

E-GOVERNANCE THROUGH INFORMATION DISTRIBUTION MACHINE (IDM) SYSTEM

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Abstract

The development of IT and Communication Technology during the last decades has been very fast and overwhelming. All aspects of human life have deeply influenced the ICT and the quality of life of human has been changed. The significance of the ICT has proved that it become the best way for governments to provide people with more convenient access to government information and services. This improves the quality of the services provided by the Government and thus it enhances the opportunities of people and this ultimately leads to the development of individuals. Through the implementation of ICT and E-Governance, the individuals of a Society become a member of an Informed Society, which plays a vital role leading to all technologies related to the Information and Communication. The Informed Societies become a source for the development of every Individual or Person, Society or Group and ultimately the whole Nation. All these are possible through the E-Governance only which is also known as Digital Governance. E-Governance is depended on E-Literacy which is considered to be a very important skill to use the Digital Technologies used for E-Governance.

India has achieved impressive progress in the field of science and technology and proved as one of the fast developing country in the world. The use and implementation of Information Technology (IT), Communication Technology (CT), Digital Technologies (DT) etc. has improved and influenced the factors like socio-economic and living styles of the people across the world. India is becoming one of the emerging super powers in the field of IT, ICT and E-Governance. The successful use of any ICT tool and the implementation of E-Governance (Digital Governance) are basically depended on the E-literate people. Therefore a **Model – INFORMATION DISTRIBUTION MACHINE (IDM)** – is being developed. This system is a quick, easy and economically viable system, to distribute the information among all including the illiterate and e-illiterate equally. The advantage is, the existing ATM machines used for cash transactions by the Banks can be used by converting to Information Distribution Machine (IDM) to distribute the information to the general public. Without any major modifications, the same ATM can be used for information distribution just by changing or modifying the programme of ATM with the coordination of Banking Sector and Governments benefiting both partners. Moreover, it is cost effective because no additional infrastructure or security is required if the existing ATMs are used for this programme. The access of these Machines is possible through the same plastic currency cards (Credit Card, Debit Card etc.) used in ATM. The charges for providing the information may be shared by the bank of ATM and the Government or its agencies according to the facility availed by the user viz. Messages, Audio, Visual, Mini Printout or Email. The working, implementation, benefits and feasibility of this IDM model are discussed in this paper. By introducing the proposed model, we can pledge to carve every citizen to become an e-citizen and dream the future of India as a DIGITAL INDIA by the year 2020.

Keywords: IT, CT, ICT, ATM, IDM, Plastic Currency, Digital Governance, G2C.

INTRODUCTION

Over the past two to three decades, innovations in Information Communication Technologies have contributed to new forms of interaction between governments and citizens in the Indian States and other industrialized democracies. The adoption of these technologies at different levels of government has contributed to the emergence of Electronic-Government or E-Government designed to communicate information, deliver services, and offer additional avenues designed to interact with and participation in government.

The rapid emergence of a global information society is changing the way people live, learn, work and relate. The development of IT and Communication Technology during the last decades has been very fast and overwhelming. All aspects of human life have deeply influenced the ICT and the quality of life has been changed. Today ICT's role is increasing day-by-day and gained significant control in the human life in all aspects.

E-Literacy plays a vital role in the implementation and success of E-Governance. E-Governance & E-Literacy is related with each other. Rather, E-Governance is depended on E-Literacy. E-Governance and E-literacy is connected with the terms like Digital Divide, Computer, Internet, Network and so on. E-literacy is considered to be a very important skill to use the E-Technologies applied for E-Governance.

The significance of the ICT has proved that it became the best way for governments to provide people with more convenient access to government information and services. This improves the quality of the services provided by the Government and thus it enhances the opportunities of people and this ultimately leads to the development of every individuals. Through the implementation of ICT and E-Governance, the individuals of a society become an Informed Society. The Informed Society is a critical forum for

leading edge analysis of impacts, policies, system concepts and methodologies related to all technologies. Hence, the informed societies become a source for the development every Individual, Society or Group and finally the Nation. All these are possible through the E-Governance only which is also known as Digital Governance through ICT.

E-Governance is regarded as the application of ICT to governance processes and decision-making, in a way that provide opportunities for citizens and communities to receive regular information about government activities. E-governance will increase the efficiency of government operations between government institutions. It will strengthen democracy through citizen participation in decision-making, and will enhance transparency by publishing government information. The direct interaction with government and citizen will provide better services to citizens and informed societies.

