AGMARKNET:** A nation-wide project of DMI has been implemented in the state successfully. The information on agricultural produces are collected and updated regularly from seventy-six locations comprising - Regulated, Wholesale, and other markets.

## Panchayati Raj and Rural Development Sector

**Central Projects:** The MGNREGA-Soft has been successfully implemented in the state. Job-Card, Scheme Information, Muster Roll and other details are uploaded on the central database directly from the Gram Panchayats and Block Panchayats. Under NSAP and SGSY, database was created for most of the districts. The MIS for schemes like PMGSY was also successfully implemented.





*Training on SGSY-MIS under progress at SIPRD, Kalyani, West Bengal.*

**Portal & e-Compendium:** The portal and e-compendium of P&RD Department was developed. The portal includes various activities of the Department including MIS which monitors distribution of fund under twelfth Finance Commission, State Finance Commission, expenditure against seven development schemes and monthly progress of work. e-Compendium, a web based information system, developed under the project DRISTI (Decentralized Rural Information Services and Technology Initiatives) provides Acts/Rules/Orders of P&RD Department. e-Compendium was supported by National Institute of Smart Government (NISG) and UNDP.

**e-Procurement:** NIC - Government e-Procurement (GeP), an online tendering system facilitates online creation & publishing of tender notice on the web, online participation by bidders using Digital Signature Certificate(DSC), financial and technical evaluation, award of contract and Post tender project evaluation. The system has been implemented in P&RD Department and in Zilla Parishads. Both the World Bank and Asian Development Bank have reviewed and approved the various features of the system.

## Welfare Sector

**Post-Matric Scholarship Monitoring System (PMSMS):** A district level application s/w helps office of the District Welfare Officer(DWO) to capture master and transaction data. It calculates and posts the entitled

amounts, approves necessary sanction orders, prepares utilization certificates and compile progress reports etc.

**OBC and SC/ST Certificate Application and Review (OSCAR):** A web based software implemented which captures application details and facilitates review of caste certificates. The estimated number of certificates at present is 50 lakhs growing yearly at the rate of ten percent.

**WBTDC:** A web based software implemented covering major functions of WBTDC encompassing activities at HQ, ROs, BOs levels. Large-sized Multipurpose Co-operative Societies (LAMPS) are formed by tribal people to pursue village level economic activities falling under centrally / state sponsored schemes. MIS for LAMPS covers Processing project proposals, loans, marketing of Kendu leaves, Sal Seeds etc.

## Transport Sector

**VAHAN and SARATHI:** The Smart Card based applications facilitate issue of Vehicle Registration and Driving Licences to citizens. The applications provides for collection of fees, tax, penalty, recording of photograph etc. VAHAN has been implemented at all the 24 RTOs while SARATHI at 9 locations. SMS service operational on pilot site at Public Vehicles Department, Beltala verifies the owner and its tax details. VPN over broad band was established at all the RTOs of the state. Data replication initiated at RTO Barasat towards building up of the state register.

## Sea Port Sector

**Comprehensive Computerization for Haldia Dock Complex (HDC):** Port Operation Management System (POMS) was developed and implemented on a turnkey mode. The system handles Vessel /Cargo /Container Operations & Management, Container Yard Planning, Billing (Vessel/Cargo), Port-Custom EDI, Container Freight Station (CFS) activities and Port Community System Integration and MIS.

## Port Operations Management System for Kolkata

**Port Trust (KoPT):** Skills acquired in HDC inspired the state centre to go for horizontal transfer of POMS, along with its architecture to Kolkata Dock System (KDS) of KoPT.

**Port Operations Management System for Ennore Port Limited:** Later POMS Project was replicated at Ennore Port, Chennai, jointly by NIC (WBSC) and NIC (TNSC).

## Judicial Sector

**Calcutta High Court:** Case Management Information System, Caveat Information System, Judicial Service Information System and Other Office Automation Systems have been implemented. Cause list is published daily through portal.

**WBAT Case Management System:** A LAN based software manages approximately 40,000 cases filed in WB administrative tribunal. The s/w provides facilities for Filing of cases, Finding the status of cases, Generation of cause list and certified copy of court order/judgment.

## Other ICT Initiatives

**Missing Children Tracking System:** NIC (WBSC) has developed and deployed a portal [www.trackthemissingchild.gov.in](http://www.trackthemissingchild.gov.in) towards sharing of information on missing and tracked children among the stakeholder organizations. During the last two years of its operation an alarming 10,000 children were reported missing in the state alone. Concerned personnel in almost



State level Workshop on Missing Children Tracking System

all the 500 police stations in the state were trained by NIC (WBSC). The portal turned out to be extremely useful for better monitoring of cases by the police administration.

**West Bengal State Election Commission:** State Election Commission conducts local body election for Panchayats & Municipalities of the State. A portal (<http://wbsec.gov.in>) was designed & developed to disseminate election related information and results.

**General Elections (Loksabha & Vidhan Sabha):** Activities like formation of polling parties, EVM randomisation, result transmission etc. in all General Elections are carried out with the customised software developed for the purpose.

**Initiative in Postal Sector:** Central projects in postal sector like PLI/RPLI Application, PATAM, Instant Money Order (IMO), and Circle Postal Accounting (CPACT) have been implemented.

**Generic Applications:** Generic applications developed and implemented in the State are Fund Flow Monitoring System, Letter & File Monitoring System, Cabinet Meeting Information System (CMIS) and Computerization of Salary Accounts (COSA).

## ICT Infrastructure/Services

In order to provide effective ICT services, a strong backbone is required. NIC (WBSC) has established an Internet Backbone, OFC based Connectivity, iNOC, Leased Circuits and Data Centre. The Web-Hosting Services covers Design & Development of Web-Sites, Domain Registration, maintenance, security auditing etc. Video-Conferencing facility has been extended to many Central & State government departments in the state.

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**Edited by:** Prashant Belwariar

# Arunachal Pradesh: Initiating e-Governance Projects in Major Sectors

*Stretching from snow-capped mountains in the north to the plains of the Brahmaputra valley in the south, endowed with vast forest cover, home to large number of fauna and flora, Arunachal Pradesh - the 'Land of Rising Sun' has enough potential to become famous worldwide for eco-tourism. Itanagar the capital city, has many attractions for tourists like the state museum, the polo park, the Buddhist temple etc. The state has 26 major tribes and many sub tribes. The Adis famous for their dance ponung, the Aptanis are settled agriculturists while the Buguns are gentle, hospitable and affectionate tribes to name a few.*



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National Informatics Centre, Arunachal Pradesh State Centre located at Civil Secretariat, Itanagar, started functioning in 1988. NIC is providing various ICT services to the government through its manpower and ICT infrastructure built up in the State.

Arunachal became a full-fledged state on 20-Feb-1987. Till 1972, it was known as the NEFA (North-East Frontier Agency). It was given the Union Territory status on 20-Jan-1972, and renamed as Arunachal Pradesh.

## NIC ICT Infrastructure and Services

**State Data Centre:** A data centre consisting of Secured network infrastructure and Storage Area Network (SAN) has been setup in the Civil Secretariat by NIC. The capacity of data centre is 3 TB presently. SDC contain several state of the art rack mount servers and SAN solution. The SDC is currently hosting web based applications like PHED MIS, NLCPR MIS, etc

**Networking Services:** A Secretariat LAN, connecting all the government offices, have been setup in the Secretariat Complex. The internet connectivity to most of these offices is provided through RF

connection/ OFC from the existing NICNET infrastructure of NIC. The Secretariat Wireless LAN has been extended to various HODs of different departments. Under this project more than 35 department located outside the Secretariat are connected using wireless/RF LAN.

The wireless nodes share the existing 45 MBPS Leased Circuit which is backed up by 2 x 2 MBPS Leased Line. Under Sub-Divisional Network project, 23 sub-divisions of the state are connected through VSATs/nearest CIC.

Recently, Wi-Max network has been set-up in 6 districts, in order to deliver e-Governance services to the citizen. Under this project, ten different govt. offices have been connected through this network in each district, to the NICNET.

**e-mail & Internet Services:** NIC provides internet connectivity and e-mail services to government departments.



Chief Electoral Officer having VC with ECI during Assembly Elections



**Video Conferencing Service:** It is best suited for geographically disadvantaged topography like Arunachal Pradesh. Videoconferencing Studios are setup at State Civil Secretariat Complex, Itanagar and all districts. The VC facility is being used by state Govt. departments and senior officials for official communication and project monitoring.

### e-Governance services

**Jan-Suvidha:** Jan-Suvidha (Computerized Facilitation Centre) is established to serve the purpose of the common people, by giving services such as Permanent Resident Certificate, Schedule Tribe Certificate, Temporary Resident Certificate, Inner Line Permit, Income Certificate and many others within one to two days. Jan-Suvidha project is first of its kind in Arunachal Pradesh, where all certificates are Computerized and issued/renewed through a single window. The Centre charges a minimum fee for all the services. The project has been implemented in 7 DC / ADC offices of the state.



*Hon'ble MLA, Sh. Alo Libang and Sh. Pawan Kr. Sain, IAS, DC, Upper Siang District at Jan Suvidha Centre after formal inauguration.*

**Treasury Computerisation:** Treasury Accounting Software (TAS) has been developed and implemented in Itanagar Treasury and Naharlagun Sub-Treasury since 2002. Now to upgrade and replicate the Treasury project in the remaining treasuries / sub-treasuries, a new web based Treasury Project has been taken up based on NIC Maharashtra model using open source technologies. The project is being implemented in phases.

**Transport Computerisation Project:** Under this project all the activities done at District Transport office is being computerized using the VAHAN & SARATHI Software developed by NIC. VAHAN caters to the registration of all types of vehicles. SARATHI application is used for issue of Learner License, Driving License, Conductor License and Driving School License. The VAHAN & SARATHI has been implemented in 9 districts of the state and at 3 districts, it is under implementation.



*Hon'ble Parliamentary Secy, Sh. R.T.Khunjuju and Smt. Swati Sharma, IAS, DC, West Kameng launching VAHAN at Bomdila*

**GPF Computerisation Project:** Directorate of Accounts & Treasuries (DOAT) maintains the GPF accounts of all Groups A, B & C employees of all departments of Govt. of Arunachal Pradesh. There are about 30,000 GPF accounts maintained by the DOAT. The GPF accounting process is computerised under this project. Annual Statement for GPF subscribers is being issued through this software.

