

Informatics

AN e-GOVERNANCE PUBLICATION FROM NATIONAL INFORMATICS CENTRE



In Focus

PFMS

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- NIC's 1st Technology Conclave
- VIVID 2019
- Digital India Awards
- Goa State
- District Mahabubnagar
- Online Examination System
- National Power Portal
- Anubhav Portal

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A well-planned mechanism, engagement and stability lay the foundation of successful governance. Having revolutionised the way government functions, the deployment of ICT has led to impactful solutions for citizens and other stakeholders, and it has also fostered strategies to ensure transparency in the government's internal processes. Finance Sector of the government is one such area where ICT has played a significant role by developing a system to monitor the flow of funds to the beneficiaries of different welfare schemes. An insightful **Cover Story** on NIC's Public Financial Management System (PFMS) has been featured in this issue of INFORMATICS.

The last few months witnessed a number of nationally important events that kept the atmosphere buzzing at NIC. Having hosted its first ever Technology Conclave, NIC collaborated with industry experts to deliberate on various ICT solutions for enhanced e-Governance. The inaugurations of Command & Control Centre and Centre of Excellence in 'AI' by the Hon'ble Union Minister, Electronics & Information Technology and Law & Justice at NIC HQ were momentous in the timeline of the organisation. While the 3rd edition of VIVID reassured NIC's commitment to keep inspiring its officers, the 5th edition of Digital India Awards showcased tremendous development in the application of ICT. Similarly, the 2nd National Workshop on Central Public Procurement Portal paved the way to ponder on future-driven strategies.

It is worthwhile to mention, an interaction session was held by Director General, NIC, with Senior Officers on New Year day to take a glance of the projects implemented last year and discuss the way forward. The **Spotlight** section of this issue features all these stories in detail.

NIC e-Governance projects in the State of Goa have been focused in **From the States** section. **District Informatics** section talks about ICT advancements in Mahabubnagar District of Telangana. Articles covered in the **e-Gov Products & Services** section are Online Examination System of NIC, National Power Portal and Anubhav Portal. **Appscape** details seven Apps introduced recently. **Accolades**, **International e-Gov Update** and **In The News** sections also bring to you some interesting reads as always.

We constantly strive towards offering a happy reading experience to our readers. Your support in the form of suggestions and feedback will be highly appreciated. Please do write to us.

Editor

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NIC's first Technology Conclave held

Profound discussions enabled knowledge sharing on harnessing advanced technologies and making India a digitally empowered nation

provided by NIC to the Centre, States and Districts. He said, "With national e-Governance plans, NIC has developed nation-wide projects such as e-Hospital, e-Courts, National Knowledge Network, National Data Centre etc."

The next session on the Conclave's theme was taken by Shri D.C. Misra, DDG, NIC, and Shri Ganesh Ramamurthy, Managing VP, Gartner, deliberated on "Transitioning to the Digital Future: What Govern-



Dr. Neeta Verma speaking during the inaugural session of Technology Conclave 2019

Shearheading deliberations on the impact of ICT on e-Governance, NIC hosted its first ever Technology Conclave at Pravasi Bhartiya Kendra, Chanakyapuri, New Delhi from 22nd to 23rd January 2019. Themed as "Technologies for NextGen Governance", the two-day event was organised by the Technical Advisory Group (TAG), constituted by NIC, to help project teams in the development of strategic solutions. Shri Ajay Sawhney, IAS, Secretary, Ministry of Electronics and Information Technology, inaugurated the Conclave by lighting ceremonial lamp, along with Dr. Neeta Verma, Director General, NIC, Dr. Savita Dawar, DDG & Chair, TAG, NIC, and Dr. Anand Deshpande, Founder, Chairman and Managing Director, Persistent Systems.

The event witnessed an enthusiastic participation of NIC officers from all over the country and erudite speakers, the technology experts from the IT industry, who deliberated on various

topics related to the application of emerging technologies.

Extending welcome to the dignitaries and participants, Dr. Neeta Verma, in her address, highlighted the role of NIC in driving the use of ICT. She said, "NIC has been instrumental in steering the application of ICT at various levels in the government. This leverages Digital India, a flagship programme of the government to transform India into a digital nation."

The speech was followed by a keynote address by Dr. Anand Deshpande who emphasised on the importance of Artificial Intelligence and Machine Learning in building a software-driven government for effective governance.

Shri Ajay Sawhney also addressed the gathering and appreciated the technical support

ment Must Do Now?" He suggested government organisations to take full advantage of digital data to optimise, transform and create entirely new services while renovating backend systems.





Speakers of Technology Conclave (above), Invited guests and audience (below)



“Big Data and Advanced Analytics” was the theme of the following session, which was taken by Shri Lenin P, DDG, NIC, and witnessed deliberations from Shri Aniruddha Deswandikar, Director, Data & AI, Microsoft on “Transform your Data Estate using Big Data & Analytics” and Mr. Salmon Sim, Regional VP, APAC - Hitachi Vantara, on “Smart

Cities: The nexus of citizens, government, data and technology”.

Underscoring potential avenues to tap “Artificial Intelligence and Machine Learning”, the next session was taken by Shri G K Gaur, DDG, NIC. Shri Manav Sehgal, Head (Solution Architecture), Amazon Internet Services, spoke about

“AI & ML on the Cloud”, while Shri Vishal Dhupar, MD, Asia South, NVIDIA, put forth insights on “Is India Ready for AI Disruption?”

The second day of the Conclave began with a keynote address session taken by Shri Nagesh Shastri, DDG, NIC. The keynote address was delivered by Shri



Lalitesh Katragadda, Founder, Indihood, who shared views on “Transforming India with Technology and Policy”.

Shri Vishnu Chandra, DDG, NIC, took the next session on “DevOps/ Agile” during which, Shri Vinod Shankar Narayanan, ThoughtWorks Technologies, deliberated on “Government Going Agile”, while Shri Manjunath Bhat, Senior Director Analyst for DevOps, Gartner, spoke about “From Fragile to Agile: Leading Cultural and Technology Change for DevOps”.

Cloud technology was also among the prime areas of focus during the Technology Conclave. Underscoring the same, a session on “Cloud Native Scalable Applications and Microservices” was taken by Smt. Shalini Mathrani, DDG, NIC. Mr. Benjamin Henshall, Country Manager, Red Hat India & South Asia, deliberated on “Cloud Native Applications and Microservices and its Relevance for Government Sector”, while Shri Santanu Roy Chowdhury, Technical Specialist Lead, Intel, talked about “Software Defined Agile Infrastructure for Cloud Native Application”.

Dwelling on the protection of network systems against any kind of threat or misuse, the next session, taken by Shri R. S. Mani, DDG, NIC, was based on “Software-Defined Infrastructure/ Network Security”. The topic “Software-defined Infrastructure - The new reality of Business Transformation” was elaborated by Shri B S Nagarajan, Senior Director & Chief Technologist, VMWARE India, while Shri KPM Das, Cyber Security and Trust officer, Cisco Systems, spoke at length about “Securing the Public Sector: A DIGITAL INDIA Imperative”.

Since online systems are extremely prone to cyber attacks, there is a need to implement cyber security controls. Contemplating the same, the next session was taken by

Smt. Ratnaboli Ghorai Dinda, DDG, NIC. Speaking on “Culture & Technology: Why the modern threat landscape demands both?”, Mr. Nick Savvides, Chief Technology Officer, Symantec, Asia-Pacific, focussed on Pervasive Security Culture and other potential aspects. Shri Balasubramanya Ramananda,



Architect, McAfee, also delivered a speech on “Trend and Predictions on Cyber Security”.

Such pragmatic discussions paved the way towards tapping the latest of technologies and operating the government processes more efficiently. The Technology Conclave concluded on a successful

note, with the event highlights and closing remarks shared by Dr. Savita Dawar, DDG & Chair, TAG, NIC and Shri S B Singh, DDG, NIC, respectively. Dr. Neeta Verma, DG, NIC, also shared her feedback about the event and appreciated all the speakers for sharing invaluable insights. Dr. R K Mishra, Senior Technical Director, NIC, delivered the Vote of Thanks.

The webcast video covering the entire event is available at <http://webcast.gov.in/techconclave-2019/>.

With inputs from
Dr. R.K. MISHRA, NEW DELHI





weaving a Digital India

2019 Held in New Delhi

Hon'ble Union Minister, Shri Ravi Shankar Prasad encourages DIOs to explore potential avenues and bring about a wave of digital change



Digital India journey has evinced global interest and people are eager to learn from Indian experience. There is digital appetite and DIOs have to work as part of a larger team of the country. We have to take India higher.

mented across the country through various District Offices. She also encouraged DIOs to tap emerging technologies for the enhancement of services.

On the occasion, a Digital India Compendium on 'Digital Bharat, Saksham Bharat', making citizens conversant with the success story of Digital India, was released by the Hon'ble Minister.

Shri Ravi Shankar Prasad also presented-NIC TechGov Awards and Swachhata Awards to the winning NIC teams from State & District Offices and State Centres respectively.

Launches by the Hon'ble Minister

Manifesting the active contribution of NIC to the aim of Digital India, the following launches were made by Shri Ravi Shankar Prasad.

- AI based Digidhan Mitra Chatbot
- Technology Incubation and Development of Entrepreneurs (TIDE 2.0) Scheme
- Centres of Excellence on
 - ◆ IOT Open lab, STPI Bengaluru
 - ◆ ESDM Incubation, STPI Bhubaneswar
 - ◆ Emerging Technologies, NASSCOM, Gandhinagar
 - ◆ Emerging Technologies, NASSCOM, Visakhapatnam



Shri Ravi Shankar Prasad inaugurating the event, along with Shri Ajay Sawhney and Dr. Neeta Verma

The third edition of VIVID (Vision Insight and Voices as India goes Digital), the National Meet on Grassroot Informatics, was organised by the National Informatics Centre (NIC) at Stein Auditorium, India Habitat Centre, New Delhi from 21st to 22nd February 2019. VIVID, an annual National Meet to conduct healthy interactions with NICians, includes District Informatics Officer (DIO) Meet and Awards Ceremony to reward the contribution of officers positioned at various District Offices across the country.

The event was inaugurated by Shri Ravi

Shankar Prasad, Hon'ble Union Minister, Electronics & Information Technology and Law & Justice, along with Shri Ajay Sawhney, IAS, Secretary, Shri Pankaj Kumar, Additional Secretary, Shri Gopalakrishnan S., AS & FA and JS (Emerging Technologies), Smt. Simmi Chaudhary, Economic Adviser and Group Coordinator, MeitY, Dr. Omkar Rai, Director General, STPI, Dr. Neeta Verma, Director General, NIC, Smt. Nandita Chaudhri, DDG, NIC and Smt. Rama Nangpal, DDG, NIC.

Highlighting the important role played by DIOs in the application of ICT services, Dr. Neeta Verma, in her welcome address, elaborated digital programmes being imple-



Many projects are attaining nation-wide footprints. We need to work on some key points, including the adoption of the Indian Enterprise Architecture and the use of open APIs.

Appreciating the efforts of DIOs and exhorting them to stay enthusiastic about their work, Shri Ravi Shankar Prasad said, “VIVID has been designed to empower and give you exposure.”

The Hon’ble Minister further added, “NIC has the responsibility to deploy technology for improving governance and make growth more inclusive and sustainable. Digital India initiative should be seen beyond IT and governance. The Hon’ble Prime Minister has taken an initiative to empower ordinary people. NIC has the responsibility to make people use digital technology with the objective of bridging rural-urban gaps and also ensuring that the national efforts to bring about transparency in governance are reached.”

Shri Ravi Shankar Prasad drew attention of DIOs to three areas i.e., Agriculture, Primary Education and Healthcare in the country.



The Hon’ble Minister motivated DIOs to devise strategies for the growth and expansion of these sectors using low-cost technologies.

Shri Pankaj Kumar also addressed the gathering and focussed on the issue of connectivity with DIOs. He said that information on the issues or challenges faced by them should be obtained.

The dignitaries were honoured with VIVID 2019 mementoes and Smt. Rama Nangpal gave the Vote of Thanks.

Thereafter, technical sessions were held by NIC Officers on Software Quality, Arti-

cial Intelligence and TechGov. The third session comprised of sub sessions on Introduction to NIC TechGov Challenge and introduction to PRISM, Introduction to TULEAP – a platform for Collaborative Development, MinT: Mining Tool – TechGov Innovation Winner, and Device Integrator –TechGov Innovation Winner. The second day also witnessed deliberations by NIC Officers on Government Instant Messaging (GIM), Gov Mail – New Features, Big Data and Analytics – Challenges & Issues, and Opportunities for Advanced Analytics in Government.

With inputs from
MEDIA INTERACTION & PROTOCOL DIVISION, NIC



Shri Ravi Shankar Prasad launching TIDE 2.0 Scheme

DIGITAL INDIA AWARDS conferred

Hon'ble Union Minister appreciates winners, guides towards innovations and making India a centre of data analytics



digital activity happening around the globe. But, there are two types of player encouraging this IT ecospace in the world, one, who are talked about, others, those who are the silent workers. Whenever I talk about Digital Inclusion, my idea about this has been that unless those who are working silently on the ground are recognised, appreciated and rewarded, Digital Inclusion will not become a success. And, your presence today, and the Awards being given today are a recognition.” The Hon'ble Minister encouraged officers to come with innovative ideas as to how to make India's data a real asset whereby India emerges as a big centre of data analytics.

In her address, Dr. Neeta Verma said, “NIC has been constantly striving to provide state-of-the-art infrastructure to the government and is the first to introduce technologies such as VSAT in the government.” She further added, “Our pan India infrastructure not only connects every government institution in the country, but all the G2G communication happens through this network working at the backbone.”

Smt. Kiran Soni Gupta said, “Technology has become so central in our lives. We see in today's world, the boundaries of the digital world are ever expanding. Digital India, the silent revolution initiated by NIC few decades ago is in full bloom today. Besides creating a lot of opportunities, Digital India does have challenges as well. But, it has transformed our lives. Right from our personal to professional lives, we have seen that how the interface between government and citizens have changed over the years.”

Dr. Gulshan Rai also addressed the gathering. He expressed, “I fully appreciate the



Shri Ravi Shankar Prasad presenting the Awards

National Informatics Centre (NIC) hosted the fifth edition of Digital India Awards at Stein Auditorium, India Habitat Centre, New Delhi on 22nd February 2019. The event was inaugurated by Shri Ravi Shankar Prasad, Hon'ble Union Minister, Electronics & Information Technology and Law & Justice, along with Shri Ajay Sawhney, IAS, Secretary, Dr. Gulshan Rai, National Cyber Security Coordinator, Smt. Kiran Soni Gupta, Additional Secretary and Financial Advisor, Ministry of Electronics & IT and Ministry of Youth Affairs and Sports, Smt. Simmi Chaudhary, Economic Advisor and Group Coordinator, MeitY, Dr. Neeta Verma, Director General, NIC, Shri

R.S. Mani, DDG, NIC and Smt. Alka Mishra, DDG, NIC. The event was attended by officers from MeitY, other Ministries, State Government and NIC and people from industry & media.

In her welcome address, Smt. Alka Mishra underscored the instrumental role played by NIC in supporting the Digital India initiative of the government and gave an overview of the Digital India Awards.

Highlighting the changing landscape of the digital age, Shri Ravi Shankar Prasad, in his address, said, “Whenever I reflect upon the IT ecosystem of the world, I find three things. One is innovation, the second is empowerment, and third, a new kind of



initiatives and products, which are going to be announced and released. The Hon'ble Prime Minister has said in various forums that this country is going to be Five Trillion-Dollar Economy and recently, the Hon'ble Minister has also released a report on Trillion-Dollar Digital Economy. These are very realistic figures, and if we convert into this, we are aiming for a 20% digital economy. Our digital economy is somewhere around 8.7% of the Indian GDP. We are almost going 1.5 times faster than the global digital economic growth."

Shri Ajay Sawhney said, "We have gathered here to acknowledge the efforts put in by large number of teams across the length and breadth of increasingly Digital India, and to celebrate many of the successes that we have achieved during this period. The task that Digital India sets for itself is a humongous task. We have seen projects growing from isolated examples to cover full states and the entire country."

Digital India Awards, a biennial event, have been institutionalised under the ambit of the National Portal of India to promote a culture of innovation and digitalisation within government departments that strive for making services accessible to citizens. Recognising a number of e-Governance



initiatives taken by the State Governments and Central Ministries to improve the delivery of services, the fifth edition witnessed the conferring of Awards in eight categories i.e., Emerging Technology, Best Mobile App, Exemplary Online Service, Open Data Champion, Web Ratna – Ministry/Department, Web Ratna – State/UT, Web Ratna – District, and Outstanding Digital Initiative by a Local Body. The nominations underwent a multi-tier evaluation process and they were screened by IIT Delhi. Thereafter, they were placed in front of an esteemed jury, which was chaired by Shri Ajay Sawhney and comprised of senior government officials, academia & industry experts.

Two Jury Choice Awards as well as Special Mention Awards for the Northeast, in line with the government's Act East Policy to

encourage digital initiatives in the North-east, were also selected by the jury.

On the occasion, the following releases were also made by the Hon'ble Minister:

- Digital India Coffee Table Book
- Digital India Awards Compendium
- STQC Accessibility Certification Scheme
- Unified Messaging Platform
- Public DNS Service
- Cyber Crisis Management Plan 2019 (CCMP) and Guidance Framework for the CCMP

Concluding the ceremony, Smt. Alka Mishra delivered the Vote of Thanks.

With inputs from
DIGITAL INDIA AWARDS TEAM, NIC



Shri Ravi Shankar Prasad releasing the Compendium on Digital India Awards

NIC's Command & Control Centre inaugurated

The Hon'ble Union Minister underscores the need to monitor the Cloud & Data Infrastructure of NIC

the country. CCC has been set up keeping in view the requirement of a centralised facility to seamlessly monitor the availability of all these Centres and Cloud Services. It is noteworthy that over 10,000 e-Governance applications are being hosted by these Centres.



In a motivational address, Shri Ravi Shankar Prasad dwelt on employing latest of technologies and showed a way forward to accelerate the pace of operations. The Hon'ble Minister said, "Over a period of time, with the spread of Digital India Initiatives, applications have scaled manifold, and there was a need to set up a specialised centre to provide nation-wide view for ICT infrastructure for an effective monitoring and performance management to ensure availability & smooth functioning of all critical services."

The Hon'ble Minister also added, "The new technologies have the potential to transform societies and usher in an era of transparency and efficient governance."



