A Study of Information Communication Technology and e-Governance Initiatives in India

Susmi Routray, Institute of Management Technology, Ghaziabad, India.
Reema Khurana, Institute of Management Technology, Ghaziabad, India.

Abstract: Information Communication Technology (ICT) has huge business potential in India for both government and private sectors. ICT is also an important interface in bringing the government services closer to the public both in rural and urban areas. With the advancements in ICT, it is becoming imperative for the government of various countries to go online. ICT has provided unique opportunities to government in terms of new ways of doing business through e-Governance application. India has been a focus of study since it is the most populous democracy in the world with the computer literacy rate at a minimal low, added to that its huge geographical spread; therefore for the e-Governance to thrive in India ICT infrastructure in the country needs to be improved for which government contribution is imperative. Therefore, the purpose of the paper is to explore the government initiatives for the promotion of ICT in India. The paper also aims to study the government initiatives on e-Governance and their current status.

Keywords: Information Communication Technology (ICT), e-governance, India, government initiatives.

Introduction

Information Communication Technology (ICT) has today become a wild card in business. It is a continuous source of opportunity and uncertainty in business today. Technology has become embedded in the way we define and execute business processes and how we define a unique value proposition [Applegate, Austin, McFarlan, 2007]. Indeed the pace of ICT driven changes in last 40 years has been tremendous. The embodiment of business and processes into technology has drastically changed the way we look at businesses. Business context today makes business process re-engineering (BPR) an imperative activity. Technology used by the processes and the business environment are essential drivers of BPR [Hanafizadeh, Moosakhani, Bakshi, 2009] ICT no longer remains the back office tool for the business , it has found its way into the genre of business thereby changing the face of world economies per say. The advancement in ICT is a crucial driver in transforming the relationships between the governments, citizens and businesses and moving towards good governance. It provides opportunities for businesses and citizens to involve in the process of governance at all levels. ICT usage can lower the transaction costs for citizens as well as the government operations. Government services can be made more accessible economically to the citizens especially in the rural areas. ICT provides effective tool to attain the goal of good governance. The Indian perspective of a government office has been always of the office where in the executives sitting on the desks are extremely unapproachable and the queues are long and never ending. However e-Governance has made it possible to get the interfacing
with government done online without waiting for the long lines in the government offices. The Indian government initiatives are so directed that very shortly, the government will decentralize the processes and responsibilities so much that each citizen will be in a position to make contact with the government through a website where all the forms, legislation, news etc will be available. In the following sections the ICT initiatives taken by the government of India to promote e-Governance are listed along with the various e-Governance initiatives with their current status.

ICT Initiatives In India

There has been rapid advancement in ICT in India. India is a huge country with twenty eight states and seven union territories. The area is 3,287,590 sq kms, its population in July 2009 is 1.17 billion people. Out of this massive population there are 61% people who are literate. The median age of Indians is 25.1 years and the percentage of population below the poverty line is 22% according to an estimate made in July 2006. Thus there are 78% of the Indians who are potential customers for any commodity on the arena. This in itself is a very large customer base. [http://en.wikipedia.org/wiki/Demographics_of_India].

The Telecom Regulation Authority of India regulation

India has been continuously moving up in term of entrepreneurship competitiveness globally. This refers to the digital entrepreneurship as well. However for a digital model to exist it is important for the country to have network readiness which has been found lacking in India. Access to e-commerce is characterized by World Trade Organization (WTO) as - Access to internet services and Access to services which can be traded digitally. Both the issues deal with the infrastructure in term of internet hosts, internet service providers and reliable communication links [ Todd, Javalgi, 2007]. In order to cater to this requirements, the Indian government took an initiative to form the TRAI by the Telecom Regulatory Authority of India Act, 1997 and amended vide the Telecom Regulatory Authority of India (Amendment) Act, 2000. TRAI's mission is to create and nurture conditions for growth of telecommunications in the country in a manner and at a pace which will enable India to play a leading role in emerging global information society. In order to achieve this mission TRAI comes out with various policies and regulations to leverage the role of India as a global information society. The regulations issued by TRAI include the telecommunication tariff, the connectivity, quality of service and governance of authority. TRAI provides high speed internet, commonly known as Broadband. In India, Internet Services were launched on 15th August 1995 by Videsh Sanchar Nigam Limited (VSNL). In November 1998 the Government opened the sector to Private Operators for provisioning of Internet Services. More than 95% subscribers were using dialup access at that time. In a bid to encourage high speed Internet growth in the country and to address the demand of application requiring more bandwidth, TRAI came up with its consultation on “Accelerating Growth of Internet and Broadband Penetration” in November 2003 and submitted its recommendations to DoT(Department of Telecom) on 29th April 2004. DoT issued Broadband Policy thereafter. As per Broadband policy broadband is defined as “An ‘always-on’ data connection that is able to support interactive services including Internet access and has the
capability of the minimum download speed of 256 kilo bits per second (kbps) to an individual subscriber.

