

E – Governance System in Gujarat State

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Abstract

E- governance system means the use of a range of modern Information and Communication Technologies (ICT) such as Internet, Local Area Network, and Mobiles etc, by Government to improve the effectiveness, efficiency, service delivery and to promote democracy.

Gujarat is a frontline state in the implementation of e-governance policies & projects and setting up of key infrastructure for e- governance. This article deals with role of Gujarat e-governance system in improving Government to Government, Government to Citizen and Government to Business communication. This article also gives overview of system, E-governance system and benefits of.

Key Words: E-governance system, Gujarat E- governance, E-governance policies & projects.

I. Introduction

System is a set of interacting or interdependent entities forming an integrated whole. For example, in case of, Personal Computers (PC) there are interdependent entities like mother board, processor, hard disk, input devices like key board, mouse and output devices like monitor, printer etc., physically any of these device is complete in itself, but functionally they cannot work independently. That is, mouse has to be connected to PS2 port or USB port of mother board to function. Similarly, keyboard, hard disk, processor, monitor are all electronically interconnected to perform functional requirements of personal computer. This interacting and interdependent grouping of entities to perform certain task is called a system. Similarly, Gujarat e-governance system comprises of interdependent and interacting entities: Government, Citizens, and Business.

Government interacts with citizen and business at different fronts at various levels of governance, such as revenue, health, education, agriculture, finance, sale tax etc, and various levels such as, Secretariat, District, Municipality, Talukas (Tehsil), and Village (Panchayat).

E-governance system means, the use of a range of modern Information and Communication Technologies (ICT) such as Internet, Local Area Network, and Mobiles etc., by Government to improve the effectiveness, efficiency, service delivery and to promote democracy^[1]. E-governance, or e-government, or digital government, essentially refers to, 'The utilization of IT, ICTs, and other web-based telecommunication technologies to improve and/or enhance efficiency and effectiveness of service delivery in the public sector', (Hai, 2007)^[2]. Gujarat is a frontline state in the implementation of e-governance policies & projects and setting up of key infrastructure for e - governance. Main components of Gujarat e-governance system are given below^[3].

A. Government to Government Communication

Gujarat government has established Gujarat State Wide Area Network (GSWAN) and using IWDMS software for inter and intra department communication.

B. Government to Citizen Communication

Gujarat Government has started SWAGAT Online (State Wide Attention on Grievances through Application of Technology) project for handling grievance of the common man through video conferencing and solutions that are immediately provided online to common man. Many municipal corporations of Gujarat state have also introduced online complaint lodging and redressal system in Gujarat state.

C. Government to Business Communication

Gujarat government is working on e-procurement project. Gujarat is a frontline state in the implementation of e-governance policies & projects and setting up of key infrastructure for e-governance. Gujarat government ranks first state in the country to have made e-governance functional in all its Municipalities and Municipal Corporations². For the best e-governance initiatives in the country, Ahmedabad Municipal Corporation will receive a gold medal and Gujarat will receive total five awards for the best use of information and technology services in 2009, from Administrative Reforms and Public Grievances and Information Technology Department of the Central Government^[4].

II. Need of Good E-Governance System in Gujarat State

Government of Gujarat needed good e-governance system because:

- Traditional system of governance lacked pace in administrative work both intra and inter departmental due to delays and red-tapism.
- Citizen could not access government information easily.

- Public grievance and service delivery system was also slow and inefficient.
- Developmental work was slow due to long tender procurement process.
- Business suffered because of delays in clearances from various departments and regulatory authorities.

After that, the implementation of e-governance system was planned in phases, i.e., assessing need, prioritizing needs, and implementation in planned mode.

III. Implementation of E-Governance System in Gujarat State

Taking note of above problems, the Government of Gujarat realized the need of implementing Information Communication and Technology (ICT) in governance system. Gujarat being already one of the most prosperous states of India, came-up with the plan, with the objective of fostering rate of growth in every sphere of its citizen's life.

Backbone of E- Governance System in Gujarat State

Govt. of Gujarat started implementation of e-governance in December, 2001, by establishing Gujarat State Wide Area Network which connects all Government departments at various levels such as village, taluka, and districts electronically^[5]. The wide area network was built-up in three stages.