Shri Ravi Shankar Prasad, Hon'ble Minister, during the presentation session

Shri Ravi Shankar Prasad, Hon'ble Union Minister, Electronics & Information Technology and Law & Justice, inaugurated the Command & Control Centre (CCC) at NIC Headquarters, New Delhi on 10th January 2019, in the presence of Shri Ajay Sawhney, IAS, Secretary, Ministry of Electronics and IT (MeitY), Smt. Kiran Soni Gupta, Additional Secretary and Financial

Advisor, MeitY & Ministry of Youth Affairs and Sports, Dr. Neeta Verma, Director General, NIC, Shri Pankaj Kumar, Additional Secretary, MeitY, Shri Gopalakrishnan S., AS & FA and JS (Emerging Technologies), MeitY and other senior officers from the Ministry.

NIC has been offering services to the government through its 4 National Data Centres and 30 Mini Data Centres across

CCC is providing users with a customised dashboard of Network Management System (NMS) to enable them to monitor their respective applications. NIC is also providing Application Performance Management (APM) through CCC to improve the availability, performance and functioning of critical applications.

With inputs from
ANIL RATHORE, NEW DELHI



Smt. Shalini Mathrani, DDG, along with Shri Anil Rathore, TD, apprising the Hon'ble Minister of the activities of CCC

NIC's Centre of Excellence in 'Artificial Intelligence' inaugurated by Hon'ble Union Minister, Shri Ravi Shankar Prasad

The Centre will enable the formulation of AI strategies for responsive governance



NIC's Centre of Excellence in 'AI' will set up a platform equipped with supercomputing facilities for fast tracking applications of AI in e-Governance adoption in Govt. projects.

Giving a boost to the e-Governance strategies driven by Artificial Intelligence (AI), the Centre of Excellence (CoE) of NIC was inaugurated by Shri Ravi Shankar Prasad, Hon'ble Union Minister, Electronics & Information Technology and Law & Justice, at NIC Headquarters, New Delhi, on 10th January 2019. Shri Ajay Sawhney, IAS, Secretary, Dr. Neeta Verma, Director General, NIC, Shri Pankaj Kumar, Addi-

tional Secretary, Shri Gopalakrishnan S., AS & FA and JS (Emerging Technologies) and other senior officers from the Ministry of Electronics and Information Technology (MeitY), were also present on the occasion.

With an aim to work closely with Ministries and Government Departments, CoE has been established to focus on the areas of Machine Learning, Natural Language Processing (NLP) & AI in Text, Image

Recognition, Speech Recognition & Synthesis, Deep Learning and Chatbot/Voicebots.

Underscoring the role of AI for an efficient e-Governance, Shri Ravi Shankar Prasad said, "CoE in AI is designed to promote innovation in application of AI to take e-Governance services to the next level. NIC has done a few proof of concepts in image analytics as in Swachh Bharat Urban, numeric modelling as in power, text classification and summarisation etc., which will find an echo in similar use cases in other Ministries and Departments."

"Artificial Intelligence and deep learning can prove to be very helpful in detecting duplication under various e-Governance services, which will help the government save a lot of money", the Hon'ble Minister added.

A few Proof of Concepts were demonstrated in the AI Lab and a Reference Book on the Use of AI Technologies in eGovernance Application was also released on the occasion.



Dr. Neeta Verma briefing about the activities of CoE to the Hon'ble Minister

With inputs from

SHARMISTHA DAS GUPTA, NEW DELHI

DG interacts with Senior NIC Officers on New Year Day

The year begins on a significant note with launch of standardised NIC Logo



Dr. Neeta Verma, DG, NIC, launching the standardised NIC Logo, along with Shri D.C. Misra, DDG, NIC

New Year is the time to reassure commitment to attaining future goals while cherishing the past accomplishments. As 2019 rolled in, Dr. Neeta Verma, Director General, National Informatics Centre (NIC), convened a meeting of Deputy Director Generals, Heads of Groups and Senior Informatics Officers for deliberations on the highlights of NIC's digital initiatives in 2018 and the aspirations set for the current year. Held at NIC Headquarters, on the joyous occasion of the New Year, the meeting's live webcast was attended by NICians from various locations such as Patna, Hyderabad, Imphal, Ranchi, Haryana and Gandhinagar.

Extending New Year wishes to all, Dr. Neeta Verma, in her inspirational address, spoke about the latest achievements concerning the previous year. DG expressed, "When we began our journey, our focus was mobile first, and then we moved to cloud first. In 2018, we were primarily trying to focus on digital



Shri Mohan Das Viswam, Sr. TD, presenting the standardised Logo of NIC

platforms. I am glad to see that a lot of those platforms have come to the age and some of them have actually achieved nationwide, pan India presence. If you look at eOffice, eProcurement, eHospital, eCourts, Sarathi and Vahan, a lot of products that took off last year have the potential of taking the pan India status."

Appreciating the committed efforts made by NIC Officers, DG encouraged all to stay dedicated to the organisation with the same enthusiasm. She also threw light on the setting up of a media group to spread awareness about the projects undertaken by NIC.

The launch of standardised NIC Logo was also one of the significant happenings during the meeting. Highlighting the need to enhance NIC's visual identity, a presentation on Logo Standardisation was given by Shri Mohan Das Viswam, Sr. Technical Director, UxDT Division. He spoke about the need of standardisation and the application of logo variants on different platforms like websites, social media, publications, event backdrops etc.

Thereafter, Dr. Savita Dawar, DDG, gave a presentation on R&D Activities in NIC, in which she spoke about the ongoing research and development in various groups such as Data Analytics Centre, Artificial Intelligence, Cyber Security, OTG, Computer Aided Design (CAD), Geographic Information System (GIS) and National Knowledge Network (NKN).

NIC has been spearheading the government's digital initiatives with full vigour and the same was apparent from the inauguration of multiple projects during the last year. Such momentous events like Launch of Digital NIC, Collaboration with Sri Lanka for NKN Peering, Launch of Digital Payments Dashboard, Launch of eWay Bill, Felicitation Ceremony for OpenGovDataHack National Challenge and so on, were covered in a presentation showcasing the glimpses of NIC in 2018.

Shri V.K. Tyagi, Technical Director, thanked all the Officers for their participation.

With inputs from
MEDIA INTERACTION & PROTOCOL DIVISION, NIC

GOA STATE

On a progressive path to become the next IT Hub of India

NIC Goa State Centre is the leading solution provider of ICT services in the State. Aimed at better e-Governance, the initiatives by NIC Goa have earned several prestigious accolades to its credit. South Goa is a unique District in India where a complete Data Centre is provided by the District Magistrate.

Edited by
ARVIND KUMAR DADHICHI

mmensely popular as a bustling tourist destination, the smallest yet vibrant state of India, Goa, has a lot of recognition to its credit. Boasting of over 80 miles of coastline, natural beauty, magnificent heritage sites and churches, and much more, the State has strongly established itself in the hospitality sector. Currently ranked 19th in the country as far as Ease of Doing Business is concerned, Goa is now not only touted as a hottest travel destination in the country, but is also rapidly progressing to be an upcoming Information Technology Hub and Start-up haven. The same has got a boost after the relaunch of the IT Policy in July 2018. Goa was the first State to achieve 100% digitisation of Land Records way back in 2001. NIC Goa has been working with a firm commitment to make the State a technologically rich destination where citizens can avail ICT services to the maximum. Some of the important and large-sized ICT projects implemented by NIC Goa are as follows.

National Generic Document Registration System (NGDRS)

The State Registration Department, Government of Goa has marked their presence under Digital India Programme by launching National Generic Document Registration System (NGDRS) (<https://ngdrsgoa.gov.in>), which is a national initiative by NIC. It uses a powerful algorithm to determine property/ land valuation, automatic stamp duty and registration fee on the basis of market value. This project was inaugurated by Shri Nilesh Cabral, Hon'ble Minister of Power, Non-Conventional Energy, Law and Judiciary, Government of Goa, on 4th February 2019. All 12 talukas in both districts have completely switched over to NGDRS and are working seamlessly right from online registration, online payment, taking appointment for final registration

where finger print scanning and physical verification are mandatory. The project has been developed by Software Development Unit (SDU), NIC Pune as part of G2C and G2G services.

Impact

- The execution of deeds for registration is now done in a ten-minute time window.
- Online payment of registration fees is integrated with e-Challan Payment Gateway.
- Property registration is made simple and hassle free.
- Need to interact with SRO officials is eliminated. Citizens need to visit registrar's office only for the final stage of registration.
- Property registration process is simplified for citizens.



“

My heartiest congratulations to NIC Goa on being an invaluable partner of the Government of Goa in the various e-Governance initiatives. With e-Challan Payment Gateway, about 75% of all the government receipts are now received through online mode. Directorate of Accounts makes approximately 98% of payments electronically. The recently launched NGDRS, State GST System and Excise System have made a good impact. This year, for the first time, Goa has had a fully digital Budget. Goa SPARROW System has made a high impact on moving towards the paperless office. All these measures are helping us achieve our dream of Digital India.

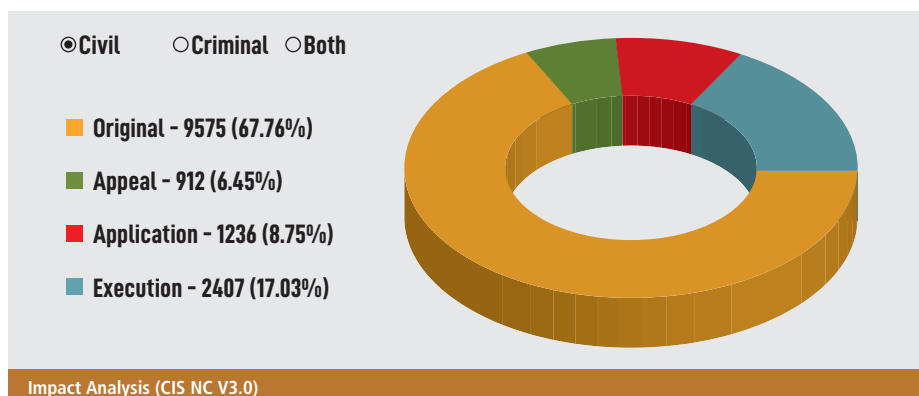
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Goa Assembly Budget

On 30th January 2019, Late Shri Manohar Parrikar, Hon'ble Chief Minister and Finance Minister of Goa, presented a 100% Paperless Budget – an initiative of Green Budget, for the first time ever in Goa History. All the Budget documents were made available to all Ministers and MLAs during the session on their Notebooks and Tablets. Later, the entire Budget was made available on the website, especially designed for the Budget.

A web-based software for preparing entire activities of the Budget till presentation at Legislative Assembly and a Mobile App were developed by NIC Goa. All the budget related documents of the current year and previous years are available at the website (<http://www.goabudget.gov.in>) and Mobile App (GoaBudget).

Case Information System National Core V.30 (CIS NC V3.0)

Considering the reliable and high bandwidth availability, first time in India, cloud-based CIS V3.0 has been imple-

mented in the District and Subordinate Courts of Goa. Developed by NIC, SDU, Pune as part of G2G and G2C services, this application (<http://ecourts.gov.in>) meets functional requirements of the registry of District and Subordinate Courts with respect to filing and registration of cases, preparation of causers, publishing of orders and judgments. CIS shares case status, roznamas, judgments, orders and causers through a website for the benefit of litigants and legal fraternity.

Touch screen based information kiosks have also been installed at the respective court complexes for lawyers and litigants to view judgments, daily orders, case status and causers. A Mobile App has been developed and hosted in Play Store to help lawyers and litigants get information about case statuses and causers. Digital display boards have been installed at various places outside court halls within respective court complexes to showcase proceedings in court halls.

Benefits

- Options to prepare decree of award, digital edition of judgments and final

orders are available.

- Database and application are migrated to NIC cloud services for uninterrupted services.
- The entire database is synced with National Judicial Data Grid. Case statuses, judgments, causers, daily proceedings (roznama) and daily orders are instantly available to litigants and lawyers.

On similar lines, Case Management and Information System (CMIS) and The CONFONET, which deal with quasi-judicial machinery, are implemented in Goa.

e-Challan Payment Gateway

A common platform for all Goa Government receipts, e-Challan Payment Gateway Portal (<https://egov.goa.nic.in/echallanpg>) is a G2C service that makes the operation of online payments possible through a single platform. Developed by NIC Goa, the system is integrated with the State Bank of India Multiple Option Payment System (SBI MOPS), and it provides Internet Banking, Credit Card and Debit Card options of over 60 banks.

Impact

- 75% online payments are made on an average.
- The success rate of online payments is 85% on an average.
- As of now, 23 departments are providing online payment services.
- There are more than 300 online services available to citizens, businesses and employees.
- The system is a green and paperless initiative of the Government of Goa. Bulky bank scrolls have been replaced by e-scrolls.



e-Challan Payment Gateway Team receiving the CSI-Nihilent Award in Kolkata



Smt. Mridula Sinha and Shri Govind Gaude launching Fair Price Shop Automation Project in Goa

Fair Price Shop Automation Project

Connected with ePoS devices at Fair Price Shops, the Fair Price Shop (FPS) Automation Project (<https://epos.haryanafood.gov.in/goa/>) was launched by Smt. Mridula Sinha, Hon'ble Governor of Goa and Shri Govind Gaude, Hon'ble Minister for Civil Supplies and Consumer Affairs, Government of Goa, on 11th December 2018. Developed by NIC Andhra Pradesh, the project has been undertaken as G2C and G2G service.

The Public Distribution System (PDS) functions through a network of FPSs. The sale of essential commodities as per the entitlement of ration card holders takes place at an FPS, as per the retail price fixed by the State Government. FPS automation is the last mile activity under the end-to-end computerisation of TPDS.

Features

- Biometric authentication of beneficiary using Aadhaar
- Capturing sales transactions data at FPS
- Capturing receipt of commodities at FPS
- Generation of various MIS reports

Impact

- Right beneficiaries of PDS get their dues.
- No pilferage of materials at the FPS

Goa Excise Management System (GEMS 2.0)

Goa Excise Management System (GEMS 2.0) (<https://egov.goa.nic.in/excise> - for public, <https://goaexcise.gov.in> - for department) was released recently. It provides over 55 online services to stakeholders like production module (raw material, blinding, bottling, warehouse, transport permit), recording/ renewal of labels, license/ renewal for production, warehouse, retails, import/ export and NOC, permit for import/ export of spirit/ alcohol/ liquor etc.

Features

- License (registration, issuance, renewal and withdrawal of excise license)
- Label (registration of new brands,

change in MRP etc.)

- No Objection Certificate (all kinds of NOC)
- Permit (new permits for imports within the country, abroad etc.)
- Manufacturing unit (complete workflow from raw material, bottling and warehouse entry to exit)
- Online web portal for public was launched on 28th March 2018. It helps browse excise department related information.
- GEMS Mobile App (available on Play Store and for official use only)

Impact

- Green office, elimination of paper
- Reduced application processing time from weeks to few hours
- An applicant can submit label images digitally as a part of Ease of Doing Business.
- Internationally recognised GSI Barcode helps identify genuineness of the permit.
- Linking of permits and endorsement details have helped avoid multiple truck entries against one permit.

Goa GST System

A tab based Intranet Application for Goods and Services Tax for the Department of Commercial Taxes, Government of Goa, Goa GST System (<http://go-agst.gov.in>) was made operational on 1st July 2017, with the concept, "work from anywhere". Developed by NIC Goa, this G2G and G2B system has been designed in accordance with GST Acts/ Rules and is in sync with the Central GST System. This suite offers services like registration,

returns filing, tax collection, ward offices and tax payer units, ledgers, assessment of tax payers based on returns and tax payments, refund processing etc.

The GST Mobile App has been made available on Google Play Store with complete workflow and acts as an alternative to the existing application system hosted on the web.

Impact

- Completely paperless, anywhere and "on the go" operation
- E-sign and digital signatures are incorporated.
- Easy tracking of non-filers of returns

Goa Road Transport Department

NIC Goa has successfully implemented the following eTransport services.

Vahan 4

Developed by NIC New Delhi, Vahan 4 (<https://vahan.parivahan.gov.in>) is a G2C service, designed to manage new vehicles' registrations for the Regional Transport Offices (RTOs).

Impact

- Nearly 80% of registration data is digitised and made available through National Register.
- Introduction of POS has reduced manpower requirement to handle cash.

Sarathi 4

Developed by NIC Andhra Pradesh, Sarathi 4 (<https://sarathi.parivahan.gov.in/sarathiservicecov>) is a G2C service, designed to manage driving licenses at RTO offices.



Shri Parimal Rai, IAS, Chief Secretary, Government of Goa, inaugurating GEMS 2.0



Shri Govind Gaude, Hon'ble Minister for Art and Culture, Goa, inaugurating the workshop on e-Granthalaya

Impact

- Nearly 90% data of driving licenses have been digitised. Details are made available through National Register.
- Licenses can be processed across 28 states in India without NOC.

eTransGoa/ Goa Transport Portal/ Checkpost Goa

eTransGoa is a workflow-based system related to RTA & STA permits. Goa Transport Portal (<https://www.goatransport.gov.in>) provides general information about the Transport Department and Checkpost Goa is meant to monitor vehicle checkpost related activities. Developed by NIC Goa as part of G2G, G2B and G2C services, all the three systems have been operational since the mid of 2018.

Impact

- Online payment feature has helped reduce public movement to RTO offices and thus, malpractices in the department.
- At check posts, daily tax collection from nearly 125 vehicles entering the state has gone up to Rs. 1.5 lakh.

Infogram

Infogram is an integrated solution implemented to efficiently manage functions in a village panchayat with respect to the registration of births & deaths, house tax & light tax collection, lease rent collection, issuance of construction licenses, trade licenses, and issuance of various certificates like residence certificate, income certificate, character certificate, caste certificate etc., and also the

issuance of NOC for water and electricity connection. This system has been developed by NIC Goa as part of G2C services.

Impact

- Transparency, efficiency and accountability in Panchayat Administration has been achieved.
- Citizen records are maintained online and up-to-date.

Municipal Services on UMANG App

An initiative of the Ministry of Electronics and Information Technology (MeitY) and National e-Governance Division (NeGD), Unified Mobile Application for New-age Governance (UMANG) (<https://web.umang.gov.in>) provides a single platform to all the Indian citizens to access government services. Developed by NIC Delhi and Goa as part of G2C services, this system also includes services linked to Urban Local Government Bodies. Locally developed web services were exposed to be consumed by UMANG App. Users can search and view birth and death certificates after submitting the mandatory fields.