Gaps in Telecom Regulation Authority of India (TRAI) regulation: Bandwidth is an important issue for network access. High bandwidth broadband speed is dependent on the network access infrastructure available in India. Currently, in India broadband availability is mainly by DSL technology. DSL (Digital Subscriber Line), uses special modulation schemes to fit more data into existing telephone copper wires. Requires a modem but allows simultaneous phone service. Up to 12 times faster than ISDN with same distance requirements. The main problem associated with DSL is the Copper loop in local network. Copper local loops are not suitable enough to support high bandwidth broadband connections as optical fibers in local loop are. Optical fibers in local loop, which can be instrumental in providing higher bandwidth in broadband, are quite less. The wireless access technologies such as 3G, WiMAX etc. can provide wider coverage but speed limitation would still be a problem. The wireless broadband speed will not be as fast as optical fiber networks. Therefore, large scale deployment of optical fiber is essential to support very high speed broadband. Higher broadband speed definition will facilitate launch of content rich services and application and will boost broadband penetration.

**Government initiatives on wireless technology**

Wireless networks are being looked upon as potential cost-efficient last mile connectivity solutions, compared to traditional wired connectivity. In order to cater to the need of wireless users in the country, the Wireless Planning and Coordination (WPC) Wing of the Ministry of Communications was created (WPC Home - http://210.212.79.13/). It is the National Radio Regulatory Authority responsible for Frequency Spectrum Management, including licensing. It exercises the statutory functions of the Central Government and issues licenses to establish, maintain and operate wireless stations. WPC is divided into major sections like Licensing and Regulation (LR), New Technology Group (NTG) and Standing Advisory Committee on Radio Frequency Allocation (SACFA). SACFA makes the recommendations on major frequency allocation issues, formulation of the frequency allocation plan, making recommendations on the various issues related to International Telecom Union (ITU), to sort out problems referred to the committee by various wireless users, site clearance of all wireless installations in the country etc. According to some industry estimates, about 85% of Indian villages, are within a 25 -30 km distance from an Optic Fiber termination point. However, the villages themselves lack well-penetrated and broadband-enabled telecom infrastructure. Several Indian state governments and city municipalities have announced state- or city-wide wireless networks in an alliance with a private partner. The central government has also emphasized on the importance of these programmes under the centrally funded State Wide Area Networks (SWAN) initiative (http://www.wi-fi.org/files/Report%20-%20The%20Future%20for%20Wi-Fi%20in%20India%2020070205.pdf)

Gaps in wireless technology implementation: The central opportunity metro Wi-Fi offers is that it can make Internet connectivity ubiquitous. The challenge for the Indian environment is creating the right business model. While government-led initiatives to expand broadband access are
encouraging, but history [Saxena, K.B.C. 2005] tells us the government-led projects could lose steam, or stagnate at any time. Political and bureaucratic delays have often led to faulty or slow implementation. A big infrastructural issue is the lack of a reliable power supply. Mobile devices are battery operated but battery life is a bottleneck, especially since the back-up power is not available sufficiently. Solar panels are feasible, but they tend to disproportionately add a cost to each access point that needs to be powered.

