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UNION MINISTER inaugurates DGRC

VIVID:

National Meet on Grassroot Informatics

BIHAR STATE

Soaring High with Excellence in m-Governance

EAWAS

House Allotment made Simple and Easy

ESRT

Simplifying Route Permit Issuance & SRT Payment

SAMRAKSHANE

Online Portal for Crop Insurance

SILVER JUBILEE ISSUE

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EDITORIAL

he speed of change has never been greater at any point in history than it is in today's age. Trends in all walks of life are displaced every few weeks, technologies become obsolete in months and companies that were giants once are sold for pittances in years. In such a case, for an exercise

to survive 25 years is a remarkable feat and one that I am happy to report Informatics has accomplished.

Change is a double edged sword. On one hand, it drives the civilization forward but on the other, the prospect of frequently starting afresh and struggling constantly to keep up is rather daunting. Thus, striking a balance between change and constancy is the key. Informatics started out as a quarterly 8 page long pamphlet and has now turned into a 48 page magazine, keeping up with the times. But at the same time, the vision for the publication is still identical to what it had been in 1992, informing people about the programs of the NIC. I believe that we have succeeded marvelously in the venture to strike a balance between the old and the evolving.

As we move into a new leg of our collective journey, I sincerely thank everyone who has been involved with the publication in any capacity and would like to express my hope that their continued love and support would persist, driving us further on our paths.

We have two Spotlights in this special edition, covering the important events organized by the NIC recently; Inauguration of the DGRC in Patna and VIVID, the National Meet of Grassroot Informatics. In an exclusive interview with our Patron, Ms. Neeta Verma, she talks about the origin and journey of Informatics as it completes 25 years of publication. Further, we present a cornucopia of articles covering a wide variety of initiatives and programs of the NIC. Our usual features like In The News and International eGov Updates are here as always.

We hope that you find the issue engaging and informative.

Happy reading.

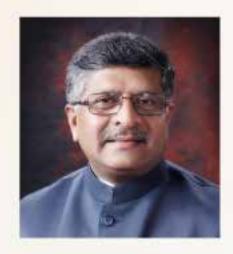
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RAVI SHANKAR PRASAD Minister of Law and Justice & Electronics and IT Government of India



MESSAGE

I am delighted to learn that INFORMATICS - eGovernance magazine published by National Informatics Centre, has completed 25 years of publication. I am sure it has contributed immensely in collaboration of new ideas and dissemination of information. As we move towards greater digital convergence, the need for sharing of ideas, new initiatives and success stories will only help moving towards a harmonious digital convergence. My warm compliments for achieving this milestone.

National Informatics Centre (NIC), has been playing a stellar role in developing, supporting and spreading the digital ecosystem of India and it stands today as a key pillar of Digital India. Every member of NIC has been contributing towards achieving the goal of digital governance. However, on this occasion I urge the scientists of NIC to take lead in innovations in the new areas of digital ecosystem like big data, artificial intelligence, virtual reality, cyber-crimes, GIS solutions, digital payments etc. I hope the future editions of INFORMATICS magazine would share views and works of NIC in these new areas as well.

I wish this effort my best wishes.

(Ravi Shankar Prasad)

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P.P. CHAUDHARY

Minister of State

Law & Justice and

Electronics & Information Technology

Government of India



Message

I am extremely delighted to know that Informatics, the e-Governance magazine published by the National Informatics Centre (NIC) is completing 25 years of publication with this Issue.

Information Technology (IT) has played the role of a catalyst in propelling India to leapfrog ahead in the 21st century. As the transformative and visionary leadership of Prime Minister Shri Narendra Modi transfuses with the exuberant and skilled workforce of our society, the nation is marching ahead on the path of creating a Digital India in the truest sense.

Digital India Program, the marquee initiative of the Government of India, aims at imparting effective and efficient digital delivery of public services to citizens at their doorstep. Under this program, several landmark initiatives such as Aadhaar, MyGov, DigiLocker, eSign, e-Hospital, Jeevan Praman etc. have been undertaken with an objective to transform our nation into a digital economy and an inclusive knowledge society.

Since its inception in the year 1976, National Informatics Centre has been instrumental in transforming the landscape of e-Governance in the country. As the prime builder of e-Governance applications across the 36 State Governments and over 650 Districts in the country, it will not be an overstatement to consider NIC as the backbone of the Digital India program.

I hope that the Informatics magazine continues to highlight the hard work put in by the organization to develop and implement outstanding initiatives in delivering e-Governance to the citizens across the nation.

My best wishes for the future.

(P. P. Chaudhary)

Bihar State's ICT Initiatives

Soaring High With Excellence In m-Governance

NIC Bihar has been identified as a Mobile Competency Centre and has been involved with the design and development of several key **Apps for various departments** at a variety of levels of administration.

Edited by PRASHANT BELWARIAŔ

ational Informatics Centre (NIC) in Bihar has been actively involved in designand developing software for improving the delivery of services offered

by Government Departments and District Administrations by leveraging the ICT infrastructure of NIC (NICNET, NKN, LAN, Mini Data Centre, Videoconference studios, messaging service, Webcast facilities etc).

Not only several Mission Mode Projects (MMP) and Central Projects have been implemented successfully in Bihar like Digital Land Records Modernization Programme (DILRMP), Transport MMP, ePDS MMP, ePanchayat MMP, IVFRT MMP, eOffice MMP, eProcurement MMP, PRAGATI Platform, eSamiksha/ Bihar eSamiksha, ePMS, CPGRAM, NDAL-ALIS, SPARROW, PRISM, Track Child etc. but Mobile Governance has also been catching up very fast and various mobile-based channels are being leveraged to deliver the services to the citizens through mobile devices.

NIC Bihar has been identified as a

Mobile Competency Centre. Key Mobile Apps developed for various departments of Bihar are Electrical Assets Imposition System for North and South Power Distribution Company, Gramin Tola Sampark Nischay Yojana (GTSNY) for Rural Works Department, Spot Energy Billing System for Power Distribution Companies, eLabharthi App for Social Welfare department etc.

A number of digital ecosystems have been created in various socio-economic sectors like Agriculture, Co-operative, District Administration, Education, Energy, Forest, Food & Consumer Protection, Home Affairs, IT & Digital India Programme, Judiciary, Land & Revenue Reforms, Rural Development, Rural Works, Social Welfare, Transport and various other departments for digitization and improving delivery of online services.

In this brief article, we will take a look at some of the prominent initiatives of NIC Bihar and the various digital eco-systems and digital interventions created here.

I-BHUGOAL

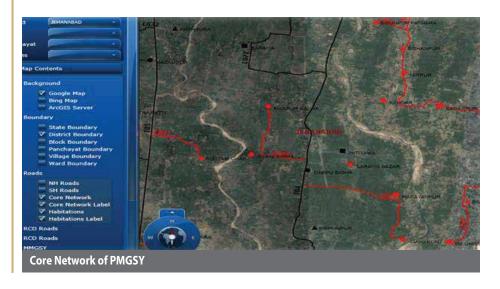
(Bihar Infrastructure Mapping GIS Project)

The main aim of this project is to establish "Bihar GIS" as a tool to represent





RAJIV RANJAN Scientist-D rajiv.ranjan@nic.in

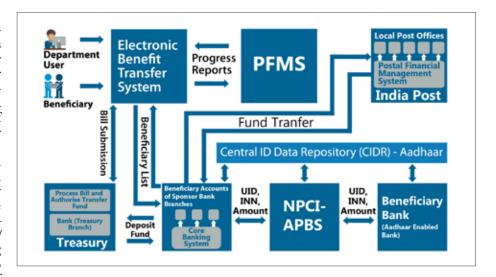


resources (natural as well as man-made) for location specific planning, decisionmaking and monitoring. The project has as its objective, the establishment of Bihar State Spatial Data Infrastructure for Multi-Layer GIS for planning and eGovernance by taking advantage of existing & available data. This is a joint initiative of the IT Department, Government of Bihar and National Informatics Centre, Bihar. This project integrates GIS, GPS, and Satellite Imagery to capture location specific information. GIS project now integrates "Mobile based eGovernance Services" to access and update eGovernance applications through Mobiles/ Tablets. Mobile technology is being introduced to bring about easy access to applications and increase the reach of applications to remote locations. The Mobile-based framework established integrates MIS, GIS and Mobile Technology. This project has won the "GOLD Medal" in National eGovernance Awards in the "Innovative use of Technology" category.

TOLA CONNECTIVITY IDENTIFICATION APP

(Rural Works Department) In order to provide connectivity to all the





Architecture of electronic fund transfer using PFMS

remaining 31,000 habitations which have not been connected through Pucca roads, a survey has been undertaken. This mobile and GIS based application allows the identification of missing tolas, capturing the length of the roads to be constructed, availability of land, cost of land in case of private land and current status of road. The survey will help in preparation of DPR and monitoring of roads.

E-LABHARTHI

[Digital Ecosystem for Social Pension Schemes

Digital ecosystem in social security pensions for direct benefit transfer comes out as one of the excellent examples of eGovernance which can obviate many problems like wastage of public funds, corruption and the role of middlemen who restrict the beneficiaries from getting their benefits in time.

The e-Labharthi System has been envisaged as a major transformation in electronic service delivery and financial inclusion which bypasses the pain points of the existing service delivery mechanisms. Funds can be transferred by the banks directly to the bank accounts of identified beneficiaries. The Electronic Benefit Transfer system will transformed to accommodate newer technologies and shall be further customized in accordance with the feedback provided by the customers in a later stage. NPCI has introduced advanced

payment service such as Interbank Mobile Payment Service (IMPS) which uses mobile devices to transfer fund to other bank accounts in real time. 67.44 Lakh beneficiaries under six schemes have benefitted from the scheme with an estimated Fund Transfer of 1700 Crores (in seven months) in 38 districts. Jehanabad was the pilot district where the scheme was launched. It is estimated that the State Government may save more than Rs. 1000 crore per annum towards payments of pensions in different schemes with e-Labharthi.

SEITRA

[Smart Energy Infrastructure and Revenue Administration System]

Smart Energy Infrastructure and Revenue Administration System (SEITRA) is an integrated framework of web, mobile and GIS technologies to manage electrical infrastructure and produce energy bills for the consumers. ICT based solutions have been implemented for Mobile and GIS based modeling of electrical infrastructure mapping and planning, survey of connected and unconnected households for electricity infrastructure planning, project monitoring, handling grievances, and monitoring & execution of projects, tracking the habituated defaulters in bill payment thus enhancing the revenue collection, spot electricity billing through Mobile App, building up appropriate Management Information System (MIS) for monitoring revenue

collection in its totality, thus helping decision making and establishing modern web-based interface for greater transparency between the Electricity Board & its consumers.

MOBILE BASED SPOT BILL-ING OF ELECTRICITY BILLS (Bihar Power Holding Corporation)

Developed for Spot Billing of Electricity Bills, this Mobile App comes with a Bluetooth printer provided with the device so that the electricity bill/receipt of payment can be given to the consumer on the spot. This has been developed for the Bihar Power Holding Corporation.

SURVEY OF MUKHYA-MANTRI GRAMIN VIDHYU-TIKARAN NISCHAY YOJNA

(Bihar Power Holding Corpora-

One of the seven Nischay projects undertaken by the current government is to ensure that electricity reaches to each and every household. The Mobile App is being developed for capturing information of access to electricity of 2.8 Crore households of Bihar.

常 B ... 日本公庫 12:22 BENEFICIARY DETAILS UPDATION 000001419332 neficiary Name | ASHIYA KHATUN MD GAFUR 365000057953 AADHAR No. 23930000545885 IFSC PUNB3322222 9525701671 SUBMIT 4 0 eLabharthi App

ELECTRICITY INFRASTRUC-TURE MAPPING OF BIHAR APP (Bihar Power Holding **Corporation**)

Aimed at helping in GIS mapping of electrical infrastructure such as GSS, PSS, Poles, Transmission Lines etc. the App is a very important tool for the Electricity Department. Armed with the digital data of the Electricity Infrastructure in the state, the Department can take necessary steps for the development, maintenance and expansion of the infrastructure.

BIHAR PANCHAYAT ELECTION 2016

NIC has extended total ICT support in recently concluded Panchayat Elections including preparation of Voter List, Deployment of Polling Personnel for Voting, Counting. A centralized database of all candidates winning or losing along with their contact details has been created. Online counting from the Block level and uploading of the details of the result was made available in real-time.

Real time uploading of counting data has made the counting process transparent and resulted in minimizing court cases due to conflicts arising from the counting procedure.



Availability of the information related to 7.5 lakh contesting candidates and 1.59 lakh winning candidates is very useful for analysis and monitoring by the State and District Administration.

DIGITAL ECO-SYSTEM FOR FARMERS

Agriculture Department, Government of Bihar has initiated subsidy distribution through a common platform called Online Farm Mechanization Application Software (OFMAS). OFMAS allows farmers, dealers and manufacturers to sell and purchase farm implements in a transparent and cost effective manner. OFMAS is a role-based and workflow based online web application (http://krishi.bih.nic.in). The application offers various G2G, G2B and G2C services. Government officials can use the application for monitoring the entire process at various levels. Dealers can use the system to easily approach the farmers for selling their products while farmers can apply online for availing subsidy on farm machinery. Built-in SMS feature provides timely alerts at various stages of processing of application.