Benefits

- Citizens have an easy access to birth and death certificates registered at any of the 15 registering authorities in the State.
- Citizens can verify the correctness of certificates.
- Once the process of digital signing of legacy data is completed, citizens can

download certificates on the payment of required fee.

- The system provides a contactless, cashless and faceless process.

Goa Land Records Project (DHARANI)

Developed by NIC Goa as part of G2C and G2G services, DHARANI (<https://egov.goa.nic.in/dslr>) is a complete integrated textual Land Records Management System implemented in the State of Goa.

Features

- Record of Rights (Form I & XIV - Rural) and (Form D - Urban)
- Mutation is done digitally.
- Integrated with the Property Registration System, which facilitates automated initiation of mutations once the property is registered.
- Used for crop survey during Kharif and Rabi seasons
- Web-enabled touch screen kiosk interface is available to public.
- Citizen Service Centres provide copy of ROR to public.

Impact

- 5,10,000+ RORs issued so far through DHARANI Rural
- 2,00,000+ mutations processed till date using DHARANI Rural/Urban
- Online payments have made it simple for citizens.

Immigration, Visa, Foreigners Registration & Tracking (IVFRT)

Undertaken by the Ministry of Home Affairs, IVFRT (<https://www.boi.gov.in>) is a Mission Mode Project, based around the core values of security, facilitation, enablement and streamlining of procedures for foreign visitors. Various modules implemented in the State of Goa are Immigration Control System (ICS), eVisa, eLanding Card (eLC), eFRRO, C-Form, S-Form, Prior Reference Check (PRC), Nationality Status Verification (NSV), Online Indian Citizenship and Unique Case File (UCF). The project has been developed by NIC New Delhi as part of G2C services.



Shri Prashant Thete, SIO, NIC Goa, speaking during the launch of OCMMS

Benefits

- A secure and integrated service delivery framework that facilitates legitimate travellers while strengthening security
- Electronic Tourist Visa/ Electronic Landing Card for foreigners from select countries
- Generation of UCF by consolidating the complete travel history information of foreigners/ Indian nationals travelling to and from India, thereby enabling better risk profiling by security agencies

Impact

- Efficient and effective tracking of foreigners in India
- Immigration clearance has been facilitated by issuing eLanding Card by setting up mobile counters for foreigners/ tourists visiting India on short-term visit.

On similar lines, **e-Sanad**, an online system for Attestation and Apostille of Documents, has been developed for using documents abroad. **Arms License Issuance System (ALIS)** and **Inter-operable Criminal Justice System (ICJS)**, used for digitising and interlinking the data exchange among the Courts, Police, Prosecution, Forensic, Prison, Juvenile Justice and Finger Print are implemented in Goa.

e-Granthalaya

Developed by NIC New Delhi as part of G2C services, e-Granthalaya (<https://egranthalaya.nic.in/>) is useful for the automation of in-house activities of libraries and to provide various online member services. The software provides built-in Web OPAC interface to publish library catalogue over the internet. The

software is UNICODE Compliant and thus, supports data entry in local languages. As on date, 224 libraries in Goa are using e-Granthalaya application. To extend this application to the grassroots level institutes, a two-day workshop was organised and inaugurated by the Chief Guest, Shri Govind Gaude, Minister for Art and Culture, Government of Goa.

The latest version of e-Granthalaya i.e., Version 4.0 is a 'Cloud Ready Application' and provides a web-based data entry solution in enterprise mode with a centralised database for a cluster of libraries. Considering the good connectivity in the entire State of Goa, this centralised application will be hosted at State Data Centre (SDC) so that each institute can be provided with a unique instance.

Online Consent Management & Monitoring System (OCMMS)

NIC has developed OCMMS application (<https://goaocmms.nic.in/>) for Goa State Pollution Control Board, under the Ministry of Environment, Forest and Climate Change, and it was inaugurated on 10th October 2018. Nearly 16 services have been taken onboard, thereby facilitating the industry to apply for these services online through this portal. The Application has been developed by NIC New Delhi as part of G2B services.

Some of the services offered by this application are Consent for Establishment, Common Consent Application, Lab Analysis Report, Inspection Report, Closure Direction for Industries, Online Consent Fees, Lab Fees, water cess and other fees, Online Filing of Annual Reports Form – IV and Form – V, and

online submission of water cess.

CM Dashboard

NIC Goa has provided 17 services under various projects on DARPAN portal (<http://ga.cmdashboard.nic.in>), which has been developed by NIC UP as part of G2B services. Some notable services are e-Challan receipt, revenue collection, excise permits, daily GST collection, Vahan and Sarathi, mother and child tracking, PDS, municipal administration etc.

Accolades

- SKOCH Award of Merit for e-Challan Payment Gateway in New Delhi, September 2015
- CSI-Nihilent Award in Project Category for e-Challan Payment Gateway in Kolkata, January 2018
- Express Computer Award for Enterprise Apps for e-Challan Payment Gateway in Indore, February 2018
- SKOCH Order of Merit for GEMS in New Delhi, September 2015
- Technology Sabha Award in August 2018, initiated by the Indian Express Group
- CSI Nihilent E-Governance “Award of Excellence” under best Department Category for 2009-2010 for Goa Land Records Project (DHARANI)

Summary

NIC Goa is making rapid strides in ICT projects. From mainframe based GPF and High Tension Electricity Billing to the online payments of today, Information Technology in Goa has gone through the entire gamut of development. It is noteworthy that citizen-centric services can now be availed from the comfort of one's home, thus reducing the overall carbon footprints of modernisation. With the implementation of major projects highlighted above, NIC Goa State Centre is well-tuned with the national vision of Digital India. ■

For further information, please contact:

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District Mahabubnagar, Telangana

Setting new horizons towards digital empowerment and enhanced e-Governance

Edited by
REUBAN K

NIC Mahabubnagar District Centre has been spearheading the implementation of ICT services in the District with great zeal, thereby helping the District Authorities establish a better connection with citizens. A number of projects, speeding up e-Governance in the District, have also helped citizens find a faster way of approaching the authorities and getting quick resolutions.

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Mahabubnagar is the largest district of Telangana State in terms of area covered and is also known as Palamoor. Mahabubnagar district headquarters town was named after Mir Mahabub Ali Khan, the Nizam of Hyderabad. It is bounded on the north by Ranga Reddy district of Telangana, on the east by Nagarkurnool district of Telangana, on the south by Wanaparthy and Jogulamba-Gadwal districts of Telangana and on the west by Raichur and Gulbarga districts of Karnataka State.

Beautiful temples, forts, museums, backwaters and other attractions in the District make it one of the most desired tourist attractions in South India. While the District already enjoys a thriving tourism economy, the District Authorities have also been consistently engaged in the enhancement of citizen-centric services. It is noteworthy that NIC Mahabubnagar District Centre has been dedicatedly working with the Authorities in the implementation of ICT services, thereby contributing to better e-Governance in the District.

ICT Initiatives in the District

District Website

NIC Mahabubnagar District Centre undertakes the regular maintenance and updation of District Administrations website (<https://mahabubnagar.telangana.gov.in>), as per the latest information received from the District Administration. Mahabubnagar District was conferred with 'Webratna District – Gold' award in Digital India Awards 2018 ceremony held in New Delhi on 22nd February 2019. The Award was presented for newly improved bilingual (English and Telugu) website, based on S3WaaS (Secure, Scalable and Sugamya



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NIC Mahabubnagar District Centre is playing a key role in the implementation of eOffice Project in all the Departments of Mahabubnagar and is active in the promotion of e-Governance. The Centre's determination and initiatives taken in Mahabubnagar have created a conducive atmosphere for the implementation of several e-Governance projects and paved the way for the District Administration to do more in this area by providing accurate, transparent and responsive informatics services to the District.

The keenness and proactive support from NIC officials to roll out various e-Governance projects, sharing of government information through the District website and active support during General Elections have been quite commendable.

I appreciate their efforts and regular contributions towards the promotion of ICT culture and making e-Governance a true success in the District. The District unit of NIC has taken significant strides since then and helped the District Administration in bringing about a qualitative change. I really look forward to the NIC team to act up to highest level by their sincere and strenuous efforts and wish them all the best in their present and future assignments. This was possible through collaborative efforts of District Administration and NIC.

D. RONALD ROSE, IAS
District Magistrate & Collector
Mahabubnagar, Telangana

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Shri D. Ronald Rose, IAS and NIC Officials during Digital India Awards 2018



Inauguration of eOffice at District Chief Planning Office

Website as A Service framework). The revamped website provides enhanced user-friendly functionalities and interfaces, in compliance with the Guidelines for Indian Government Websites (GIGW) standard website norms and robust security standards.

Shri D. Ronald Rose, IAS, District Collector, Shri. M. Satyanarayana Murty, District Informatics Officer and Shri. Ravi Bandi, Additional District Informatics Officer, received the award from Shri Ravi Shankar Prasad, Hon'ble Union Minister of Electronics & Information Technology and Law & Justice.

Some of the salient features of the website are:

- ◆ Contemporary look and feel ◆ Responsive design ◆ Integrated search ◆ Sugamya easy accessible ◆ Infrastructure included ◆ Seamless cyber security ◆ Standardised information architecture ◆ Easy content management system

eOffice

eOffice (<https://mahabubnagar.eoffice.telangana.gov.in>) has been implemented at 55 departments of Mahabubnagar District. The new eOffice system is an integrated file and records management system that allows employees to manage content, search for data internally and collaborate. The file system also enables electronic movement and tracking of files, along with the archival and retrieval of data. Training on eOffice has been provided by Shri Ravi Bandi to seven Probationary/ Trainee IAS Officers from 2016 Batch, along with District Collector and Joint Collector, Mahabubnagar.

Mahabubnagar is the first District in Telangana State to implement eOffice at more departments.

e-Hospital

An innovative ICT-driven solution for hospitals, e-Hospital (<http://ehospital.gov.in>) is a Hospital Management System, specifically meant for hospitals in the government sector. This generic software covers major functional areas such as patient care, laboratory services, workflow based document information exchange, human resource and medical records management of a hospital. It is a patient-centric system rather than a series of add-ons to a financial system.

e-Hospital has been implemented at Government General Hospital, Mahabubnagar, Area Hospital, Narayanpet and Community Health Centres of Kosgi, Makthal, Badepally and Koilkonda right from 24th April 2017.

Mahabubnagar District Mobile App

Released by Mahabubnagar District Administration, Telangana State, Mahabubnagar District's Mobile Application aims to provide citizens with a tool to connect and interact with the District Authorities. Developed with technical support from NIC Mahabubnagar, the Android application has dual language (English + Telugu) functionality, and it can be used for accessing information about the District like District Administration, contact numbers, tourism around Mahabubnagar etc.

Citizens can explore the Messages section to receive important updates, news alerts, announcements etc., sent by Mahabubnagar District Administration. The information centre is a handy feature that enables the browsing of all the important information and resources about the District and provides access to the contacts of District

Officials, offices etc., directly through the App. The Feedback and Suggestion section helps citizens post complaints, feedback, issues and suggestions, along with photographs, to concerned authorities in just a few clicks. The App can be downloaded from Google Play Store, and it has over 5000 users as on date.

DM-Dashboard/ Darpan

A dashboard showing an analytical view of projects, Darpan (<https://ts.dmdashboard.nic.in>) is meant to provide the District Administration the status of different departmental activities with architecture for presenting dashboard in respect to the monitoring of schemes at District level. The dashboard architecture has been hosted on common framework for the entire country. The District Collector can monitor activities of all the departments by using DM Dashboard Login i.e., Telangana DARPAN.

Land Records Updating Programme

NIC Mahabubnagar District Centre helped the District Administration in the Purification of Land Records and technical training on the same has been provided to various revenue teams.

Digital India Activities

- NIC District Centre plays a major role in increasing computer awareness among government staff and providing them training for an effective utilisation of government facilities. Workshops, training programmes and multimedia presentations are conducted on regular basis.
- A large number of trainings on cashless transactions have been organised for employees and students to promote digital payments.

►► Continued on Page 29

Public Financial Management System

Facilitating digital inclusion and accelerating transformation to a 'Digital Economy'



In his budget speech, on 28th February 2011, the then Finance Minister stated that the year 2011-12 would be a transition towards a more transparent and result-oriented economic management system in India. The government would take major steps in placing the administrative procedures concerning taxation, trade, tariffs and social transfers on electronic interface, free of discretion and bureaucratic delays. In furtherance of these objectives and in compliance with the provisions of the IT Act, along with other related laws and recommendations made by the Reserve Bank of India (RBI), the Public Financial Management System (PFMS) established itself as a safe, secure, efficient and robust payment platform for the Government of India. The system enabled the successful delivery of payment services from Government Treasuries and Programme Implementing Agencies (PIA) to beneficiaries' accounts. The accountability of public funds is very important and hence, there is a need for the executive, legislature and audit branches of the government, in addition to citizens, to access all financial transactions.

The system has expedited direct payments from paying units to citizens, government employees, contractors and other entities receiving payments and facilitated paperless transaction in a secure environment. It has also helped reduce overall cost and promote green banking. The digitally signed e-pay orders are processed by the accredited banks to credit the beneficiaries' accounts through a bouquet of electronic payment instruments such as Intra Core Banking Solution (ICBS), National Electronic Fund Transfer (NEFT), Real Time Gross Settlement (RTGS), Aadhaar Enabled Payment System (AEPS) and National Automated Clearing House (NACH).

Objectives

Electronic payment products, which over the years have metamorphosed into NACH, AEPS and NEFT/ RTGS, have ushered in new ways of payment processing. With technology being one of the major enablers, the need for a secure and efficient payment system started taking shape so as to enable faster payment delivery to beneficiaries and agencies in far-flung areas where conventional modes

The Ministry of Finance has taken a big leap forward, with PFMS emerging as one of the largest financial management systems in the world, critical in bringing about transformational accountability and transparency in financial management and promoting good governance.

of payment such as cheques and drafts consume time. Such a system would facilitate transaction wise prompt reconciliation and near real-time settlements. Benefits envisaged included convenience and privacy, efficiency in transactions, lowering of transaction costs, just-in-time availability of funds, reduced cost of carry and reduction of leakages. With over 1,38,000 bank branches enabled for e-payments, it provided an opportunity to transact electronically for government payments cutting across geographic divides.

PFMS, conceived as an online transaction system, enabled Direct Benefit Transfer (DBT) and other payments directly to the bank accounts of beneficiaries. This system rolled out by the office of the Controller General of Accounts, Ministry of Finance, with the National Informatics Centre (NIC) as its IT partner, proved to be a game changer.

Background behind the initiative

Under the traditional system of the government, paying units were drawing cheques, cash and demand drafts or in some cases, ECS (by issuing a lump sum cheque in the name of the accredited bank, along with the list of beneficiaries) for payments to be made, which had its own share of inherent drawbacks.

- Not completely integrated processes
 - Separate payment and reporting systems
 - Difficult to enforce validation
 - Multiple data capture and control points
- Hierarchical chain of PIAs through which the Government of India's funds flow to the grass-roots level
- Long payment process life cycle from Drawing & Disbursing Officer (DDO) to Pay and Accounts Officer (PAO) to Bank and final credit to the beneficiary's account

(average about 20-22 days)

- Payment through drawing a cheque had to go through a 13-stage time-consuming workflow.
- Transaction wise reconciliation was not possible.

The Government of India decided to expedite payments from central paying units directly to all recipients' accounts. This would accelerate the adoption of other e-services, due to their efficiency and ease-of-use, by all the Government Ministries and Departments, which was already a declared objective of the government. By moving to electronic payments, the Ministry of Finance expected to usher in increased transparency and promote good governance in the public sector.

With tremendous growth made by the banking sector in the past decade in improving their payment and receipt systems through Core Banking Solutions (CBSs), coupled with exponential growth in the telecom sector, the desire to leverage them for effecting prompt payments through electronic means had become even more relevant. Triggers contributing to the kick-starting of the e-payment initiative were:

- Monumental growth made by the banking sector in the past decade – over 1,38,000 branches spread over 25,000 geographical locations on the Core Banking System
- Window of opportunity for the government to improve efficiency of its payment functions – leveraging progress made by Reserve Bank of India (RBI), National Payments Corporation of India (NPCI) and various agency banks with products such as NACH, RTGS and NEFT
- Unprecedented growth in penetration of telecom services enabling the linking of geographically spread entities. India's telecom network is the second largest in the world with over 1.17 billion mobile



“The successful operationalisation of electronic transfer of funds to a large number of beneficiaries of this magnitude, under the scheme PM-KISAN by PFMS, with superb leadership, outstanding teamwork, excellent analysis of data for decision-making, creating new systems required for operationalisation and implementation within a very short timeline, is a historic achievement of PFMS, which has further reinforced the Digital India initiative of the Government of India. The NIC-PFMS team has made a stellar contribution to the process completing the activities in a record time.

SANJAY AGARWAL

Secretary
Dept. of Agriculture Cooperation
and Farmers Welfare
Government of India

outflows to vendors, beneficiaries and agencies are happening through the e-mode.

The present digital governance initiatives provided an opportunity to fully leverage IT based solutions, coupled with modern banking channels, for seamless payment integration from capturing budget allocations and claims, processing of sanctions by Programme Division, and generation of bills (invoices) by spending units to the treasury for payment. Such a system enhances transparency and responsiveness by providing tracking of the bill at every stage of payment up to the final credit into the recipient's account. The end-to-end secured solution would reduce costs for both government and third parties, thereby enhancing ease of doing business.

Public Financial Management System

Concept and Framework

The primary focus of the Government of India has been to streamline the flow of funds to PIAs, almost in detriment to other financial management issues. Factors that affect the flow of funds in social welfare schemes are the government approval processes, a large number of implementing units including Panchayati Raj Institutions (PRIs), various intermediate levels that the funds have to flow through, and the physical mode of transfer. While the creation of state and district level PIAs in many projects has addressed the issue of

fiscal stress, the consequent delay in release of funds by the states is still constrained by:

- Approval process in the Government of India and the lack of clear guidelines for release of funds
- Lack of adequate financial delegation, especially to state societies to process transfers to districts
- Failure to take advantage of rapid advances in banking, telecom and IT to make on demand availability of funds so as to eliminate float in the system

Disbursement in excess of ₹ 5 trillion (\$70 billion) under programme support is made to recipient agencies through different mechanisms in a fiscal period. Several bottlenecks impede the implementation of social welfare programmes of the government:

- Fund is routed through the banking channels of every tier of PIAs even though no actual expenditure happens at these intermediate levels.
- Bulk of the actual expenditure happens at the last mile – block/ panchayat level in most schemes. The system cannot facilitate tracking of fund flow from the point of release in the Government of India to final expenditure at spending unit level.
- The systems in place lack a reliable reporting system, dashboard and analytics for monitoring of scheme funds.
- Huge funds lie unutilised in the banking system, parked in the accounts of PIAs

phone users having a tele-density of 92.98% (2017).