**Information Technology (IT) Act**

For the first time in 1998 the Ministry of Commerce in India created the first draft of the legislation following the direction of UNO (United Nation Organization) termed as “E-commerce Act”. Information Technology (IT) Act provides legal recognition to all transactions carried out by means of electronic data interchange and other means of electronic communication. Some of the issues addressed by the IT Act, 2000, include the following - Any subscriber can authenticate an electronic record with his digital signature, and subsequently any person can verify that document by using the subscriber’s public key. All electronic records and digital signatures have legal acceptance. Central government can decide the rules for digital signatures. It also, discusses the format of digital records and digital signatures. Digital signatures were given legal acceptance by the IT Act. In July 2001, the Government of India issued a set of laws known as the Information Technology (Certifying Authority) Regulations, 2001. These regulations detail the functioning of the certifying authorities in issuing digital signatures.

IT Act states that any person who accesses, downloads, copies, extracts data without authorized means or permission is punishable. The section also states that any person tampering with, damaging, denying unwarranted access to or manipulating any computer/computer system shall be liable to pay damages by way of compensation not exceeding USD 0.21 million to affected persons. Introducing viruses or causing disruptions in a computer are also punishable under the Act. The role of the Cyber Regulations Appellate Tribunal. (Apellate is a body empowered to review judicial decisions and tribunal is the court of justice) IT Act deals with offences such as wrongful loss or damage or destruction of information, deletion or alteration of any information in a computer network, hacking, etc, and prescribes their punishment. It also includes offences such as tampering with computer source documents, publishing obscene information, misrepresentation, and breach of confidentiality and privacy. It also states that if a network provider/intermediary can prove that he has taken diligent steps to prevent the offence he has been charged with, or that it was unintentional, he is not punishable under the Act.

Gaps in the Information Technology(IT) Act : It is not that the IT Act is holistic in nature. There are certain issues which have not been addressed in it, thus making it lack in really supporting e-Governance.

- Taxation issues arising out of e-commerce, Internet, m-commerce.
- Intellectual property rights such as digital copyright issues, trade marks, patents.
- Domain name registration policy, domain name disputes, cyber-squatting.
- Privacy and data protection issues;Junk mail and spamming.
• Guidelines for content, technological standards and electronic payments. [Basu, Jones, 2005]
• Making the infrastructure available at the rural level.

The Internet and ensuing e-Governance activities need laws as much as any other business, as it is also an essential exchange of money for services/products like any other business; there is a need for law to control. e-Governance has the capability to change traditional business models; there is a need for a synergistic and adaptable legal policy to sustain the e-entrepreneurs spirit and the confidence of consumers. In addition the Act makes no reference to the protection of intellectual property such as copyrights, patents or trademarks on the Internet. It is also silent on domain-name infringement and cyber-squatting. Domain name is used to identify websites. It comes in many suffixes such as: .edu (educational institutions), .org (organizations), etc. Each domain name is associated with one or more IP addresses. This will seriously inhibits corporate bodies to invest in the IT infrastructure. Finally the Act fails to address the issue of cross-border taxation that may arise in international contracts. [Basu, Jones, 2005]

**e-Governance initiatives in India**

The National e-Governance Plan (NeGP) was approved by the Government in the year 2006, comprising of 27 Mission Mode Projects (MMPs) and three core components [Fig. 1]. The vision of this enormous programme is to “Make all Government services accessible to the common man in his locality, through common service delivery outlets and ensure efficiency, transparency & reliability of such services at affordable costs to realise the basic needs of the common man”.

http://india.gov.in/outerwin.php?id=http://mit.gov.in/. The objective is to bring Government services to the citizen’s doorstep with a holistic view of initiatives across the country and providing an enabling ICT based platform. The following sections lists the various e-Governance initiatives for different sectors.