**Payroll Computerisation Project:** A generic payroll system has been developed by NIC to computerise the Payroll system. The same has been implemented in about 60 government offices of the state and districts.

**Election Support:** Arunachal Pradesh has 60 Assembly Constituencies and 2 Parliamentary Constituencies. NIC is providing technical support to the Election department in terms of e-mail, internet and VC service, training to the state govt officials in the operation of EVM machines, timely submission of various data to the ECI as well as the CEO. The services of NIC have become indispensable to the Election department in every Assembly / Parliamentary Election in the state.

NIC also provides ICT solutions for the display of election results to the public. For the first time in the country, during the Assembly elections 2009, NIC has successfully demonstrated the remote monitoring of voting process in selected voting centres in Tirap and West Kameng district.



**Web Based MIS for PHED:** Web Based MIS for PHED, Arunachal Pradesh is a first major computerization project of the state, which covers all the major functionalities of the PHE Department. The software has 11 modules. At present, the department of PHED has implemented 4 modules in 2 of its divisions.

**NLCPR monitoring System:** This is a web-based MIS for NLCPR projects for the Department of Planning. It has interface for Ministry of DoNER and the Executing Agencies for submission of data and monitoring the progress (financial and physical) of various projects. The software has been deployed for acceptance testing by Department of Planning.

**Tele-Education Project:** The objective of the project is to provide trained faculty to the students to teach basic science subjects and mathematics for preparation to appear in all India competitive entrance examinations like JEE, PMT, AIEEE, etc. Currently Tele-Education Service is being provided in three districts (One Higher Secondary School each) using NICNET.

**National Portal:** The objective of the National Portal project is to enable a single window access to information and services being provided by the various Indian Government entities. Under is project, at the state level, NIC is providing technical support to the State Nodal Officer in identification and management of the content in the context of Arunachal Pradesh.

**CIPA Project:** Common Integrated Police Application (CIPA) Project aims at automation of all functions carried out at the police stations. The project has been implemented so far in 41 Police Stations in various districts.

**File Monitoring System:** The objective of File Monitoring System is to monitor the office files going out and coming into an office. The project has been implemented in several government offices



**e-Procurement:** This project is for electronic tendering and procurement of various items under the PMGSY scheme. Training has already been given to the concerned officials of Rural Works Department and prospective bidders.

**e-Court Project:** The process of computerisation of the Itanagar Bench of Guwahati High Court has been taken-up in Arunachal Pradesh.

**NREGS MIS:** Technical support and training on NREGA MIS (online & offline) is provided in collaboration with SIRD to various stake holders in the

state of Arunachal Pradesh. There has been progress in implementation of the same in many of the districts.

**IDSP:** Integrated Disease Surveillance Project is a decentralized, State based Surveillance Program in the country. It is intended to detect early warning signals of impending outbreaks and help initiate an effective response in a timely manner. The implementation of IT component of the project is supported by NIC.

**CONFONET:** The objective of the CONFONET Project is to set up ICT infrastructure at Consumer Redressal forums all over India to provide IT solution at each level in order to provide E-Governance, Efficiency, Transparency and Systematizing of working. This project is implemented in the State.

**Plan Plus:** It is a software tool presently used in the Backward Regions Grant Fund (BRGF) scheme implementing district for grass roots level planning. The project is under implementation in the lone BRGF district of the state, Upper Subansiri.

## Web Services

NIC provides state-of-the-art web hosting services to state government departments at its Integrated Data Centre at NIC HQ. Remote updation facilities are also being provided to the user departments. NIC Arunachal Pradesh is playing an important role in design, development and hosting of website of various departments. The website of 15 districts has been developed and launched. Training: The NIC-Arunachal Pradesh has well equipped Training Centre which facilitates NIC to provide training services for various departments.

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***Edited by-*** Prashant Belwariar

## Upcoming ICT Events

### **The 5th Conference on eServices in European Civil Registration**

Berlin, Germany  
May 6th-7th, 2010

[http://www.amiando.com/riser\\_eu.html](http://www.amiando.com/riser_eu.html)

### **Webit e-GOV Summit 2010**

National Palace of Culture, Bulgaria  
May 26th-27th, 2010

<http://www.webitexpo.com/en/eGov/2010/index.html>

### **The European e-Identity Management Conference 2010**

London, UK  
June 9th-10th, 2010

<http://www.revolutionevents.plus.com/eema/index.htm>

### **2nd International conference on eParticipation (ePart) 2010**

Lausanne, Switzerland  
August 29th-2nd September, 2010

<http://www.demo-net.org/epart>

### **Conference On Spatial Data Infrastructures 2010**

FON University in Skopje, Republic of Macedonia  
September 15th-17th, 2010

<http://sdi2010.agisee.org/index.php>

### **4th International Conference on Theory and Practice of Electronic Governance Conference**

China National School of Administration,  
Beijing, China  
October 25th -28th, 2010

<http://www.icegov.org/icegov/icegov2010/introduction>

### **eChallenges e-2010 Conference**

Warsaw, Poland  
October 27th-29th, 2010

<http://www.echallenges.org/e2010/>

### **The 5th International Conference for Internet Technology and Secured Transactions (ICITST-2010)**

Thistle Hotel, Heathrow, London  
November 8th-11th, 2010

<http://www.icitst.org/>

Incase you know of any such conferences, please write to us at:  
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## e-Procurement at Mahanadi Coalfields Limited (MCL) : A Success Story

*The e-Procurement for Works and Services was started in MCL on the 63rd Independence Day of the Nation and with this MCL entered into a new era of e-Governance. August 15th 2009 will be marked with golden letters in the history of MCL as on this auspicious day MCL became the first subsidiary of Coal India Limited to implement e-Procurement for Works & Services and also became the first Central PSU Company of the country to avail e-Procurement services of National Informatics Centre (NIC), Government of India with auto technical evaluation. The e-Procurement was made mandatory for all areas of MCL w.e.f. 15th September'2009. Here we have an Exclusive Talk with Chief Vigilance Officer, Sh. N. K. Pradhan, IRS, Mahanadi Coal Fields Limited, Govt. of India Undertaking.*

**i** Our heartiest congratulation for successfully implementing e-procurement in MCL. Would like to hear more from you.

**N.K.P:** Thank you for the same and my sincere thanks to NIC for providing such an excellent cost effective solution. I extend the same to all the team members who have been working day and night for the success of the project. This has been a vital project for us and is a major initiative of MCL in the direction of e-Governance. e-Procurement for works and services was inaugurated on 15th August 2009 by Sh. S.R. Upadhyay, CMD, MCL. The guidance and encouragement given by Sh. Upadhyay all along could lead to the successful implementation of e-Procurement in MCL. Sh. B. Mahapatra, Director (Finance), Sh. A.K. Singh Director (Tech./Project & Planning), Sh. A.K. Tiwari, Director (Tech./Operation) and Sh. S.C. Padhy, Director (Personnel), MCL gave regular guidance and

encouragement to the e-Procurement cell. In fact the e-Procurement cell in MCL functions under the direct supervision of Sh. A.K. Singh, Director (Technical/Project & Planning). To make the transformation gradually but surely, three pilot tenders were hosted on the inaugural day along with a systematic roll out plan. As you are aware, this is a project which has direct impact on the efficiency of the organization and results in an efficient and transparent tender management with better feedback to the Bidders at each stage.

**i** What were the initial thoughts regarding e-Procurement at MCL?

**N.K.P:** We have been very enthusiastic to implement e-Procurement at MCL and to take up works and services through on line tendering process in a phased manner. Moreover, the emphasis was on making a generic module to cater to the tendering process in coal



**Sh. N. K. Pradhan, IRS**  
Mahanadi Coalfields Ltd.

producing companies.

In December 2007, the process was initiated by MCL Board and we have examined the services provided by various e-Procurement service providers. In letter F.No. 8(5) E.II(A)/2006 dated 10.1.2007 issued by Department of Expenditure, Ministry of Finance, in reference to OM No. 8(5)E.II(A)/2006 dated 5th July 2006 conveying the directives on the subject "Introduction of Mandatory e-Procurement" there is a reference of National Informatics Center (NIC) at Para-5(viii). We felt that, NIC being a Central Government department, security of the bid data is ensured. So we approached NIC being the nodal agency for e-Procurement for

government departments. After going through the GePNIC (Govt. e-Procurement System of NIC) our team observed that the e-Procurement system of NIC is quite flexible to accommodate the requirement of MCL with some customization and addition of auto-technical evaluation module.

### **i** What about the financial implications of proposal submitted by NIC?

**N.K.P:** In most of the e-Procurement system being provided by the service providers, the bidders have to pay transaction fee in terms of certain percentage of the tendered value for each tender. But in the e-Procurement system developed by NIC, neither the bidders nor the department has to pay any transaction fee. There is only one time investment to be made by MCL and the major part of investment will be for the creation of infrastructure like Servers, OS software etc. which will be owned by MCL and can accommodate any number of tenders to come in future. There will be some recurring expenditure by MCL towards maintenance of hardware, software and other support services rendered by NIC.

Subsequently in the impact analysis we have evaluated that MCL has recovered the investment done under this project, within the first few tenders finalized on this e-Procurement portal.

### **i** What are the Change management steps initiated by MCL?

**N.K.P:** The business process re-engineering exercise was carried out with the help of National Informatics Centre. For the purpose, a core team was formed with experts from Systems Department, Contract Management Cell and Vigilance Department of MCL. They framed the desired system requirement keeping in view the directives of the MCL Board, guidelines from CVC and relevant manuals of CIL. MCL Board accorded its approval on 13.06.2009.

The objective is to automate the entire tendering process including tender creation, floating of NIT, bid submission, bid evaluation in an on-line web based real

time environment and to eliminate or minimize the human intervention in tender evaluation. The bid validity period has been reduced from 120 days in manual tendering to 60 days in e-Procurement that would lead to reduction in quoted bid prices and will also increase the bidder base.

### **i** You have been the main driving force behind the success of this project. Please tell us the major challenges you have dealt with?