- Digital security standards and advanced IT tools for safer transactions and faster processing

Addressing governance and ease of doing business issues, the Finance Minister, in his Union Budget, 2016-17 speech, emphasised on good governance with special focus on process reforms, IT-enabled government processes etc., and bringing transparency and efficiency in government procurement of goods and services. Since then, several policy interventions have been made for enhancing digital financial transactions in the government sector as well as in regular commerce. The Ministries and Departments have been steadily moving to electronic payments since 2012. Currently, 98% of the cash

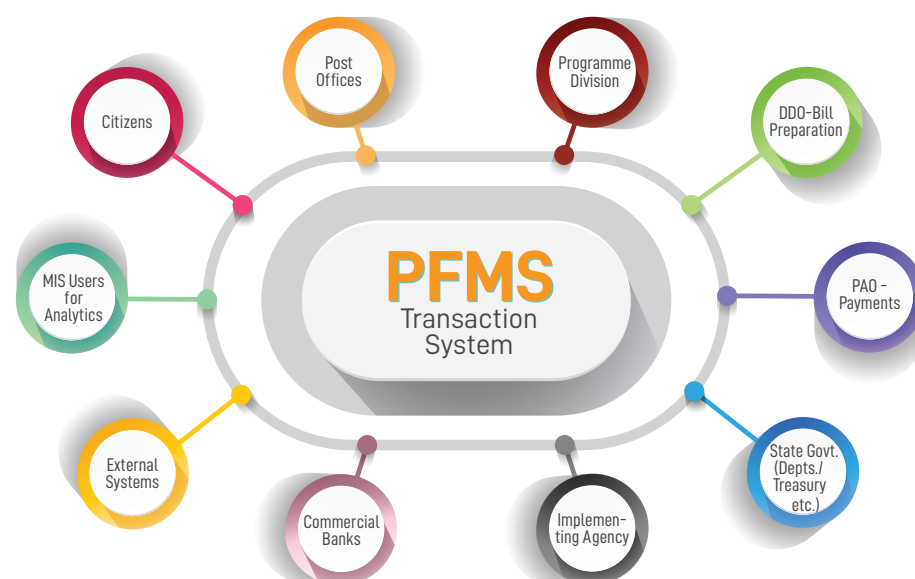


Fig. 1: PFMS Transaction Hub and Spoke System



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Two additional important columns of this infrastructure are Public Finance Management System (PFMS) and Unified Payments Interface (UPI). PFMS is an end-to-end solution for processing, tracking, monitoring, accounting, reconciliation, and reporting of financial flows into and out of the central government. It constitutes a unified platform for tracking releases of financial flows and their utilisation down to the last mile. Through the banking system, it connects the Central Government financial flows digitally to State Governments, businesses and even households.

It was on the strength of this system that recently Shri Narendra Modi, Hon'ble Prime Minister, could transfer Rs. 2,000 each to bank accounts of 10 million farmers under PM-KISAN scheme with a few clicks of a mouse. Today, government transfers can be initiated from PFMS and can directly flow to bank accounts of State Governments, vendors and individuals with no intervention whatsoever by banks.

ARVIND PANAGARIYA

Professor of Economics
Columbia University

Former Vice Chairman, NITI Aayog

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across several schemes. Time lag between release and expenditure builds up float in the system, which has a 'carrying cost', estimated to be in excess of ₹ 100 billion (\$1.4 billion).

Initiative by the Government of India

PFMS emerged as a programme of the Department of Expenditure in the Ministry of Finance, with the objective to establish a real time Decision Support System for Central Sector and Centrally Sponsored

Schemes of the Government of India. With the recent restructuring of the existing Centrally Sponsored Schemes (CSS) and Additional Central Assistance (ACA) into 66 schemes (inclusive of 17 flagship programmes), PFMS was poised to track almost ₹ 5 trillion (\$70 billion) under these schemes.

PFMS, conceptualised as an IT tool for Programme Division, enabled the registration of PIAs, disbursement of money using DBT, programme implementation, and tracking of funds. With consistent value additions and enhancement of features, PFMS, today, has traversed, beyond its vision to include budget and treasury management, along with several other public financial management functions.

The successful roll-out of PFMS has transformed programme implementation, money transfer, and tracking of funds. PFMS now caters to most functions of an online Integrated Financial Management System, viz. budget management, payment and receipt functions, government banking arrangement (agency banks and RBI), accounting and reconciliation of transactions.

Objectives

PFMS was started as a pilot project approved by the government in 2010 for four flagship schemes to be implemented in a few states. Appraisal of results facilitated the transition of PFMS into a central scheme for XII Plan period during the financial year 2013-2014. In 2014, the scope expanded to include end-to-end digitisation of government accounts and inclusion of all government treasury functions of receipts and payments. In 2013-2014, PFMS was mandated for DBT payments in all major welfare programmes of the government. In 2017, extension of PFMS was granted until the end of XIV Finance Commission award period i.e. 31st March 2020 to:

- Facilitate sound public financial management for the Government of India by establishing a comprehensive payment, receipt & accounting network.
- Provide a management platform for welfare schemes, a database of PIAs, integration with CBS of banks and state treasuries and tracking of funds to the lowest level for better monitoring, review and decision support.

- Bring in effectiveness and prudence in public finance management through better cash management, real-time resource availability and utilisation across schemes, better scheme management, reduced float and direct payment to beneficiaries.

Key features

Programme Implementing Agency (PIA) Registration

PIAs (viz. Statutory Bodies, Trusts, Registered Societies, Autonomous Bodies, State Government Institutions, Local Bodies etc.) receiving funds from the Government of India – registration on PFMS for monitoring of their bank balances and tracking of fund flow.

Treasury (PAO) computerisation - Online Payments, Receipts and Accounting of the Government of India

It facilitates budget entry, payments, compilation of accounts, bank reconciliation and authorisation of funds to departments for the supply of goods and services, execution of works etc.

Bank Interface

PFMS – CBS interface is operational with 248 banks, India Post and RBI to facilitate pre-validation of beneficiaries and agencies' bank account details for e-payments.

Direct Benefit Transfer (DBT)

It facilitates every Department/ Ministry to transfer funds electronically to beneficiaries (individual or institution) through NACH/ AEPS of NPCI. Major external applications integrated include MNREGASoft, MCTS, AwasSoft, NSAP, NSP, OMMAS, Geo-Reach, PDS system and Priasoft.

Expenditure management and fund utilisation (EAT)

PIAs use the EAT module for transferring funds/ advances to lower level agencies and e-payments to vendors and beneficiaries.

Interface with State Treasuries

It enables tracking of funds transferred from Central Ministries to States, starting from the initial release, with the PFMS – State Treasury Interface, implemented for all 36 States/ UTs.

Non Tax Receipt Portal (NTRP)

It provides a one-stop window to citizens/

corporates/ other service seekers for making online deposits of non-tax receipts due to the Government of India by using credit card, debit card or through net banking of any of the banks integrated with seven Payment Gateway Aggregators. This portal, integrated with most of the applications of the Government of India Departments/ Ministries, facilitates online collection of their receipts.

Technology Stack

The Government of India's financial management platform, PFMS, driving reforms and initiatives, monitoring programmes in the social sector and tracking funds at Central and State levels, is the technology backbone to ensure that the funds disbursed by the government under various schemes are spent as per their intended purpose and reach the intended beneficiaries.

The PFMS technology stack consists of a three tier architecture with (a) the User Interface Layer, (b) the Data Processing Application Layer running on Microsoft .NET 4.7 and (c) the Database layer on Microsoft SQL Server 2016. The external systems interface Integration and Batch processing layer run on the middleware Microsoft Biztalk Server 2016. Based on Service Oriented Architecture (SOA), PFMS is deployed on a private cluster/ cloud in the NIC Data Centre. Key usage statistics are:

- 20 TB Database Size (average growth - 26 GB per day)
- 3,486,559 Registered Users (login IDs)
- Average daily log-in of 166,857 users on website

- Peak Concurrency of 15,632 users
- 70% (peak) and 45% (average) CPU Utilisation

PFMS Digital Payment Ecosystem

PFMS – Bank Interface: Changing Landscape for Value Delivery

The interface designed to integrate with banks uses standards applicable to host-to-host (H2H) integration using Secure File Transfer Protocol (SFTP) and PKI based digital signature for ensuring security, authenticity and integrity. The system creates and manages the database of bank SFTP servers, the data exchange formats, business rules, data mapping options, metadata for data integration scenarios: account validation, bank account transaction details, full payment cycle and reconciliation.

Bank & External System Integration

Generation of XML to be sent to Bank SFTP

PFMS middleware polls the OLTP database after fixed intervals, fetches data and processes it for XML generation with a polling frequency varying from 5 minutes to 6 hours (configurable based on priority and demand) for applications related to payment file generation, sending account validation and payment response to external systems and many other applications.

File once generated, is pushed to SFTP location of banks/ external system and the delivery status is marked in PFMS OLTP

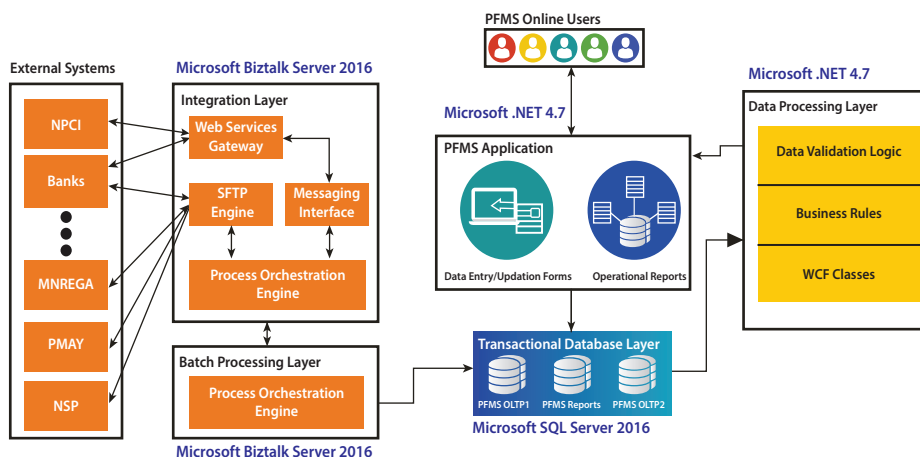


Fig. 2: PFMS Logical Architecture



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PFMS has made a direct and significant contribution to the Digital India initiative of the Government of India by enabling electronic payment and receipts for Ministries/ Departments. PFMS is unique in the sense that the financial reporting and the implementation of schemes go hand in hand due to its interface with banks. PFMS has secure integration with all the major banks for the exchange of data both ways. Electronic payment into the accounts of agencies and beneficiaries has also been successfully implemented. Electronic payment is done for account holders of banks as well as post offices. PFMS is a vital link and game changer in the implementation of DBT schemes, amply demonstrated recently during transfer of funds to PM-KISAN beneficiaries.

NAGESH SHASTRI

Deputy Director General
National Informatics Centre

”

database. In case of delivery failure, it is marked as FAILED and re-initiated after a pre-defined interval.

Consumption of XML from Bank/ External System SFTP

For every application, for each bank/ external system, the receive location contains SFTP login details, path from where file is to be picked and the polling interval is pre-configured. Depending on these parameters, PFMS SFTP adapter polls the SFTP location for any new files waiting for consumption by PFMS at pre-defined polling intervals varying from 5 minutes to 15 minutes. The file once consumed is deleted from SFTP folder.

The banking system interface's purpose is to effect payments, track and monitor the

financial transactions pertaining to fund disbursement under different social welfare schemes on a real time basis and to facilitate:

- Sharing and validating bank account details of PIAs.
- Capturing events and behavioural attributes of agencies as captured by the bank and use them for effective and efficient management of transaction related services.
- Updating bank branch master details.
- Providing metadata for maintaining desired level of data quality and consistency.
- Pre validating beneficiary/ vendor accounts for payments.
- Completing the cycle of reconciliation of transactions between bank and PFMS and provide integrity checks.
- Resolution mechanism to avoid repetitive cycles.

The payment ecosystem has established a changed landscape for value delivery, automating end-to-end payment transaction life cycle and moving to the next level of standards by adopting ISO messages for a common system. A new paradigm for reconciliation with prompt response of transaction status is now established. With this, the next generation solution for a payment ecosystem is now built and a model of integrated information is created. Major features of the payments system include:

- Integration options through SFTP, web services using open standards for platform independence
- Account Validation – Returns KYC details of account holder with the bank
- Agency accounts transaction details –

For tracking daily balances and transaction reconciliation

- Payment products – Print Payment Advice (PPA), Digital Signature Certificate (DSC) based authorisation and adoption of ISO 20022 for electronic data interchange
- Handling of high priority and routine bulk payments
- Management of high volume of DBT payment transactions with broader time window for NEFT/ NACH with banks/ NPCI and supporting banks to upgrade and standardise their payment system
- Risk management through business rules and controls
- Government treasury (PAO) transaction reconciliation, settlement and accounting through e-Scrolls

Account Validation

PFMS validates each recipient, getting fund from government agencies, and assigns a unique beneficiary/ vendor ID. The Account Validation Request xml file after generation is sent to the bank's SFTP location. The bank validates the account number and returns Name(s), Indian Financial System Code (IFSC), type of account, Aadhaar, PAN and Address. On receiving the validation response, PFMS generates the beneficiary ID and shares it with the external system initiating the request. Account validation is also available through web service for 18 banks.

Payment Processing

Payment requests from 35 external systems (including the PFMS UI) are processed for integrity and authenticity of DSC signed files. The payment files (File Transfer Order) generated, for both DSC

(agency signed files/ server signed files) and PPA (Print Payment Authority) are sent to the banks' SFTP location, which are then picked up for payment. The banks in turn process response files, viz. ACK/ NACK, Initiation (Debit Response), Success/ Reject/ Hold (Credit Response) and Scrolls (PAO Payments). The Credit Status received is shared with External Systems and PFMS UI for reconciliation and re-initiation for failed transactions.

To ensure that the processing of File Transfer Orders (FTOs) and its payments are completed within a maximum of T+2 days ('T' being the day on which it is received by PFMS), the PFMS payment system follows a protocol, a typical example of which is shown in the Figure 6.

The Banking Integration Universe

The unique value proposition of PFMS is a result of its integration with Core Banking Systems of almost all major banks in the country. 248 banks have been integrated with PFMS (September 2018), which include Nationalized Banks (20), Regional Rural Banks (54), Private Sector Banks (15), Co-operative Banks (98) and others (61), with a unique capability to push online payments to any beneficiary/ vendor.

A summary of the daily average volumes processed by the payment ecosystem of PFMS during February 2017 is as below:

- FTOs from external system processed: 70,136 with 2,498,668 beneficiaries
- PPA batches processed: 25,246 FTOs
- PAO batches processed: 71,694 FTOs
- Account validation batches processed: 30,365 with 1,492,147 beneficiaries

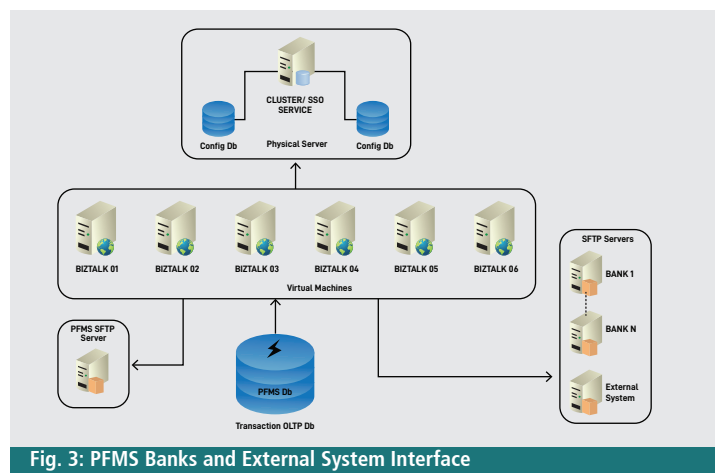


Fig. 3: PFMS Banks and External System Interface

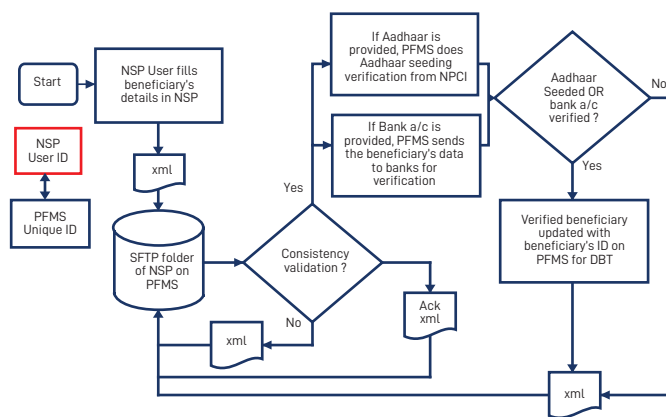


Fig. 4: Beneficiary/Vendor Validation process for the National Scholarship Portal (NSP) through PFMS

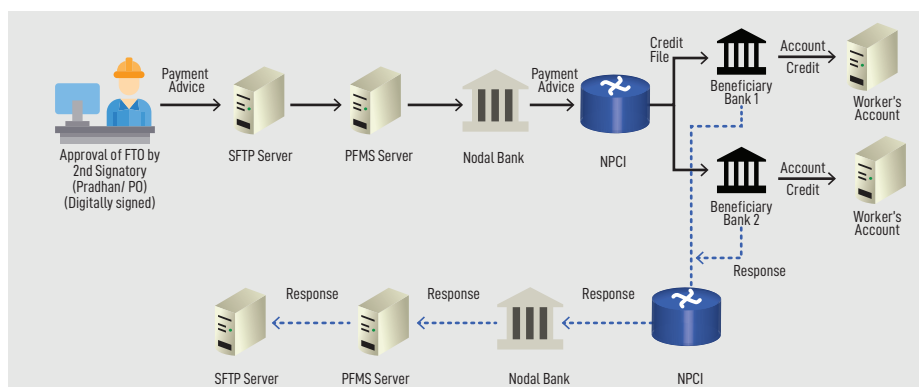


Fig. 5: Payment ecosystem of PFMS – External System

- A record amount of ₹ 716.3 billion (\$9.95 billion) was transacted through PFMS on 28th March 2018, with the number of transactions peaking at a historic high of 9,819,026 processed in a single day.
- A staggering 34,297,084 number of payment sanctions (2.216 billion transactions) have been processed through PFMS since inception (FY 2009-2010), totaling an amount of ₹ 59.6 trillion (\$851 billion).
- During the last three years, 1.2 billion DBT transactions have been recorded amounting to ₹ 2.69 trillion (\$37.4 billion) for 44 Central Sector Schemes and 354 State Schemes made by about 15,000 agencies.