E-PACS

(Co-operative Department)

e-PACS is a mobile and web-based





solution designed and implemented to facilitate paddy procurement through PACS (Primary Agriculture Credit Society) and Vyapaar Mandals across Bihar. The payments made to PACS and farmers are also monitored using the application. This is a G2G initiative by the Co-operative Department, Government of Bihar, to track paddy procurement, its milling & delivery of rice by millers through a Mobile App. This application solves the problem of information gap observed in paddy procurement, conversion to rice and delivery & subsequent management of rice at the Depots. The application now has been integrated with Farmer database. Farmers need to register on the portal with land details, rent receipt, Personal ID and first page of Bank Passbook. Due verification by Block office is completed and a registration ID is provided to the farmer. Provision has also been made for those farmers also who cultivate on others land. They have to submit a self certified form duly verified by Kisan Salahkar. The mobile App is preloaded with the list of registered farmers so that procurement can be done only from those farmers. This is being considered as landmark step by State Government to cover large number of small and marginal farmers. The resultant output is to have real time data on procurement process. The data



so generated is also being shared with State Food Corporation. So, Agriculture, Cooperative and State Food Corporation department sharing data among them.

CHANAKYA

IICT based solution for Registration and Examination System|

This is a web enabled, role based & work flow based software solution for the Universities/ Educational institutions to accomplish enrolment, registration and examinations task which offers a better solution to improve the productivity and efficiencies of the manpower and for the entire system covering Registration & Examination Branch of the University/ Educational Institute. The entire system covers Registration & Examination Branch of the University/ Educational Institute. All modules of the system sit on the same database, meaning no messy, troublesome interfaces and real-time integration with error free results. In the process of transforming the University into the 'Centre of Excellence' Chanakya has potentially powerful enabling tools for registration and examination system.

FOREST MANAGEMENT INFORMATION SYSTEM

The forest area of Bihar covers 6,473 sq



km and constitutes 6.87 % of the total geographical area of the state. Hence to increase the forest/tree coverage, substantially through time bound programme of afforestation, plantation of trees, promotion of agro-forestry among farmers etc., proper management of forest and wild activities, an ICT enabled e-Governance system became the need of the department. To fulfill these objectives an integrated Forest MIS integrating MIS, GIS and Android based e-Governance System has been designed, developed and implemented by the department in association with NIC.

e-PLANTATION (Environment and Forest Department)

This App has been developed for online registration of plantations across the state and for capturing the plantation details such as scheme name, plantation area, type of species, sanction details, ten geographic co-ordinates of the plantation boundary and time-stamped geo-tagged photographs. After generation of plantation ID the App further facilitates division and range wise progress monitoring by respective field level officers. The App is integrated with Web and GIS based backend support for real time monitoring of schemes on Google/ Bing maps for e-Governance at grass root level.

PHED MANAGEMENT INFO-RMATION SYSTEM [PhedMIS]

PhedMIS is an integrated portal supporting web, GIS and mobile applications for better management of various schemes run by PHED department, and has created real-time database of all ongoing schemes, and tracking the presence of field officers along with location details through Mobile App, by capturing and monitoring the depth and other details of Hand Pumps through Mobile App, and monitoring & tracking of contractor's physical achievement of schemes, development of department's own recruitment portal, online test module, submission & monitoring of DMA Monthly Performance Report, monitoring and rehabilitation of hand pumps (Chapakal) and Pipe water Supply of entire state under Saat Nischay Programme of Hon'ble Chief Minister, Bihar.

e-CHAPAKAL

(Public Health Engineering **Department**)

eChapakal captures and monitors the status of Chapakals installed by the department along with the beneficiary details and water quality test report .The beneficiaries' details and water quality test reports are displayed on geospatial maps of integrated web and GIS portal. The portal facilitates in redressal of incorrect information through Grievance redressal system of the portal. The App also provides role based monitoring and verification of uploaded data.

e-PEYJAL

(Public Health Engineering Department)

Used to capture & monitor the house hold connections under various water supply schemes (Mini pipe water supply,

Pipe Water Supply and Multi Village Schemes) of "Har Ghar Nal Ka Jal" Yojna of Saat Nischay Programme of Hon'ble CM of Bihar, the ePeyjal App has been developed by the NIC, Bihar. Till date, household connections of 8954 beneficiaries have been captured and displayed on GIS framework for citizens to view the actual status.

NIC District Centres are playing diverse roles right from executing various projects under eGovernance and Digital India initiatives to the day-to-day ICT-driven technical support & consultancy to various departments in the district. The design & development of new ICT initiatives at the behest of District Magistrates are also undertaken under the guidance and technical support of District Informatics Officer (DIO) and District Informatics Addl. Officer (ADIO). District Administration with support from NIC is executing and implementing eGovernance and Digital India initiatives at the grass root level in achieving transparent, efficient and responsive governance by leveraging the NIC Service and Infrastructure profile such as:

- NICNET and NKN Connectivity
- · Video Conferencing
- · Capacity building
- eMail and SMS services
- · ICT implementation in districts including Software Development, Technical Support for VVIP Events and DeitY Programmes e.g. Digital India, CSCs, DISHA, eGovernance Society etc.

ACCOLADES

The efforts of NIC Bihar have been acknowledged with following awards this

CSI Award of Excellence for Project "Smart Energy Infrastructure & Revenue Administration System" executed for Energy Department, Govt. of Bihar.

CSI Award of Appreciation for "iBhuGoal-Roads" executed for Rural Works Department, Govt. of Bihar.



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Union Minister Inaugurates Digital Government Research Centre (DGRC) in Patna

DGRC is a centre of excellence which strives to nurture, visualize and implement ideas in the field of eGovernance research and innovation

Centre (DGRC), Patna, intends to bring together a strong team of researchers and developers from the academia with interests and experience in database, human-computer interaction, knowledge representation, data mining, and other areas of computer science and information systems.

The technological potential exists for individuals, groups, and communities to

By RAJESH KUMAR SINGH and RAJIV RANJAN

on'ble Union Minister of Electronics & IT and Law & Justice, Shri Ravi Shankar Prasad, inaugurated the Digital Government Research Centre at Patna on 2nd March 2017. Among the other dignitaries present were Shri Sanjeev Kumar Chaurasiya, Member (Bihar Legislative Assembly), Ms. Aruna Sundararajan, Secretary, MeitY, Government of India, Ms. Neeta Verma, Director General, National Informatics Centre (NIC), Dr. Omkar Rai, Director General, Software Technology Parks of India (STPI), Dr. Pushpak Bhattacharyya, Director, IIT Patna, Shri Sanjay Singh Gahlout, Deputy Director General DDG (NIC), Dr. N. Saravana Kumar, I.A.S., MeitY, Government of India, Shri Rajesh Kumar Singh, State Informatics Officer (SIO), Bihar and Shri Manoj Kumar Mishra, MD, NICSI.

On this inaugural function, a Memorandum of Understanding (MoU) was signed between National Informatics Centre and Indian Institute of Technology (IIT) Patna regarding the founding of the DGRC.

DGRC aims to facilitate Inclusive and Data-driven Governance and Digital platforms. Digital Government Research







Handing over of MoU signed between National Informatics Centre and IIT- Patna





A view of delegates and audience



participate and shape a Digital Government in a myriad of new ways to help the Government as a centre for excellence where ideas can be nurtured, visualized and executed. Other areas of interest are visualizing India and leveraging the data for developing applications in the area of GIS, certification courses on emerging fields like data scientists and data journalism, acting as a facilitator for "Openness" in content, technology and processes through policy intervention, capacity building and awareness programmes and collaboration for effective and efficient sustainable solutions with the academia to bring out solutions in the governance eco-system which will help in service delivery etc.

DGRC is a unique initiative that aims to create ripples in the Digital and eGovernance space by undertaking pioneering research in the various areas of interest that are connected to the field. The partnership between the Ministry of Electronics & IT and the prestigious IIT, Patna is a major step forward towards establishing India as the world leader not only in undertaking and executing massive eGovernance projects but also envisioning the next big thing in the field.



The **National Meet** on Grassroot **Informatics**

By V.K. TYAGI and BIPIN BALAGOPAL

progress in the field of Information and Communication Technology with leaps and bounds. This progress, however, would not have been possible without the contributions of the officers closest to the ground reality, the District Informatics Officers (DIO). The DIOs have detailed knowledge of the issues and problems faced at the ground level and expertise in implementing the solutions. To interact with them as well as honour their unwavering commitment towards the cause of turning India into a rium, India Habitat Centre, New Delhi.

ndia has been making digitally empowered country, NIC organized VIVID, the National Meet on Grassroot Informatics recently. The name VIVID has been derived from Vision, Insights and Voices as India goes Digital. Featured here are some glimpses of the event.

> The vibrant three day event, organized in New Delhi from 19th-21st January, 2017 was inaugurated by Shri Ravi Shankar Prasad, Hon'ble Union Minister of Electronics & Information Technology and Law & Justice at the Stein Audito-

Shri P. P. Chaudhary, Hon'ble Minister of State for Electronics & Information Technology and Law & Justice, Ms. Aruna Sundararajan, Secretary, Ministry of Electronics & Information Technology (MeitY), Dr. Ajay Kumar, Additional Secretary, MeitY, Ms. Neeta Verma, Director General, NIC and Ms. Rama Nangpal, Deputy Director General, NIC were the distinguished guests who shared the dais with Shri Ravi Shankar Prasad.

VIVID saw the enthusiastic participation from DIOs across the country. 17 DIOs were felicitated at the event for their





MIC is the technological bridge of India. A bridge is not just something which allows you to cross a river but is a larger philosophical concept. It brings people together, bridging the gaps and divides.

Ravi Shankar Prasad Union Minister Electronics & IT, Law & Justice



I take this opportunity to compliment NIC for its diverse set of contributions, fostering knowledge and IT culture in the country. I wish every success to this first of its kind initiative and hope that this platform would continue to evolve.

P.P. Chaudhary Minister of State Electronics & IT, Law & Justice exemplary contributions towards the various initiatives promoting cashless transactions as a part of the Digital India Programme.

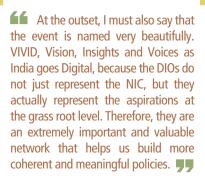
During the speech, Hon'ble Union Minister encouraged the DIOs to develop a culture of innovation so that the organization can become a pioneer in the field of eGovernance at the international level. At the occasion, he announced pilot programs to upgrade the infrastructure at 150 centres of NIC as well as annual prizes worth Rs. 3.5 Lakhs for the best performing DIOs of the country. Shri Ravi Shankar Prasad launched two new initiatives by the NIC, the District Collector Dashboard and the NIC Service Desk.

The inaugural session was followed by talks on "NIC's Journey So Far", "Best Practices from the Field" and seminars on "Digital India Programme" and "Financial Inclusion" delivered by officials of NIC. The sessions saw some of the senior officials of the organization talking candidly with the DIOs, inviting their suggestions and comments on the programmes being undertaken on the national scale.









Aruna Sundararajan, IAS Secretary, MeitY



It is truly a historic day as for the first time, DIOs from all over the country are today here and are having direct interaction with the Ministry, with the stake holders and the Hon'ble Ministers themselves. The DIOs are the silent foot soldiers who have started the journey of IT enablement in the country.

Dr. Ajay Kumar, IAS Additional Secretary, MeitY



The District Informatics Centres were set up across the country three decades ago. The DIOs and DIAs could initiate and contibute immensely to create IT awareness and capacity building in the Districts. In many ways, their presence has catalyzed the adoption of IT for Districts Administration.

> **Neeta Verma** Director General, NIC







On Day 2, talks were delivered by the DIOs on the initiatives in their own districts and the challenges faced in the implementation of the programmes as well as the achievements of their programmes. Following lunch, an open session was organized with the DIOs so that their concerns and queries could be addressed directly to the senior officers of the organizations and they could respond in kind.

The final day of VIVID saw sessions on technology conducted by the various project heads of NIC in the morning at Shastri Park, Delhi. The event concluded with a visit of DIO's to the National Data Centre, NIC to get a peek at the infrastructures which are indispensible for the products and services they create. was widely applauded.

The event drew much appreciation from all the participants as it was a rare opportunity for them to interact with their peers and seniors from all across the country and share their views, insights and visions. For smooth organizing of the event, various committees were constituted under the leadership of Ms. Rama Nangpal, DDG, NIC. The success of the event

INFORMATICS- 25 Years of Excellence in Publishing on ICT in Government:

An Exclusive Interview with Ms. Neeta Verma, Patron of the Publication

Having been passionately involved with Informatics in various capacities since its very inception, Ms. Neeta Verma has seen the magazine grow over its 25 year history very closely. Here's an excerpt from an exclusive interview with her by Mohan Das Viswam.



ou have been involved with *Informatics* from the very beginning. Please let our readers know about the origins of the idea

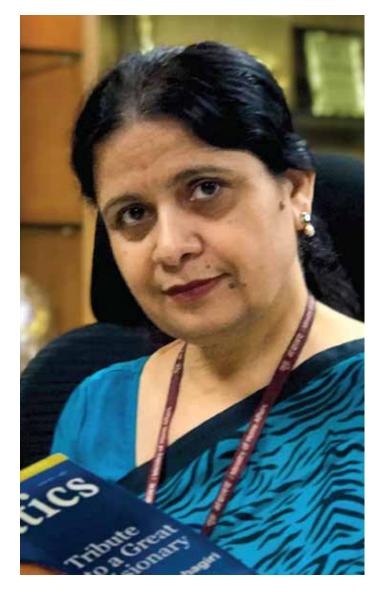
Informatics was, like much else in NIC, the brainchild of the Late Dr. N. Seshagiri. As the organization grew in its scope of operations, a need was felt to have clear channels of communication between the organization and the various stakeholders. Informatics was born out of that need. It was a small quarterly pamphlet of 8 pages at its inception and has continued to grow and evolve over the years. It has since established itself as one of the most important publications in the field of e-Governance and has disseminated information about ICT developments and initiatives faithfully and accurately for twenty-five years now.

What was the print magazine publishing experience in its early days? And how has it changed now?

A lot! Over the last two and half decades, we have seen a paradigm shift in the way the print and publishing industry works. Publishing then was very time consuming and was generally outsourced. The tools used for layout and designing also had its limitations. But the scenario has changed much and for good, thanks to the innovations in print and publishing technology. So far, we have tried to maintain certain standards of quality and are making effort to improve it further in the forth-coming issues.