**N.K.P:** The major challenge was the adoption of the system by both the internal (employees) as well as the external stakeholders (bidders). Winning the trust of both stakeholders is the success mantra of e-Procurement implementation in any Organization. For Capacity Building, extensive training was jointly conducted by MCL and NIC officials to train internal users for tender publishing, opening, evaluating and to train a large number of bidders to use the system for online bidding.

### **i** You are a Vigilance man. Please enlighten us in this angle with respect to e-Tendering.

**N.K.P:** I was keen on the implementation of (1) OM No.8(5)/E.II(A)/2006 dated July 5, 2006 of Ministry of Finance on “National e-Governance Plan (NeGP) Implementation of e-Procurement in Ministries/ Departments” (2) Letter F.No.8(5)/E.II(A)/2006 dated January 10th, 2007 of Ministry of Finance on “Introduction of Mandatory e-procurement” (3) CVC Office Order No.46/9/03 dated 11.09.2003 on “E-procurement/Reverse Auction” and (4) CVC Circular No.29/9/09 dated 17.09.2009 on “Implementation of e-tendering solutions.”

With the introduction of e-Procurement system, there will be drastic reduction in the complaints relating to Tender finalization due to better data security and transparency of the system.

However, with the implementation of GePNIC many of the objectives like wider web publishing, on line bidding, time bound completion of tender process to avoid cost

over run, non-discrimination among bidders, elimination of subjective judgment in the evaluation of Tenders have been fulfilled.

I would rather say it has substantially improved Vigilance Administration with greater transparency in procurement by eliminating unhealthy business practices. I strongly believe that this is a gigantic step towards better Corporate Governance.

**i** MCL have signed a MoU with NIC/NICSI for the implementation of e-Procurement system. What are future plans?

**N.K.P:** On 22nd January'2009, Sh. S.R.Upadhyay CMD, MCL and myself visited NIC, New Delhi and had a meeting with Dr. B. K. Gairola, DG, NIC. Dr. Gairola extended his kind support to provide e-Procurement services to MCL. I express my sincere gratitude to Dr. B. K. Gairola, DG, NIC, Dr. Y. K. Sharma, DDG, NIC, Sh. A. Mohan, DDG, NIC, Smt. J.R.D. Kailay, MD, NICSI and Sh. S. K. Panda, SIO, Orissa for extending full co-operation.

MCL and NIC have partnered and have committed to take forward this project to new heights bringing in new features for fast decision making and added convenience to the users without compromising with the transparency in tendering process. NIC / NICSI has taken responsibility of Server Management at their Data Centres, providing Digital Signature Certificate to MCL officials, training the Trainers, Help desk set up and other aspects of this software project.



*MOU sign with MCL by MD, NICSI*

We are also interested to implement Contract Management (Post Tender activities) system. A module for Online Payment Gateway integration to receive tender application fee & EMD from bidders electronically and to refund EMD to bidders are also underway.

**i** How do you articulate the success of this project and any other important factor?

**N.K.P :** I am very optimistic about the future of this project, the way it has made a holistic change in the procurement system. A comparative study of e-Procurement vis-a-vis Manual system of tendering reveals that average cycle time from floating of NIT to opening of Price Bids has been drastically reduced to 31 Days. The minimum cycle time from floating of NIT to award of work has been recorded so far as 21 days. Considerable savings resulted to MCL in terms of reduced cost of procurement of works and services.

For the successful GePNIC rollout at MCL, I convey my deep sense of gratitude to all the members who have contributed significantly to this project namely Sh. S.K. Panda, SIO, NIC Orissa, Sh. P.Krishna Prasad, SIO, NIC Tamilnadu, Sh. M. Manivannan, Sr. T. D. and Sh. K.S. Raghavan, Sr.T.D. from NIC, Chennai, Sh. A.K. Hota, T.D., Sh. T.P. Ray, Scientist-D and Sh. Nihar Ranjan Biswal, Scientist-C, from NIC, Bhubaneswar, Sh. R.P. Dash, DIO, Sambalpur, Sh. Rajeev Chauhan from NICSI, New Delhi, Sh. Malay Pattnaik from NICSI, Orissa, Sh. S.K. Bhanja, Project Manager (e-Procurement), Sh. O.P. Mishra, Supdt. Engineer (Civil), e-Procurement Cell and Sh. S.K. Shrivastava, Supdt. Engineer (Civil) of Vigilance department of MCL. It is their initiative, sincerity, and positive approach with spirited well coordinated teamwork that has brought this project to this level of success. **i**

**Interview by:** S.K Panda, SIO

**Coordinated by:** Ashok Kumar Hota



# Web GIS for Emergency Planning and Response

*Disasters have always posed a serious threat to human life, be it natural disasters like earthquakes, cyclones etc. or manmade disasters like chemical accidents, chemical/biological war, etc. With rapid industrialization, usage of chemicals for industrial, commercial and domestic purposes has inter-alia increased their storage, production, transportation and handling, leading to increased number of serious chemical accidents affecting surrounding communities in a short span of time and mostly without warning. Trauma of Bhopal tragedy is still fresh in our memories. Therefore, there is a pressing need to understand the potential of chemical emergencies and develop tools for emergency planning and response to minimize the damage in case of any eventuality.*



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Ministry of Environment and Forests (MoEF), government of India, which is the nodal ministry for management of hazardous chemicals, has made tremendous efforts to minimize chemical accidents and to improve emergency preparedness. The project “GIS based Emergency Planning and Response System (GEPR)”, sponsored by Ministry of Environment & Forests, is an important step in this direction.

## The Product

GEPR has been developed to assist the district administration, Major Accident hazard (MAH) units in emergency planning and response. It is a unique, first of its kind approach and envisages developing a comprehensive web based GIS application with database of MAH units, hazardous chemicals stored, and resources available to combat emergency.

GEPR is focused on chemical accidents arising out of MAH units. Chemical accidents can be broadly categorized as resulting in fire, explosion and toxic release. Other factors such as ignition source, over-pressurization, meteorological conditions, etc also play an important role. With the help of computer simulation models, it is possible to predict the area that may be affected under different emergency scenarios. Further, to assess the damage and

carry out emergency planning and response exercise, it is essential to overlay the outcome on area map having features such as other industries, residential areas, schools, markets, road, rail, etc. The resources required such as fire and spill control, medical aid, etc. to combat the emergency situation arising out of chemical accident, their location and access to site of accident also needs to be plotted. All of the above requirements have been incorporated in the GEPR package to make it a versatile tool for chemical emergency management.



*Sh. Sanjay S Gahlout, DDG NIC is receiving memento from Sh. S. K. Saxena, DG FASLI at CIDM-2010 conference.*

Latest information was collected from Directorate of Factories to identify MAH industries. Data on each MAH industry was collected through a well-designed questionnaire. Data collected pertain to chemical data type of chemicals, quantities, storage containers, storage conditions, etc. and response data PPEs, medical facilities, fire fighting facilities, vehicles, etc. for each MAH unit separately. Data was collected for “First Responders” and “Sensitive Area” district wise. First Responders

include Police, Fire Service and Medical Service. Relevant data was collected with respect to contact information, facilities available to combat chemical emergencies, etc. such as fire tenders, BA sets, etc. with fire department, burn and chemical poisoning facilities with hospitals, etc.

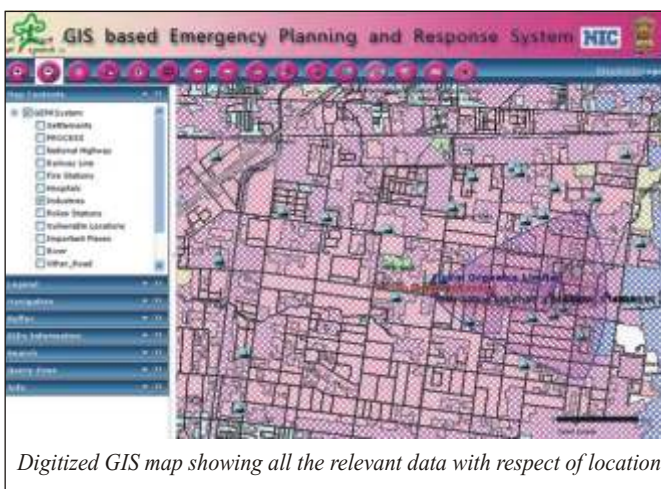
In addition, Field data collected with GPS pertaining to location of MAH industries and first responders and other sensitive areas have been superimposed on base maps. Customization of districts maps has been done to get seamless maps of industrial cluster with MAH industries along with MCL scenarios, police stations, fire stations, hospitals and venerable locations. Based on the MCL scenarios computer modeling has been done using ALOHA and ARCHIE. Outcome is made compatible to complete software package.

Customized software is developed, that displays relevant data with respect of location of MAH units, first responders, chemical and response data, possible accident scenarios, hazard zone under each scenario, etc. User can customize the view, Hazard zone in case of toxic scenarios can be viewed with respect to user input wind direction, fire/explosion scenarios shall be depicted as circular buffer zone.

The fourteen states covered in the project are Gujarat, Maharashtra, Tamil Nadu, Andhra Pradesh, Delhi, Punjab, Haryana, Uttar Pradesh, Rajasthan, Madhya Pradesh, West Bengal, Assam, Karnataka and Kerala.

#### Following are some of the main features of GEPR:

- State of the art solution with integrated spatial, non spatial data & chemicals models
- Planning for worst-case scenarios.
- User friendly structure allows rapid zoom on different layers
- Can call up Response Information Data Sheets (RIDS) of hazardous chemicals
- Can calculate contaminant arrival time, affected area and overlay the plume on the base map
- Strong query builder capable for handling dynamic queries



Digitized GIS map showing all the relevant data with respect of location

GEPR comprises digitized maps of the districts and that of the industrial clusters / surroundings comprising the following layers-

- Administrative boundaries
- National Highway
- Rail/ road network
- Settlements
- River/water bodies
- MAH Industries
- First responders
- Accident Scenarios (templates)

The product has been developed in three phases. Phase I and II was developed district wise on stand alone system with Map objects. Based on the feedback received from various end users during workshops and to further improve the product GEPR (phase III) was developed. Phase-III of GEPR is developed using ArcIMS. It has Web based GIS Technology for easy implementation and updating of required non-spatial data. High Resolution Mapping i.e. Quickbird data is used and enhanced modeling features like Process hazards have also been added on pilot basis.