Benefits and Major Achievements

Considering the diversity and multiplicity of channels through which money is spent/transferred (including through DBT), PFMS is designed to serve the pertinent need of establishing a common electronic platform for complete tracking of fund flows from the Central Government to a large number of PIAs, both under Central Government and the State Governments till it reaches the final intended beneficiaries. PFMS, thereby enables real time monitoring of disbursements and utilisation

of funds, which in turn, provides a sound Decision Support System across Ministries and Departments of the Government of India as well as all the State Governments and Union Territories.

The efficiency brought out in the management of public funds through PFMS had a cascading beneficial impact on the management of State Government public finances as well as provided an efficient delivery of public services to the States. PFMS reflects the true spirit of co-operative federalism with Centre and State Governments, combining their efforts in improving public finance management for ultimate public good. It has helped improve programme/ financial management, reduced float in the financial systems by enabling 'just-in-time' releases, and ensuring better cash management with direct reduction of interest cost to the government. The scheme envisaged to promote transparency ensures that benefits reach the last mile. PFMS :

- Provides a financial management platform for all schemes.
- Facilitates the creation of a centralised database of all recipient agencies.
- Facilitates integration with core banking solution of banks handling funds

of the Central Government.

- Facilitates integration with State Treasuries for efficient and effective tracking of fund flow to the lowest level of implementation for schemes of the Central Government.
- Provides information across all schemes/ implementation agencies in the country on funds utilisation, which will lead to better monitoring, review and decision support to enhance public accountability in the implementation of schemes.
- Facilitates effectiveness and economy in Public Finance Management through better cash management for transparency in public expenditure.
- Provides real-time information on resource availability and utilisation across schemes.

PFMS has seen an exponential increase in transaction volumes, which is evident from the statistics cited above. Amount transacted on PFMS also rose from ₹ 1.75 billion (\$24.3 million) in 2013-2014 to ₹ 10.24 trillion (\$142.3 billion) in 2017-2018. As more and more users come on board, a multi-fold increase in the growth in terms of load and scalability is expected. PFMS has successfully handled 1.86 billion payment transactions totaling ₹ 46.7 trillion (\$657.7 billion) since its inception, out of which, 600 million transactions (about 30%) totaling ₹ 23.05 trillion (\$324.6 billion) (about 50%) have been effected during the fiscal 2018-2019 alone.

DBT through PFMS, transferring subsidies/ benefits directly to citizens into their bank accounts, is a path-breaking reform, which has altered the landscape of the government programme implementation with reduction of leakages and elimination of ghost beneficiaries. Its aim to timely

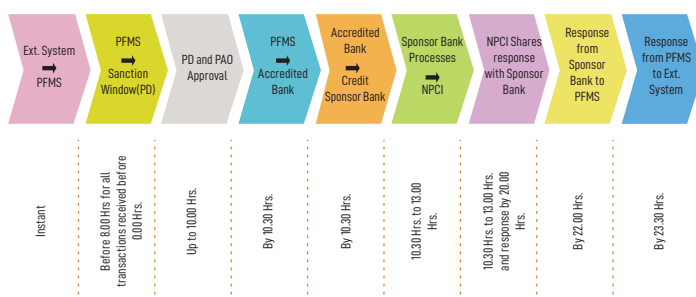


Fig. 6: Timeline of a typical NeFMS FTO in PFMS

Programme Implementing Agencies	2.4 million
Beneficiaries registered	379.4 million
Number of schemes	8,681
Number of Banks Integrated	248
E -Payments - Number of Transactions	1,623 million
E -Payments - Amount	₹ 28.5 trillion (US \$ 396 billion)
E -Payments - Intra - Govt. Advices	₹ 13.19 trillion (US \$ 183 billion)
Non -tax receipts on NTRP - Amount	₹ 2.21 trillion (US \$ 30.7 billion)
Payments transactions per day	
: 2015 - 16	> 0.7 million
: 2016 - 17	> 1.5 million
: 2017 - 18	> 2.1 million

Table 1: Statistics (Status as on 30th September 2018)

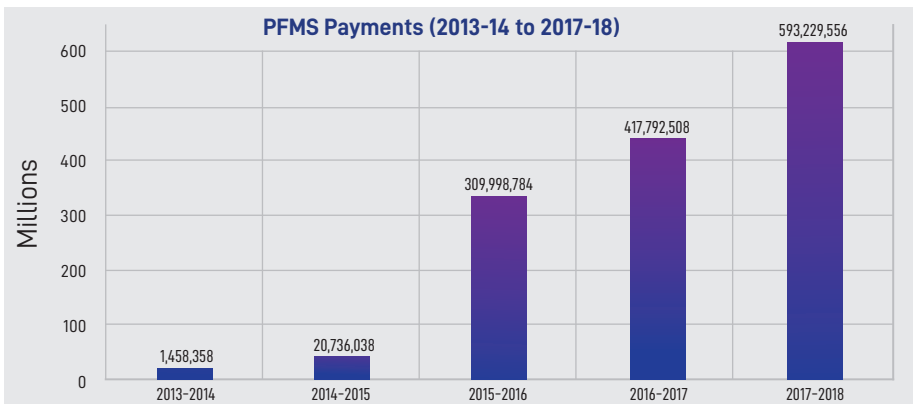


Fig. 7: Exponential growth of PFMS transactions

transfer benefits to citizens by bringing efficiency, transparency and accountability in the government system has brought immense relief to the poor and the needy strata of the Indian society. PFMS has successfully processed in excess of 1.79 trillion DBT transactions, involving total DBT payments of ₹ 3.94 trillion (\$55.5 billion) since its inception. Almost 40% - 45% of these transactions were successfully effected in the calendar year 2018 alone. Currently, the total number of DBT beneficiaries being serviced by PFMS is in excess of 180 million. The implementation of PFMS has helped the system to manage and maintain huge data that the government could now leverage using machine learning and AI tools to develop a more scientific approach in payments of social welfare benefits to citizens. The actual status of utilisation of funds by a myriad of PIAs of the Central and State Governments is now monitored to ensure that the benefits reach the intended beneficiaries. The Finance Minister has reiterated that PFMS has the capability of providing real-time information on resource availability, flows and actual utilisation. Some of the acknowledged benefits reaped are:

- The Uttar Pradesh State Government has claimed a saving of ₹ 5.2 billion (\$72 million) using PFMS for social assistance pension payments.
- An estimated ₹ 100 billion (\$1.39 billion) is the annual gain to the Centre from PFMS platform integrated with state treasuries, quoted a press release by the Government of India.
- A Niti Aayog press release by its CEO Shri Amitabh Kant, informed that the linkage of Aadhaar and DBT has helped government save close to ₹ 830 billion (\$11.5 billion). PFMS has been a very

efficient and effective tool for the monitoring of government funds.

PFMS has started facilitating the implementation of the government's ambitious PM-KISAN Yojana, which would involve an estimated additional 12-13 crore beneficiaries at a ten-year outlay of ₹ 750 billion (\$10.7 billion). This involves a massive exercise of coordination with multiple stakeholders including the Ministry of Agriculture and the agency banks for achieving the objective. The first tranche of about ₹ 2,000 was successfully credited to the bank accounts of the first lot of 1.01 crore (over 10 million) small and marginal farmers on 24th February 2019, with the formal launch of the scheme by the Hon'ble Prime Minister.

Way Forward

Considering the diversity and multiplicity of channels through which money is spent/transferred (including through DBT), PFMS serves the pertinent need of establishing a common electronic platform for complete tracking of fund flows from the government to a large number of PIAs, both under Central and State Governments

till it reaches the final intended beneficiary.

Digital India Programme, launched in 2015, has accelerated the development of a strong foundation of digital infrastructure and expanded the internet access to about 481 million subscribers. Promotion of a digital payments ecosystem is its natural extension and has the potential to transform India's economy by digitisation of financial transactions and to move towards a cashless (or less cash) economy. The DigiDhan mission is a focused initiative of the government by establishing a robust, secure and inclusive pan-India digital payments ecosystem. PFMS on its own has made over 593 million so far during the current fiscal and is providing a big impetus in the realm of government payments towards accomplishing this objective.

This is, however, just the tip of the iceberg. India is in a sharply accelerating "take-off" phase of its digital journey. In the near future, PFMS is targeted to scale up to over 4 million PIAs carrying out 10 million transactions per day. India is poised for the next phase, the creation of tremendous economic value and empowerment of millions, as new digital applications permeate and transform a multitude of activities at a national level.

Acknowledgement

The Controller General of Accounts with the National Informatics Centre (NIC) as its technical partner in 2009 conceived the PFMS application. It is through the untiring efforts of the Indian Civil Accounts Organisation in driving this initiative, along with scientists of NIC that PFMS has become a landmark e-Governance application. ■



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- Digital India Week celebrations and Digital India Outreach campaigns have been undertaken.

Aadhaar Enabled Biometric Attendance System

Aadhaar Enabled Biometric Attendance System (AEBAS) (<http://tsmbn.attendance.gov.in>) has been implemented for all the employees at the Collectorate Complex, Mahabubnagar and all mandals of the District. As part of the Digital India initiative of the Government of India, it has been decided to implement common Biometric Attendance System (BAS) in the government offices. The proposed system would enable employees to register attendance by simply presenting their biometric (finger prints/ iris). This event will be authenticated online after one to one match with the biometric attributes stored in the UIDAI database against the employees' Aadhaar numbers. Efforts are being made to implement AEBAS in all departments and government schools of the District.

Jeevan Pramaan

A biometric enabled digital service, Jeevan Pramaan (<https://jeevanpramaan.gov.in/>) is meant for the pensioners of Central Government, State Government or any other government organisation, and it uses Aadhaar platform for their authentication. A successful authentication generates Digital Life Certificate, which gets stored in the Life Certificate Repository, and the Pension Disbursing Agencies can access the certificate online.

e-PDS

Public Distribution System (PDS) facilitates the supply of food grains and distribution of essential commodities to a large number of poor people through a network of Fair Price Shops at a subsidised price on a recurring basis. Point of Sale (POS) Machines have been installed at all the Fair Price Shops.

Mahabubnagar District is the pilot District of Telangana State to implement e-POS. (<http://epds.telangana.gov.in/FoodSecurityAct/>) (<http://epos.telangana.gov.in/e-PoS/login.html>)

Following are the benefits of the system:

- Accurate and real time information

- Elimination of PDS exploitation
- Paperless operations
- Daily status of consumption and inventory of commodity
- Awareness among citizens on PDS
- End to end monitoring on PDS leading to efficient consumption

NDAL and ALIS

National Database of Arms Licenses (NDAL) is a software used to maintain the centralised database of arms licenses issued all over India.

The issuance of arms license and other services related to it are among the important tasks of a District Magistrate. Maintaining the records of arms license issued by the District Administration is important as they need to keep track on issuing the license in terms of person and purpose of license. As the manual system of record keeping is cumbersome and time-consuming, Arms License Issuance System (ALIS) has been developed as per the requirements of the District Administration.

Following are some of the features of the software:

- Submission of application at a single counter
- Delivery of license and related services from the same counter
- Acceptance of government fee at ALIS counters
- Online capturing of photograph of the applicant
- Workflow based system
- Automatic check on the ceiling of number of weapons
- Re-engineered government process
- Provision of generating licenses on stickers in duplicate (one for license, other for record)
- Provision of generating stickers for renewal of weapons, deletion of weapons, addition of weapons etc., in duplicate

eCourts/ Judiciary Department (<http://ecourts.gov.in>)

Under the National e-Governance Plan (NeGP) of the Government of India, NIC District Centre is playing a vital role in the implementation of eCourt system, video conference system, LAN in court premises, uploading of data, arrangement etc. The

District Centre coordinated for the networking issues and provided complete technical support.

SPARROW

(<https://sparrow.eoffice.gov.in/>)

Smart Performance Appraisal Report Recording Online Window (SPARROW) is an online system based on the comprehensive performance appraisal dossier that is maintained for each member of Service by the State/ Central Government. The system facilitates electronic filling of PAR by officers in a way that is not only user-friendly but also allows to fill from anywhere, anytime, as per their convenience. NIC Mahabubnagar District Centre provides technical support in SPARROW to the District Collector and the Superintendent of Police.

e-Laabh

(<http://elaabh.telangana.gov.in/>)

A web-based Benefit Management System, e-Laabh has been designed for the welfare of dairy farmers and fishermen for sanction and release of subsidy under various schemes offered by the Government of Telangana in a highly objective and transparent manner. The dairy farmers and fishermen need to register their details as a one-time measure and then apply for various schemes as per their eligibility through this online system.

Rashtriya Bal Swasthya Karyakram (RBSK)

(<http://rbsk.telangana.gov.in/>)

Rashtriya Bal Swasthya Karyakram (RBSK) is a new initiative that aims at early identification and early intervention for children from birth to 18 years age to cover 4 'D's, viz. defects at birth, deficiencies, diseases, development delays, including disabilities. It is noteworthy that 0 - 6 years age group will be specifically managed at District Early Intervention Centre (DEIC) level, while for 6 -18 years age group, management of conditions will be done through existing public health facilities. DEIC will act as referral linkage for both the age groups.

The first level of screening has to be done at all delivery points through existing Medical Officers, Staff Nurses and ANMs. After 48



Shri D Ronald Rose, IAS, receiving Gem of Digital Telangana Award for eOffice Implementation in Mahabubnagar District



Shri D Ronald Rose, IAS, and NIC Officials receiving SKOCH Order of Merit Award for eOffice Implementation in Mahabubnagar District

hours till 6 weeks, the screening of newborns will be done by ASHA at home, as part of HBNC package. Outreach screening will be done by dedicated mobile block level teams from 6 weeks to 6 years at anganwadis centres and 6 - 18 years children at school. Once a child is screened and referred from any of these points of identification, it would be ensured that the necessary treatment/ intervention is delivered at zero cost to the family.

NIC Mahabubnagar is providing technical support to the District's Health Department for the implementation of RBSK Project.

Other Districts Support

Support is being provided to other four newly formed districts, Wanaparthy, Nagarkurnool, Gadwal and Narayanpet to implement all the e-Governance projects, belonging to State and Central Governments.

Mee Seva and Common Service Centres

Necessary training and support is being provided to Mee Seva and Common Service Centres (CSCs) to implement and set up CSCs, Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) and National Knowledge and Innovation Centre (NKIC). As on date, more than 400 CSCs have been set up in Mahabubnagar District.

e-Governance/ Email facility/ Video conferencing/ Websites development

District Informatics Centre (DIC) helps in the proper implementation of various national level and state level software in the districts. Some of the software developed at DIC are also implemented. DIC also computerises many activities, required by

the Collectorate. NIC Mahabubnagar is providing technical support for studio quality based video conferencing facility. This is being availed by various departments to interact with their higher officials. NICNET services are also being provided for data transmission from District to various government departments. Video Conferencing facility is functioning on 34 MBPS Leased Line.

Prajavani (<http://cpgrams.ts.nic.in>)

An Online Grievance Redressal System, Prajavani enables citizens to lodge grievances to any government department. All the petitions are received by the Collector and forwarded to various HoDs, and the status of each petition can be monitored regularly by the Collector. Usernames and passwords have been created for all the departments and officers to monitor Prajavani. Several training programmes have been conducted for all the computer operators and dealing assistants of all the departments who are using Prajavani.

Election Computerisation

NIC Mahabubnagar has always played an important role during the Assembly Elections and Lok Sabha Elections. Polling Personnel Management System software, provided by NIC, Telangana State Centre, was implemented for the randomisation of polling personnel to various booths for Telangana State Assembly Elections 2018. During elections, NIC District Centre provided necessary support for the computerisation and online transmission of various reports to the Election Commission of India (ECI).

The deployment of polling personnel and counting personnel after randomisation is

carried out as per ECI guidelines during the election period. A software has been developed for EVM randomisation, and the District Centre also facilitates and ensures online transmission of 'counting and results data' to ECI during elections.

Training has been provided to actual users on Suvidha - for political parties for various permissions online, Sugam - Vehicle Management System, Genesys - General Election System for Pre and During Counting of Votes, National Grievances Redressal System for election related complaints from citizens and cVIGIL Mobile App implementation for complaints on Moral Code of Conduct (MCC).

Accolades

- Webratna District - Gold award to Mahabubnagar District in Digital India Awards 2018
- Gem of Digital Telangana Award 2017 and SKOCH Order of Merit Award 2018 for eOffice Mahabubnagar

Summary

NIC Mahabubnagar has been successfully leading the implementation of various e-Governance projects. The District Administration is now fully aware of the potential of informatics and approaches NIC District Centre for various ICT services. ■

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Online Examination System of NIC (OESNIC)

Boasting of a robust architecture enabling the simultaneous operation of multiple exams

OESNIC has replaced the existing examinations, conducted using paper, with online paperless system in government departments and schools, thereby ensuring 100% transparency in conducting examinations and mark sheet evaluation. Till date, more than 60 examinations have been conducted for NIC and the Government of Tamil Nadu. Around 3000 NIC officials have taken the exams.

Edited by
REUBAN K

wing to a stable career and various other benefits, many students enrol for government exams after graduation. A well-strategised process, right from planning to execution to completion, is followed by the respective authorities to conduct these examinations. To ease their effort and bring transparency to the system, the Online Examination System of NIC (OESNIC) has been designed and developed as a product for conducting various Recruitment and Departmental Promotion Examinations for the State Government and Central Government Departments. The system supports multiple choice questions and the application is designed using Thick Client-Thin Server Architecture where the server load is reduced to the maximum extent.

The entire process of examinations is conducted in a safe and secure environment with questions and answers stored only in encrypted form. The encrypted and compressed question booklet gets downloaded to the client machine using the secure channel. The Application Architecture ensures minimum usage of server and also handles a large number of concurrent users. The GudApps Test of NIC is being conducted using this application. The Bilingual Data Entry Speed Test for English and Tamil has been introduced and can also be used for other Indian languages.