How do you feel the magazine has evolved over the years? What difference do you see between the magazine then and now?

We have seen a tremendous increase in our readership over



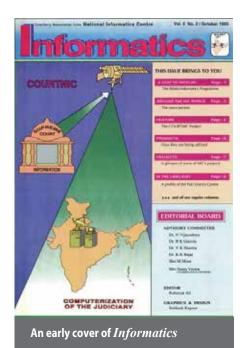
the years. The publication was initially just for our internal purposes and copies were printed in limited numbers for the NIC family and our associated Departments. Currently we print over 8000 copies, which are distributed to each and every Ministry and Department upto the District Administration level. The copies of each Issue are also sent to all the Embassies in India and Indian Embassies around the world.

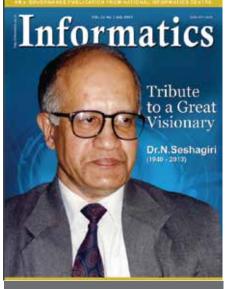
How are various sections in each of the Issues planned? Who authors and contribute to the sections?

The articles submitted to *Informatics* are usually positioned under sections; 'From the States', 'District Informatics, 'eGovernance Products and Services', 'Technology Update', 'Lead Story', 'Spotlight' and 'Guest Column'. In addition to these, there are also regular features, which are prepared by the editorial team of *Infor*matics like 'In The News', 'International eGov Updates' and 'Cyber Governance'.

With the innovative initiatives under the Digital India Programme now, India has become a rather happening place and there are events, seminars, workshops, talks and visits organized often at various venues in States across the country. The 'Spotlight' and 'Lead Story' sections cover these events of interest that are organized and makes these events come alive for the readers.

Articles and columns are contributed by scientists and technologists who are directly involved in development and implementation of the ICT projects and products. These are reviewed and edited appropriately by our regional editors. News features are received through our correspondents from across the country. Some special Issues carry write up by





Cover of a tributory Issue on Dr. N. Seshagiri, founder of NIC

"Success of the publication could not have been possible without the contributors and authors who take time out of their busy schedules to keep the readers informed of the projects, products, services and the latest advances of ICT for eGovernance."

leading figures of the e-Governance arena, who share their vision for the future of India and how e-Governance and Information & Communication Technology would play an important role in fulfilling it.

What contributions do you see Informatics is making in today's Information Technology driven World?

Informatics has always led the way in keeping its readers informed of the projects, products, services and the latest advances of ICT in eGovernance. The success of the publication could not have been possible without the contributors and authors who take time out of their busy schedules to write and contribute to the publication. This is only half the equation as without the readers' love and support Informatics would not be at the position it is at. As *Informatics* takes the next step forward towards fulfilling its objectives in this Information Technology driven World of today, reinvigorated by its contributors' constant and untiring support, we hope that this milestone is one of many more to come in our long and fruitful journey.

What is your vision for the magazine as it moves into 26th year of publication?

NIC has a pan-India presence with a network of over 700 offices countrywide and associated with offices of Central and State Governments and District administrations. We hope to turn Informatics into a single point of reference for information and updates Government's ICT programmes and activities in the country, especially the Digital India initiative. NIC's pivotal role in implementing ICT initiatives has been widely acclaimed and I feel privileged for being associated with this esteemed organization and its publication, Informatics.



January 2017 Issue of *Informatics*

District Dhenkanal, Odisha:

Achieving Excellence With Quality ICT Services

The NIC District Unit-Dhenkanal strives to implement various eGovernance projects conceptualized at the National, State and District level maintaining a high degree of quality and excellence.

Edited by PRASHANT BELAWARIAR

IC District unit, Dhenkanal, has been instrumental in the promotion of ICT usage and implementation of State and Central e-Governance initiatives and has worked incessantly towards the goal since 1988. The District Centre is equipped with the state of the art NICNET infrastructure having 1 Gbps leased line connectivity and provides network connectivity to diverse district offices like RTOs, Courts, DWOs, Judicial and all other offices of Collector-

The District of Dhenkanal owes its name to a Savara (Tribal) chief named 'DHENKA' who formerly ruled over in this tract. Dhenkanal, 'Home of Elephants and Tigers of the country' has a vast area covered with dense forests and a long range of hills with Kapilash Parvat Abode of Lord Chandrasekhar. It is one of the oldest districts of Odisha, comprising of 3 sub-divisions, 8 Blocks, 8 Tehsils, 1 Municipality, 3 NACs and 1237 Villages with 198 GPs.

The District administration is an important delivery channel of the Government to deliver services to the public. With this objective, the District Administration and NIC have initiated and implemented strategic eGovernanace projects which have directly benefitted the quality of life of the people in the district. In this article, we will discuss briefly some of the most important projects and initiatives of the District Centre in the recent past.

CITIZEN INFORMATION KIOSK (SAMPARK)

A touch screen based information kiosk has been set up at District office to provide online access to various government services, schemes & other useful information. Citizens are getting ROR details, grievance status details, project information, development work status, DRDA



The keenness and support from NIC officials along with the other staff to rollout various National and State level e-Governance projects, sharing of information through District website, computerization support during general election etc. has been quite commendable.

I believe NIC will keep up this good work and continue to provide us technical support for successful implementation of ICT projects for the benefit of Citizens.

ROOPA ROSHAN SAHOO, IAS Collector & District Magistrate Dhenkanal

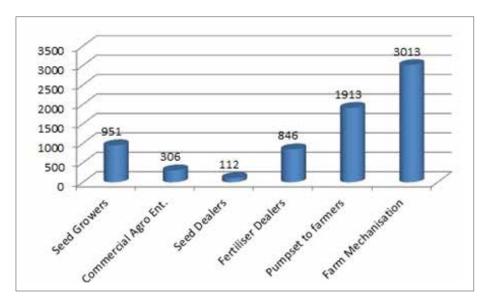
work status and the RTI information with the help of the kiosk.

PRERANA

"Post-matric Scholarship Registration Release and Network Automation" has



DILIP KUMAR NANDA Scientist-E & DIO dk.nanda@nic.in



Subsidies provided to farmers under the Seed DBT scheme

been launched to ensure the automation, streamlining & effective management of the process of scholarship applications as well as for faster and efficient disposal with timely payment to ST/ SC/ OBC students. In 2015-16 education year scholarships to the tune of Rs. 4.35 crore have been directly transferred to over 6000 students' bank accounts.

AGRICULTURE

In the Agriculture sector, the daily market price is updated to the AGMARKNET by the four RMCs of the district. Farmers, seed growers and dealers of the district can avail services over the online system of Seed Certification, Seed Licensing, Fertilizer Licensing, Farm Mechanisation, pump set tracking etc.

SEED DBT

Seed DBT for different crops facilitates Direct Benefit Transfer of subsidy to farmers for purchase of seed. This brings transparency and greater efficiency in administration. 41146 farmers of the district have registered under the Farmer Registration System. Of these, 7210 farmers have availed subsidies amounting to Rs. 47,53,526.60 through DBT in almost 13,000 transactions.

SCHOOL STUDENT HELPLINE

The SSH software enables students as well as citizens to lodge their grievances directly to the Secretary of School & Mass Education Department pertaining to education and mismanagement at schools.

ONLINE FILLING OF **ENTREPRENEURSHIP MEMO-**RANDUM (EM-I & EM-II)

This is a single window system for entrepreneurs, implemented successfully for District Industry Centre under Department of Micro, Small, Medium Enterprise (MSME), Odisha. 289 entrepreneurs of the district have made use of the portal to register themselves for the various schemes.

E-ABHIJOGA FOR ONLINE PUBLIC GRIEVANCES REDRESS & MONITORING SYSTEM

The system enables citizens to send their grievances directly to the District Administration/ Hon'ble Chief Minister, Odisha. The initiative has achieved a uniform and systematic approach towards monitoring of grievances.

ICT SUPPORT FOR GENERAL **ELECTION 2014 & 3-TIER PRI ELECTION 2017**

NIC District Centre provided total ICT solution during General Elections, Odisha Legislative assembly elections and 3-tier PRI elections. The main activities include IT enabled randomization of polling personnel, EVMs, formation of polling parties, generation of Appointment Orders, TA/ DA reimbursement, data processing for voter turnout & polled processing for voter result transmission, processing of micro-observers and result transmission. A central monitoring cell was established at NIC District Centre for monitoring of Election activities on the Election Day. DIO NIC acted as the Nodal officer for all computerization activities related to the Election.

DIGITAL INDIA NATIONAL LAND RECORDS MODERNI-ZATION PROGRAMME

The Bhulekh application has been implemented in all Tehsils of the district and RORs for all villages have been digitized. Subsequent to mutation, the ROR database is being updated by user department from time to time and uploaded on Bhulekh Web Server at regular intervals for public access.

MODERN RECORD ROOM UNDER DINLRMP

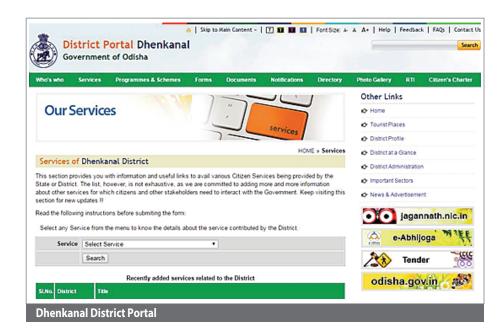
As a part of DINLRMP, Project Modern Record has been set up in all the Tehsils of Dhenkanal District with compactors to store revenue records. The revenue case records are scanned, properly indexed and uploaded to the Document Management System for future retrieval. Bar coded stickers for revenue case record are pasted in each file for its proper management. This reduces the citizens' waiting time to get the certified copies and makes the searching procedure easy for the staff.

E-MPR ON LAND ACQUISI-TION SYSTEM

Online MPR on Land Acquisition System helps District Administration in monitoring Land Acquisition proposals. It tracks proposals submitted to R&DM Department for notification and its compliance reports. It also monitors issuance of orders and awards disbursement of projects.

COLLEGE ACCOUNTING PROCEDURE AUTOMATION (CAPA)

Implemented in 488 category colleges for maintaining transparency and effective management of financial transactions in accounting section. Various modules of Accounting Procedures are initialization of data on Master Data management, Payroll management, Advance management and financial transaction module.



DIGITAL CASHLESS **PROGRAMME**

As part of promoting cashless transactions and converting India into less-cash society, various modes of digital payments were made available. Training and awareness programmes were organised at various levels in the District with active support of CSCs, DEGS, banks, financial institutions and officials.

IVFRT

IVFRT is an important MMP under NeGP. Its various modules like c-FRO, c-Form and s-Form are already operational in the district. DIB from SP Office is the implementing agency for the project. Using this system, any foreign citizens residing in a hotel or working in an institution/ university/ organization have to be enrolled. This will help to keep a watch over the foreign nationals in the District and monitor their activities.

RECRUITMENT & TRAINING

Necessary IT support is provided to the District Administration by NIC District Centre, Dhenkanal for the recruitment processes from time to time by managing application database and generating Admit Cards, Merit Lists and conducting Computer Skill Tests. Also several computer awareness cum capacity building training programs are undertaken to facilitate effective implementation of ICT Projects & e-Governance applications.

DHENKANAL DISTRICT PORTAL (http://dhenkanal.nic.in)

The District website has been designed and developed by NIC to host government information in the public domain. The website makes available important information regarding the district and various services provided by the District Administration.

E-DISTRICT

Under e-District Project seven services namely Issuance of Residence Certificate. Caste Certificate, Legal Heir Certificate, SEBC Certificate, Solvency Certificate, Income Certificate and OBC Certificate are rendered to the common citizens at present.

JEEVAN PRAMAAN

The Life Certificate for Central and State Government Pensioners application has been implemented in the District and Sub Treasuries of Dhenkanal District. Awareness camps were organized at different levels and Life certificates issued to the pensioners.

THE WAY AHEAD

With its many initiatives and projects, NIC Dhenkanal works with the District Administration at various levels to make the lives of the citizens simple and more convenient. From implementing national level projects like the Jeevan Praman to local projects like managing the District Portal, Dhenka-

OTHER INITIATIVES **TAKEN UP BY NIC DISTRICT CENTRE DHENKANAL**

- Digital Locker
- e-Courts
- NICNET & Video Conferencing
- Teacher Transfer Portal
- e-Procurement for Online Tendering System
- e-Mamata
- Track the missing Child under ICPS/ Juvenile Justice
- MGNREGS
- PRIASOFT
- Awassoft
- PlanPlus
- ServicePlus
- NGO portal
- Rainfall Computerization
- CCTNS
- NSAP
- Swachh Bharat Mission (SBM)
- e-Nijukti
- Automation of Small Savings Activity (ASSA)
- NADRS
- Transport Office Computerization
- NDAL-ALIS

nal strives to supplement the District Administration's efforts to ensure that the benefits of the various schemes of the Government reach their intended beneficiaries with minimum wastage of time and resources.

For further information, please contact:

DILIP KUMAR NANDA

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District Lakhimpur, Assam:

Providing the best in ICT services with G2C focus

The NIC District Unit of **Lakhimpur District was** setup in 1990 and the Unit has made tremendous strides towards empowering the District Administration with ICT tools, spreading IT culture and developing & implementing numerous ICT applications at the **District, State and National** level.

Edited by **RUBAIYAT-UL ALÍ**

et up in the year 1990, the NIC Lakhimpur District Unit has been providing technical support to all the wings of the District Administration for implementation of various national, state and district level e-Governance projects, and in recent times, the Digital India programme.