The workshop for GEPR (PhaseIII) was conducted in April 2010 at Pune and it was highly appreciated by the authorities. The project needs to be expanded to cover

*Continued on page 31 .....*

# Screen Readers and Designing Accessible Websites

*Our Society has benefited in many ways from the information technology revolution. However, not everyone can reap the benefits of this technology change unless websites are developed to serve the largest possible audience that includes persons with disabilities. Increasing the target audience shall be done by using different hardware and software platforms, connectivity, devices, etc.*



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It is now being felt world over that it is the responsibility of every web site developer to design 'Barrier-Free' Websites to ensure that people with disabilities have equal access to public information that is available on the Internet and the World Wide Web.

## Web Accessibility

Accessibility caters to the needs of people with impairments like Visual, Hearing, Mobility, Learning, Elderly. Such audience requires special technology to assist them in rendering or viewing a webpage. The technology meant to help this section of users is called Assistive Technology (AT) and the related devices/software are called Assistive Devices (ADs).

Visually challenged users require an output of synthetic voice and those with low vision or dyslexia may need large text or spatial adjustments. Hearing impaired may require text equivalents for audio information. The mobility challenged may require the ability to browse without the use of keyboard, mouse, or input device that requires a part of their body other than just their eyes or mouth.

Assistive Devices (ADs) for people with disabilities include screen

magnifiers, screen readers, synthetic speech, caption-ready monitors, or alternative keyboards. This article focuses on designing web pages that can be read easily by the screen readers enabling visually challenged people to access the information presented on them.

## Screen Readers

Screen Readers are assistive devices that convert text into synthesized speech to facilitate visually impaired users to listen to and comprehend the content on a webpage. A screen reader typically reads the page from top to bottom and left to right. Beyond the task of reading, the screen reader allows users to navigate through Web content using different shortcut keys which provide a variety of choices like reading everything from top to bottom, one line at a time, or the user can use the tab key to navigate from link to link. The user can also navigate from one heading to the next (e.g. by pressing 'h' key with jaws) or from one frame to the next. Today the screen readers are even configurable and allow the users to control parameters such as the reading speed, accent and the way to read out the content (e.g. whether to read out the pronunciations or not).



Screen Reader	Website	Free/Commercial
Screen Access For All (SAFA)	<a href="http://www.nabdelhi.org/NAB_SAFA.htm">http://www.nabdelhi.org/NAB_SAFA.htm</a>	Free
Thunder	<a href="http://www.screenreader.net/index.php">http://www.screenreader.net/index.php</a>	Free
WebAnywhere	<a href="http://webanywhere.cs.washington.edu/wa.php">http://webanywhere.cs.washington.edu/wa.php</a>	Free
JAWS	<a href="http://www.freedomscientific.com/jaws-hq.asp">http://www.freedomscientific.com/jaws-hq.asp</a>	Commercial
Supernova	<a href="http://www.yourdolphins.co.uk">http://www.yourdolphins.co.uk</a>	Commercial
Window-Eyes	<a href="http://www.gwmicro.com/Window-Eyes/">http://www.gwmicro.com/Window-Eyes/</a>	Commercial

### Designing accessible website

Sighted users can scan an entire screen almost instantaneously while screen readers present content to users, one item at a time. The linear progression through the content from beginning to end is somewhat like Interactive Voice Response Systems (IVRS) which do not reveal all of the options at once and users must progress through such systems in a step-wise manner. The fact that screen readers present linearized versions of web content is an important one that should guide Web developers during the design process.

The following points should be kept in mind so that the content is meaningfully presented and can be navigated easily by the to the screen reader user.


- Correct and relevant title should be given to every page. This is important as screen readers first read the title of the page
  - Clear heading structure (H1, H2 and H3) should be maintained. This helps the visually challenged user to quickly scan the main content heads of the page. There should be only one H1 tag on a page.
  - A “Skip to content” link must be provided at the top of the page. This helps the user to directly go to the main content of the page bypassing the repetitive sections like page header, navigations etc.
  - Short, meaningful descriptive text for links must be provided. Using functional text descriptions provides better navigation and coherent feedback to users who rely on the screen readers to read a page.
  - Meaningful text descriptions must be provided for non text elements like images by giving an ALT tag. For decorative images like icons, bullets etc. a null
- ALT must be given (ALT=” ”) as Screen readers ignore images without alt text. A video presentation with an audio component requires captioning. The captioning must be completely synchronized with the audio presentation to allow for the viewer to follow the meaning of the content. If there is a slide show like a PowerPoint slide show available but it is “visual only”, the graphics need to have alternative text representations.
- All functionality of the content should be operable through a keyboard interface as the visually challenged cannot use the mouse.
  - Avoid using tables for layout and presentation purposes. When used for representing data, tables should be provided with proper header row and captions and the data items should flow left to right, one line at a time.
  - Frames should be avoided while designing a webpage as frames cannot be easily read by the visually impaired. When used, frames should be titled with text that facilitates frame identification and navigation.
  - While designing a form it must be ensured that text instructions that describe the input are provided at the beginning of a form or set of fields. Also elements associated with input like text fields must be labeled to ensure that information about the input field is spoken by screen readers when the field receives focus.
  - If an input error is detected, the error must be described to the user in text so that it can be read by the screen reader. The error message should be precisely presented. This will ensure that users are

aware that an error has occurred and can determine what is wrong.

- Attributes of colour, shape and size must not be used to represent information as these would make the content inaccessible to the visually challenged. For example, we should avoid using statements like “All the text written in red are mandatory”.
- For all user interface components, the name and role should be programmatically determined; states, properties, and values can be programmatically set; and notification of changes to these items is available to screen readers. For example is there is a checkbox control on the page and its state is checked then screen reader should be able to read its name and state.
- While using scripting languages to display content, or to create interface elements, the information provided by the script must be identified with functional text that can be read by assistive technology. All JavaScript URLs should have meaningful text so as to be useful for people with

disabilities to follow. Use of event handlers like OnClick(), OnChange() etc. as the only method for navigating or completing a page should be avoided. Although event handlers that require no user interaction like OnLoad() is not problematic.

- All script function should include a NOSCRIPT tag for those browsers or assistive technologies that do not have script support.
- Whenever using CAPTCHA code for security on your web page, use one that can be read/ understood by people using screen readers. An example of such text based CAPTCHA is available at <http://india.gov.in/suggest/suggest.php>

Technology like screen readers are quite robust in their capabilities and make reading and interpretation possible as well easy for the visually challenged. They are boon from the world of technology for the visually challenged enabling them to access the digital contents. Accessibility is an important idea behind many web standards. Designing accessible websites will help in creating an inclusive digital world. 

.....Continued from page 28

additional districts/states having clusters of MAH units for national perspective.

### Promotion of IT enabled services for according clearances.

Keeping in view the recommendations of the high powered committee, a workflow based web portal may be developed and deployed in the Ministry with an aim to provide comprehensive, accurate, and online information to the public on various clearances (EC/FC/CRZ). This portal shall host a suite of online applications (for granting various clearances) that can be used by the authenticated users as per the assigned roles and privileges. The proponent/User Agency may submit application (for seeking clearance) online and the same could be forwarded to the concerned head of the sector as defined in the flow for the decision. This portal may have the option of uploading the contents

by various stakeholders. Thus all the clearances related with different sectors (e.g. Environment, Forests, CRZ etc.) could be granted through a single window.

Generic model on consent management developed for State Pollution Control Boards could also be integrated with this portal, so that NOC for Consent to Establishment and Consent to Operate along with other components could also be granted through this portal

**Project team:** Sh. Ajay Kumar, TD, Mrs. Arpita Gupta, PSA, Mrs. Sangeeta Bhatia, PSA, Mrs. Meenu Arora, PSA.

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# Kanpur Dehat : Serving Rural Citizens at their Doorstep

*ICT is fast spreading by virtues of its adoption in various sectors serving the citizens. NIC, Kanpur Dehat, established in 1988, has been serving the rural masses by facilitating the district administration, development departments and citizens through small and large IT based initiatives.*



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The IT roadmap for Kanpur Dehat was prepared in the year-2008 to provide 32 online services to the different sections of the society through Jan Sewa Kendras. On 15th July, 2008 the website <http://kanpurdehat.nic.in/nss> was inaugurated by the then District Magistrate Sh. O.P.N.Singh, IAS. This was a major step towards information dissemination at the grass root level as the website provides the G2C & G2G services, and also extends the delivery of services to the doorstep of the citizens.

The website caters to the government, general public and especially those living in remote and far flung areas of the district. It is being extensively used by the government departments, colleges, universities to check the genuineness & authenticity of the certificates issued at the tehsil level. People can view Record of Rights (RoR), pension & scholarship details, salary slips (for government employees), census and election related information, government tenders, BPL list etc. They can track the grievances filed through single window system or Lokvani and download more than 60 different types of service related application forms.

**e-tehsil:** The 'e-tehsil' application has been developed by NIC, Kanpur

Dehat, to issue different types of certificates, such as Caste, Domicile and Income, at the tehsil level. The application is fed at the tehsil computer centre and the certificates are generated on the preprinted stationary with running serial number at the tehsil before being delivered to the citizen. This saves a lot of time and prevents unnecessary running between the government offices by the citizens. Based on PPP model, the project has been able to generate substantial revenue for district administration and the authenticity of the certificates can be verified at [kanpurdehat.nic.in/nss](http://kanpurdehat.nic.in/nss).

e-tehsil has created the center of excellence for services at the tehsil level with a motto to provide '**service with a smile**'. There is considerable improvement in delivery of services to the rural citizens with 24X7 availability, no bribe, hassle free and free from touts. The certificates are neat, with considerable reduction in errors and in-time delivery.