Highlights

- 54 Tests were conducted for 2990 NIC employees.
- Knowledge of all the new entrants to NIC was also evaluated using the above

software.

- A one-day test was conducted for 11,000 candidates in 4 batches from 85 engineering colleges across Tamil Nadu, using this application.
- The application is tested to withstand the load of 10,000 concurrent users.
- The application is developed using Open Source Technologies.

Technologies used

- LAPP (Linux-Apache-PHP-PostgreSQL Database)
- HTML5, CSS3, Javascript, Bootstrap Libraries, RESTful Web services

Features

The system facilitates the following features and these are configurable across examinations.

- Conducting different tests among multiple batches simultaneously for more than one department
- Random generation of Question Booklets
- Reshuffling of Question Booklet Serial Number within a batch
- Assigning Reshuffled Question Booklet to candidates using randomisation method
- Disabling all special keys in keyboards during exams to restrict candidates from using other modes of search operations
- Continuing with tests from the time of interruption in case of local hardware or network issues and completing within the left out time frame
- Assigning weightage of marks to each question based on the difficulty level
- Giving negative marks for wrong answers, if required

Application Architecture

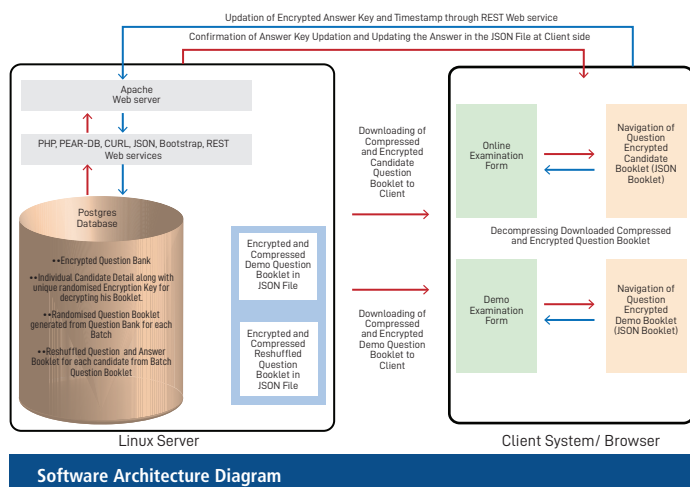
The application works in the following manner.

- Questions and answers are stored in the database in an encrypted form.
- A booklet with N number of questions is generated through randomisation as JSON (JavaScript Object Notation) file for each batch and stored as an encrypted JSON file with SALT (a random generated number).

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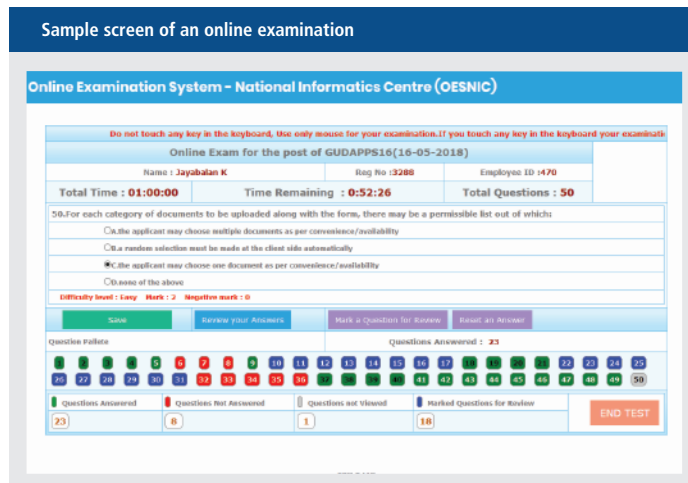


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- A booklet generated for a batch is reshuffled to generate M number of question booklets by randomising the N number of questions selected for a batch. This activity changes the order of appearance of questions. Now, there are M numbers of reshuffled question booklets from a booklet generated for the batch.
- The next activity is to generate booklet for each candidate appearing in a particular batch. To do this, these M booklets (JSON file) were randomly selected and the JSON file name is assigned to each candidate. This process ensures the same booklet with same serial number does not appear for the consecutive candidates sitting next to each other in the examination hall.
- The M number of booklets (JSON) are kept in compressed and encrypted form in a separate folder, linked with batch number to increase the search speed during download of question booklet by candidates.
- Since the generation of booklets as JSON file is done before the exams begin, the database operation for generation of questions for each candidate from the database is completely avoided.
- A demo question booklet with 10 questions as JSON file is kept in the server for practice test before the actual online exam. When a candidate clicks "DEMO TEST", the demo JSON file gets downloaded to the client. Since the navigation of questions is done from JSON file at the client end, there is no client and server communication for any updation till the candidate completes the DEMO TEST.

- When a candidate selects "ONLINE TEST", the encrypted and compressed JSON file kept in a folder gets downloaded to client and JSON object is parsed to display question and choices on screen. Since the questions are attached to button number, when a candidate clicks on a particular number in the question pallet, the corresponding question is parsed from the JSON file in the client machine and displayed on screen. The network bandwidth usage is avoided for displaying the candidate's desired question on screen from the database each time when the candidate clicks a button for a particular question. This architecture helps in scaling up the application and results in improved performance of online examination.
- When a candidate answers the question and clicks on "SAVE NEXT" button then only a web service is called through CURL (a tool to transfer data from or to a server) and gets updated in the Answer Table just by sending REGISTRATION No., QUESTION ID and ANSWER KEY. Based on the confirmation from the server about updation, the answer key of the candidate gets updated in JSON Object in the client and hence, client will always be in sync with the server.
- If anything goes wrong at client side (system hangs, power issues etc.), the candidate doesn't need to worry. When the candidate logs in again from the same client or from any other client, a new encrypted and compressed JSON file gets generated from the database with whatever questions the candidate has answered,



and is downloaded to client. An old screen with answered questions (GREEN BUTTONS) is displayed and the candidate can CONTINUE THE TEST. The system will calculate the time of their last answer and the balance time to be given to them. Thus, there will not be any loss of time to the candidate even in the case of any unexpected interruptions.

- In this architecture, the navigation between questions by the candidate is done only at the client end. Only when the candidate answers a question, a client server communication is initiated for updating the answer key of the candidate in the table. Due to this, the server and database load is very minimal.

Way Forward

It is planned to introduce OESNIC in other State/ Central Government Departments for conducting online exams for internal promotions and also to recruit data entry operators for using speed test feature available in all the Indian languages. Further, it is also envisaged to take this product to high/ higher secondary schools for students to take multiple choice questions tests in various subjects. ■

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National Power Portal

Providing comprehensive framework for Power Sector data capture and dissemination

National Power Portal (NPP) has been envisaged by the Ministry of Power, Government of India to create a unified platform for collation and dissemination of Indian Power Sector information.

Edited by
MOHAN DAS VISWAM

National Power Portal (NPP) is a unified system developed for Indian Power Sector to facilitate online data capture/ input (daily, monthly, annually) from generation, transmission and distribution utilities in the country and disseminate the power sector's information (operational, capacity, demand, supply, consumption etc.) through various analysed reports, graphs, statistics etc., for generation, transmission and distribution at all India, regional, state level for central, state and private sector.

NPP was launched by Shri R. K. Singh, Hon'ble Minister of State (Independent Charge) for Power and New & Renewable Energy, on 14th November 2017.

Functional Modules



The portal comprises of the following modules under Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) of Rural Electrification Corporation and Integrated Power Development Scheme (IPDS) of Power Finance Corporation.

- Installed Capacity
- Generation
- Transmission

- Fuel Management
- Urban Distribution
- Rural Distribution

Data Collation and Dissemination

Data is being collected through forms, bulk data upload using Json format and web services under NPP. Data flows from various power sector utilities through the internet to NIC Cloud where data is analysed and disseminated in forms of various Analytical Reports, Dashboard and Mobile Apps.

Technologies Used

The portal has been designed and developed using Open Source Technologies with front-end 'SPRING/Hibernate' and for back-end, 'Postgres' is used. SMS and email services will be used to send alerts, messages to utilities to improve and expedite the data entry process.

Feeder data with Input energy, category-wise consumers (domestic/agriculture/industrial/government etc.), energy billed, energy consumed, amount billed and amount collected is being collected through a standard json file on monthly basis, which is scheduled and processed in the night.

Capacity, generation and fuel data are being collected through web services from large CPSUs (NTPC, NHPC etc.) and also through input forms from GENCOs and TRANSCO.

Stakeholders

- Ministry of Power
- Central Electricity Authority
- Power Finance Corporation
- Rural Electrification Corporation
- Generation Utilities
- Transmission Utilities
- Distribution Utilities

Integration with Other Applications

NPP is integrated with associated systems of Central Electricity Authority, Power Finance Corporation, Rural Electrification Corporation and other

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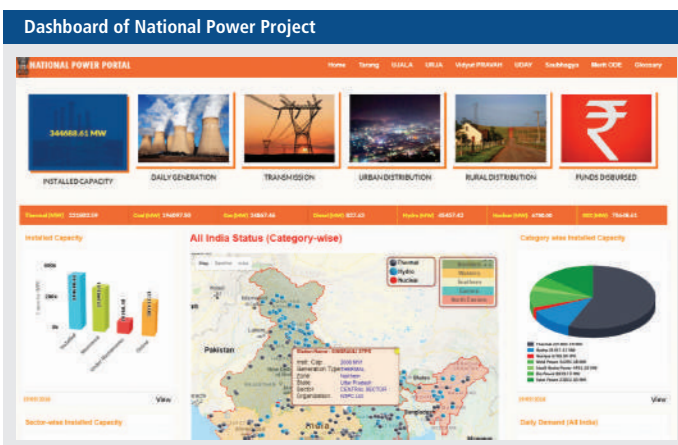
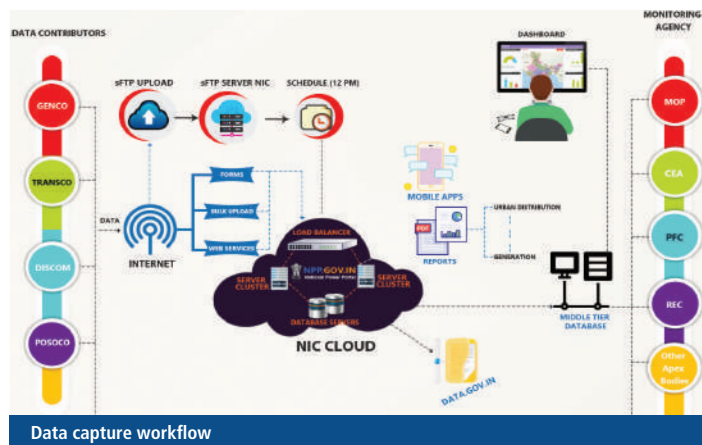


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major utilities and would serve as single authentic source of power sector information to apex bodies, utilities for the purpose of analysis, planning, monitoring as well as for public users. The Ministry of Power (MoP) has designated Central Electricity Authority as the nodal

agency for implementation of NPP.

Salient Features

The system is available 24x7 and ensures effective and timely collection of data. It standardises data parameters and formats for a seamless exchange of data between NPP and respective systems at utilities. It also facilitates data collection at source, minimises manual data entry and optimises cost by maintaining common IT infrastructure.

Dashboard

The NPP Dashboard has been designed and developed to disseminate analysed information about the sector through GIS enabled navigation and visualisation chart windows on capacity, generation, transmission, distribution at national, state, DISCOM, town, feeder level and scheme-based funding to states. The system also facilitates various types of statutory reports required to be published regularly. The Dashboard would also act as a single point interface for all Power Sector Apps launched earlier by the Ministry such as TARANG, UJALA, VIDYUT PRAVAH, SAUBHAGYA, URJA and MERIT ORDER DESPATCH.

National Workshop Held

A National Level Workshop was organised at the Convention Centre, Scope Complex, New Delhi on 27th September 2018 and was attended by delegates and participants from Power Finance Corporation (PFC), Rural Electrification Corporation, Generation, Transmission and Distribution utilities from

all over the country. Shri Ajay Kumar Bhalla, Secretary (Power), appreciated the efforts made for NPP and emphasised its significance.

In her address, Dr. Neeta Verma, DG, NIC, highlighted the emerging technologies and their relevance in addressing issues of the power sector. Shri GK Gaur, DDG, NIC, explained the scope, coverage, architectural overview, design and functioning of NPP.

A brochure on NPP was released by the Secretary on this occasion and a short film on NPP was also screened.

Accessibility

The Dashboard can be accessed by visiting the website, <https://npp.gov.in> while the website, <https://nppdms.gov.in> is meant for utilities to enter data.

Way Forward

- ◆ Integration of new and renewable energy data
- ◆ Integration of real time data from SCADA systems
- ◆ Enhanced frequency of power supply status
- ◆ Data Analytics for informed decision making
- ◆ Predictive modeling and use of AI technology for better performance of the Power Sector

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“National Power Portal is created to provide updated information on Indian Power Sector through a single platform. Its integration with various Apps (Tarang, Ujala, Vidyut Pravah, Urja, Merit) enriches the resource base. It promises availability of quality data to the stakeholders including researchers and industries. NPP's data repository provides opportunity for intervention of emerging technologies such as AI, Machine Learning, and Deep Learning in optimum utilisation of power sector resources and addressing complex operational issues in functioning of the sector.”

G.K. GAUR
Dy. Director General, NIC

Anubhav Portal

A platform for retirees to cherish work life moments and help channelise enhancement in internal processes

Operated by the Department of Pension & Pensioners' Welfare under the Ministry of Personnel, Public Grievances & Pensions, Anubhav is the dream project of the Hon'ble Prime Minister. It provides a platform to retiring employees to share their experiences of working with the government and give important suggestions.

Edited by
MOHAN DAS VISWAM

Pension MMP, a Mission Mode Project under the National e-Governance Plan (NeGP), has been envisaged to safeguard the benefits of pensioners and enable them to garner the benefits of e-Governance. The primary objective of this MMP is the redressal of their grievances, besides providing them with information and guidance on pension and retirement related matters.

Anubhav (<http://pensionersportal.gov.in/anubhav>) is another significant endeavour by the government under Pension MMP to enable retirees to share their work experiences and give suggestions for improvement in various fields. Providing them satisfaction and a sense of belongingness, this system helps create a database of suggestions and work experiences, thereby leading to an enhancement

in the existing system and inspiring the existing employees.

Anubhav captures the employees' field experiences, category of experience, skills and suggestions, apart from personal details. These write-ups are assessed by the Head of Office and forwarded to the Head of Department for final assessment. Suggestions given by retirees are forwarded to the concerned organisation. Retiring employees can also update their write-ups by using PAN and OTP before the assessment.

Objectives

Anubhav aims to

- Create a database of significant suggestions and work experiences.
- Channelise the human resource of retiring employees for nation building.
- Enable Ministries/ Departments to take crucial steps while considering useful and replicable suggestions.

Stakeholders

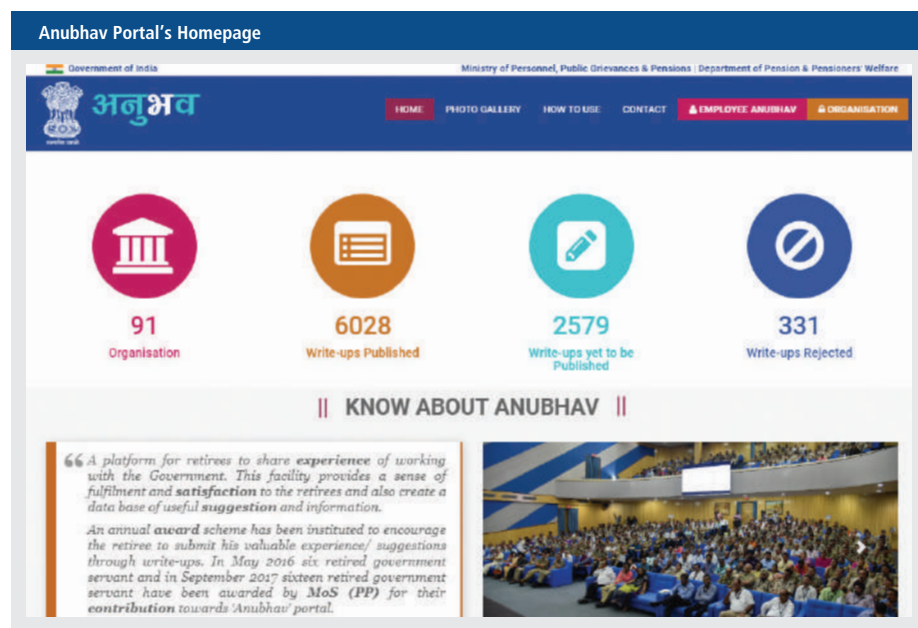
- Individual (Central Government Retiring Employees & Pensioners)
- Head of Office (HoO)
- Head of Department (HoD)

Features

For Retirees/ Pensioners

- Uploading of photos

Anubhav Portal's Homepage



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Awardees, along with other officials, seen with the Hon'ble Minister, Dr. Jitendra Singh

- Uploading of write-ups and suggestions in PDF and audio formats
- Modification in write-ups and suggestions before publishing

Screening of write-ups

- Write-ups are published after two levels of screening.
- The Ministry/ Department can return write-ups to retirees for review.
- Suggestions given by retirees can be forwarded to the Indian Institute of Public Administration (IIPA) and the National Institute of Financial Management (NIFM), in addition to the concerned Ministry/Department for review.
- Published write-ups can be pulled back and rejected and vice-versa.
- Readers can also give feedback on write-ups.

Implementation

Ministry/ Department on-boarding

Login id and password have been issued to HoO and HoD of the Ministries/Departments. A Department can further create logins for their attached/ subordinate offices.

Retiring employees on-boarding

Retiring employees do not require any login id and password to upload write-ups. They can update their write-ups before publishing by using PAN and OTP.