The District of Lakhimpur was notified through a proclamation issued by then Governor General in July, 1839. On October 2, 1971 the district was reorganized with two sub divisions viz. Dhemaji and North Lakhimpur. Later it was again reorganized in the year 1989 with two subdivisions viz. Dhakuakhana and North Lakhimpur leaving Dhemaji as a separate

The prime objective of the NIC Lakhimpur District Unit is to provide citizen- centric services in a more transparent and effective manner. Some of the notable projects and

initiatives taken up by NIC District Centre, Lakhimpur are detailed below:

DISTRICT ICT INITIATIVES

Digitization of PDS data

Under the NFSA/ PDS computerization programme, NIC has given technical support to the District Administration for digitization of more than 8,50,000 beneficiaries' record in the e-Ration Card Management System (ERCMS) software. Six MIS modules for the ERCMS software were designed by NIC to identify bogus/ duplicate beneficiary records at the Fair Price Shop (FPS) level and GPSS (Gaon Panchayat Samabay Samity) level:

- 1. MIS module for generating GPSS/FPS wise list of existing duplicate Ration Cards
- 2. MIS module for (a) collection and
- (b) entry of beneficiary bank account number, mobile number(s) and Aadhaar number
- 3. MIS module for generating Ration Card (RC) details with photograph of Head of
- 4. MIS module for generating FPS wise

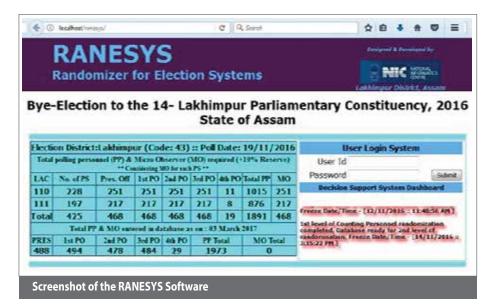






JAGADISH **BURAGOHAIN** Sci./ Technical Asst-A & ADIO jagadish.buragohain@nic.in





list of beneficiaries aged less than 6 years

- **5.** MIS module for generating "invalid" Ration Card
- **6.** MIS module for replacement of Head of Family with next of kin

By using these MIS modules, the District Administration has identified more than 30,000 duplicate beneficiary records in the ERCMS software and necessary steps have been taken to correct the database by deleting bogus/ duplicate beneficiary record and inclusion of genuine beneficiary names.

To further strengthen the ERCMS software, NIC Lakhimpur is now working towards designing another MIS module for mapping of beneficiary records with the district's demographic area so that beneficiary records can be mapped with community/ tea garden area.

RANESYS (RANdomizer for Election SYStems v3.0)

RANESYS v 1.0 was developed in order to achieve development and deployment of user-friendly, fast-response and error-free software for election systems. Software Re-engineering, tuning of database is now being carried out (under modality of RAISE (Rigorous Approach to Industrial Software Engineering) for deployment of version v3.0 of RANESYS in the upcoming panchayat elections (in 2018) as well as parliamentary elections (in 2019). The prime objective of this software is to deliver maximal output with shortest

processing/ compilation time. This software is not only meant for randomized selection of EVMs and personnel for election duty and counting duty, but will also be useful for other election related jobs. Among the planned modules for lanch are:

- **1.** Module for collection of personnel's bank a/c number has been incorporated to promote cashless transactions
- 2. Module for generating pre-printed identity card for polling, counting personnel
- **3.** Module for deployment of advanced polling party

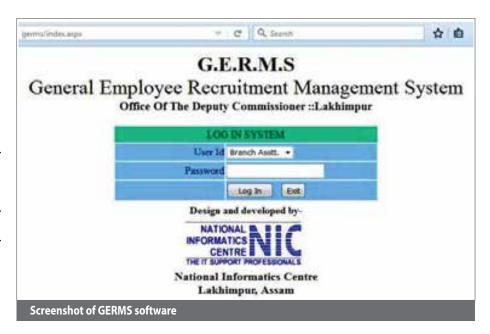
- 4. Module for replacement of polling personnel before or after 1st/2nd/3rd level of randomization
- **5**. Module for selection of personnel from reserve/standby pool
- 6. Integrated Decision Support System

GERMS (General Employees Recruitment Management System)

NIC Lakhimpur has developed a software solution for conducting employees' recruitment management, for the District Administration. Some features of this software are:

- **1.** Randomized generation of roll numbers for examinees
- 2. Randomized allotment of examination centre/hall
- **3.** Generation of e-Admit cards, Centre Intimation Card and exam hall wise attendance sheet for written test
- **4.** 3-tier accessibility to maximize the confidentiality of evaluation and compilation process for both written test and vivavoce
- **5.** Declaration of results on merit basis and as per roaster points.

Since the deployment of the system, four recruitment processes have been completed successfully.





(Left) Workshop on celebrating Digital India week presided over by (then) DC, Lakhimpur along with DIO, NIC and other District officials at District HQ. (Right) Presentation on Digital India programme by ADIO, NIC on the eve of celebrating Digital India Week at Subansiri Revenue Circle, Ghilamora.

STATE AND NATIONAL ICT INITIATIVES

Integrated Land Record Management Systems

NIC has provided technical support to the District Administration (Revenue Branch) for implementation of the Integrated Land Record Management System (ILRMS) in which Land Records data (Dharitree) is integrated with Property Registration (e-Panjeeyan) system along with Land Sale Permission module and Bhu-Naksha software in all seven Circle Offices and District headquarters.

Manav-Sampada (EHRMS)

Training, consultancy and technical support have been provided to the staff and officials of the District Administra-

tion for implementation of Manav - Sampada (e-Human Resource Management System) for all staffs and officials working under the amalgamated establishment of DC's office for online service book maintenance and implementation of new concepts of human resource management. The basic data of all personnel have been fed into this online system.

Revenue-MIS, GAD MIS and e-Safar

MIS for Revenue and General Administration Department have been implemented in all wings of the District Administration for online updating of records pertaining to the Revenue and GAD Departments. Training and technical support have been provided to all staff and officials for use of the e-Safar software (Official Tour Management Programme).

ACOUT DETRICT Official Website of Lakhimpur District Denote at a cliance Acount at a cliance Acount datery Notifications Welcome to Lakhimpur :

Vahan and Sarathi

Vahan and Sarathi application software have been commissioned in the District Transport Office under the Mission Mode National Transport Computerization Project. NIC Lakhimpur provides regular operations support and is now engaged in implementation of the web-based solutions of the same software.

District Website

The official website of the district http://lakhimpur.nic.in has been designed and maintained by the NIC District Centre, in coordination with the district administration and other departments.

THE WAY AHEAD

- 1. Development of CAMPUS Software: Common Admission Management Platform for undergraduate studies is being developed as per the requirement of local colleges
- **2. Development of CSLR Software:** Computerized Storekeeper for Land Records is being carried out for encrypted labelling and safekeeping of manual copies of land records
- **3. Upgrading RANESYS:** RANESYS software is being upgraded for the forthcoming Panchayat Election 2018

For further information, please contact: **MITHUN MUKHERJEE**

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eAwas Software & App of Chandigarh:

House Allotment Made Simple and Easy

e-Awas is a comprehensive, integrated and easy to use software and mobile App that has made the process of house allotment for government officials simple, fast and efficient. e-Awas has been developed by NIC, UT Chandigarh and has helped make the entire process paperless, end-to-end.



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Edited by MOHAN DAS VISWAM

Awas, which aims at bringtransparency enabling hassle free allotment of Government Houses, is a step towards taking Chandigarh into the Digital Age and using technology to solve real world problems.

portal (http://eawas.chd.gov.in) enables online submission of applications by employees and facilitates allotment of vacant houses through a bidding system.

THE SOFTWARE

There are a total of 13789 government houses in Chandigarh UT out of which 11961 houses of 18 categories are listed under General Pool for allotment to the employees of Harvana, Punjab, Punjab & Harvana High Court and Chandigarh who are posted in Chandigarh. The existing system was totally manual and the data was being maintained in a large number of registers, which resulted in delays in the processes. There was no single point from where their concerns could be addressed. Status of Licence Fee received and maintenance of the houses by engineering department was not available for the House Allotment Committee (HAC) to take any decisions. Despite being vacant, many of the houses were not occupied, causing revenue loss to the government.

These problems engendered a need to automate the processes of the House Allotment department, rent controller and the maintenance wing of engineering department as managing a large number of houses and the continuous flow of applications required a lot of effort and resources. With this in mind, the e-Awas software was conceptualized and the project was initiated under the guidance of Dr S. B. Deepak Kumar, IAS, Secretary, House Allotment Committee (Upper) cum Secretary, IT and Shri Jitender Yadav, IAS, Secretary House Allotment Committee (Lower)-cum-Director, IT.



Allotment of houses was a big challenge. There was no centralized system and the data was scattered. We have consolidated the data, on-boarded various departments and created a transparent mechanism where employees can bid for houses of their choice and allotment is done as per seniority. I believe the initiative would be highly beneficial to the employees. NIC Chandigarh UT Unit has put in tremendous efforts in this exercise to make it a success.

DR. S. B. DEEPAK KUMAR, IAS Secretary,

House Allotment Committee(Upper) & Secretary, Information Technology

Developed by NIC, UT Chandigarh, e-Awas is a comprehensive, integrated and easy to use solution that has made the processes simpler, faster and more efficient. It is backed by an efficient monitoring and control mechanism that addresses the requirements of each and every stakeholder.

THE WORKFLOW

Any applicant can register himself/ herself and apply online for government accommodation as per the eligibility criteria and can participate in the bidding process, after his/her application is verified and accepted by the House Allotment Committee. The features of the software include applying for a house, vacating a house, generation and updation of seniority lists, bidding for vacant houses, allotment, licence fee payment, handling of mutual exchange/ extension applications, employee grievance redressal, eligibility scrutiny, bid details and house maintenance. Training sessions have been organized for the stakeholders and the trainers were adequately trained to assist applicants facing problems. A dedicated help-desk was also setup which attended to and resolved the queries of the applicants.

E-AWAS MOBILE APP

The App was conceptualized and created keeping in mind the ease of use of a mobile App as compared to a software. It assists field inspectors in reporting status of houses instantly after checking the complete details on the App itself, which would be helpful and time saving for further processing. The App has been developed by Centre of Competency for Mobile App Development, NIC Shimla.

TECHNOLOGY USED

eAwas application has been developed using Microsoft .NET 4.5 Framework with Microsoft MSSOL Server-2012 backend. For making the application easy to use, JSON (JavaScript Object Notation) and JQUERY have been used. Reporting





module has been developed using RDLC. For the design of the web application, RWD (Responsive Web Designing) has been followed which uses BOOTSTRAP framework.

SALIENT FEATURES OF E-AWAS

- Automating all activities/ processes involved in the allotment of houses making the process paperless.
- · Allowing bidding for houses of their choice by the applicants using only the software.
- Making the status of houses, seniority list and allotment details available to the employees which makes the process more transparent.
- The process has been re-engineered & the forms redesigned for providing better services in a simple and quick way.
- Easy maintenance and prompt updating of housing records.
- Making housing records/ transactions tamper proof and genuine.
- · Better tracking of data relating to allottees, license fee recovery, subletting, litigation etc.
- The allottees can monitor their license fee recovery position, which facilitates payment of outstanding license fee dues, if any, as well as quick issuance of No Demand Certificate.
- Revenue saving for the government by reducing the cost, time and mitigated the wastage of resources involved in the process. Vacant houses are quickly and optimally allotted resulting in better revenue collection for the Government.
- Regular alerts are sent through SMS/ Email. Information is also made available on Portal which is Mobile enabled.

- · Automatic generation of waiting lists and vacancy registers
- Aadhaar authentication based Allotment on specified dates of the month. Applicants can download the Allotment Letter themselves.
- · Facility for centralized maintenance system which can be monitored at senior level thus bringing accountability.
- Grievance module to help the allottee with issues related to allotment, maintenance of the accommodation and rent. Automatic escalation of grievance to next higher level if no action is taken on it within 15 days.

THE WAY AHEAD

Rent Controller Module would be fully integrated with the eAwas application once the backlog data is entered, to take care of the licence fee. The procedure of collecting licence fee data from various offices would be automated which would help in reconciliation. It would also help in issuance of NoC to the allottee. Also, the application would be integrated with a payment gateway, for the online payment of rent and eSign feature would be added to make it more secure. The eAwas Mobile App would be enhanced further to cater to the requirements of the applicants and officials from the various offices.

For further information, please contact:

VIVEK VERMA

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ICT Tools for Elections in Puducherry

Best Practices for Effective Election Management

General Elections and By-Elections of 2016 held in Puducherry UT made use of the best practices for effective **Election Management with** the help of ICT tools.



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V. GOPI **SWAMINATHAN Technical Director** gopi.pon@nic.in





D. GOPINATH Scientist- B d.gopinath@nic.in

Edited by R. GAYATRI

n Puducherry, Information Technology (ICT) has played a key role in putting the UT on the national map of innovations and best Election practices Management.

Albeit the small size of the U.T., the distribution of the four regions among the three Southern States of Tamil Nadu, Kerala and Andhra Pradesh with three different spoken languages poses a real challenge for planners. To accelerate the activities, an NIC cell has been formulated in the office of the Chief Election Officer for the complete software development and implementation. The NIC UT unit and District units of Puducherry UT are involved in the efforts.

After General Elections 2014, ECI has constituted nine Working Groups on various aspects of planning and management of elections and related matters for submission of a detailed report. Puducherry UT is a member of the Working Group 7 on the topic "Information Technology". NIC, Puducherry had been given the responsibility to collect and compile data for preparing a consolidated report based on the earlier experiences, observations, and learning of all states.

Real Time Poll Monitoring System (RTPMS)

The important events right from conduction of Mock Poll to close of Poll were captured on a Real Time basis through RTPMS and relayed online to all the stakeholders directly from all the polling stations. The progress of the polling percentage in the various regions of Puducherry was visible to all concerned. The option of Emergency SMS integrated into the software brought forward effective tackling of interruptions.

RTPMS has been the greatest success story of 2016 General Elections winning the accolades of the Election Commission, Press and the officers.