**Nagrik Soochna Kendra (Information Kiosk):** A touch screen information kiosk has been setup at the Collectorate compound Kanpur Dehat to provide various types of information to the general public by simply navigating through the touch screen menus. The complete application is developed in local language 'Hindi' to make it more users friendly and the



information profile includes – *Statistical information about the District. Statistical information about the State; Information on historical & tourist places; Contact directory of district officials; Information on development schemes; RTI related information; Maps of the district, tehsil, block; Treasury & Budget Information, etc. and Health & Education related information.*



*Inauguration of Nagrik Soochna Kendra (Information Kiosk) at Kanpur Dehat Collectorate by District Magistrate, Sh. O.P.N.Singh, IAS*

**Land Records Computerisation (LRC) Project:** LRC is one of the most successful projects, which facilitates the electronic generation of Record of Rights (RoR) and has been implemented in all the tehsils of the district. The project is distributing RoRs to rural citizens for last five years and has recently been integrated with the UP State Wide Area Network. Tehsils have started sending data via SWAN to District headquarter which is published at the site <http://bhulekh.up.nic.in>

**RefNIC:** The software has been specially designed for District Magistrate & Chief Development Officer of the District to handle problems and grievances of general public. The complete monitoring and tracking of the received applications is done through RefNIC software. Various MIS reports are generated at different levels, which results in a better Decision Support System. The software has now been introduced in District Treasury-Office, SP- Office and District Judge-Office.

**CourtMIS:** The CourtMIS project is for better management of cases in the courts of District Magistrate, ADM, SDM and Tehsildars. It can handle different types of cases and the proceedings of the case are regularly updated after the hearing is done at the court.

**CauseNIC:** The District Court Computer Center is a center of excellence, which has online database of civil and criminal cases. The CauseNIC software has almost automated all the activities of the District Court. The cause list for all the 38 courts are generated by CauseNIC and the proceedings of the courts are regularly fed by the Peshkars of the courts, which ensures proper maintenance of the database.

**The 'HOW Pension System' (Handicap, Oldage, Widow Pension):** This is an integrated software for the Handicap, Oldage and Widow pensioners of the district. The data from all the three departments are fed with the help of agencies and after processing it is also made available to the general public through the website [kanpurdehat.nic.in/nss](http://kanpurdehat.nic.in/nss)

**Backup, Internet Services & Training:** NIC District Centre is giving backup and Internet services to all the departments of Kanpur Dehat housed in the Collectorate and Vikas Bhawan. A year long training schedule is in place to train the revenue & development officials, which helps in change management.

In addition to these, NIC, Kanpur Dehat has successfully implemented the state level project of treasury computerization. It has been providing IT services to the district basic education department from last 13 years. It is one of the first few districts to establish SWAN connectivity in the tehsils and blocks and is committed to extend IT enabled Services to the citizens right at their doorstep. **i**

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**Edited by:** Anshu Rohatgi

# Muzaffarpur : A Major Hub for e-Governance in North Bihar

*Muzaffarpur, a major town of north Bihar, situated on the Indo-Gangetic plain, has earned international encomiums for its delicious Shahi Litchi which are exported to other parts of the country and even abroad. Muzaffarpur has innumerable historical sites and monuments. There are a lot of Buddhist Viharas and places of interest related to Lord Buddha. The natural scenic locations and backdrop of the hills makes it an ideal travel destination. The district is bounded on the north by East Champaran and Sitamarhi districts, on the south by Vaishali, on the east by Darbhanga and Samastipur (part) and on the west by Saran and part of Gopalganj districts.*



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NIC District Centre, established in the year 1989, has contributed immensely in inculcating informatics culture and at present is a hub for many

e-Governance activities, utilizing ICT for promoting transparency and good governance.

## **Excerpt of the letter from Sh. Anand Kishor, IAS & District Magistrate, Muzaffarpur**

*Creating mass awareness of informatics culture among District Administration and other district level departments, NIC District Unit, Muzaffarpur, has become the hub of many e-Governance activities in the district with successful implementation of many ICT projects.*



Wide spread use of ICT in various departments made the district administration realize the importance of modern technology and has provided NIC a new site to accelerate the pace of e-governance activities in the district. In his inaugural address on the occasion, the District Magistrate emphasized the need for strengthening and empowerment of NIC District Centre.

VSAT facility. Connectivity is also provided to Head Post Office, under the ARROW project of Department of Post, Govt. of India. Different Departments / Sections of district administration are connected with NICNET.

## **Major Activities**

### **MUDRA (Municipal Corporation towards Digital Revenue Administration):**

The software manages tax collected from households for the municipal corporation. The demand generated for households are uploaded on the website - <http://ulb.bih.nic.in>. This has helped the citizens to know their outstanding dues.



*The District magistrate & SIO, Bihar during Inauguration of the New NIC Centre*

**Videoconferencing Facility:** The VC (set up in 2004) facility has been frequently used by various departments in monitoring developmental activities. Videoconferencing facility between civil courts and Khudiram Central Jail was established in the year 2001 for speedy trial of prisoners. The centre has dedicated 2 Mbps Leased Line including DAMA and Sky blaster

### **SCORE (System Of Computerized Registration):**

The software implemented on pilot basis in the year 2005 at the district, helps in getting various types of document registered incorporating biometric features. The registration process is completed on the same day itself.

### **General Election Support:** Election

Confidential - ELECON 8.0 software with various features like randomization of EVM, Force deployment, counting personal deployment etc. has helped to streamline various processes during general & state elections.

**Bhu-Abhilekh:** In an effort to simplify the land mutation process and automatic generation of schedules (panji) for Land Record computerisation, the Bhu-Abhilekh software has been implemented in the district.

**Computerisation of DRDA and NREGA:** The computerisation of DRDA and NREGA has enhanced transparency in execution & administration of developmental schemes. The data entry and report generation under NREGA software is functional at DRDA as well as at BIC (Block Informatics Center). NREGA data are uploaded on the site <http://nrega.nic.in>

**Transport Computerisation:** “Vahan” and “Sarathi” software for Transport Department is operational in the District. The unique feature is smart card based issuance of driving license and registration certificate book.



*IT Enabled Citizen-Centric Service*

**BPL Survey:** Below Poverty Line (BPL) survey data of around 10 lakhs families of the district have been stored electronically and are extensively referenced in various works related to socio-economic development schemes viz. public distribution system, Rastriya Swasth Bima Yojna etc.

**Arms License Computerisation:** Details of arms licenses issued by the district administration are maintained through the customised software. The

software generates different type of reports, which helps the district administration in formulating policy for the licensee.

**District Computer Center Society:** District Computer Center Society (DCCS) established in the district in 2005 with District Magistrate as the Chairman and DIO, provides technical support and act as a member for the society. The DCCS has proved beneficial to the students' community at large.

**Website for District:** The website <http://muzaffarpur.bih.nic.in> provides information related to history, geography, voter list, land registration, old age pension etc. It is also useful for anyone wanting to know other details about the district.

**e-Granthalaya:** A library automation software was implemented at B. R. Ambedkar Bihar University, Jawahar Nayoday Vidyalaya and Muzaffarpur Institute of Technology.

**Bhavishyanidhi:** The information of GPF/CPF of the government employee in the district are being maintained using Bhavishyanidhi software of NIC. The system maintains the subscriber details, their contribution, advances, refund etc and generates the necessary accounts with proper check.

**Capacity building & IT Training:** The center conducts computer awareness training programs for government officials regularly. The effort has facilitated smooth rolling out of e governance programs.

**Mahadalit Database:** To provide special benefit to the weakest of the weaker section of society, district administration conducted a survey and prepared a database of Mahadalit at the district level. The survey data was captured and necessary MIS developed to meet the requirements of the administration.

**Panel for Class-IV employee:** The centre maintains a panel of class IV employees using customised software. It has helped the district administration in maintaining transparency during their empanelment. **i**

#### *For further Information:*

#### **District Informatics Officer**

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**Edited by:** Prashant Belwariar



# Dumka : Enabling e-Governance in a Big Way

*Situated in the pristine beauty nestled in the hill ranges, Dumka - also called the second capital town of the Jharkhand state, is fringed with verdant forest and fast flowing rivers. Dumka means 'skirt of the hills' and was named by the Mughals due to the picturesque hills that surrounds the district. The district is crisscrossed by the rivers Ajoy and Mayurakshi, perfect for water sports, white water rafting and parasailing. The vibrant tribal culture can be seen in the lifestyle of the people - simple, traditional with strong community ties. Masanjore Dam on the river Mayurakshi is a beautiful picnic spot located 31 km from the city.*



**R. S. Kushwaha**  
Districts Informatics Officer, Dumka  
[rs.kushwaha@nic.in](mailto:rs.kushwaha@nic.in)

NIC Dumka was setup in 1988 for providing ICT based decision support to the district administration. The centre has played a major role in utilizing technology for good governance. The IT infrastructure of

the district was further strengthened with the installation of VSAT, STM line, Video conferencing facility and LAN which extends up to district Postal and SPOffice.

## **Excerpt of the letter from Deputy Commissioner, Dumka Sh. Prashant Kumar, IAS**

*NIC Dumka is fulfilling its assignments at Treasury, Transport, Consumer Forum, Central Jail, NREGA, GPF, Post Offices and other government departments as well as providing technical support through Data warehouse tools for the analysis of NREGA schemes in the District. In recent days, NIC Dumka has developed Old Age Pensioner Payment System which provides efficient, timeless, transparent and accountable system of pension payment through bank/post office and enable us to implement National Social Assistance Program (NSAP). Your assistance in this project ensured the celebration of "Pension Guarantee Day" on 7th day of each month in the district. Also the dedicated efforts put up by NIC officials during the elections is unparallel and beyond description.*



**District Website:** The district website (<http://dumka.nic.in>), developed by the centre provides information on history, administrative setup, welfare schemes, tourism, schools etc. The information on BPL list, GPF balance slip, PDS, Voter List, Agriculture, Industry etc justifies the effort. Details of public information officers in the website as provided in the RTI Act, has greatly bridged the gap between the people and the administration.

**Video Conferencing:** NIC district center as well as the commissioner's office is equipped with Video Conferencing facility. VC facility set up between the district Civil court

and jail has led to speedier trial of prisoners enabling quicker justice.

## **Projects Implemented**

**Old Age Pension Payment & Monitoring System:** The use of ICT in Old Age Pension Scheme under the National Social Assistance Program (NSAP) has percolated the benefits of e-Governance to the downtrodden. The manual process of sanction and disbursement of the monthly pension, was not only cumbersome, tedious and non transparent, the reliability of the information was also questionable. The district center, implemented the web based application software, which was inaugurated by the Honorable Chief Minister.