DIGITAL INDIA 2020

India has achieved impressive progress in the field of science and technology and proved as one of the fastest developing country in the world. The use and implementation of Information Technology (IT) and Digital Technologies (DT) has improved people's day-to-day life tremendously. The Communication Technology (CT) also had a great influence on the socio-economic factors, geographic factors and living styles of the people across the world. India is becoming one of the emerging super powers in the field of IT, ICT and E-Governance. In E-Governance, IT and ICT are being recognized as an effective tool for digital economy. Use of E-Governance will help people to access information at anytime from anywhere. Effective use of IT and ICT services in Government administration will help to reach the citizen easily and quickly. (G2C)

The successful use of any ICT tool and the implementation of E-Governance are basically depended on the E-literate people. E-Governance through E-literacy will enable good governance, smooth administration, the development of individual and Nation, to empower the awareness and welfare of Citizens and finally to prove the efficiency and transparency of the Government. Even though ICT is the backbone of the E-Governance, E-literacy is required to use the ICT tools. Its goal is to identify and improve the strategies & services of Government which can reduce the costs and ease the administrative process. We can pledge to carve every citizen to become e-citizen and dream the future of India as a DIGITAL INDIA by the year 2020.

The dream Digital India 2020 will encourage the development, use and ensure the access and ICTs benefits where ever it can be applicable irrespective of region, casts, gender and age bar. It is anticipated that the venture, Digital India 2020 will fulfill by ensuring provision and maintenance of infrastructural facilities necessary for ICTs developments such as, reliable electricity supply, tele-communications, transport etc. This will lead to a systematic, relevant and sustainable development of ICT awareness in general public. It will give way to the educational and training programmes to provide adequate supply of qualified ICT personals, skilled and able workers in all sectors.

By the year of 2020 it is expected that implementation of ICT and E-governance for information technology will drive government operations, engage citizens, and provide government services comprising the E-Services, E-Democracy, E-Administration, E-Commerce etc. all over the country. All this will reflect the functions of E-government to the general public. By 2020 through E-Governance, flow and integration of information can be improved, maintained to achieve better governance. There is a need of publicity, debate and exposure to ICTs among the common people

irrespective of their education and financial strata. Capacity building is important if the society can accept, adopt and use ICTs in wide manner. The ICT policy of Governments should concentrate on the capacity building of common man.

The basic infrastructure required to meet the target DIGITAL INDIA 2020 include the achievement of 100% Literacy & E-literacy rate, improvement in the Power Sector by assuring the maximum availability of power supply either by electricity or through some other alternative power system like Solar Power System. The Banking System, Human Resource Development, Good IT and ICT connectivity also play vital role in Development. For easy communication and maximum involvement of local people, development of ICT in Local Language is one another important basic infrastructures required for Digital India 2020. It is being recognized by many experts that the PPP model framework (Private-Public-Partnership) is a good network because it can involve the general public directly and indirectly with government projects and make it success. India has recognized the benefits of ICT and E-governance. The aim is to provide citizens with easier and faster access to government services.

INFORMATION DISTRIBUTION MACHINE (IDM)

Visualising a successful DIGITAL INDIA 2020 through Digital Governance and going through all the above factors thoroughly, a new model is designed for a better and easy distribution of information. Taking advantage of IT, CT and ICT; a model named Information Distribution Machine (IDM) is being developed for a quick, easy and economically viable system to distribute the information among all including the illiterate and e-illiterate equally. By reducing or minimizing the use of paper, this model saves the environment also.

This model based on the working style of Automated Teller Machines (ATMs)

installed by the Banks for cash transaction. The existing ATM machines may be converted to an Information Distribution Machine (IDM) to distribute the information. The ATM machines used for cash transaction can be used for information distribution by changing or modifying the programme with the coordination between Banking Sector and Governments. This will be benefited by both Banking Sector and Government Sectors simultaneously.