The Puducherry Legislative Assembly Election 2016 was a prelude to Mobile App based m-governance to Election processes. Mobile App version of RTPMS has been implemented during the by-elections 2016 where all the booths were provided with a Tab installed with the Mobile App. The U.T. of Puducherry has earned the distinction of pioneering such an initiative.

Trends Dissemination System (TDS)

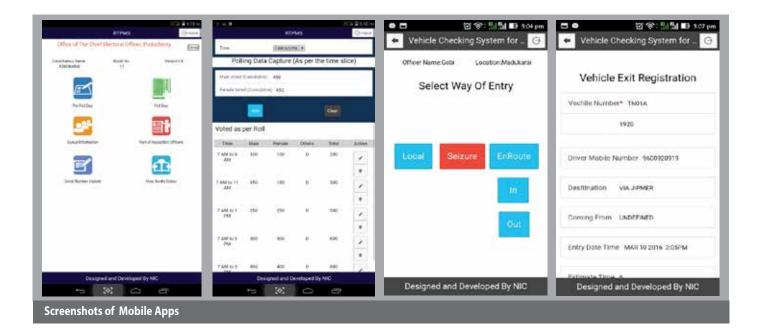
The Trends Dissemination System (TDS) is a web enabled application, where the complete gamut of activities are integrated on one screen, for monitoring the counting progress of all the 12 AROs of Puducherry at 5 counting centres. A separate website and the Mobile App are available to display the result at a glance and view the trends continuously. The system has also been replicated in Goa.

SMS Portal

A web based generic SMS portal, used by the office of CEO, DEOs and ROs, saved a lot of time and effort in sending letters, phone calls and maintenance of manual registers. Timely delivery of information was the primary achievement. Local language based SMS support is another major highlight of the portal.

Mobile App for Static Surveil-

This is a Mobile Application (App) with a web based system for the control room for online information about vehicle checking made by all the Static Surveillance teams of the entire UT, at check posts, for updating the vehicle details. A web based dashboard is available for the Control Room to easily monitor the online incoming/ outgoing information on vehicles along with in-built search facility in the portal.



The ease of updation about the checking through Mobile App has saved lot of time in updation of data, preparation of activities register and monitoring the check posts.

UDHAVI Single Window Clearance System

The online application helps the political parties and the public to get permissions for holding meeting, opening temporary party offices, vehicle permits, processions, street corner meeting, loud speaker permissions etc., The acknowledgement, SMS facilities and uploads of permission details are major functionalities.

THEERVU **Grievance and Complaints Redressal System**

All the complaints and grievances of voters are registered through this Online System for registering the details through web including the complaints received from toll free number 1950 in Control Room.

The competent authority would then look

into the complaints and update the Action Taken Report through the work flow based system.

Online Services for Voters

With this facility, the citizens can file their claims and objections with a simple form interface and get the service. A Backend Electoral Registration Officer (ERO) module is available to all the EROs to access the online applications received and given to Booth Level Officers (BLO) for verification. A comprehensive MIS is provided to view the status of the applications and SMS facility is integrated into the system.

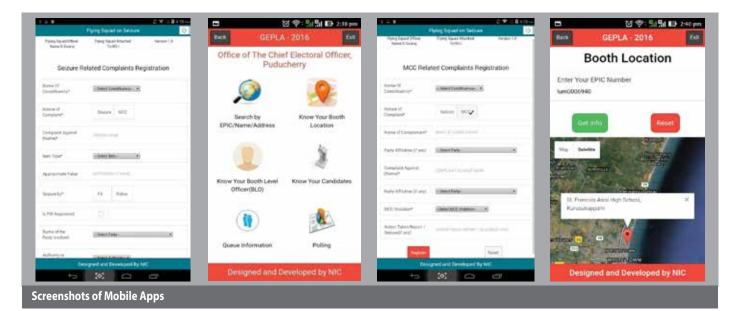
General Information to Voters through Mobile App

A Mobile App called "General Information to Voters" has been developed to help the voters search the voter list for the Electoral Photo Identity Card (EPIC) details, to geographically locate the polling station over Google map, to find out the details of the Booth Level Officer. The App also provides the list of candidates who have filed their nomination with their affidavit details. The Polling percentage and queue information on Poll day is also provided.

On the result dissemination day, the public get the trends details for the 30 Assembly constituencies. The application has received widespread appreciation from public, media and officers.



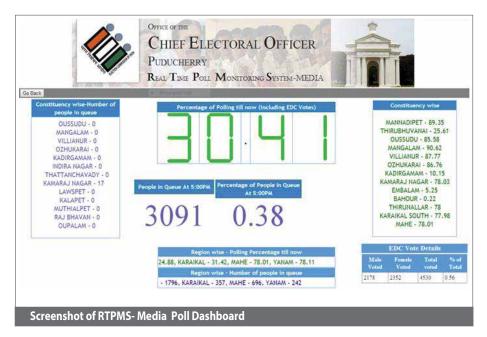
Hon'ble President of India, Shri Pranab Mukherjee giving away the ECI Award 2016 for IT initiatives to Shri V. Gopi Swaminathan, Tech. Director (NIC) & Nodal officer



Mobile App for Flying Squad Team

An App with a web based system was also developed for the control room for management of online information about Model Code of Conduct (MCC) complaints/ seizure details. A web based dashboard is available for the Control Room to easily monitor the online information on seizure with search facility. The flying squad team carries tablets having an application for updating the details of MCC related violations and complaints.





The ease of updation about the checking through this App saves lot of time in updation of data, preparation of activities register and monitoring the flying squad checks.

SUMMARY

The young India is rapidly emerging as citizens empowered by ICT continually embracing the web and mobile technologies. NIC, Puducherry has endeavored successfully, with its various applications, in this direction and has been appreciated by the Election Commission of India for its initiatives.

For further information, please contact: DR. D.R. SHUKLA Senior Technical Director & SIO- Puducherry NIC, IV Floor, Chief Secretariat PUDUCHERRY U.T. Phone: 0413-2229484 Email: sio-pon@nic.in

eSpecial Road Tax Payment System:

Simplifying Route Permit Issuance and SRT Payment

eSRT has immensely simplified the entire process of paying the monthly Special **Road Tax for commercial** vehicles in the state of Himachal Pradesh, With the entire process online the vehicle owners can make their payments directly from their smartphones.

Edited by **VIVEK VERMÁ**

o ply buses (Stage Carriage Vehicle) in the state of Himachal Pradesh, it is mandatory to obtain a Stage Carriage Permit, which is issued by the HP Transport Department. All Stage carriage permit holders are required to pay a monthly tax known as Special Road Tax (SRT).

The SRT is a monthly prepaid tax calculated using a formula based on parameters like seating capacity of buses, road type on which the bus will ply (National Highway, State Highway etc), distance covered, type of the buses (Ordinary, Deluxe and Semi Deluxe) etc.

E-SRT SOFTWARE SOLUTION

The eSRT is an initiative of HP Transport Department and NIC Himachal Pradesh for facilitating online issuance of new Stage vehicle carriage route permits and online payment of monthly Special Road Tax. Using eSRT web application, Permit Routes are finalised by adding stations and assigning arrival and departure timing corresponding to every route station. Once route is finalised, the route permits are issued. Thereafter, eSRT application auto calculates monthly tax using SRT formu-

The application has facility for paying monthly tax online using Himachal Pradesh Cyber Treasury portal without visiting to RTO office. It also allows other provisions like Penalty Calculations, instalment payments, and various exemptions as per provisions of Transport Department.

In addition to standard MIS reports, various other Dynamic reports have been made available for different enforcement agencies that are effectively using these reports for tracking tax defaulters.



The eSRT software, developed by NIC Himachal, has helped in the recovery of road tax arrears and increased the tax collection figures by almost 4.5 times. The mobile app is facilitating the transporters in keeping track of their road tax payments.

Commissioner, Transport, **Government of Himachal Pradesh**

DR. SUNIL CHAUDHARY, IAS

E-SRT MOBILE APP

For issuance of Route permits, the RTO authorities capture the owner and vehicle detail followed by formation of route by addition of requested stations with arrival and departure timings. These formed routes are sent to RTO authorities for final approval electronically. In case route requires permissions from other RTOs, then countersign request is sent electronically.

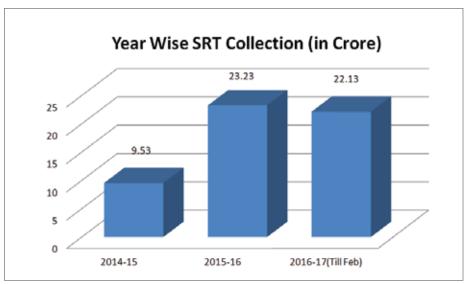




PRITHVI RAJ NEGI Scientist-B prithviraj.negi@nic.in



After the issuance of Route Permit, the application auto-calculates SRT on 1st day of every month and starts accumulating penalty on daily basis after 15th day of every month. With due approval of RTO/ directorate authority, the application takes care of day wise special tax exemptions provisions in case the vehicle has not travelled due to adverse climatic conditions or any other reasons.



For online payment, tax payers gets registered in http://admis.hp.nic.in/ pathkar/ with login id and password. Now tax payers pay their monthly SRT tax online using Cyber Treasury options integrated with eSRT. On mobile platform, the users can pay their tax online by downloading the eSRT HP Android mobile App from Google Play Store and the home pages of the Himachal Government and HP Transport Department websites.

MILESTONES

• Issued 4732 Stage Carriage Vehicle

Permits by 10 RTO authorities for Private Owners of Buses and Himachal Pradesh Roadways fleet

• Approx. Rs 52.47 Core Special Road Tax has been collected through eSRT application, since its implementation in April, 2014.

TECHNOLOGY USED

The eSRT Application has been developed using ASP.Net with MS SQL Server as backend database. The Android Mobile App has been developed using eclipse IDE, Java language and for local storage SQLite has been used.

WAY FORWARD

It is proposed to include automatic issuance of Route Permits by optimizing and analyzing the timings of various vehicles at a particular Station/ Stop. The administrative simplification of the calculation of Special Road Tax, which is very complex process at present, shall be implemented. The mobile application, eSRT, will be enhanced by integrating the payment gateway and making it available in Windows and iOS platforms.



For further information, please contact: **AJAY SINGH CHAHAL** State Informatics Office NIC State Centre, HP Secretariat Shimla-171002, HIMACHAL PRADESH Phone: 0177-2624045 Email: sio-hp@nic.in

Samrakshane: Portal for Crop Insurance

Providing End-to-End Management Solution

Samrakshane is an online portal providing end-toend e-Governance solution for managing the crop insurance activities under both PMFBY & MWBCIS. The software has successfully secured 16 lakh enrolments which is a sharp increase from 35% to 94% in terms of the coverage for Rabi crops.



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Edited by R. GAYATRÍ

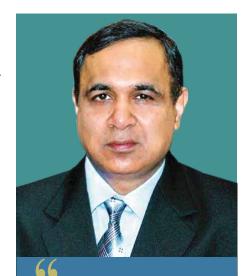
ccording to World Bank, approximately 60 percent of India's land area is used for agricultural purpose making India second largest in terms of agricultural land

availability. Major chunk of this agricultural land is rain-fed (60% of total agricultural land) and India ranks first among the rain-fed agricultural countries. Due to unpredictable monsoons there is constant threat to sustainable agricultural production. To bring certainty in agricultural income, the Government of India along with respective state governments has come out with crop insurance schemes which address the sufferings of the farmers and provides compensation arising out of crop loss/ damage. There are two schemes under which farmers can insure their crops namely Prime Minister's Fasal Bima Yojana (PMFBY) and Modified Weather Based Crop Insurance Scheme (MWBCIS).

National Informatics Centre, Karnataka State unit has designed, developed and successfully rolled out an end-to-end e-Governance solution named SAMRAK-SHANE (meaning PROTECTION) for Agriculture and Horticulture Department to handle crop insurance activities under both PMFBY & MWBCIS

OBJECTIVES

- To create a transparent and farmer friendly system for enrollment, registering claims, compensation calculation and payment of compensation to farmers under the Crop Insurance Scheme (both PMFBY & MWBCIS).
- To simplify and speed up the disbursement of claims to within two to three months from the harvest date and credit the same directly into the farmers' Aadhaar linked account.
- To facilitate transparent conducting of crop cutting experiment involving all



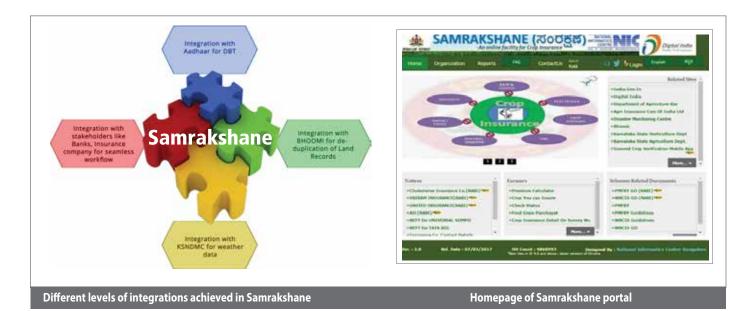
NIC, Bengaluru has developed brilliant system using 'Bhoomi' land records IT system and Aadhaar to create Samrakshane - aptly called to manage these huge operations. The State Government was able to settle the claims in less than 2 months after the close of the Khariff 2016 season and also conducted about 25000 CCE using Mobile

It shows that NIC can handle any challenge provided administrators also put their best effort. Kudos to NIC – Long live.

> **RAJIV CHAWLA, IAS Additional Secretary** Government of Karnataka

stakeholders and publishing the videos and photos of the conducted experiments.

• To prevent unscrupulous people from



misusing the scheme by registering request on others' land or by registering multiple times on their own land or by registering for crops which they have not planted.