*Hon'ble CM Sh. Shibu Soren inaugurating the 'Old Age Pension Payment and Monitoring System'*

**Computerization and Networking of Consumer Forum (CONFONET):** The web based “Case Monitoring System” under CONFONET provides storing the details of cases registered by complainants in consumer courts. The software provides for court wise entry of new cases, daily cause list generation, backlog entry of cases and finally uploading of daily orders and judgments on the website <http://confonet.nic.in>.

**Jail Computerization:** The Prison Management System (PMS) and Visitors Management System (VMS) implemented at the Dumka central jail, eased day-to-day maintenance of prisoners details.

**Kuber:** A web enabled secure, role based 'Treasury Information System' - 'Kuber' has been running in the district treasury office for maintaining treasury related transaction using JharNet a State Wide Area network. Biometric authentication at the level of Treasury Officer was introduced to make the whole system foolproof. The software facilitates operations like DDO's Creation, Fund Allotments, Online Bill Generation, Advice generation for the bank, Receipts, Book Transfers, Direct payments,



*'Kuber' Operational at District Treasury*

capture of GPF/CPF schedules etc.


**GPF Computerization:** The 'Bhavishya Nidhi' software implemented at the district GPF Office, maintains the subscriber details, their contributions, advances, refunds etc. The software generates the necessary accounts with proper checks. The department prepares monthly pay bill in which the GPF/CPS subscription of each employees are mentioned.

**District Transport Office Computerization:** The VAHAN & SARATHI software is implemented at the District Transport Office for registration of vehicle and issuance of license respectively. The provision of issuing Driving License and Vehicle Registration on smart card had been incorporated.

**NREGA Software:** The district has successfully implemented the NREGA software to effectively monitor the scheme's status and employment generation activities. The web based software has proved to be a great tool for implementing social justice.

**Online VAT:** The VAT software provides for compulsory registration of commercial establishments which has led to improved tax compliance, minimized tax evasion and has also brought many new commercial establishments into the tax net.

**IT Training:** District level IT training centre was set up with the purpose of imparting computer awareness training to the government officials. The training center was inaugurated by the Honorable Chief Minister recently.

**Other projects:** Various other projects like 'Samvad' software for monitoring public grievances, MAMTA software & IDSP project in the health sector, AGMARKNET project, Instant Money Order (IMO) at Post Office, Land Record Computerization, DC Court Case Monitoring, Cattle Census are successfully implemented at the district. 

#### *For further information:*

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**Submitted by:** Prashant Belwariar

# International e-Gov Update

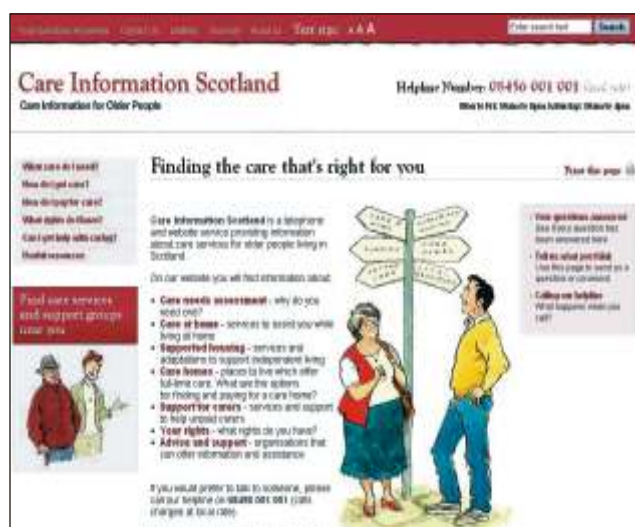
## UK: Government launches one-stop shop for data

A major new website launched to the public gives anyone who wants to use it free access to UK government data in one place. The site contains more than 2 500 sets of data from across the UK government. All of the data is non-personal and in a format that can be reused by any individual or business to create innovative new software tools, such as applications about house prices, local amenities and services, or access to local hospitals.

So that people can continue to create new products in the future, [data.gov.uk](http://data.gov.uk) will be using a new, open licence, which allows government-owned data to be freely reused by anybody. In fact, freeing up public data will create major new opportunities for businesses. By allowing industry to use data creatively they can develop new services and generate economic value from it.

Making public data available for re-use is about increasing accountability and transparency and letting people create new, innovative ways of using it. Government data should be a public resource. By releasing it, we can unlock new ideas for delivering public services, help communities and society work better, and let talented entrepreneurs and engineers create new businesses and services. This is a tremendous opportunity for UK firms to secure better value for money in service delivery and to develop innovative services which will help to grow the economy.

For more info: <http://data.gov.uk/>



## One Stop Shop For Care Information For Older People In Scotland

Up and down Scotland there are fantastic care services for older people - helping older people to remain independent in their own homes where possible and providing quality residential care where necessary. To make all this process easier, a new information service launched in Scotland.

Care Information Scotland (CIS) offers a single point of information - through one phone number and web address - on the care available for older people throughout the country. It offers detailed information for older people and their families on the range of community care services available from local authorities, the private and voluntary sector.

Care Information Scotland (CIS) will change all that, providing clear information that is thorough and easy to understand. It will make life much easier for anyone seeking information - in what can often be a crisis situation for a family - on care and support for themselves or for older relatives. The new service communicates clearly eligibility for care, access to care, costs and the choices people have allowing them to make informed decisions.

For more info: <http://www.careinfoscotland.co.uk/>



## A one-stop-shop for online public procurement in Macedonia

Representatives of the 'e-Gov Project' and the Public Procurement Bureau of the Former Yugoslav Republic of Macedonia announced the launch of a new system that integrates the eProcurement system (EPPS) with a software solution for publishing contract notices and notifications.

Developed by the Public Procurement Bureau, the integrated software creates a one-stop-shop for public procurement in the Former Yugoslav Republic of Macedonia, improving the efficiency and transparency of the public procurement system in the country.



The eProcurement system is a significant tool in the fight against corruption and bureaucracy, contributing to a transparent public procurement system. The system extracts the human and subjective factor in all stages of procurement through the use of modern technologies, thus reducing bureaucracy and increasing the Government's efficiency.

For more info: <https://e-nabavki.gov.mk/>



## Virtual Procedure Office, Catalonia, Spain

For the first time in the Spanish Autonomous Community of Catalonia, over 1 000 eGovernment services for both citizens and companies can be found on a single website; the Virtual Procedures Office (VPO). Among all eGovernment services through the virtual office, 160 can be entirely carried out online.

Virtual procedure office is more accessible, efficient, transparent, personalized, and above all focuses on interconnected administration of

Catalonia. Online services available include applications for large family certificates, reductions in the water tax or certificates of habitability, as well as enrolment for certain education exams in order to obtain the corresponding degree.

As far as businesses are concerned, entrepreneurs can perform, among other operations, the preliminary notification of construction works, the notification of work related accidents and subscriptions to the new public administration project tenders. In fact, Virtual Procedure Office is the product of the aim to simplify and make administrative procedures more agile, in order to make Catalan companies more competitive, qualitative, and competitive.

For more info: <http://www.gencat.cat/>

Compiled by: Informatics Team.

# Cyber Governance

*A look at some of the recently launched Indian Government Websites....*

## Cabinet Secretariat, Govt. of India (<http://cabsec.gov.in/>)

The newly launched website of cabinet secretary is one of the few sites in the government web space that is fully compliant to guidelines for Indian Government Websites. The website is friendly to assistive devices like screen readers and has a host of features that make it accessible to the differently abled. The user can adjust contrast, decrease/increase font size according to their needs and preferences. The whole site can be operated by key board alone. The site, in particular, provides information about the functions of the Cabinet Secretariat and detailed guidance about the allocation of business rules of the Government of India. Within the site, information about the Cabinet Secretariat's Committee on Disputes, Press releases, Tenders, Circulars and RTI are also made available. This easily navigable and visually appealing website of Cabinet Secretariat also render a slew of information from different sources such as the department of Public Grievances, National Authority Chemical Weapons Convention, Department of Performance management and Govt. of India Directory. The Information is provided and updated by *Cabinet Secretariat, Govt. of India.*



## Project Uday, Government of Madhya Pradesh (<http://projectuday.nic.in>)



The Urban Administration & Development Department, MP has come out with a lively site for their indigenous Project Uday. The Project Uday which is functioning under Water for Asian Cities programme is all about Urban Water Supply and Environment improvement and Sanitation in the four cities of MP viz: Bhopal, Gwalior, Indore and Jabalpur. The content rich website provides a good deal of information on the organization, financing plans, objectives and scopes as well as the components and outputs of the project. Apart from this, information on tenders, events, reports, publications are also published regularly in the website.

The websites provides an excellent platform for professionals allowing them to discuss and exchange information on technical and management issues enabling competency development.

## MSME development Institute, Mumbai (<http://msmedimumbai.gov.in>)

The Small scale industry is playing a predominant role in driving economic growth and hence it is imperative to raise professional standards. Keeping the fact in mind, the MSME development institute, Mumbai unveiled its official website for its stakeholders. The website gives a hawk eyed view about the workflow of the institute in a very detailed structure. A user can browse on the government policies towards small scale industries, and the ministry's role in promoting and facilitating Micro, Small and Medium enterprises within the state. Details about the various programs, schemes, development and trainings, acts, rules, notifications and administration can be easily access from the content rich website. This dynamic website showcases the implementation of activities of promotion and development in the SME sector in Mumbai.



*Contributed by:* Lokesh Joshi, NIC

# National Portal Update

## Web Ratna Awards

Today, almost every Government department is trying to leverage upon the benefits of ICT to provide better services to the common citizen. A number of e-Governance initiatives have been undertaken by the government departments at Central and State levels. Some of the e-Governance projects are already running successfully in different parts of the country. An endeavour like the National Portal provides an ideal front-end for diverse services and information from a single point.

National Portal of India, 'india.gov.in' has been launched as a part of Mission Mode Project under the National e-Governance Plan (NeGP) by National Informatics Centre, <http://www.nic.in>, Department of Information Technology, Government of India. The portal has proved as a one-stop-solution for all information and services related to the Government of India.