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**Fig. 1: Nation e-Governance Plan**
e-Governance initiatives for Business

MCA21 e-Governance Project - Ministry of Company Affairs (MCA), Government of India (GoI) has initiated MCA21 program, for easy and secure access to MCA services in a manner that best suits the businesses and citizens. MCA21 is envisioned to provide anytime and anywhere services to businesses. It is a pioneering program being the first Mission Mode Project (MMP) for e-Governance being undertaken in the country. This program builds on the GoI vision to introduce a Service Oriented Approach in the design and delivery of Government services, establish a healthy business ecosystem and make the country globally competitive. MCA21 program will provide for anytime anywhere electronic services with speed and certainty to all the stakeholders. It will include: Design and development of application system; Setting up of IT infrastructure; Setting up the Digital Signature/PKI delivery mechanisms and associated security requirements; Setting up of Physical Front Offices (PFOs); Setting up of temporary FOs for the peak periods to meet with the requirements and subsequent shutdown of temporary FOs at the end of such peak periods; Migrating legacy data and digitization of paper documents to the new system; Providing MCA services to all MCA21 stakeholders in accordance with the Service Oriented Approach; Providing user training at all levels and all offices (Front and Back Offices). The MCA21 is designed to automate processes related to the proactive enforcement and compliance of the legal requirements under the Companies Act, 1956. The MCA21 Project has been awarded the Dataquest IT Path-breaker Award, 2006, and recognized as a major Government initiative in the field of e-Governance, with use of technology for improving and changing the existing processes, and making life easier for India's business community, investors and aspiring entrepreneurs.


Central Excise, this mission mode project is being implemented by the Central Board for Excise and Customs (CBEC). The services to be offered are: Filing of Service Tax and Excise Returns, e-Payments of custom duties, automated clearance of courier consignments, electronic filing of various applications for approvals /permissions. This project is being implemented to facilitate trade and industry by simplifying the customs and excise processes. It will help businesses to enhance their competitiveness and create a climate for voluntary compliance by providing guidance and building mutual trust. The aim of the project is to network 20,000 users in 245 cities using wide area network. Currently the project is in the implementation stage. Implementation of national data center and WAN are under process, roll out of risk management system are also under process, electronic accounting system for Central Excise & integrated customs system is being implemented, automation of Central Excise and Service tax is under progress. http://www.cbec.gov.in/

Commercial Taxes, the maturity of VAT implementation varies across States and the need has been strongly felt for streamlining VAT administration through citizen-centric, service-oriented processes, and establishing a certain degree of standardization with respect to Commercial Tax (CT) administration. Since the CT departments mainly interface with businesses and often account for 60% - 70% of the total revenue of the States and Union Territories, their functioning
can directly affect the attractiveness of a State as a business destination. In this context the Commercial Taxes Mission-Mode Program (CT-MMP) has been conceived under the National e-Governance Plan (NeGP) of the GoI. The initiative is spearheaded by the Department of Revenue (DoR), Ministry of Finance, with the National Institute for Smart Government (NISG) and Ernst & Young as Strategic Consultants to the DoR. Services to be offered under Commercial Taxes e-Governance services are - Online Application for Registration; E-Filing of Returns; Electronic clearance of refunds; Online payment of taxes; Online dealer ledger; Online dealer verification; Online issuance of CST statutory forms. The status of the project: draft MMP report has been submitted to the Department of Revenue which has been circulated to states for their comments. A National Level Workshop to be held for firming up the MMP design.

e-Governance initiatives are undertaken to reduce the points of contact between the businesses and the government agencies and to simplify the processes. Towards this goal an initiative has been proposed by the Department of Industrial Policy and Promotion. The vision of eBiz is to provide comprehensive G2B services to all the business entities in an even driven manner. Its objectives include reduction of time for getting the G2B services in the pre-establishment and post establishment periods to provide integrated services of central, state and local governments, automate the workflow in the concerned government departments and above all to enhance transparency, speed and certainty in provision of G2B services. 25 Services for business and industry identified for the pilot including - Company Registration Services; Project yet to commence; Filing of statutory returns; Issuance of Clearances, Issuance of Trade Licenses. eBiz pilot has been initiated and is proposed to be implemented in four states, namely, UP, Maharashtra, Haryana at one district in each state.