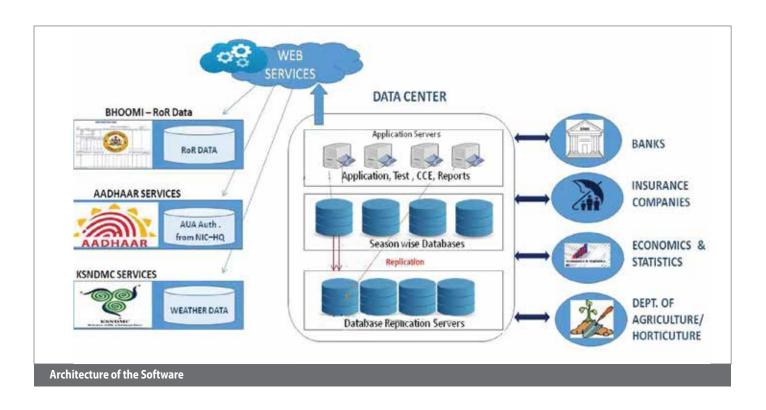
• To capture digitally the Term Sheets used for payout calculation in WBCIS on relational database and to use weather data picked up electronically from Karnataka State Natural Disaster Management Centre (KSNDMC) for automating payout calculation.

SALIENT FEATURES OF SAM-RAKSHANE

- Facilitates Agriculture/ Horticulture Department to generate crop insurance gazette notification.
- Facilitates Banks, Insurance Channel Partners, Raitha Samparka Kendras (RSKs) to enrol for crop insurance under PMFBY & MWBCIS.
- Enables Agriculture & Horticulture

Department for issuing prevented sowing and Mid-term adversity notifications.

- Farmers can raise claims for localized risks and post harvest losses themselves without calling help desk or visiting banks.
- Automatic generation and assignment of crop experiments based on randomization technique to pick plot for conducting crop experiment.
- Crop cutting experiments (CCEs) using

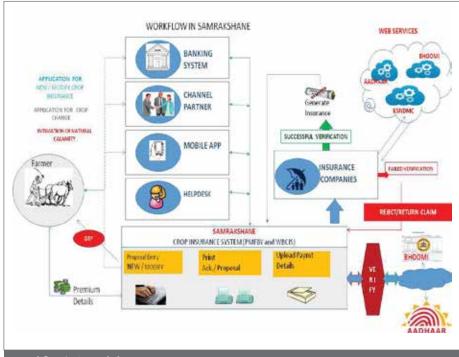


Android based mobile App. With facilities to capture geo-coordinates, photos and videos.

- Compensation calculation fully automated using actual yield obtained from CCEs after applying area discrepancy factor.
- Insurance companies have facility to acknowledge enrolments, view compensation details, approve the same and access various reports. Insurance companies have been provided with web service to update payment details back to Samrakshane.
- Term sheets have been captured digitally under MWBCIS and compensation calculation automated using electronically received weather data from Karnataka State Natural Disaster Management Centre (KSNMDC).
- SMS sent to farmers at all important stages.

ACHIEVEMENTS

- 10 lakh enrolments in Khariff 2016 (5% increase in enrolments in first season)
- 16 lakh enrolments in Rabi (up from 35% to 94% coverage)
- Process cycle time for compensation payment reduced almost by 10 months.
 Payment of Bidar district completed on 14-02-2017
- Integrated with Aadhaar for facilitating Direct Benefit Transfer
- De-duplication of land achieved with electronic data exchange with BHOOMI (RoR database)
- Crop Cutting Experiments conducted using 14,000 Mobile devices and facilitated District Magistrates with alert system in case of exorbitant yield figures.
- 9000+ bank branches (two users each),



Workflow in Samrakshane

1000 RSKs (Raitha Samkaraka Kendras), Insurance companies, District Magistrates, District Statistical Officers, Joint Directors of Agriculture, Deputy Directors of Horticulture, Director, Department of Economics and statistics, Development Commissioner, Addl. Chief Secretary (Horticulture), Secretary (Agriculture) etc. are using the application

TECHNOLOGY PLATFORM

- Front end forms are developed using ASP.net with C# as scripting language using framework 4.0
- Backend database is MSSQL server 2008 R2
- Local language interface using Unicode.

· Android SDK API Level 24

THE WAY AHEAD

- Grama Panchayats will be enabled to enrol crops under PMFBY & MWBCIS using digital payments/ Aadhaar Enabled payment.
- Automation of notification generation based on the crops grown in different insurance units using past season's data.
- Integration of mobile App with digitized village maps for validation of CCE location and verification of enrolment data to avoid area discrepancy factor.
- Controlling the enrolment period, sowing period, prevented sowing cut off dates, mid-term adversity cut off dates, allowed period for post harvest loss claims and localized risks through configuration file district wise and crop wise to take care of different agroclimatic zones of the state.



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Ujjwala-Textual and Demographic De-duplication: Facilitating the PMUY

The project to de-duplicate the textual and demographic data for the Pradhan Mantri Ujjwala Yojana (PMUY) has enabled elimination of many fraudulent beneficiaries and holds immense potential for application in a variety of other schemes initiated by the Government.



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Edited by **MOHAN DAS VISWAM**

ndia is widely touted as an emerging economic power, but nearly half of the country still cooks with firewood. According to 2011 census, only 28.5% of the 1.3 billion population across India uses LPG/ PNG for cooking. Pradhan Mantri Ujjwala Yojana (PMUY) aims at providing 5 crore free LPG connections in 3 financial years (2016-19) to the women belonging to below poverty line (BPL) [as per the Socio Economic Caste Census data] across the country.

The Government extends support to the population in the form of various schemes, subsidized policies and grants. However, in governance, enormous data of individuals gets collected in digitized databases. At times certain duplicates infiltrate the digitized databases which pave the way for misuse of the government subsidies by unintended and fraudulent beneficiaries.

Identifying the duplicates from a large chunk of applications become a tedious Developing a de-duplication algorithm requires grit and thorough assessment of raw data. Textual and Demographic De-duplication (TDD) algorithm aims to identify transformed or direct forms of same person's identity exhibited as multiple persons in the database. The results are thus called as SUSPECTS. The SUSPECTS found are sent for field verification to the department. If the SUSPECT turns out to be a real deceitful case, then it is blocked from the benefited list and is termed as a DUPLICATE, else it is rejected as a FALSE SUSPECT. In essence, TDD is developed with an intention to use technology in the form of algorithm without the use of any biometrics, expensive equipment or beneficiary's presence to excerpt the fraudulent suspects. Till date, TDD has successfully de-duplicated



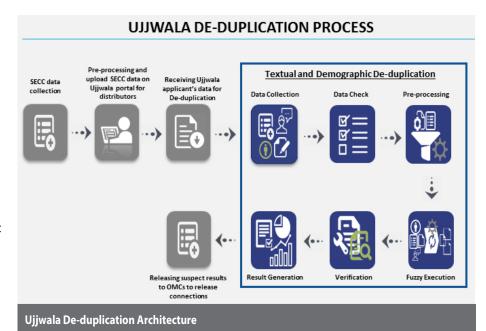
I would like to convey my appreciation for the work done by the team working on de-duplication of LPG beneficiaries for the Oil **Marketing Companies on behalf** of Ministry of Petroleum and Natural Gas. The team has contributed immensely towards the implementation of Pradhan Mantri Ujiwala Yojana (PMUY) scheme by extracting the 10.15 Crore beneficiaries' dataset from the SECC (Socio Economic Caste Census) data de-duplicating the applicants in a time bound manner. Their sincere efforts in de-duplicating Kerosene Oil user's data against the LPG beneficiary database also deserves to be commended.

ASHUTOSH JINDAL, IAS Joint Secretary (Marketing) **Ministry of Petroleum & Natural Gas** 15.5 crore LPG beneficiaries curtailing around 1,56,33,099 multiple gas connections and is continued henceforth under PAHAL scheme to aid in saving government funds and mitigating frauds. The same algorithm with revised logic is now used for de-duplicating PMUY data.

PMUY DE-DUPLICATION

There is no straight forward approach to deal with a large chunk of miscellaneous data. A subtle understanding of the scenario is required to formulate the process according to the requisite. The working scenario of PMUY is as follows:

- 1. Receiving Socio Economic Caste Census (SECC) data from TDP (Telematics Development Promotion) division.
- 2. Preparing the data to be in a unified standard format and manifesting the data to OMCs (Oil Marketing Companies) through which OMCs check the eligibility criteria of the applicant, applying for a new gas connection under PMUY scheme.
- 3. Receiving the PMUY applicant data from OMCs as Waitlist data and de-duplicating the data on the basis of three textual demographic parameters -Name, Address and KYC (Know Your Customer) number; which is AHL-TIN (Abridged Household List - Transaction Identification Number) which is a 29 digit unique number. The first 27 digits of the AHLTIN are same for each family and the last 2 digits differ for each member the family. within De-duplication is done for both family and members of the family so as to ensure there are no duplicates within the family.
- **4.** Forwarding the clear list (Beneficiaries who are not suspects and qualified to receive the connection under PMUY) to OMCs through Web Services for releasing the connection to the beneficiaries.
- 5. The data of the beneficiaries who got the new connection through PMUY will be sent again to NIC as delta data for



demographic de-duplication.

ROLE OF DE-DUPLICATION IN PRADHAN MANTRI UJJWALA YOJANA (PMUY)

NIC's role in curtailing the duplication in PMUY is immense and requires collection and analysis of large set of data constructively. Be it collecting SECC data from TDP, unifying the data and making it available to OMCs for validating the applicants' eligibility or be it receiving PMUY Waitlist/ Delta data and de-duplicating, NIC provides its methodologies in executing the whole process in a well-defined manner.

De-duplication for PMUY waitlist data kick-started in April 2016 with all 36 States/ UTs going live. The data of the beneficiaries who have received a new connection through PMUY are sent to NIC as delta data for demographic de-duplication to refurbish the existing beneficiary data. De-duplication for PMUY Delta data commenced from January 2017. Real time de-duplication for Delta data is being performed for all the States/ UTs on daily basis.

WAY FORWARD

Central and State Governments offer numerous welfare schemes for the people, but ensuring their accessibility to the intended beneficiaries is still a far cry. In this context, curtailing the duplicates without the use of sophisticated biometrics infrastructure is one of the major issues faced. One area where Textual and Demographic De-duplication can be of value is in ensuring fair usage of government funds in projects like Public distribution system, agricultural subsidies, petroleum subsidies, educational grants, development authority subsidies and other such sectors. Another area is preventing the misuse of Government identification cards where one individual possess multiple/ duplicate identification cards. To name a few passports, government health cards, election IDs, driving licenses, insurance policies and other similar domains. All these are sectors where textual and demographic de-duplication has immense application.

	ארוח	VALA WAI	TLIST	UJJWALA DELTA			
States/ UTs	Total Consumers	Total Suspects	Suspect (%)	Total Consumers	Total Suspects	Suspect(%)	
36	2,63,08,548	81,20,925	30.87	2,04,03,877	9,62,560	4.72	

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Household Survey, Odisha:

A Smart Survey Initiative for Children Education

Household Survey is a smart initiative of School and Mass Education Department which enables efficient and convenient computerization of the collected information of children through Block level MIS personnel and preparation of the Child database, Data consolidation, Data verification and Web hosting.



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Edited by **PRASHANT BELAWARIAR**

ight of Children to Free and Compulsory Education (RCFCE) Act. 2009 and State RCFCE Rule-2010 instructs to maintain the Records of 6 to 14 years age group children in the State and to ensure elementary education is provided to each and every such child. There was a need to conduct a Household Survey through door to door enumeration to identify each and every child up to 14 years age and maintain the Child Records as per the parameters prescribed. The database was created for the Household Survey for:

- **1.** Assessing the enrollment position as well as number of out of school children.
- 2. Tracking each and every out of school child in 0-14 age group and providing need based inputs to bring back them to the schooling system.
- **3.** Identifying the reason for dropping out of school so that remedial action can be initiated.
- **4.** Identifying the pre-school age children in Anganwadi Centers and Pre-Schools and assess the future school going population in villages for advance action in terms of providing infrastructure, teachers, text books, uniforms etc.
- **5.** Identifying the class wise in school children and track the attendance & achievement and provide facilities like free text books, Uniform, Aids & Appliances for CWSN etc.
- **6.** Identifying the Children reading in various institutions and eliminate fake & duplicate enrollments from the system.
- 7. Integrating child data with Aadhaar Number (UID) for identification and use by the department for several welfare schemes initiated by Government of Odisha as well as Government of India.
- **8.** Planning all activities related to implementation of RTE-SSA in the State with need based planning.



66

We acknowledge the efforts of **District Education officers** (DEOs), District Project Coordinators (DPCs), Block Education Officers (BEOs), ABEO-cum-BRCCs, **Cluster Resource Centre Coordi**nators (CRCCs), State/ District/ Block level MIS staff, all Head Masters & Teachers and SMC members for their cooperation and dedication to make the **Household Survey a success in the** State. We acknowledge NIC-**Bhubaneswar for their technical** support in database creation, web hosting and reporting for **Household Survey 2016.**

MAHENDRA KUMAR MALLIK, IAS
State Project Director, OPEPA

OBJECTIVE

The objective of the Household Survey was to identify each and every child in 0-14 age group throughout the State through door-to-door survey in each habitation by enumerators and create a database which can be updated monthly/ annually with little efforts carrying the change in the educational status of each child.

INNOVATIONS APPLIED

Survey

The first phase is door-to-door survey by school teachers and Anganwadi workers for filling of the Child Record Formats (CRF). The objective was to cover each and every household and identify each

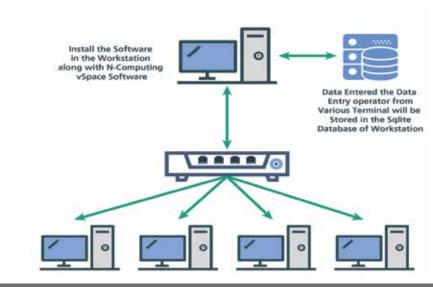


child in 6-14 age group & record the information in the CRF. The available Anganwadi registers may be referred for ensuring the coverage of all children in the survey. Department of School and Mass Education Odisha collected the data with the help of enumerators.