In order to promote more and more innovative e-Governance initiatives and to give due recognition to the exemplary efforts in this direction, the Web Ratna Awards have instituted under the ambit of the National Portal of India.

The awards aim not only to recognize the noteworthy and sustainable initiatives in the realm of e-Governance but also to disseminate information about such initiatives for others to customize the replicate the successful solutions. These awards would reflect the outstanding ICT initiatives in full categories:

1. Citizen Centric Service
2. Public Participation Service
3. Outstanding Web Content
4. Innovative Use of Technology
5. Comprehensive Web Presence Ministry/ Department
6. Comprehensive Web Presence State
7. National Portal Coordinator (NPC)
8. NIC Coordinator of the National Portal (NCNP)

These awards were announced some times ago for nominations. Nominations were received from all over India and have been reviewed by committee of experts & our esteemed jury. The awards will be conferred shortly in Platinum, Gold, and Silver categories.

## Informatics: News Online

Informatics, an e-Governance publication from National Informatics Centre, <http://www.nic.in>; Department of Information Technology Ministry of Communication and Information Technology, Government of India, since its inception, has been the flag bearer of technological information to the readers across the world. From a couple of article, it has diversified into a treasure of technological updates and others.

News Column of Informatics is an agglomeration of news focusing on ongoing, forthcoming as well as prospective ICT initiatives and e-Governance activities within India. The news column is got wide popularity among the various portals of NIC.

Due to overwhelming contributions/over flooded request for News Column in printed version of Informatics and paucity of space, we had started a News Online section where our contributors can publish the news instantly. More over, the printed version of Informatics is a quarterly activity, whereas online version of Informatics, <http://informatics.nic.in/> gets updated on daily basis. Thus it gives our contributors and advantage to put the news fresh without losing its essence.

Your online contribution would reach to millions of our readers on the latest developments in the field of ICT and e-Governance. Even though you are not an NIC correspondent, but wish to contribute e-Governance news in the online version of Informatics, please get in touch with our correspondents (refer to correspondents' details given at the end of the bulletin).



# In the News

## Hon'ble president inaugurates SWAN at Secretariat, UT of Lakshadweep, Kavaratti.

The Lakshadweep State Wide Area Network (SWAN) has been inaugurated by her Excellency Smt. Prdaibah Devi Sing Patil, Hon'ble President of India, at a glittering function held at Secretariat of UT of Lakshadweep, Kavaratti on 24th December 2009.

The occasion was blessed with the presence of the Administrator of the U.T. of Lakshadweep, along with Her Excellency's spouse, local Member of Parliament and all Heads of Departments of the administration besides public representatives. The Hon'ble President of India spoke with the Sub Divisional Officers of the islands of Agatti, Androth and Minicoy, through the newly established video conferencing system.



*Hon'ble President of India interacting with SDOs through VC*

This project envisages connecting around 420 offices across Lakshadweep. This enables videoconferencing with the Sub Divisional Offices at all inhabited islands. The Public redressal is also one of the main features of this system. The administration would be brought to very close to the people with speed and transparency.

During her Excellency's speech, she focused on providing all round connectivity between islands and the mainland. More efforts needed to improve ship, boat and air services to develop regular and effective transport linkages. She appraised SWAN, an ICT initiative to provide connectivity between the various Government departments. It will be a platform for e-Governance and other IT enabled services. SWAN shall help in the improvement of education, health awareness, providing information about the weather, entertainment and news delivery services. She also wished the bandwidth is increased, internet facilities be extended to the people for their business and personal use.

***K.P. Mohamed Koya, Lakshadweep***

## e-Governance Stall at 'Kissan Mela 2009-10', Alappuzha, Kerala



*e-Governance Stall at Kissan Mela*

An e-Governance stall was setup at the annual 'Kissan Mela 2009-10' held at SDV Grounds, Alappuzha from 19th to 27th December, 2009. The mela is an event by the Agri-Horti Society in association with Department of Agriculture, Government of Kerala and Botany Department, S D College, Alappuzha. It attracts people from all walk of life especially farmers. Farmers and other stakeholders exhibit and market their produces directly.

As an innovative step, with the initiation of the District Collector, who is the President of the Agri-Horti Society, NIC Alappuzha District Centre had setup the e-Governance stall under ATMA with the expert guidance and cooperation from the State Centre and Agricultural Informatics Division of NIC Head Quarters, for giving awareness about the e-Governance initiatives in Agriculture by Central and State Governments. The stall was equipped with a Touch Screen Kiosk with internet

connection, an LCD TV for projecting Multimedia presentations and videos of achievements, postures and banners highlighting the features of the portals. Brochures and notices were distributed to the visitors. Good response was received from the visitors of the stall, especially the farmers.

Speaking on the occasion, Sh. P. Venugopal IAS, the District Collector says "The e-Governance stall setup by National Informatics Centre during KISSAN MELA 2009-10 was an excellent facilitation centre to the farming community of the District, giving awareness on the possibilities open to them through Information & Communication Technology.

This in fact benefited a large section of farmers who were, hitherto, unknown to the facilities that the Government of India and the State Government are extending to them.”

*P. Parvathy Devi, Allappuzha*

## “Gold” National e-Governance Award for Madhya Pradesh Education Portal

The Education Portal [www.educationportal.mp.gov.in](http://www.educationportal.mp.gov.in) developed by NIC, MP has bagged the prestigious Gold National E-Governance award of GoI. The award was presented during the 13th National e-Governance Conference organized jointly by DARPG, GoI and Department of IT, GoI at Jaipur on 18th and 19th Feb '10.

The award was presented by Smt Prabha Rao, Hon'ble Governor, Rajasthan in the presence of Sh. Prithviraj Chauhan, MOS (Prime Minister's Office) and Sh. Sachin Pilot, MOS (Communications & IT). DG (NIC) was also present during the award ceremony.

The project is being continuously being enriched and enhanced with new facilities and services since last one year. It has also won several prestigious awards under different categories which includes MP State Government e-Governance Award 2009 Best Project under “IT for Masses” category; CSI Nihilent e-Governance Award 2009 Best Project under Department category; Manthan South Asia e-Governance Award 2009- for effective public service deliveries through innovative IT applications.

Sh. Shivraj Singh Chauhan, Hon'ble CM of MP, Smt. Archana Chitnis, Minister (School Education), Sh. Avni Vaish, Chief Secretary, GoMP has also congratulated the project team for this feat.



*The project team - Manoj Jhalani, Secretary, Education, GoMP, M. Vinayak Rao, SIO; CN Rao, STD; Sunil Jain, TD; Sanjay Garg, SSA & Vipin Bose, SA and other team members of Education Department received the award.*

*Santosh Shukla, Madhya Pradesh*

## SMS based complaint receiving system launched by J&K Police at Jammu



*Sh. Ashok K. Gupta, IGP, Jammu launching the SMS Based Service for Citizens*

Recently a SMS based Complaint Receiving System, as a supplement to Dial 100 was inaugurated by IGP Jammu for the general public of Jammu City in which the citizen can send a SMS based complaint to the PCR Jammu through their mobile which will be then forwarded to the concern Police Station / Officer for quick necessary action. Citizens can send complaint related to Harassment, Accidents, Traffic Jams, Strangers, Dangers, Corruption Ragging, Domestic violence etc without visiting the Police Station.

NIC Jammu & Kashmir has implemented the software with the technical support/guidance of CIPA Team of NIC Andhra Pradesh at Police Control Room Jammu (J&K) and the same software will be replicated at Srinagar soon.

*Jit Raj, Jammu & Kashmir*

## Kudos for NIC Rajasthan

NIC Rajasthan added a feather in its cap by winning three awards recently. The first one being the Manthan Award South Asia 09 (MASA) held at NCUI Complex New Delhi on the 19th December 2009. The e-Gram project was awarded under the e-Governance category. The prestigious award was given away by Hon'ble Minister of State for Communications & Information Technology Sh. Sachin Pilot and received by SIO Rajasthan Smt. Indu Gupta, Sh.



*Award received by NIC Rajasthan officials from Hon'ble Minister of State for C&IT, Sh. Sachin Pilot*

Prashant Mittal TD, Sh.Chandan Sen & Sh.Manoj Nagar (PSA's) and Sh.Arun Mathur SSA. Similarly another ICT Project titled "Pregnancy & Child Tracking System" under the e-Health category also received an appreciation at MASA 09.

Apart from these awards, NIC Rajasthan also received two awards at Jaipur. The first being 'PayManager' which was awarded the e - Rajasthan 2009 Public Choice award under G2C Category and the second being the e-Gram project ,which was awarded the e-Rajasthan2009 Jury Award under the G2C Category respectively. A team of NIC officials Sh.Deepak Bhargava TD, I.D. Sh. I.D Variyani & Manoj Nagar PSA's and others received the prize. Thus it was double kudos for e-Gram.

*Chandan Sen, Rajasthan*

## Inauguration of online registration of employment exchanges at Kohima

Employment Exchanges Computerization for the state of Nagaland is being formally inaugurated by the Parliamentary Secretary for Housing, Labour and Employment, Er. T. Saku Aier on 19th February 2010 at Regional Employment Exchange Office, Kohima.

Congratulating the Department for implementing the computerization project, he also lauded the NIC for the technical support given and encouraging the officials to replicate the project to other districts of the state.

Speaking on behalf of NIC, Nagaland, Sh. Kemvu Elah, PSA and Project in Charge said the project could be successfully implemented in the Department due to the support given by the Director and his officials in the implementation of the Project. He said the Employment Exchange computerization is one of the National e- Governance Mission Mode Project which is being implemented across the country. With the implementation of Employment Exchange Computerisation, it would help the Department to maintain records in a schematic manner and the detail information about the registered job seekers and employer can be had from anywhere and anytime.

Joint Secretary, Labour and Employment, K. Miasalhou and Director, Employment and Craftsmen Training N. Panger Jamir also gave short speeches. The programme was attended well by the Departmental officials and Media.