ATMs ACROSS THE COUNTRY

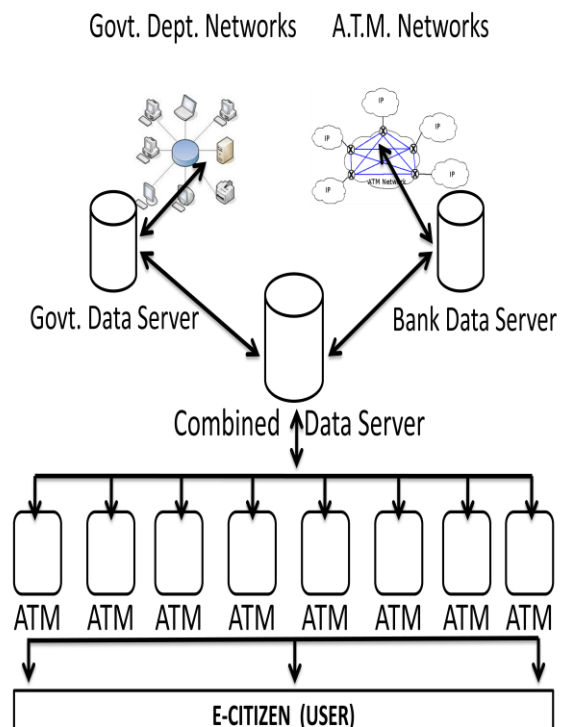
The ATMs are installed by various sectors of banks in India. Presently these ATMs are used for cash transaction only. These ATM can be enhanced for information distribution also with the help of this proposed Model. According to a data available from Reserve Bank of India’s “Bankwise ATM/POS/Card Statistics”, the number of ATMs in the country — National, Private, Public, Foreign and other Cooperative banks, part of the National Financial Switch connecting all ATMs — had reached 1,62,543 by the end of April 2014. Since the number of banks also more; and it is a continuous process of installation; the researcher expect that this figure will reach to 2 to 3 lack ATMs installed all over India by the end of current financial year.

S.No.	Banks	ATMs
1.	Public Sector & Nationalised Banks	1,12,624
2.	Private Sector Banks	48,770
3.	Foreign Banks	1,149
Total		1,62,543

The strength of ATMs installed in India
 Source: Reserve Bank of India’s “Bankwise ATM/POS/Card Statistics”

The ATM which connects the Bank Server for all their transaction detail can connect to

the E-Government’s Information Server and provides the information to the public very easily. The information may be stored either in Frequently Asked Question (FAQs) or Query based programme or both to meet the requirement of people. This can be useful for the educated, uneducated and e-illiterate people equally as well. The choice of oral questioning with the call centres can yield good result and serve the general public in a better way.



Data Flow Connectivity Diagram of IDM

FUNCTION OF IDM

The access of these Machines can be made either by the plastic currency cards (Credit Card, Debit Card etc.) or with the user’s Permanent Account Number (PAN) cards for better authentication. Since, one person can have only one PAN number, and it is accountable to the Government of India, PAN card is more appropriate to exercise these Machines if it contains more personalized data. The charges for access of information may be shared by the bank of ATM and the Government or its agencies according to the services availed like FAQs,



Audio, Mobile Message, E-Mail or the Mini Printout taken by the user. By imposing or encouraging the use of PAN Cards in India, it will not only smoothen the working of E-Governments, but also yield resources of Revenue Income to the E-Government through their accountability.

The government may ask to use the PAN Cards to use IDM and can waive the payment from the user and make nominal payment to the Bank by the E-Government. A Policy or MOU may be signed with the Bank for this joint venture.

Presently, the ATMs provide information regarding the transaction in a printout form on request. Through the ATM converged IDM machine, people can access the required information very easily. The existing multi-lingual system in ATM will help the user to operate easily and quickly. In this system, the user first try with the FAQs and then he can go for the second

level like Audio, E-Mail, Message or even a Mini Printout!

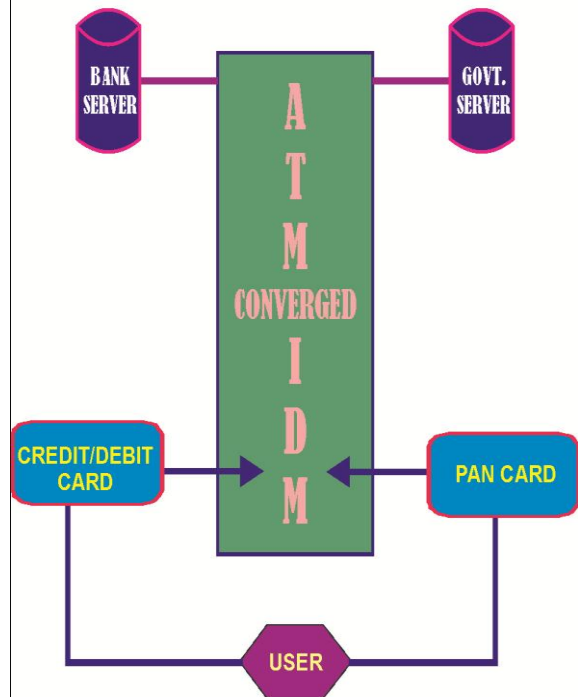
ADVANTAGES OF IDM

There are many advantages in the implementation of this ATM converged IDM machines, but some Primary and Vital advantages are listed here:

1. There can be a good tie up and joint venture with the Banking sector and Government sector permanently.
2. The existing ATMs of Banks can be used by the E-Government at initial stage as pilot project.
3. This will be a Private- Public- Partnership (PPP) Model with the participation of all ventures.
4. No additional physical infrastructure of Hardware required in this process either by the Bank or E-Government for pilot projects.

5. No direct investment or expenditure from the part of E-Government to implement these projects other than Software Developing and MOU.
6. The existing IT department of Government may be used in this project to coordinate with Banking Sector.
7. Both Government and Banking Sector will be economically benefited on long term basis. This will open channels of resource for both sectors.
8. All type of preprogrammed or query based information can be distributed.
9. The answer of query may be sent as Text/MMS message to Mobile instrument if the user demands.
10. The answer of query may be sent on emails as per the choice of user.
11. The query may be answered through audio, display screen, printout which is the inbuilt features of any ATM.
12. More people will be attracted to the Banking Sector to get the plastic currency cards (E-cards), which normally the banks encourage.
13. Most banks has the e-card facility and they promote it as well. The automation of e-card service ease the task of the bank and it give good services to the customer. The increase in the use of e-cards will surely benefit the Banking Sector.
14. There will be a transformation from Citizen to E-Citizen by the use of IDM and will bring changes in the living condition of E-citizen.
15. More people may be forced to get the Permanent Account Number (PAN) which will be an added advantage for the E-Government for those peoples Income Tax accountability.
16. When the use of ATM converged IDM machines increases, more machines will be extended to the rural areas which mark development.

17. Increment in number of ATM converged IDM machines will certainly will bring encourage among rural people which promotes the development in rural areas.
18. The easy access of information of common man will bring all the benefits of E-Governance, which is the ultimate aim of an E-Government.



Model of ATM Converged IDM Machine

19. When the use of ATM converged IDM machines increases, more machines will be extended to the rural areas. Increment in number of IDM machines will certainly bring the development of people living in rural area.
20. Databases of the user criteria can be developed with the help of these IDM users and improve its working accordingly in future.
21. The E-Government can have a summary and accountability about the user queries which can be instrumental for further development and decision making in future plans.

The banks are already connected with mobile network and they give details of transactions of customers in their mobile numbers. Similarly, the information can be distributed through the mobiles and emails apart from the onscreen and audio output to the user which will be an added advantage to them as the shown in diagram.

In case, if the joint venture with Government and Bank does not execute, these IDMs can be designed as needed and installed in Government offices like Hospitals, Post Offices, Police Stations, Railway Stations, Colleges, University and other Government offices. The cost of Hardware, Installation, Networking, MIS and other infrastructures has to be borne by the Government. If the time is limited to office hours; then the security is not required. In the case of 24 x 7 hours service, it may be functioned accordingly. Since, Banking Sector has already established these infrastructures, making a joint with Banking Sector will give easy, quick and with limited expenditure.

CONCLUSION

The easy access of information will bring all the benefits of E-Governance, replacing current human-executed processes, which involve accepting, storing, processing, outputting or transmitting information. The

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existing clerical functions will be automatic. It will support new human-executed information processes like creating new methods of public service delivery, supporting current processes of decision-making, communication, and decision implementation.

By the implementation of this Information Distribution Machine; Governance will become very cheaper, quicker and of course better also. E-participation of citizen empowers to gather information and to get involved in the process of decision making by the E-Government. Online work limits the unwanted traffic or movement of people from one place to another. When the information and all activities of government are transparent; and easily available to people, it will make the government more responsible towards the people.

A Successful implementation of E-Governance by any Government offers better management, delivery of services to its people, improved interactions with everyone and give empowerment to them through the facilitation of access to information. Certainly, the Information Distribution Machine (IDM) will prove as a useful tool and technique to all E-Governments and E-Citizens, establishing G2C successfully.