Digitization

The second phase is to computerize the collected information of children through Block level MIS personnel and prepare the Child database, data consolidation, data verification and webhosting.

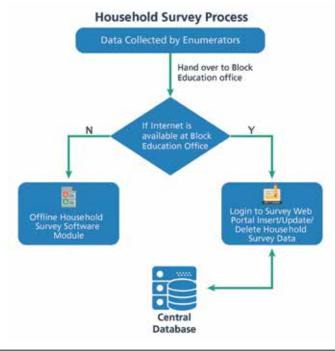
Getting the huge Household survey data to central server is the main problem. There are many issues like lack of systems and connectivity in block level. In addition the offline system needs workstations with multiple dump terminals at block level so that multiple data entry operators can enter



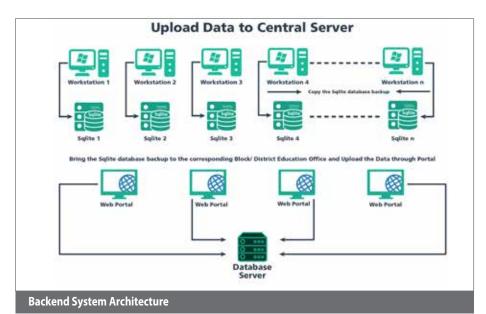
Infrastructure used for conducting the Household Survey

the collected data at the same time. In order to solve this, a generic approach was needed which could work both offline and online

Before uploading the data to the central server, master data had to be prepared properly. So a model was designed to collect master data of all districts, blocks, GPs (Gram panchayats), clusters, villages and habitations. Another goal of this model is to assign MIS PC (Manage information System Planning Coordinator) to each block with the names and mobile numbers. Once the door-to-door survey was completed by the enumerators, Digitization of Household Survey data at block level was started. If net connectivity is available at the block level data will be entered to the system through the portal by data entry operators after login with valid credentials. But where at block level, systems are not available for multiple data entry operators, another offline model (UNIX workstation) was prepared so that multiple data entry operators can enter the



Survey Process Diagram



data from dumb terminal. All the data entered by multiple data entry operators at same time will be stored in the database of workstation. Data entered by multiple data entry operators from the dump terminals will be stored in SOLite database of workstation.

Once the data entry is completed the SQLite database backups can be brought to the corresponding Block/ District education office and the backups are uploaded to the server through portal.

PROGRAM MANAGEMENT

Planning

Odisha Primary Education Program Authority (OPEPA) decided to sample Household survey data to help the Administrative unit down the line i.e. District and Block level, so that huge sampling work can be completed on time.

Stakeholder Management

There are different stakeholders in the process which had to be managed viz. Block, GP, District and OPEPA. Block Education Officer (BEO), District Education Officer (DEO), Odisha Primary Education Programme Authority (OPEPA), NIC

Performance Management

The Master data populated by the Block level resources need to be validated by District level resources. Extreme care has to be taken at this phase to avoid additional efforts at later stage of the project. Again, once the data is published online and the stake holders are responsible for updating of their respective data within a timeframe.

Organization change management

The changes due to the introduction of new sample survey of Household data has caused the OPEPA to monitor the picture and information uploaded by the Block and District level Program manager. It also made necessary the verification of the information before it is uploaded to the web.

Communication Management and Governance

A Nodal officer has been appointed to oversee that the process is carried out smoothly and no grievance is pending at the Government end.

Process Re-engineering

Earlier, the online data collection module was restricted to District with good net connectivity but the combination of offline and online module helps to reach the last mile to collect data from Block level. Now this new idea has given them opportunity to concentrate on the quality of the data and stick to the commitment to deliver it on time

Training and Workshop

MIS PC (Manage information System Planning Coordinator) of all blocks were called during the workshop and educated

regarding office setup procedure and data entry module. Training was imparted to the team to expedite the job at Block and District level.

SUMMARY

- 1. Total 85,63,970 Households in 95,105 habitations of the state were surveyed.
- 2. Detailed database of 84,24,700 children between 0-14 years has been prepared.
- 3. 42,125 children were identified as Out of school and steps have been taken to enroll them into schools.
- 4. Data of 0-14 years were handed over to W&CD Department for ensuring their enrollment in Anganwadis.
- 5. Database of all In-School children were tagged to their respective classes in the schools.
- 6. Fake duplicate names from enrollment were removed during the survey
- 7. All activities of SSA, MDM etc. were made child centric.
- 8. Steps have been taken to link Aadhaar number to each child in the database.
- 9. Household Survey data will be updated annually during April-June to update the educational status of each child and add to new entrants to this age group.

WAY FORWARD

Simplifying the process of offline and online integration of Household Survey Data to HHL portal is one important aspect and creating opportunity for the state level administrator and HRD Ministry to explore the portal as decision support system. After successful implementation of the model, Government of India scrapped the old method i.e. UDISE and the entire project was awarded to National Informatics Centre. In the age of Digital India the significance of the project is vital for NIC as well as Ministry of HRD. The following objectives have been decided:

- 1. All areas of the application need to be made generic
- 2. Initial processes were already started with Ministry of HRD to roll out the project in pan India level
- 3. Setting of a PMU at OPEPA

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Digital India Awards 2016:

Assessment Methodology for Digital Initiatives



Digital India Awards 2016 used a rigorous and scientific methodology to determine the 28 winners across 8 different categories of awards including Special Jury Awards.



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Edited by **MOHAN DAS VISWAM**

he universal acceptance of the power of ICT in transforming and accelerating the development process, especially in developing economies, is indisputable. Government of India has also been proactively engaged in the seamless delivery of information and services with the adoption of best ICT practices. In order to promote more innovative e-Governance initiatives by Government bodies, Digital India awards (earlier known as the Web Ratna Awards) were instituted under the ambit of National Portal of India. The award acknowledges exemplary initiatives of various government entities in the realm Digital India.

AWARD CATEGORIES

Considering the vision of Digital India and acknowledging the fact that citizen are now accessing government information and services through media other than the web including, but not limited to, Smartphone Apps, the scope of the Web Ratna awards (2014) was broadened to include these initiatives in addition to the other categories. Digital India Awards 2016 have been constituted under the following eight categories:

- Exemplary Online Service
- Innovative Citizen Engagement
- Web Ratna Ministry/ Department
- Web Ratna State/ UT

- Web Ratna District
- Outstanding Digital initiative by Local body
- Best Mobile App
- Open Data Champion

ONLINE NOMINATION

Online nominations had the following parameters:

General Parameters

- Contact details of the team leader and team members, details of the website like Title, URL, overview etc.
- •The salient features like Usability, Interface, Outreach, Bilingual interface, Content personalization features, Presence of contact details, Feedback form/ Contact details, FAQ and Help.

Category Specific Parameters Most Innovative Citizen Engagement:

Relevance, target audience, modes of participation, extent of participation and outcomes.

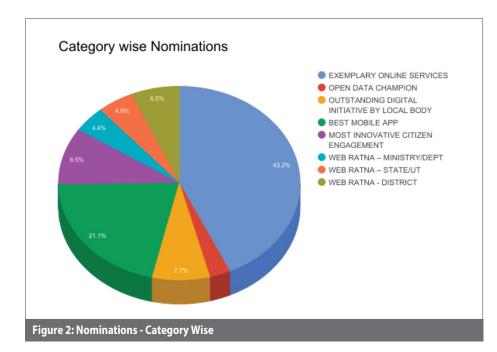
Exemplary Online Service:

Service maturity (informational, enhanced informational, transactional or connected), convenience, transparency, number of feedbacks received/ redressed, number of grievances received and addressed.

Web Ratna - Ministry/ Department:

Details of major e-Governance initiatives covered, reach, stakeholders, subordinate departments/ offices that have their own websites, convenience in availing of information and/ or services, number of feedbacks received/ redressed etc.





Web Ratna - State/ UT Government:

Spectrum of coverage, number of State Departments with their own websites, number of transactions to complete a task, time taken per transaction, convenience to avail information/ services, no. of feedbacks received/ redressed etc.

Web Ratna - District:

Number of Online Services & Certificates, information for local residents/ tourists, convenience, transparency, cost effectiveness, efficiency, enhancement etc.

Outstanding Digital initiative by Local body:

Number of Departments associated, content, online service quality, service maturity, convenience to avail information/ service, number of grievances received/addressed, etc.

Best Mobile App:

Relevance, ease of use, technical, App functionality, privacy concerns, social media integration, incorporation of analytics functionality, feedbacks and suggestions, etc.

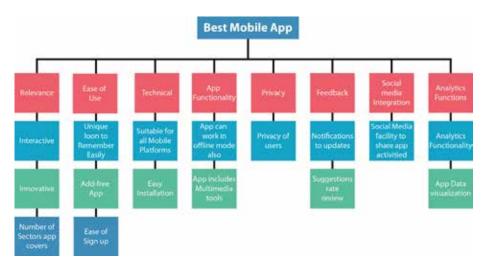


Figure 3: Criteria for Best Mobile App

Open Data Champion:

Presence on Data Portal of India (http://data.gov.in), compliance with the National Data Sharing and Accessibility Policy (NDSAP), description, usefulness, availability for statistical inferences, etc.

EVALUATION PROCESS

Extensive process for evaluation of filed nomination was followed which was conducted in two stages.

Stage-1: Entries were screened and evaluated by IIT Delhi based on a scientifically formulated methodology.

Stage-2: The distinguished Jury under the Chairmanship of Secretary, MeitY and experts from Academia and Industry. thereafter reviewed the shortlisted nominations and finalized the awardees in each category.

Three awards were presented in each category namely Platinum, Gold and Silver along with Jury choices in few categories. A total of 28 entries were selected to receive the Awards.

INSTRUMENT DESIGN FOR EVALUATION

A proficient team from the Indian Institute of technology (IIT), Delhi played an active role in screening the applications based on a scientifically devised process.

Each category was assigned with some specific features which a entry had to qualify to get shortlisted for the award. Criteria were defined for each category based on their specific and regular features. for example for the best mobile App the criteria can be seen in *figure 3*.

For each criteria, a set of questions was prepared. The questions were mapped with website/ App features either based on yes or no (0 or 1) score, or based on Likert scale (0-5).

Questions for criteria 'Ease of Use' for 'Best Mobile App'' are given in Table-1. Similarly, questions were prepared for each of the other criteria for this category.

Weights Assignment

The multi-criteria approach Analytic Hierarchy Process (AHP) was used to assign the weights to each of these

SI.	Ease of Use	
1	ls the app available in multiple/regional language	0/1
2	The app labels are easy to understand	0/1
3	App is easily available in app download library or app stores	0/1
4	App Icon is unique and users can remember the icon	0/1
5	Video/ Screenshots are available that highlights the Apps features and benefits	0/1
6	Whether the App is Ad -free Application	0/1
7	Whether App is free downloadable	0/1
8	If App is paid application whether a free version is provided along with full version	0/1
9	App Sign up/ Log in process is simple	0/1
	Total (c)	9

Table 1: Questionnaire for rating the criteria Ease of use for category	,
Best Mobile App	

Intensity of Importance	Definition
1	Equal Importance
3	Weak Importance of one over other
5	Strong Importance
7	Demonstrated Importance
9	Absolute Importance
2,4,6,8	Immediate Values
Reciprocals of the above	If activity-i has one of the above numbers assigned to it when compared with activity-j, then j has the reciprocal value when compared with i
1.1-1.9	When elements are close and nearly indistinguishable

Table 2: Decision matrix for best mobile app

criteria. AHP was developed by Thomas L Saaty in 1980. AHP is a rational framework for structuring a decision problem, representing and quantifying its elements, relating those elements to overall goals and evaluating alternative solutions.

Analytic Hierarchy Process (AHP)- Inputs

- Relative importance of criteria
- Through pair-wise comparison matrix
- Expert opinion to assign the weights for each question W1, W2, W3....Wn in respective questionnaires.

To arrive at the weights first a pair-wise comparison matrix was created. In this, the various criteria were compared in pairs for importance on a 9 point scale as given in Table-2.

Based on the comparison matrix in Table-3, the weights were arrived after

Relevance	19.7%
Ease of Use	14.6%
Technical	20.2%
App Functionality	15.4%
Privacy Policy	4.8%
Feedback	5.1%
Social Media integration	5.1%
Analytics Functionality	15.4%

Table 4: Final weights for Best mobile App

	Relevance	Ease of Use	Technical	App Functio- nality	Privacy	Feedback	Social Media	App Analytics
Relevance	1	1.00	1.00	1.00	5.00	7.00	5.00	1.00
Ease of Use	1.00	1	0.33	1.00	3.00	5.00	5.00	1.00
Technical	1.00	3.00	1	1.00	3.00	5.00	3.00	1.00
App Functionality	1.00	1.00	1.00	1	3.00	3.00	3.00	1.00
Privacy	0.20	0.33	0.33	0.33	1	1.00	1.00	0.33
Feedback	0.14	0.20	0.20	0.33	1.00	1	1.00	0.33
Social Media	0.20	0.20	0.33	0.33	1.00	1.00	1	0.33
App Analytics	1.00	1.00	1.00	1.00	3.00	3.00	3.00	1

Table 3: Pairwise Comparison matrix for Best Mobile App

normalising and performing a consistency check. The final weights for the criteria for best mobile app are given in Table-4. Security audit and certification were mandatory for any entry to be considered for evaluation.

Data Collection

The data was collected for each nomination based on questionnaire instrument of that category (Table-1). Double blind assessment was followed for ascertaining impartial outcomes. Third evaluation was done if needed.