EDI , the objective of the MMP is to simplify procedures, introduce electronic delivery of services by regulatory and facilitating organisations, provide 24*7 access to users, increase transparency in procedures, reduce transaction cost and time and introduce international standards and practices. This will enable clearance of export/import of cargo at ports/airports/ICDs etc. within 24 hours. The services offered will be Electronic filing/clearance of Import/Export Documents by exporters, importers, agents, Customs, Ports, etc; E-Payment of duties/charges, etc by Ports, Airports, Customs, etc; Electronic exchange of documents between community partners like Customs, Ports, DGFT, CONCOR, etc. the current status being Customs message exchange with ports completed.

e-Procurement, this MMP is being implemented to ensure that government procurement becomes simplified, transparent and result-oriented. The objective of the MMP is to establish a one stop-shop providing all services related to government procurement, to reduce cycle time and cost of procurement, to enhance transparency in government procurement, to enhance efficiency of procurement, to bring about procurement reform across the government. http://www.mit.gov.in/.
Table I (a & b): e-Governance initiatives in Business & G2G and their stages

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Integrated: Central, State and Local

**e-Governance initiatives for G2G**

Treasures, due to partial or non-computerisation of State Treasuries/Office of AGs, most of the information relating to the operations in the Government account continues to be exchanged in paper form only. In order to get the accounts of State Governments expeditiously and to provide for better Management Information Systems, networking of all agencies involved in finalisation of accounts of State Governments was felt necessary. A Core Group on Computerisation of Treasuries in State has been constituted to formulate a draft scheme on project for Treasuries Computerisation under e-Governance plan of Government of India. The concept note is being worked out by the Department of Expenditure. The services offered will be Payment of Salaries to Govt Employees, All Expenses paid through PLA, Account Reconciliation, Department wise and head wise expenditure compilation and communication to AG. Status being RBI constituted core group to examine issues and identify activities for enabling electronic information flow between RBI, banks, treasuries, DDOs of states and AGs offices. Report of working group is being finalized. Core group (representation from DoE, NIC, RBI, select States, CAG) constituted to formulate scheme for computerization. Draft MMP Plan prepared by DoE with NIC assistance.

National Service Delivery Gateway, the emergence of many e-Governance applications for different departments to provide online services to citizens, businesses and government would require increasing interactions amongst departments and with external agencies at various levels in Government. The National e-Governance Service Delivery Gateway (NSDG) is an attempt to reduce point to point connections between departments and provide a standardized interfacing, messaging and routing switch through which various players such as departments, front-end service access providers and back-end service providers can make their applications and data inter-operable. The National e-Governance Service Delivery Gateway (NSDG) aims to achieve a high order of interoperability among autonomous and heterogeneous entities of the Government.
(in the Centre, States or Local bodies), based on a framework of e-Governance Standards. The services offered will be all core and common services like messaging, authentication, payment gateway, etc for delivery of e-Governance services. The project is in its design and development phase.

**e-Governance initiatives for Rural and Urban sector**

Income Tax Portal - The volume of income tax payers in India has more than doubled from 12.5 million in 1996-97 to 31.9 million in 2006-07. Tax collection in India is done manually through the collection counters provided by the department or at the special tax collection drives. In order to counter the growing demand for an competent system of tax collection, the Income Tax Department launched a centralized website in 2002 with the aim to answer broad-based Income Tax queries. In 2005-06 more substantial electronic transactions were introduced through the Income Tax website. Presently 19 services are offered through the online system including but not limited to: preparation and filing of individual Income Tax returns and TDS (Tax Deducted at Source) returns, filing and tracking of PAN (Permanent Account Number) / TAN (Tax Deduction and Collection Account Number) applications; status enquiry of taxes paid in banks; and access to taxation rules and taxpayer-specific information.


Computerization of Land Records - The project has been implemented in ten states. Services are delivered from departmental offices located at taluka headquarters where computer terminals connected with backend databases have been installed. Two basic services have been computerized: issue of Record of Rights (RoR), which has been computerized in all states covered by the assessment; and mutation of land records upon a transfer of land to another owner, which has been implemented in five states.