In the first stage, all the government offices in the State Capital Gandhinagar were connected to Sachivalaya through SCAN (Secretariat Campus Area Network). In the second phase, all the districts head quarters (24 excluding Gandhinagar) were connected with their subordinate offices and subsequently these head quarters were tied with Gandhinagar Secretariat. Third phase comprised of weaving Taluka (Tahsil) level offices with Taluka centers located at Taluka Mamladar office and their link with district centers.

There are about 225 Talukas connected to their respective district centers^[6]. Performance of GSWAN is given below:

A. District Level Connectivity

GSWAN is connecting 7 Districts on 8 Mbps, 18 Districts on 4 Mbps and 1 District with 2 Mbps to State Center at Gandhinagar using leased circuits provided by BSNL, Reliance and Tata Tele Services.

B. Taluka Level Connectivity

GSWAN is connecting 225 Talukas to 26 District HQ on 2 Mbps leased circuits.

C. Interconnectivity using GSWAN

GSWAN is interconnecting more than 3600 Districts and Taluka level government of Gujarat offices.

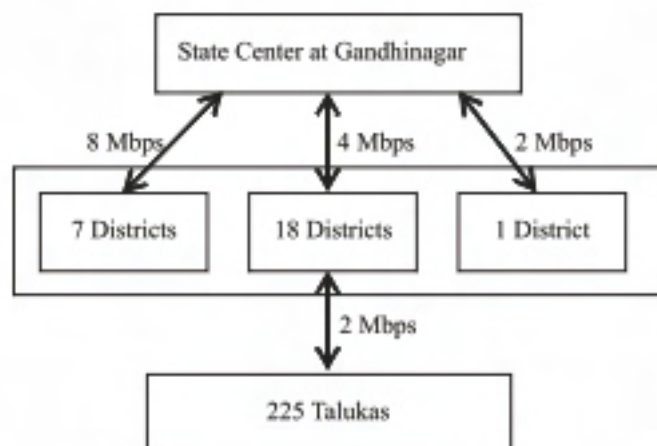


Figure 1: Gujarat State Wide Area Network Architecture⁶

IV. Components of E-Governance System in Gujarat State

A. Government to Government Communication

Using SCAN and GSWAN as the backbone for data, voice and video communication software called Integrated Workflow and Document Management System (IWDMS) was developed by Tata Consultancy Services for intra and inter department document, work flow and collaborative management. The implementation of IWDMS was first done within Secretariat and later on extended to other independent Govt. offices in Gandhinagar. Later, the reach of this software was extended to all District Centers and independent offices outside Gandhinagar. As, of today, there are 50 DCs and independent offices successfully using and utilizing this software for efficient, effective and timely working.

In future, the Govt. of Gujarat is planning to extend this software (IWDMS) facility to Taluka and village level. Today, at Taluka and village level, GSWAN is primarily used in data based intensive work like keeping record of birth, land etc. Every taluka has a data base server which is used to keep such records. These records are updated at a central server located at district level also.

- **Comparisons of old system and new system at Gandhinagar Secretariat**

1. **Old System:** Each department in Gujarat secretariat had a registry section before

implementation of e-governance; and the work of this section was managed by inward and outward file registers. Example below shows the file transaction between two departments (Finance department and General Administration Department) in Gujarat secretariat before the implementation of E-governance. Transaction steps are given below:

- Finance department writes file details in outward register.
- File goes to general administration department (GAD).
- GAD writes file details in inward register.
- File goes to administrative hierarchy of finance department
- GAD write down file details in outward register after completion of task.
- File goes to finance department.
- Finance department writes file details in inward register.
- File goes to hierarchy of finance department.