Helpdesk

Telephonic and email based helpdesks

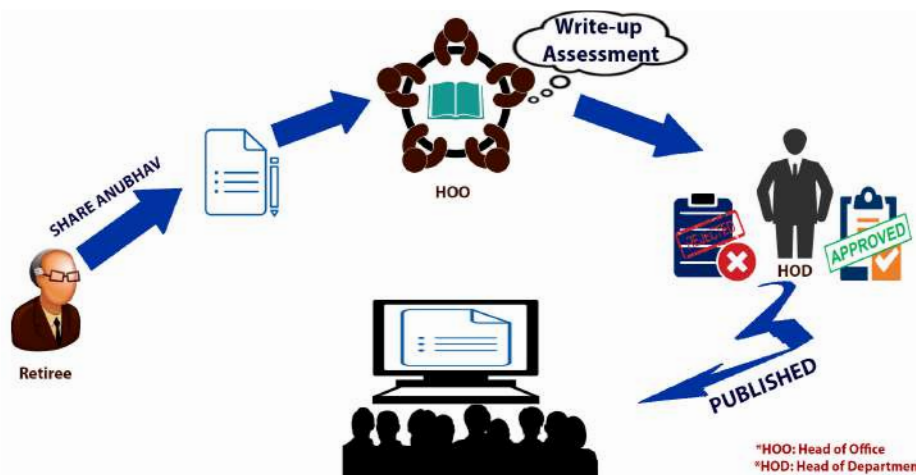
have also been set up to provide day-to-day support.

Project Development

Anubhav has been developed inhouse by NIC's team at D/o Pension and Pensioners' Welfare, which is currently headed by Dr. Y K Singh, Sr. Technical Director.

Way Forward

Anubhav creates a huge database of exceptional/ outstanding work by capturing information in the form of audio apart from text, which will be used by the coming generation of government employees in decision-making. Suggestions given by retirees will also be assessed by IIPA and



Anubhav Portal workflow: Steps involved in the publishing of write-ups

The project development is led by Shri R. Sriram, Sr. Technical Director.

Awards Scheme

An Annual Awards Scheme was started in 2016 in order to encourage the submission of write-ups by retired government servants. On the third Anubhav Awards Ceremony held on 18th September 2018, six pensioners were presented with awards by Dr. Jitendra Singh, Union Minister of State (Independent Charge), Development of North-Eastern Region (DoNER), MoS PMO, Personnel, Public Grievances & Pensions, Atomic Energy and Space.

NIFM for implementation. The awards scheme encourages more and more retiring employees to showcase their work and gain recognition. ■

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Appscape

Mobile technologies have been evolving at a high pace over the last decade. Mobile network has seen growth from 1G to 4G. The fifth generation of wireless network, which is expected in next few years, promises great advantages such as increased data rates beyond 1Gbps and will provide higher broadband density with reduced latency. Computation capabilities of mobile devices are also increasing, along with the change in network infrastructure. New mobile devices are coming with more RAM, high resolution cameras, better processors and compact form factor.

The way applications are designed has a high impact on end user experience. Responsive design allows user interface to adjust itself as per form factor of device. A Progressive Web App (PWA) further extends the capability of responsive design and gives a local application experience with offline line capabilities using service workers. One of the disadvantages of PWA is that it cannot be deployed on Play Store. Trusted Web Activities (TWA) is a new way to integrate your web-app content such as your PWA with Android App. TWA allows deployment on Play Store in a simple way and is a latest offering from Google. Cross Platform Mobile Apps offer the feature of write once, run anywhere. Flutter is one of the emerging platforms for the development of hybrid Mobile Apps from Google.

This issue of Appscape covers some of the recently launched and popular Mobile Apps, which belong to different sectors such as Agriculture, Health, Governance & Administration and Rural Development. Custom Hiring Centers of Agriculture Machinery Mobile App helps farmers avail custom hiring services of Farm Machinery Banks, while e-BloodBank App provides information about blood stock availability. eVidhan App is meant for the empowerment of Members of the Legislature. SS Tank App helps monitor Summer Storage Tanks. Lok Kalyan Mitr App provides awareness on various social and public welfare schemes being run by the government. Traffic Management Himachal Pradesh App enables to control and manage vehicular traffic effectively and HP Circle Rates App provides information on Stamp Duty and Registration Fee Charges.

- C.J. ANTONY, NIC HQ



For Apps uploading queries:
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Visit the Mobile App Store
<http://egovmobileapps.nic.in>

CHC Agri Machinery

Farmers of different states across the country can use the Custom Hiring Centers of Agriculture Machinery Mobile App (CHC Agri Machinery) to avail custom hiring services of Farm Machinery Banks (FMBs)/ Custom Hiring Centers and Hi-tech Hubs, established under various schemes of the Department of Agriculture Cooperation & Farmers Welfare (DAC&FW), Ministry of Agriculture and Farmers Welfare, State Scheme and by private owners. The App was launched by Shri Parshottam Rupala, Hon'ble MoS for Agriculture in New Delhi on 24th January 2019.

The multilingual App also helps societies, entrepreneurs and progressive farmers, willing to provide their agricultural machineries and equipment on rental basis, increase income by making optimum utilisation of the available agricultural machineries available in CHCs/FMBs/Hi-tech Machinery Hubs. The App has following components:

- **Registration of CHC owner and service provider** - At the time of registration, the App captures latitude, longitude, location of CHC, photo and address details. A CHC owner can add details of implements available for rent, their specifications and rental details per acre or per hour, photographs of machineries, booking received, booking closure and feedback & rating.
- **Farmer module** - A farmer can search and make booking through Mobile App and post feedback on a CHC's performance.

Using the App enables timely availability of farm implements and appropriate machines at competitive hiring charges, promotes increase in crop productivity, facilitates crop residue recycling and helps reduce the cost of cultivation.

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<https://play.google.com/store/apps/details?id=app.chcagrimachinery.com.chcagrimachinery>

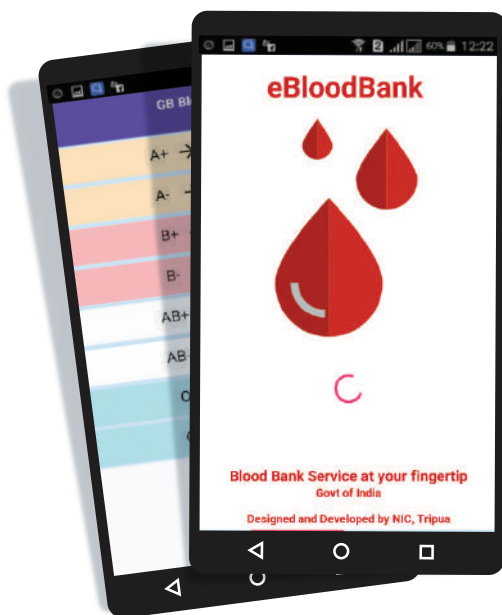
e-BloodBank

e-BloodBank Mobile App has been developed for the ease of patients who can easily locate their nearest hospital and find out information about the place to get a particular blood group.

This Android App features the following:

- **Blood stock availability status of all blood banks across India:** Patients can find stock status of all blood banks right from the convenience of their home.
- **Search for particular blood group:** Patients can search the stock availability of a particular blood group. There is an option to search within a state, district etc. The App also shows distance and navigation details.
- **Register yourself as donor:** A person willing to donate blood can register himself. Whenever a blood donation camp is held in that particular area, the potential donor gets intimated by SMS/ through eBloodBankApp to donate blood.
- **Details of blood bank:** Blood bank details like contact number, navigation services etc. are also available.
- **Facts about blood donation:** The App shares various facts about blood donation everyday with potential donors. This debunks myths related to blood donation and encourages them to donate blood at regular intervals.
- **Know about upcoming blood camps:** Details of upcoming blood camps are shown in the App so that a donor can go there to donate blood. The registered donors are intimated by SMS.
- **Plan your donation:** Donors can view their last blood donation status and plan for future donations.

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<https://play.google.com/store/apps/details?id=ehospital.gov.in.ebloodbank>

eVidhan

eVidhan is a member-centric Application (Mobile & Website) developed for the empowerment of Members of the Legislature who can submit questions and notices. Developed by NIC Himachal Pradesh as a Global Product, the App features My Page facility, in addition to Public Page for Hon'ble Speaker, Ministers and Members to access information related to themselves during sessions and meetings of the House Committees. They can also view their salary and bill reimbursement details. The Android and iOS App is integrated with cloud-based web services of eVidhan Application.

Major sections related to Sessions of the Legislature are:

- Proceedings of House
- Questions and replies (starred & un-starred)
- Notices under various rules and replies
- Bills for introduction in the House and amendments
- Committee reports
- Other papers such as administrative reports, R&P rules and audit reports
- Speeches of dignitaries

Using House Committee Meeting option, Members can view meeting agenda and related replies/ documents received from various departments. Himachal Pradesh Legislative Assembly has become India's first ever high-tech paperless Legislative Assembly after launching eVidhan Application in August 2014. All the documents are made available online to Hon'ble Members in the App, in addition to touch screens installed at their tables inside the Assembly House and website.

Queries: *Dharmesh Kumar (dharmesh.sharma@nic.in)*



<https://play.google.com/store/apps/details?id=evmember.sbl.evmember>
<https://itunes.apple.com/ng/app/e-assembly/id1331341956?mt=8>

SS Tank

Summer Storage Tanks (SS-Tank) Mobile App has been designed for the use of the Department of Rural Water Supply and Sanitation (RWSS), Government of Andhra Pradesh. Developed by NIC AP State Centre, the App is being successfully implemented in all the 48,692 habitations of the state for capturing percentage of SS-Tank filled and running status of canal. It can be used in both online and offline mode.

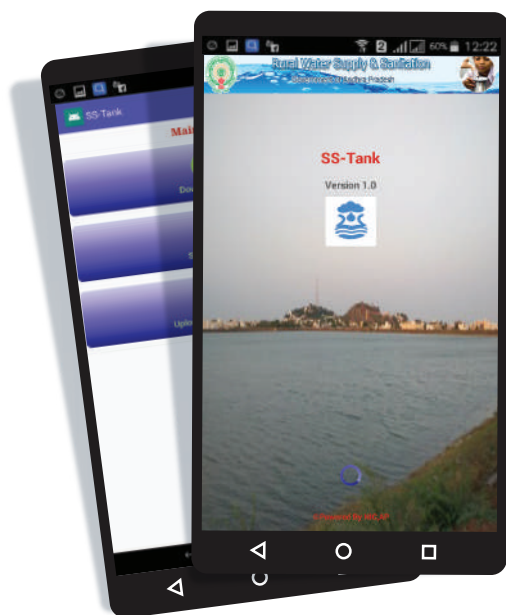
The Department of Rural Water Supply and Sanitation provides drinking water facilities across the state. SS tanks are maintained for drought prone areas of Andhra Pradesh. The App aims to help RWSS functionaries in monitoring the SS Tanks and help the RWS functionaries in taking percentage status (Percentage of SS-Tank Filling) and status of canal (running or not).

Navigation of the App:

❖ **Download Data:** This feature allows users to download master data from the MIS application and use the same in the event of non-availability of the internet. ❖ **SS Tank Filling:** This feature facilitates users to capture the SSTank filled and running status of canal. ❖ **Upload locally saved data:** This feature helps upload locally saved data to the server as and when there is internet connectivity. After successfully uploading data to the main server, the number of successfully uploaded records gets displayed for SS Tank.

Technology stack used for Client Side technology are Android SDK & SQLite and Java and Restful Web Services are for Server Side technology.

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https://play.google.com/store/apps/details?id=com.nic.ss_tank

Lok Kalyan Mitr

The Government of India launches various welfare schemes and programmes every year for the benefit of citizens so that they can improve their financial situation, and it also has an impact on the country's economy. However, due to the lack of affordability, people living in rural areas don't have access to electronic or social media and hence, remain unaware of these schemes.

The concept of Lok Kalyan Mitra is an attempt to improve the standard of life of deprived and backward people living below the poverty line. The State Government has set a target of making people aware of various social and public welfare schemes being run by the government. Serving as a link between the State Government and citizens, Lok Kalyan Mitr App aims to take feedback from beneficiaries on various implemented schemes and enhance the number of beneficiaries in various schemes of the Central and State Government by organising chaupals at village level, in consultation with the Block Development Officer.

Lok Kalyan Mitr Mobile App and portal have been developed by NIC Uttar Pradesh for capturing the feedback of citizens and photographs of chaupals with geo-tagging for real time monitoring. The Android App also operates in offline mode, and it provides different dashboards for monitoring purpose. It also features modules for chaupal summary entry & feedback entry and data synchronisation.

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<https://play.google.com/store/apps/details?id=in.nic.up.jansunwai.mitr>

Traffic Management Himachal Pradesh-JanAbhaar Rally

Traffic Management App is an initiative of the General Administration Department, Himachal Pradesh to effectively control and manage vehicular traffic during any major event in the State. One such event is the organising of Jan Aabhaar rally by the State Government during which, the App is used to capture the movement of vehicles. It has been developed by NIC HP.

The App features the following:

- The vehicle level person enters vehicle specific details such as district, assembly constituency, starting place, vehicle number and number of persons.
- The administration identifies entry points for the destination and users are created for each entry point. The entry point user marks every rally vehicle crossing the entry point as “vehicle in” and also assigns the parking area for the vehicle.
- The user deployed at parking area is given user ID to access the App and mark the vehicles parked on vehicle's entry into the parking area.
- Although the App is role and workflow based, a provision is there to help each level of user enter the vehicle's missing information like information to be entered by vehicle level nodal person can be entered by Entry Point user. If the same is still missing, the Parking Slot user also can enter the complete information.

The respective district and state level users can view latest status of vehicles started for the rally and reach the defined points, thereby easing the job of organisers. The App can be used for any similar event by defining the required details with a little customisation.

Queries: *Ajay Singh Chahal (ajay.chahal@nic.in)*



https://play.google.com/store/apps/details?id=nic.in.Traffic_Management

HP Circle Rates

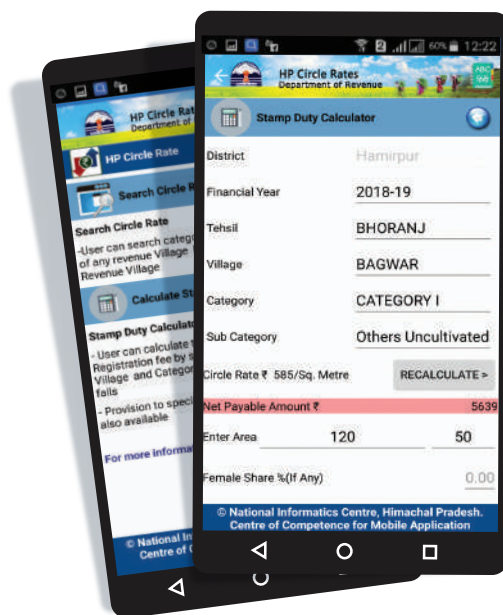
The HP Circle Rates App has been developed to provide information on circle rates of revenue villages in the State of Himachal Pradesh. Developed by NIC HP, the App consists of a search option to find out notified prevailing circle rates and a calculator to know the exact stamp duty and registration fees applicable.

The App features the following:

- **Search Circle Rates:** Users can search category wise applicable circle rates of any revenue village by selecting District, Tehsil and Revenue Village. The rates vary depending on the land type and distance of plot from national/ state highway or any other road. All rates are annually notified by the concerned District Registrar using the HP Circle Rate software.
- **Stamp Duty Calculator:** Users can calculate the applicable stamp duty and registration fee by selecting District, Tehsil, Revenue Village and Category under which land to be transacted falls. The calculator has a provision to specify female share, and new industry to be setup (as purpose of sale deed) is also available to calculate exact duty and fee. The user is free to add as many types of land under transaction.

The App also helps the end user in understanding the categorisation and circle rate calculation of land/ property based on the distance from state/ national highway and cultivable and uncultivable land. The App is available in both Hindi and English languages.

Queries: *Ajay Singh Chahal (ajay.chahal@nic.in)*



<https://play.google.com/store/apps/details?id=nic.hp.HPCircleRate>

China has unveiled its 'first female AI news anchor'

China's state-run news agency, Xinhua has unveiled 'the world's first female AI news anchor' to read alongside its male AI news presenters. Named Xin Xiaomeng, the perfectly styled broadcaster was developed jointly by Xinhua and search engine company Sogou, and was shown off in a video on social media.

Apart from a few stiff facial muscles, Xiaomeng is remarkably life-like, complete with hand adjustments while on camera, and just enough on-cue blinking. The computer-generated journalist was modelled after real-life Xinhua news anchor Qu Meng whose voice and image provided inspiration to developers.

In a video on Twitter, Xiaomeng addressed the world in Chinese with English subtitles, saying "Hello to everybody who's watching" and announcing her role as broadcaster for China's Two Sessions political conferences. Xiaomeng will join Xinhua's two male AI reporters.

As she was unveiled to the world, Xinhua announced that her male colleague Xin Xiaohao has had an upgrade. Xiaohao has not only gained a new register of body languages, but he has also been promoted from a seating position to standing during his broadcasts, and he's pretty pleased about it. "Henceforth, rather than working behind the desk, I'll be broadcasting the news in front of the desk," he told the world. "Instead, I'll be broadcasting from a standing position. I can make more hand gestures and facial expressions. Now I have my own name, Xin Xiaohao. Thanks to this upgrade, I will be able to conduct better broadcasts."



The two carry off their broadcasts seamlessly, with not a stutter or forgotten cue in sight. But in a sign-off line that will be unlikely to win her any friends in the newsroom of the flesh-and-blood variety, Xiaomeng promises to "present you with a better news broadcast".

Source: <https://www.thenational.ae>

Malaysian State deploys Facial Recognition System to fight crime

Malaysia's northern state of Penang has launched a facial recognition system capable of identifying faces of criminals through closed-circuit television (CCTV) cameras. For the first time in the country, Mr. Chow Kon Yeow, Chief Minister of Penang, said that the technology, which uses artificial intelligence would prevent crime and check on traffic offenders, according to state news agency Bernama.

"This technology, which is capable of detecting the faces of criminals or people wanted by the police will be operated from the CCTV control room of the Penang City Council and the Penang Police headquarters. The monitoring via CCTVs is an initiative by the Penang State Government to reduce crime, especially street crimes in an effort to maintain the safety and well-being of the people," he said.

The system works on identifying criminals or wanted persons through images uploaded by the police and would track such individuals while alerting the authorities on their movements.



Mr. Chow Kon Yeow added that the initiative includes increasing the number of CCTVs on the island from 767 to 3,000 units in stages and expanding the camera network to other parts of the state.

Source: <http://www.xinhuanet.com>

University of Missouri to strategize on ways to prevent cyber attacks

Researchers at the University of Missouri hope to employ a new strategy in the ongoing struggle to protect digital information in the cloud from targeted cyber attacks. The strategy establishes a new artificial intelligence system to combat digital intrusions and protect people's personal information that gets stored electronically often in the cloud during online purchases.