[http://www.mit.gov.in/download/ImpactAssessmentReportDraft.pdf](http://www.mit.gov.in/download/ImpactAssessmentReportDraft.pdf]. Computerization of Property Registration - Computerization of property registration has been rolled out in five states: Rajasthan, Haryana, Punjab, Gujarat and Delhi. In Tamil Nadu smaller offices remains to be covered. In Himachal, Uttarakhand, West Bengal and Orissa, coverage is partial while in some states the rollout is at an early stage. All the states have computerized the registration of a property transfer deed and issuance of certified copies of the deed.


Agriculture - Services - Under ongoing AGRISNET Project, Pilots for 17 States have been approved providing following services, Soil Information, Crop Diseases & Management; Good practices for Horticulture, Sericulture, etc. Phase wise study initiated by Ministry of Agriculture.
Phase 1 - 23 priority services and processes for reengineering have been identified (Draft ready).

Phase 2 - framework for implementation to be prepared, to be completed in 5-6 months. Gram Panchayat - The MMP has been designed to overcome the challenges being faced in the villages such as lack of reliable communication infrastructure, delay in providing services to the citizens (Licenses, Certificate etc), Low revenue mobilization for implementing schemes at the Gram Panchayat level, lack of monitoring mechanism for the schemes. Services identified for citizens are Issue of trade licenses, issue of certificates, house related services, information dissemination such as agenda, voting, resolutions, etc, copy of proceedings of Gram Sabha and action taken report, receipt of fund progress reports, individual beneficiaries of various schemes, etc. Services identified for functionaries are Data on BPL, PF for landless laborers, education, health, computerization of accounts etc. Advanced States like A.P, Assam, Gujarat, Orissa and Tamil Nadu have started computerization of Gram Panchayats.

India Portal: The National Portal of India is a Mission Mode Project under the National e-Governance Plan being implemented by NIC. The objective behind the Portal is to provide a single window access to the information and services of the Indian Government at all levels from Central Government to State Government to District Administration and Panchayat for the Citizens, Business and Overseas Indians. An attempt has also been made through this Portal to provide comprehensive, accurate, and reliable and one stop source of information about India and its various facets. The information in the Portal has been well classified into distinct modules, which are also interlinked at relevant places to provide the visitor with a holistic view. First version of portal has been launched, Content preparation and enhancement is under progress.

e-Court: The Indian judiciary comprises of nearly 15,000 courts situated in approximately 2,500 court complexes throughout the country. The total no. of pending cases in these Courts as on 01.01.2005 was 2, 94, and 97,251. Need was felt to make the programme of ICT enablement of the Indian Judiciary mission-critical. Under NeGP as a MMP, it is proposed to implement ICT in Indian judiciary in three phases over a period of five years. The project scope is to develop, deliver, install and implement automated decision making and decision support system in 700 courts of Delhi, Bombay, Kolkata & Chennai; 900 courts in the 29 capital city courts of states and UTs and 13000 district and subordinate courts. A list of 8 services is to be provided including online availability of judgments, cause list, e-filing of cases, notices through emails provided clients email id is available. E-committee constituted to oversee implementation.

Banking: The integration of core banking solutions of various banks will bring in operational efficiency, online fund settlement; reduce inter-bank clearing transactions; reduce time & effort involved in handling clearing transactions and their settlement thereby facilitating improved customer service & customer satisfaction; improved regulatory compliance; improved cash & fund management; standardisation of processes across the banks and improved Management information system. One of the main utilities can be Electronic mode of payments using Smart Card and Point of Sale Terminals as a viable alternative to paper based Cash Transactions of small value (micro payments) that will reduce the circulation of cash. Current status being, Core
banking: 15,000 branches, Any branch banking: 13,000, ATMs: 12,000 locations, Internet Banking: 15,000, Online banking ombudsman: 15 centers.
http://finmin.nic.in/the_ministry/dept_eco_affairs/index.html

Police: Police has been included in the NeGP as a response to an ever-increasing threat of terror and ascending crime graph. It addresses the need to improve the efficiency of the police force. One of the major steps in this direction is the creation and sharing of crimes and criminal database. In addition, the MMP also includes personal management and inventory control. However, there are large variations in these functions across the States, which do not allow common development of the processes and consequently the software. The MMP therefore adopts a phased approach towards implementation. Common Integrated Police Application (CIPA) Software is operational in all 128 Police Stations of Delhi; pilots are being carried out in 5 states - MHA advised by Apex Committee to prepare - DPR including services and service levels, Roadmap for implementation.