*Swadesenuo Natso, Nagaland*



*Parliamentary Secretary inaugurating the Employment Exchange Online Registration*

## Online quiz gallery application



*Students attending the Quiz at IITF-2009, New Delhi*

The S&T Division, Ministry of Earth Sciences had developed an application "Online Quiz Gallery". It was developed using PHP with MySQL as backend RDBMS support. Apache acts as Web Server. The resources of application platform are totally drawn from open source. This Quiz Gallery application also developed on Java and PostgreSQL platform. The software is used to test the knowledge of people in the area of Earth Sciences, Atmospheric Science and Ocean Science, which encourages and brings awareness amongst school children.

The Ministry of Earth Sciences organize Quiz for the Earth Sciences, Atmospheric Science and Ocean Science & Technology at places like IITF-



2008 & 2009, National Science Congress and various science Museum of India using stated application. Around 7000 participants have been participated in the Quiz conducted by the ministry in various science events during the last two years. The ministry also provides gifts and certificates to the participants those who scores above 80%.

*Sanjay Gahlout, NIC HQ*

### 3 Days Workshop on e-Granthalaya and NewsNIC Software at NIC Kerala

Three days “Workshop on e-Granthalaya and NewsNIC Software for Automation and Networking of Libraries” was conducted during 23-25th Feb, 2010 at National Informatics Centre, Trivandrum, Kerala. The workshop was sponsored by the Kerala State Library Council, Trivandrum, Kerala.

The workshop was conducted for the Automation of the Public libraries exists in Kerala State. The workshop was inaugurated by Sh. Bala Krishnan Nambiar, Secretary, KSLC while keynote address was delivered by Shree Ram Kumar Matoria, Technical Director, NIC, New Delhi. Sh. Ajith Brahmanandan, Technical Director, NIC Kerala welcome the participants and delivered the introductory remarks. The e-Granthalaya workshop attended by 22 number of library officers from various public libraries.

The Workshop was Co-Ordinated by Sh. S. Manohar, SSA and Ms Sibi, A P, Scientific Officer from NIC Kerala. The participants were given exhaustive training / hands-on for use of various modules of the e-Granthalaya Software and Software CDs were distributed to all the participants.



*Participants during Class*

*Ram Kumar Matoria, NIC HQ*



*Prof. Sh. S.N. Kaul, Principal, MIT COE, exchanging the MOU at MIT, Pune*

### Signing of MoU between NIC and MIT COE, Pune

The Memorandum of Understanding (MoU) has been signed between NIC and Maharashtra Institute of Technology College of Engineering (MIT COE), Pune regarding the Setting up of CollabCAD Training & Technical Support Centre at the Institute on 23rd Feb 2010. Prof S.N Kaul, Principal, MIT COE signed the MoU between NIC and MIT COE, Pune.

Prof. Sh. Pramod E. Chaudhari, HOD, Mechanical Engineering Department was present on occasion. Dr Sh. S.N.Kaul emphasised the usefulness of the CollabCAD Software for the Faculty and the Industries around the region of Pune. Dr. Sh. Manjesh Karad, Executive Director MIT COE, Pune appreciated the efforts of setting of NIC in setting up of CollabCAD Centre at MIT COE, Pune. Sh. K.S.Nagesh TD, NIC represented

from NIC during the occasion of signing of MoU at MIT COE, Pune.

Later CollabCAD Workshop was conducted by Sh. K.S. Nagesh for the professors of MIT COE, Pune. The participants created several CAD Models using the CollabCAD Software during the Workshop. MIT College of Engineering, Pune has the distinction of becoming the first educational institute to setup the CollabCAD Training & Support Centre in the State of Maharashtra.

*K.S Nagesh, NIC HQ*

*For latest and up-to-date news and information about e-governance activities across the Country,*

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# IT Audit : Learn, look, leap forward and grow steadily

*IT Governance expects to leverage technology as a competitive advantage to streamline and solve business problems and create agility and opportunities. But, at the same time it is also expecting to deliver these capabilities with smaller budgets and fewer resources. In fact, what experience has shown is that when organizations suffer loss or any compromise or any security breach, it is due to a missing control i.e. a preventive or detective or reactive.*



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The usual outcry after a loss is to rush and protect. In today's management term it is called as "fire fighting approach". Compromise can make a good umbrella but with a poor roof. The solution lies in managing the system by setting of planned and systematic activities that ensures conformance to requirements, standards and procedures.

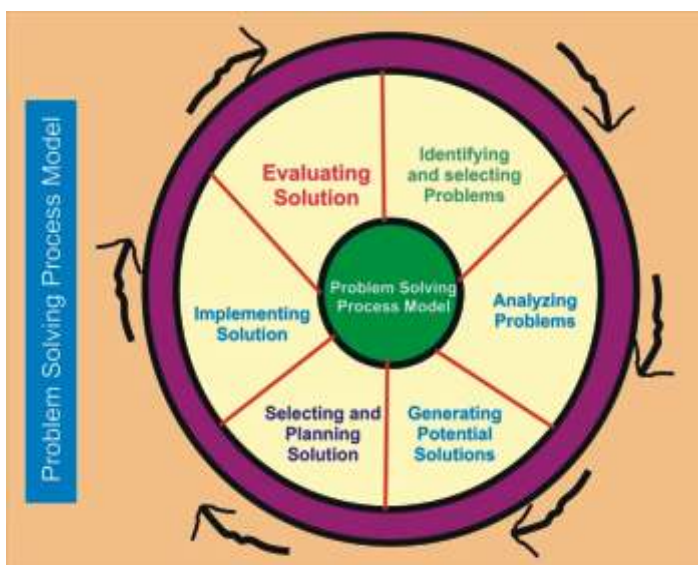
An IT Audit Review is the process of collecting and evaluating evidence of information systems, practices and operations. It evaluates and determines whether the information systems are safeguarding assets, maintaining data integrity, and operating effectively to achieve the organization's goals and objectives. The main objective of IT audit has been to look into the availability, confidentiality and integrity aspects of the information system. It is a monitoring or feedback mechanism rather a "fault finding mission".

The audit review highlights and pin-

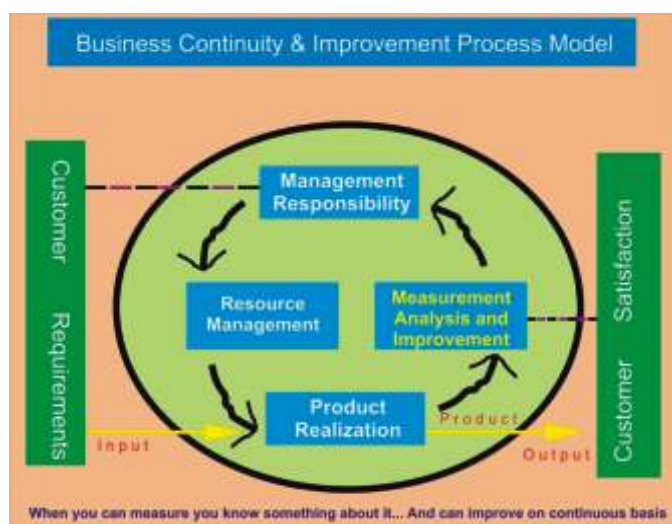
points about the organization's computer systems available for the business at all times when required; and that the information in the systems is disclosed only to the authorized users. IT Audit focuses on determining the risks and the assessment of the controls to mitigate these risks. It verifies whether IT management has developed an organizational structure and procedures to ensure a controlled and efficient environment for information processing. And, the systems and applications are adequately controlled to ensure valid, reliable, timely, and secure input, processing, and output at all levels of a system's activity.

The controls can be protective, detective and reactive. Protective or preventive controls serve to proactively define and enforce acceptable behaviors. Any control that performs a monitoring activity can likely be defined as a detective

control. It also detects the deficiency i.e. some control of protective or preventive control somewhere has failed. Reactive or corrective controls typically work in response to a detective control.



With the increasing use and faster growth of e-governance initiatives, IT systems and applications have pervaded in government departments and are making them in use to leverage the technology. The scope for IT Audit has come in way for evaluation of controls and the effectiveness of IT systems investment in achieving organizational objectives and monitoring activities. This can surely help in understanding backward (what have been done?) and moving forward (what more needs to be done to mitigate the risks involved?) in improving the IT system.



The broader processes w.r.t Information Technology Audit has been the Planning, Studying & Evaluating Controls, Testing & Evaluating Controls, Reporting and Follow-up. The audit review tries to highlights about department's IT policy, about correctness and reliability of data captured in the system, about the adequacy of controls w.r.t input, process and output. Moreover it also evaluates whether relevant business rules have been duly incorporated in the application software. The audit review also evaluates the application of suitable security controls, business continuity plans and internal control and monitoring mechanism.

Audit findings arising from the review highlights the problem areas e.g. inadequacy of users' requirements specifications, training usage, IT systems acquisition and its implementation, security policy, application control, validation checks, internal controls etc. The review gives the insights of non-compliance, missing

controls and risks involved in the implementation of IT system. The identification of problems gives the scope for improvement. The corrective measures can help to mitigate the risks and improve the system as a whole to benefit the organization.

IT governance is about adopting and adapting industry standards to improve business alignment, address compliance requirements, manage and preserve assets and provide technology services that can help the organization meet its business goals and objectives. This necessitates designing of controls for better management of technology risks for the improved and perceivable visibility of effective compliance and risks management.

The biggest challenge lies in the management and monitoring the various processes. The processes are quite complex, resource-intensive and time-consuming. They also involve managing frequently changing organizational structure and keeping pace with the changing business and partner relationship to assess risks. Moreover managing multiple process areas viz. policies, procedures, controls and frameworks to keep projects on track and comply the legal and regulatory requirements is another big challenge.

Overall the challenge is not only to retain the stimulus of e-governance but also making a graduated shift to adopt a single framework for managing controls and standards; application of simultaneous and consistent process across multiple regulatory, legal and audit requirements; reduction in duplication of effort to unify multiple silos and fulfill internal and external compliance requirements and ensure the visibility of core processes across the enterprise and driving down the implementation costs. Guidelines and compliance matrix for Indian Government website is one of the good examples of designing of controls for their compliance. The challenges lies in its implementation is to enhance the usability and functionality. Let the learnings coming through internal and external audit make us understand and look forward to address these challenges to grow an IT system progressively and steadily. **i**



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