Shri Prasad Calyam, Associate Professor of Electrical Engineering and Computer Science and the Director of Cyber Education and Research Initiative in the MU College of Engineering, said, "We are interested in the targeted attacks where the attacker is trying to exploit data or critical infrastructure resources such as blocking data access, tampering facts and stealing data."

The researchers have focused on two types of cyber attacks, those seeking customer data and those stealing resources such as bitcoins, a type of digital currency. Their strategy uses artificial intelligence techniques and psychology principles, giving the cyber attackers false hope that the attack is working.

Shri Prasad Calyam added, "Our 'defense by pretense' system quarantines the attacker and allows the cloud operators to buy



time and build a stronger defense for their systems. The quarantine is a decoy that behaves very similar to the real compromised target to keep the attacker assuming that the attack is still succeeding. In typical cyber attacks, the more deeply attackers go in the system, the more they have the ability to go into many directions. It becomes like a Whack-A-Mole game for those defending the system. Our strategy simply changes the game, but makes the attackers think they are being successful."

Source: <https://www.sciencedaily.com>

NASA to use Blockchain Technology for Air Traffic Management

The US space agency NASA is planning to advance its technology by adding Blockchain to secure air traffic services and support, according to the sources. "The agency is willing to work with an open source Blockchain platform called 'Hyperledger Fabric' that is specifically designed for enterprise transactions that resemble typical air traffic management interactions", said Mr. Ronald J. Reisman, an Aero-computer Engineer at the NASA Ames Research Centre.

Blockchain would address the potential issues of privacy, prevent spoofing, denial of service and other various attacks, according to Mr. Reisman. He asserted that Blockchain presented an engineering prototype that embodied a design and method that might be applied to mitigate security issues.

"The design innovation is the use of an open source permissioned Blockchain framework to enable aircraft privacy and anonymity while providing a secure and efficient method for communication with air traffic services, operations support, or other authorized entities," he noted.

The new framework also features certificate authority, smart contract support, and higher-bandwidth communication channels for private information that may be used for secure



communication between any specific aircraft and any particular authorized member.

Mr. Reisman said that the prototype demonstrated how this method can be economically and rapidly deployed in a scalable modular environment.

Source: <https://www.globalbusinessoutlook.com>



Shri Ajay Sawhney lighting the lamp and releasing the Annual Report, along with Shri Girish Chandra Murmu, Dr. Neeta Verma and other officials



Second National Workshop on Central Public Procurement Portal (CPPP) held in New Delhi

The second National Workshop on Central Public Procurement Portal (CPPP) (<https://eprocure.gov.in>) was organised jointly by the Procurement Policy Division, Department of Expenditure (DoE), Ministry of Finance and the eProcurement Division, National Informatics Centre (NIC) at Stein Hall, India Habitat Centre, New Delhi on 21st January 2019. The workshop was inaugurated by Shri Girish Chandra Murmu, OSD Expenditure cum Secretary Designate, DoE, in the presence of Shri Ajay Sawhney, IAS, Secretary, Ministry of Electronics and Information Technology (MeitY), Shri Sanjay Prasad, JS, PFC II, Ministry of Finance, Dr. Neeta Verma, Director General, NIC and Shri Nagesh Shastri, DDG & HoG, eProcurement, NIC. Enthusiastically attended by over 450 delegates from various Central/ State Government organisations/ departments and Public Sector Undertakings across the country, the workshop aimed to provide wide

publicity to use CPPP, discuss the issues faced by procuring entities, and develop possible strategies as the way forward.

CPPP has been established by NIC as per the directions of DoE for providing single point access to information on public procurement. As part of this setup, central procuring entities are facilitated with e-Publishing/ e-Procurement/ e-Auction and XML data transfer module by NIC. The use of CPPP has been mandated in GFR 2017.

Shri Ajay Sawhney delivered the keynote address on the occasion. Talks by eminent users across Central Government, State Governments and Central Public Sector entities and Panel Discussion were highlights of the day.

During the workshop, CPP Portal 2.0 with enhanced features was launched and Annual Report 2017-2018 on CPPP was also released. The best performing Central/ State & PSU procuring entities were presented with awards in different categories.

- ATUL KUMAR, NEW DELHI

Chief Minister, Uttarakhand, launches GPF Mobile App

Shri Trivendra Singh Rawat, Hon'ble Chief Minister of Uttarakhand, launched the GPF Mobile App at Janta Milan Hall at CM Residence in Dehradun on 25th January 2019. Developed by NIC, the App aims to enable the government employees of Uttarakhand to check their General Provident Fund account online and view balance, guidelines, final statement etc. The App also works in offline mode and a provision of SMS service has been made by NIC for employees who do not have smart phones.

Shri Deependra Kumar Chaudhari, Director General, Information, Shri Ravi Vijarnia, Assistant Director, Information, Shri Ramesh Bhatt, Media Advisor to CM, Shri Darshan Singh Rawat, Media Coordinator to CM, Shri Rajesh Goyal, ASIO, NIC Uttarakhand State Unit, Shri Narendra Singh Negi, Technical Director, NIC, Shri Rajeev Lakhera, Scientist-C, NIC and Shri Anuj Dhangar, Scientist-B, NIC were also present on the occasion.



Shri Trivendra Singh Rawat launching the GPF Mobile App

In his address, the Chief Minister said, "The services of e-Governance have been facilitated through information technology. This service is one more milestone in offering friendly, secure, hassle-free and transparent services to the stakeholders."

On the occasion, Shri Narendra Singh Negi gave a presentation on the App and highlighted its features.

- NARENDRA SINGH NEGI, RAJEEV LAKHERA & ANUJ DHANGAR, UTTARAKHAND

Chief Minister, Chhattisgarh, launches farmer-specific Mobile Apps

Shri Bhupesh Baghel, Hon'ble Chief Minister, Government of Chhattisgarh, launched two Mobile Apps, "eHAAT" and "Custom Hiring", in a grand function of 8th Indian Horticulture Congress 2019 held at Indira Gandhi Krishi Vishwavidyalaya (IGKV), Raipur, Chhattisgarh on 17th January 2019. Smt. Sakuntala Sahu, MLA, Government of Chhattisgarh, Shri S. K. Patil, Vice-Chancellor, IGKV and other dignitaries were present on the occasion. NIC Officers from Chhattisgarh, Shri D. K. Debnath, SIO, Shri Y.V.S. Rao, Scientist-E and Shri Abhijeet Kaushik, Scientist-B, also participated in the event.

Developed by NIC Raipur, e-HAAT is an online agri-market where farmers can buy/ sell or advertise fruits and vegetables, agriculture produce or any agriculture machinery, tools, tractors etc., by fulfilling the dream "Tol Mol Nahi - Sabko Milega Sahi Mol". This Android App acts as a catalyst by providing a web-based marketing platform to farmers, especially small, marginal, medium and landless, to directly sell produce to buyers.



Shri Bhupesh Baghel launching the Mobile Apps

Custom hiring is an aggregator platform, which facilitates the hiring of tractors and modern farm machinery for farmers in Chhattisgarh. The App is free and connects Custom Hiring Centres (CHC), operated by tractors and equipment owners, directly with farmers who need farm mechanisation services and solutions, thereby facilitating a fair and transparent rental process while focusing on quality, dependability and timely delivery.

- Y.V. SHREENIVAS RAO, CHHATTISGARH

e-Challan System inaugurated by Transport Commissioner in Jammu & Kashmir

Dr. S. P. Vaid, Transport Commissioner, Jammu & Kashmir, inaugurated e-Challan Project in the state on 4th January 2019, in the presence of Shri Alok Kumar, IG Traffic, Shri Aijaz Abdullah, Additional Transport Commissioner, Shri Vikas Sharma, Joint Transport Commissioner, ARTOs of Jammu and Kathua, Shri Abhishek Khajuria, Assistant Vice President, HDFC Bank, and senior officers from Transport, National Informatics Centre (NIC) and HDFC Bank.

Elaborating the App's features, in his address, Dr. Vaid said, "e-Challan Mobile App is linked with Vahan and Sarathi applications, which cover all major functions of transport and traffic enforcement wings with a number of user-friendly features." He expressed hope that the e-Challan Project will bring transparency, accountability and swiftness in the existing system and provide ease to transport enforcement officers and traffic policemen to increase visibility in operations.

The Transport Commissioner further added, "J&K state is committed to implement the e-Challan Project. It has offerings



Dr. S. P. Vaid launching e-Challan System in Jammu & Kashmir

for multiple stakeholders and State Transport Department would improve their support in maintaining compliance for citizens."

Dr. Vaid also appreciated the efforts of Shri Abhay Kumar, State Informatics Officer and Shri Rakesh Gupta, Scientist-E, NIC J&K, who gave a presentation on the features and technicalities of e-Challan Mobile App and web interface.

- JIT RAJ, JAMMU & KASHMIR



Shri Ravi Shankar Prasad launching Digidhan Mitra Chatbot

Digidhan Mitra Chatbot launched by Hon'ble Union Minister, Shri Ravi Shankar Prasad at VIVID 2019

Shri Ravi Shankar Prasad, Hon'ble Union Minister, Electronics & Information Technology and Law & Justice, launched the Digidhan Mitra Chatbot, during the momentous occasion of VIVID 2019, organised at India Habitat Centre, New Delhi from 21st to 22nd February 2019. The meet was held as an initiative to interact with the District Informatics Officers and share their experiences & contributions, as digital change makers at the grass-roots level in the states. The event was attended by Senior Officials from MeitY, Central & State Governments, and NIC.

Digidhan Mitra is an AI based chatbot designed to provide on

demand data and information from the Digidhan Dashboard portal. The automated chat service allows users to have both text and voice based conversation and returns customised information in graphical, tabular and textual format, making it distinct from other chatbots. Users can seek information on bank wise digital transactions and payment modes, along with snapshots of total digital transactions in a given period.

The Digidhan Dashboard acts as a central platform for accurate reporting, monitoring and analysis of all digital payments transactions occurring in the country and enablement of infrastructure through the deployment of Physical/ Mobile/ BHIM Aadhaar PoS devices. It consolidates digital payments transaction data of 16 digital payment modes from 110 banks, NPCI and RBI to monitor the growth of digital payments in India.

- TEAM INFORMATICS



Events in progress, Shri D.C. Misra speaking during symposium in Assam

Events on Enterprise Architecture held in Assam and Meghalaya

Shri D.C. Misra, DDG & HoG, Enterprise Architecture Resource Division (EARD), NIC, participated in two events on Enterprise Architecture - a Symposium in Guwahati, Assam on 11th Jan 2019 and a Meeting in Shillong, Meghalaya, on 14th Jan 2019. The Symposium was held at Assam Administrative Staff College and was organised by the Centre of eGovernance, AASC, in collaboration with NIC Assam. It was attended by senior officers from the Government of Assam. In his keynote address, Shri D.C. Misra elaborated on the benefits of using EA, IndEA framework and its notification. An overview of EA was given by Smt. Suchitra Pyarelal, SIO, NIC Assam.

The Meeting was held at Yojana Bhavan Conference Hall, Shillong. It was organised by NIC, in collaboration with the State IT Department, for the Senior Officials of the Government of Meghalaya and was inaugurated by Shri Conrad Sangma, Hon'ble Chief Minister of Meghalaya. Shri H. Dohling, Hon'ble Minister of Information Technology, Shri Y. Tsering, Chief Secretary, Smt. R.V. Suchiang, Additional Chief Secretary, Shri M.R. Synrem, Commissioner & Secretary, IT and Shri T. Dkhar, SIO, NIC Meghalaya, were also present. Shri Conrad Sangma stressed on the importance of the participation and inputs of all the departments in planning stage as it has an impact on the implementation and efficacy of projects in the long run. The keynote address was delivered by Shri D.C. Misra.

- KAVITA BARKAKOTY, ASSAM & CANDIDA B.M. BOOTH SHADAP, MEGHALAYA



Thiru O Panneerselvam, Dy. Chief Minister of Tamil Nadu, launching the Pensioner's Portal

Pensioner's Portal launched by Hon'ble Dy. Chief Minister of Tamil Nadu

Thiru O Panneerselvam, Hon'ble Deputy Chief Minister of Tamil Nadu, launched the Pensioner's Portal (<https://tn-pensioner.tn.gov.in>) at the Secretariat in Chennai on 18th January 2019. Additional Chief Secretary, Finance, Officers of Treasuries and Accounts and NIC Officers were also present on the occasion.

Developed by NIC TNSC, Chennai for the Department of Treasuries and Accounts, Government of Tamil Nadu, this bilingual portal facilitates important information such as details of monthly

pension credited to the bank accounts, restoration of commuted value of pension, pension arrears, details of New Health Insurance, Dearness Allowance Rates, details of IT Return and Festival Advance, thereby eliminating the need to approach the Treasury or Pension Pay Office.

This Centralised Information Dissemination portal will enable over 7.30 lakh State Government pensioners to view related details while sitting at home. In addition, it is suggested to the department that the details can also be sent through SMS so that pensioners can get the updated status on their mobile phones. The multi-browser compliant portal has been designed using responsive web design so that it also gets rendered on all devices, including mobiles, tabs and laptops. It is also planned to integrate this web portal with AGs office portal for reconciliation purposes.

- R GAYATRI, TAMIL NADU

GIS portal for Circle Rates of Lands (Property) launched in Dehradun

Shri Prakash Pant, Hon'ble Finance Minister of Uttarakhand, launched GIS portal on Circle Rates of Lands (Property) of Uttarakhand in an event held in Dehradun on 21st January 2019, in the presence of the Secretary (Finance), officers of Inspector General of Registration (IGR), Government of Uttarakhand and NIC, Uttarakhand State Unit. The portal facilitates citizens to have a graphical view of circle rates of properties for three districts of Dehradun, Haridwar and Nainital. The project has been completed by GIS Division, NIC Headquarters, in collaboration with IGR office and NIC, Uttarakhand State Unit.

Extensive efforts have been made by NIC and IGR office to digitise maps and integrate with the database of circle rates for roads fixed by IGR office, as part of the Online Property Registration portal of NIC, Uttarakhand, which is being successfully implemented in all SROs in the state.

Speaking on the occasion, Shri Prakash Pant appreciated the



Shri Prakash Pant, Hon'ble Finance Minister, Uttarakhand being welcomed

efforts taken by NIC and IGR office for this project and expressed that this leads to transparency in activities of IGR office, trust in systems and enhances government revenue. Acknowledging NIC's support for this project, Secretary (Finance) suggested the officers to cover remaining 10 districts under GIS portal soon. This project has been delivered by NIC through the Bharat Map Services and Uttarakhand is the first state to successfully implement this project.

- JAG JEEVAN BIST, UTTARAKHAND

National e-Governance Awards 2019



Award being received for Digital Land of UP

Instituted by the Government of India, National e-Governance Awards are presented every year to promote excellence in the implementation of e-Governance initiatives. In a function organised by the Department of Administrative Reforms and Public Grievances (DARPG), Ministry of Personnel, Public Grievances and Pensions in New Delhi on 27th February 2019, NIC's Digital Land of UP initiative bagged the Award (Gold) for being the best product in "Process Re-engineering", while the National



Award being received for National Scholarship Portal

Scholarship Portal (NSP) won the Award (Silver) for "Excellence in providing Citizen-centric Delivery".

Dr. Jitendra Singh, Hon'ble Minister of State (Independent Charge) for the Ministry of Development of North Eastern Region, Minister of State for Prime Minister's Office, Personnel, Public Grievances and Pensions, Department of Atomic Energy, and Department of Space, presented the Awards to winners.

Smart Cities Digital Payments Awards conferred



Dr. Saurabh Gupta receiving the Award from Shri Hardeep Singh Puri

An initiative of the Ministry of Housing and Urban Affairs, Smart Cities Digital Payments Awards recognise the initiatives made towards enabling ease of living for urban residents by encouraging Smart Cities to implement digital payments strategies. NIC UP has been conferred with the Best Digital Payments Innovator Award for the implementation of eNagarsewa project in Port Blair, during the Second Apex Conference for the CEOs of Smart Cities held in New Delhi from 26th to 27th February 2019. Dr. Saurabh Gupta, DDG, NIC Uttar Pradesh State Centre, along with other officers, received the Award from Shri Hardeep Singh Puri, Hon'ble Minister of State (Independent Charge) for Housing and Urban Affairs.

President's Award presented to NIC Kerala State Centre



NIC Kerala State Centre Officers receiving the Award

NIC Kerala State Centre has been presented with the President's Award for 'Architecture enabled Government Transformation' by the Open Group on 14th February 2019 for the successful planning, implementation and deployment of Integrated Financial Management System (IFMS) for the Government of Kerala. The IFMS Kerala has set an example of adoption of the India Enterprise Architecture Framework (IndEA) by way of solution architecture. NIC Kerala State Centre Officers, Shri T. Mohana Dhas, DDG & SIO, Shri Ajith Brahmanandan, Sr. TD, Shri Asir Edwin M., Sr. TD and Shri Nisarudeen A., Sr. TD, received the award from Mr. Steve Null, President & CEO, The Open Group and Shri J. Satyanarayana, IAS (Retd.).

Certificate of Appreciation for eOffice implementation



Smt. Alka Tewari and Shri S. Sathiyamani receiving the Award from Dr. Jitendra Singh

A Certificate of Appreciation was presented to the Department of Heavy Industry (DHI) for the implementation of eOffice software, during a function held at North Block, New Delhi on 12th February 2019. The Award was received by Smt. Alka Tewari, Deputy Secretary, DHI and Shri S. Sathiyamani, HoD, DHI Informatics Division, NIC, on behalf of DHI, from Dr. Jitendra Singh, Hon'ble Minister of State (Independent Charge) for the Ministry of Development of North Eastern Region, Minister of State for Prime Minister's Office, Personnel, Public Grievances and Pensions, Department of Atomic Energy, and Department of Space.

NICian bags Special Election Award 2018



Shri Sanjeev Kapoor receiving the Award

Shri Sanjeev Kapoor, District Informatics Officer, Samba, has been presented with the State Award for Best Electoral Practices 2018 in the category "Special Award". The Award was given away by Shri B.V.R. Subrahmanyam, IAS, Chief Secretary, J&K, in a ceremony held at Convention Centre, Jammu, on the occasion of National Voters' Day on 25th January 2019. Shri Shailendra Kumar, IAS, Chief Electoral Officer, J&K, was also present on the occasion. The event was attended by many dignitaries and senior officers of the government, representatives of social organisations, prominent citizens, teachers and a large number of students.

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