Computerization in the Road Transport Department: Computerization in the transport department has been done primarily for issue of driver’s license, renewal of license and registration of vehicles. In most states these services are offered by the RTOs located at the district level. Delhi, Rajasthan, Madhya Pradesh, Orissa, Gujarat, Haryana and Tamil Nadu have implemented computerized delivery in all districts. In some states like Rajasthan, a few centers at sub-district levels have also been computerized. In Himachal, Kerala, Punjab, Uttarakhand and West Bengal the coverage is partial. SARATHI (Driving licence) : Rollout under implementation in 9 states, VAHAN (Vehicle Registration): Rollout under implementation in 16 states. http://www.mit.gov.in/download/ImpactAssessmentReportDraft.pdf

Project unique identification number (UID), a Planning Commission initiative, proposes to create a central database of residents above the age of 18 years, and generate a UID for all such residents. This UID is intended to be used in the first instance, as the basis for efficient delivery of various social and welfare services to persons below the poverty line (BPL). Unique ID can be used as the basis for identifying and authenticating a person’s entitlement to government services and benefits through a single system rather than all government departments individually and independently investing in creating infrastructure, systems and procedures for verifying entitlement of residents under various schemes of the Government. http://mha.nic.in/

Online passport services - Computerization of passport offices was initiated as a pilot project at the Regional Passport Office (RPO) at Delhi in 1989. Subsequently, computerization was extended to all 34 passport offices (POs) across India. Computerization of passport offices was done in phases involving basic computerization of the office, Index card image capturing, online index checking and passport printing. For online registration, an applicant is required to submit the original application, supporting documents and fee at the passport office on a pre-specified date. Other services include provision to check status of one’s application, download application forms and access information on services and procedures. [http://www.mit.gov.in/download/ImpactAssessmentReportDraft.pdf]
e-District Mission Mode Project - e-District Center is initiative of the State Government UP to create a facility center at district headquarters of the 6 pilot districts with state of the art facility for providing services under e-district to citizens. The Uttar Pradesh state is surging ahead with a motto of ‘reaching the un-reached’ and ‘bridging the digital divide’. Government of Uttar Pradesh envisions that e-district delivers majority of the services through the district administration with use of Information and Communication Technology (ICT). The e-district services is envisaged to address the service requirement of rural citizen rural Common Service Center (CSC). The e-District Center will be located at the district headquarters wherein the facility should be available to urban population of the district. http://www.sitapur.nic.in/edist/Deliverables.html.

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Table II (a & b): e-Governance initiatives in Rural, Urban & both Rural and Urban sectors and their stages

Challenges
Technology alone cannot guarantee success for the e-Governance projects (Zakareya Ebrahim and Zahir Iran 2005), apart from IT infrastructure, need for political ownership at the highest level and a national vision for e-Governance, proper planning, efficient IT staff, adequate training and support are a key to successful e-government systems. Issues of re-engineering and management of change are of vital importance in comparison to technical issues associated with e-Governance. Also, for the e-Governance projects to deliver the expected benefits the importance of making service delivery completely online cannot be negated. But as the e-government projects goes through phase wise implementation, with small pilots before scaling-up, complete online process will be a major challenge area. For the e-Governance projects to be successful it is very important that the stakeholders are involved in the design of the applications. Sufficient training should be provided in sensitizing the users about the applications. The challenge is to keep the applications simple and provide necessary guidelines of the procedure so that the end user is able to use the system without any assistance.
**Conclusion**
The paper focuses on the ICT initiatives taken by the government of India to promote e-Governance and their limitations. The paper also lists the various e-Governance initiatives adopted by the government of India with their current status. Further research direction has been identified as a study of each initiative, comparing and contrasting with similar initiatives across the world. This should be able to contribute effectively to refining of the e-Governance processes world over.

**References**