Results

- Each entry was rated against each criteria c1, c2, c3...Cn.
- Final score was calculated as follow-
- Weighted score = C1W1 + C2W2 +

C3W3+....+CnWn

Nominee entry with highest weighted total sum was declared as winner under each category.

SUMMARY

The methodology used for selecting the winners of Digital India Awards 2017 was extensive, scientific and quantifiable, ensuring above par decisions and fair analysis. This model can be adopted for evaluation for similar requirements in Government.

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Regional e-Governance Academy to be setup in Mauritius

National Consultation Meeting on the creation of a Regional e-Governance Academy in Mauritius was held on 17th January, 2017 at the Voilà Hôtel, in Bagatelle. The Academy will help advance eGovernance initiatives across communities and within the region.

In his address at the event, the Minister of Technology, Communication and Innovation, Mr Etienne Sinatambou, said that the Academy, based on the Estonian e-Governance Academy, would enhance the quality of life of citizens by making use of innovative technologies to provide personalized and efficient government services.

The Minister pointed out that Mauritius being a leader in the African continent, the country can play a leading role in the region to promote a robust, efficient and reliable e-Governance platform, assisted by the expertise of Estonia in the field of eGovernance. A delegation from the eGA, along with other stakeholders, participated in this National Consultation Meeting.

A Memorandum of Understanding (MoU) was signed with the Estonian Government in September 2015 in the area of



e-Governance which provides for the setting up of a Regional e-Governance Academy. The Estonian model is thought to be well-suited for the Academy given that Estonia is a leading country in the field of e-governance infrastructure and digital services in the European Union.

Source: http://allafrica.com

€12 Million in EU Funds for Tablets for Students

arliamentary Secretary for EU funds, Ian Borg announced that 12 Million have been set aside from the EU funds for providing tablets to every student in Malta on the 26th January, 2017. Some 12000 students are poised to benefit from the scheme directly.

Addressing a press conference, Borg said that the One Tablet



Per Child project intends to help Malta reach its goal in the EU 2020 targets. "Both areas have been identified as areas in need of a significant effort in order to reach the EU-wide benchmarks," he said. "The main result indicator will be to reach 50% of teaching time in schools using digital technologies."

In addition, other schemes were also launched including like CONvErGE, a project aimed at developing new e-services in the fields of health, environment, customs and interdepartmental services. It is expected to cost nearly 57 million and aims to have a user base of 65% of the Maltese population. Another announced project, SIntergraM, has plans to fund a major upgrade of the Planning Authority's website.

"It will enable the implementation of an integrated process where the interface between government, citizens and the business community would be able to use updated information in real time and in a reliable and verifiable format which shall also result in increase of e-services usage in the Maltese islands," Borg said.

Source: http://www.maltatoday.com.mt

South Korea trains 22,600 Nigerian Govt. Officials on e-Governance

he Nigerian Minister of Communication Technology, Mr. Adebayo Shittu, confirmed that about 22,600 government officials will participate in and benefit from the ongoing e-Governance training organized by the Korean Government through the Korean International Cooperation Agency (KOICA) 2013-2018 training programme for Nigeria.

Speaking at the 4th In-Country training on e-Governance capacity building programme in Abuja, the Minister said that the training will facilitate the deployment of Information Communication Technology (ICT) in governance all across the country. In his keynote address, the Minister said that the target was to have over 20,000 trained officials across all the Departments, Ministries and Agencies.

In his address, the Korean ambassador to Nigeria, Mr. Noh Kyu-duk, said, "the ripple effect of this pool of ever more competent government officers who are adept at the tools of 21st century e-governance will, without a doubt, lead to a more efficient, transparent and convenient public service in Nigeria."

The training is a part of the 5 year "Project for Capacity Building of e-Government in Nigeria", with overarching objective of



improving the efficiency and transparency of the public service administration in Nigeria.

KOICA is spending \$8.56 million US dollars for the implementation of the project, which include drafting an e-government Master Plan, (completed and handed over to the government in 2015), establishment of an e-Government Training Centre and organizing Capacity Building Programs for 22,625 government officers

Source: http://worldstagegroup.com/

Swiss Startup to launch e-Government App Store in 2017

wiss Startup Procivis unveiled plans to launch a blockchain powered e-Government App Store, including a Digital Identity Service, by the end of 2017.

The company is developing a blockchain-powered platform designed to run a government-curated "app store" offering the full range of public administrative services, including tax filings,



land registry and commercial registry. Procivis is working closely with various organizations and experts to develop its "e-Government as a Service" solution.

Procivis will be targeting the Swiss market primarily but will also seek to serve other markets as well. More specifically, Daniel Gasteiger, founder of Procivis, noted that the platform could help countries that are falling behind in their e-government efforts to leapfrog over their counterparts. He also added, "We are very much looking to work with such countries to help them deliver e-services to their citizens based on secure digital identities similar to what India has been doing with their Aadhaar program, for instance." Kaspar Korjus, the managing director of Estonia's e-Residency programme, is one of Procivis' strategic advisers.

Procivis is currently in talks with potential joint venture partners to help it bring the pilot version of the platform to real life and its further development.

Source: https://bitcoinmagazine.com/

IVFRT Regional Conference held at Kochi, Kerala

Regional level conference IVFRT on (Immigration, Visa, Foreigners' Registration and Tracking) was organized by Bureau of Immigration (BOI) and National Informatics Centre (NIC) jointly at Government Guest House Conference Hall, Ernakulam on 10th

February 2017. The implementation status of the project was reviewed and Technical/ Administrative sessions were also conducted on cFRO, cForm/ sForm, Intelligence Collection, Inspection of registered cForm users, Seaport Immigration check and Coastal Security.

Dr. B. Sandhya, IPS (ADGP, South Zone) inaugurated the Conference in the august presence of Shri K. Sethuraman, IPS, (FRRO, Cochin), Smt. I.B. Rani, IPS (Deputy Director, SIB, Thiruvananthapuram), Shri P. Vijayan, IPS (IGP Ernakulam Range), Shri M.P. Dinesh, IPS (Commissioner of Police, Kochi City), Police Chiefs of Five Districts in South Zone, Deputy Superintendents of Police and the Officers of the Foreigners Section, Ernakulam Range.

Technical and Administrative sessions were conducted by



officials of BOI, Cochin and NIC IVFRT Kerala Team. Other sessions held were on Review of the cFRO module, Intelligence Collection & Immigration, Inspection of registered cForm users & Coastal Security and role of Immigration in Seaports. A technical presentation of the IVFRT project was given by Shri T.A. Jojo, PSA, NIC, Cochin. In the post lunch session a panel discussion was held and the participants shared their experience. The conference was concluded with vote of thanks by Shri S.K. Nair, Asst. Director/ PRO, Cochin Airport.

- N.K. PRASAD, NEW DELHI

Divisional Digi Dhan Mela held at Srinagar, Jammu & Kashmir

ivisional level Digidhan Mela was held at Indoor Stadium, Srinagar on 7th February 2017. The Divisional Commissioner (Kashmir), Deputy Commissioner (Srinagar) and other dignitaries were present on the occasion. DIO, NIC Srinagar gave a welcome address. Deputy Commissioner Srinagar in his address said that digitization will pave way for a new revolution in which paper currency will be replaced by digital transactions, thus proving beneficial to curb black money. In his concluding address Divisional Commissioner Kashmir said that Jan-Dhan, Aadhaar & Smart phones will be merged for boosting the economy of the country and for easy transfer of money. He also added that menace of shadow economy will be curbed by the adoption of digitization in the country

At the venue, a large public participation was seen thronging different stalls put up by various Departments and Telecom companies. The Divisional Commissioner, Kashmir thanked NIC- Srinagar for providing valuable support in organizing the Digi Dhan Mela.

- JIT RAJ, JAMMU & KASHMIR



OSMS and Action Jodhpur Mobile App for Jodhpur Development Authority launched

mt. Vashundhara Raje, Hon'ble Chief Minister of Rajasthan launched the Online Scheme Management System (OSMS) for Mukhyamantri Jan Awas Yojna and Action Jodhpur Mobile App for Jodhpur Development Authority on 26th January, 2017 at Ajit Bhawan, Jodhpur.

Shri P.P. Chaudhary, Hon'ble Minister of State, Electronics & Information Technology and Law & Justice, Government of India, graced the occasion with his esteemed presence. Several other bureaucrats, dignitaries and officials from the NIC were also present at the occasion.

Online Scheme Management System and Action Jodhpur Mobile App has been developed and implemented by NIC Jodhpur, Rajasthan, under the JDA Jodhpur computerization project. The Action Jodhpur App allows citizens to file civic complaints and get information about the various schemes and allotments their CCC Status (Citizen Care Centre) as well as view their usage history.



Smt. Vashundhara Raje, Hon'ble Chief Minister of Rajasthan, launching the OSMS along with Shri P. P. Chaudhary, Hon'ble Minister of State, Electronics & Information Technology and Law & Justice, Government of India

The App also provides an online web based system available to citizens for obtaining services from anywhere and ensure time bound service delivery with an extremely simplified process. Under the new system, there would be a single point of interaction which would help to optimize allocation of time and effort as well as promote accountability and transparency.

- CHANDAN SEN, RAJASTHAN

HP State Red Cross Society Website launched by Hon'ble **Governor, Himachal Pradesh**

he website of the Himachal Pradesh State Red Cross Society was launched on the 31st January, 2017 in Shimla by His Excellency, Shri Acharya Devvrat, Hon'ble Governor of Himachal Pradesh. Shri P S Rana, Secretary of the State Red Cross Society and Shri Ajay Singh Chahal, State Informatics Officer, NIC Himachal Pradesh were present at the launch ceremony along with other officers. Highlighting the importance of the Red Cross, the Hon'ble Governor laid stress on strengthening and diversifying the scope of services. He expressed the hope that the website will inform and educate the people about the activites being carried out by the Society and encourage them to be part of the various initiatives and programmes of Red Cross.

Designed and developed by the NIC, Himachal Pradesh, the website can be accessed at http://stateredcross.hp.nic.in. The site contains relevant information on the objectives, activities, events, directions for donations, governing bodies, structure, aims and objectives of the organization in a single repository. The comprehensive and detailed photo gallery available on the



website presents important events and camps conducted by the State Red Cross Society.

The website also has a portal for making donations to the organization through e-Payment and e-Banking services in a safe and secure manner. The Hon'ble Governor congratulated the State Red Cross Society on the launch of the website and appreciated the efforts of the NIC, Himachal Pradesh for designing and developing such a dynamic, interactive and user friendly website.

- AJAY SINGH CHAHAL, HIMACHAL PRADESH

6th Women Science Congress held at Tirupati

he 6th Women Science Congress was organized on the 4th January, 2017 at Tirupati as a part of the 104th Indian Science Congress. The event was inaugurated by Shri N. Chandrababu Naidu, Hon'ble Chief Minister of Andhra Pradesh and saw several women scientists in attendance such as Ms. Neeta Verma, Director General, National Informatics Centre (NIC), Ms. Tessy Thomas, Director, DRDO's Advanced Systems Laboratory (ASL), and Ms. H.S. Savithri, Professor of Biochemistry, Indian Institute of Science, Bengaluru.

The challenges of women for making it to the top in academia was one of the topic of discussions and the speakers were of the opinion that the achievement of heights in career begins with successful personal life and support from the family. Shri Naidu emphasized that family bonding, an integral part of the Indian ethos, plays a great role in helping women excel in the profession of their choosing.

ISCA General President, Shri D. Narayana Rao suggested that concepts similar to "Work from home" should be introduced for the women scientists, who usually lose close to three years from



Shri N. Chandrababu Naidu, Hon'ble Chief Minister of Andhra Pradesh along with various dignitaries at the 6th Women Science Congress at Tirupati, Hyderabad

their professional careers due to two pregnancies on an average. Ms. Neeta Verma, Director General, NIC, encouraged women to have a "killer instinct" and take extra steps in order to stay

Shri N. Chandrababu Naidu felicitated Ms. Neeta Verma, Ms. Tessy Thomas and Ms. H. S. Savithri at the end of the inauguration ceremony.

- RAM PRASAD, ANDHRA PRADESH

Accolade

e-Mutation Implementation for Akola receives Manthan South **Asia Award**

The Online e-Mutation Implementation under NLRMP for District Akola has won a Special Mention Award in the Government and Citizen Engagement Category at the 13th Manthan South Asia Award 2016-17 organized by Digital Empowerment Foundation, on 25th Feb 2017 at Surajkund Mela Ground, Faridabad, Haryana.

The awarded project aims at making a complete switch over to online Land Records processing with Online e-Mutation under National Land Records Modernization (NLRMP) Mission Mode Project scheme, from Offline Land Records e-Mutation processing using Land Records Management System (LMIS) implemented in 2001-02 under Computerization of Land Records (CLR) scheme.

For making the process of the switch quick and seamless, NIC District Centre, Akola has adopted resource optimization for utility computing. It made use of several innovations like Process isolation, Virtualization, Server consolidation, Software, Hardware portability and leveraging of shared networks.



Shri Nitin V. Choudhari, DIO (Centre) & Anil S. Chinchole, ADIO (Left) receiving Manthan South Asia Special Mention Award 2016-17 for Online e-Mutation Implementation under NLRMP for District, Akola

The notable achievements of the project are that it improves service delivery, increases throughput, increases efficiency and creates cost effective solutions for concrete and effective e-Governance. Akola is also the first District in the State of Maharashtra with online e-Mutation for all Talukas since February, 2015 and the Telhara Taluka, one of the first Talukas in the state of Maharashtra for which online e-Mutation, is also a part of Akola district. More than 1 lakh online e-Mutations have been completed in Akola with purification of 345537 7/12 records of 1009 villages of seven Talukas of Akola district.

- MOIZ HUSSAIN ALI, MAHARASHTRA