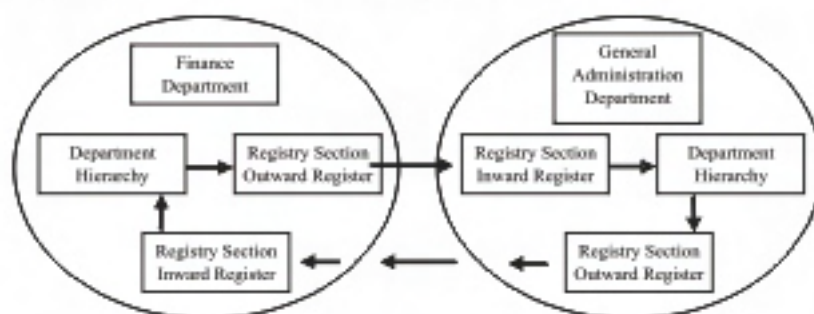


Figure 2: Transaction of File in Old System

2. **New System:** Department is sending its file to another department using IWDMS software and GSWAN. Example below, shows transaction of file between two departments using IWDMS.

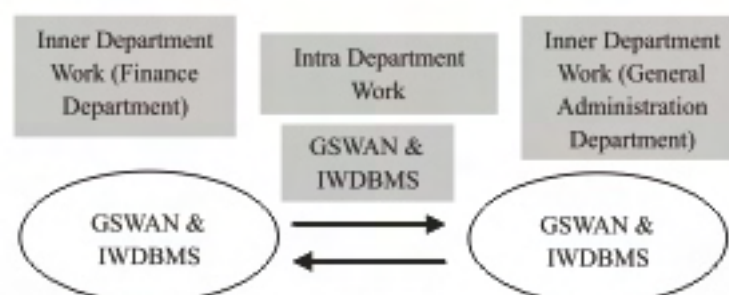


Figure 3: Transaction of file using IWDMS

B. Government to Citizen Communication

Ahmedabad Municipal Corporation (AMC) has started online building plan approval for upcoming buildings plans. This has been facilitated by using AutoCAD software in integration with GSWAN. It has got features like a citizen can submit building plan online, check the status of application and receive online approval, whereas, AMC can analyze the plan and approve it online^[11].

AMC has also introduced online complaint lodging and redressal system. This facility assists a citizen to file a complaint categorized under 13 different heads, online. These 13 categories include health, water, street light, drainage, illegal construction, public building, complaint road and footpath, property tax for existing and new building, pale depo (dead animal removal), encroachment, storm water removal and octroi. After filing an electronic complaint, complainant gets a registration number and a deadline by which his complaint will be resolved; the registration number can be used to know the status. These initiatives have bagged gold medal award for AMC from the department of Administrative Reforms & Public Grievances and Department of Information Technology, Govt. of India for using Information and Communication Technology in bridging the gap between citizens and local government^[11].

AMC is also running a first of its kind a pilot project on SMS based complaint redressal system. Another fine example of application of ICT for Government to Citizen is State Wide Attention on Public Grievances by Application of Technology (SWAGAT), where Chief Minister of state himself, talks with the government staff, once a month, over video conferencing, for resolving the matters related with citizen's long pending public grievances^[7]. This program has also been implemented at district level where district collector addresses citizen's grievances. Chief Minister's Office, Government of Gujarat was awarded Gold for SWAGAT programme for its outstanding performance. Following table shows the grievance statistics for SWAGAT^[8].

**Table 1: Grievance Statistics for Swagat
(From 24/04/2003 to 14/07/2009)^[8]**

24/04/2003 to 14/07/2009	State Level	District Level
Total Grievance Received	790	36746
Total Grievance Redressed	779	34242
Total Complaints Pending	11	2504

C. Government to Business Communication

Government of Gujarat has also started e-procurement project to facilitate various state government departments, Nigams and societies. The project is implemented in phased manner across the departments. Though, the procedure for e-tendering remains the same as in manual but all processes like vendor registration, vendor qualification, bidding, letter of intent, negotiation etc. is done electronically through a secure website. Being an online system, where users are logging in, getting authenticated and filing tenders, the system needs to have proper security. For this, two-factor authentication, digital signatures and 128-bit SSL encryption have been incorporated.

Government of Gujarat has also started Computerized Inter-State Check Posts of Gujarat Government (CICP) for interconnecting all the check posts of Gujarat state. This helps government officials to check all heavy vehicles passing through the State to and Control the transport of commodities to conform to specified standards, to avoid loss of life and property. This project has also increased tax collection and reduces corruption in Gujarat State.

V. Conclusion

- **Increase in Government Revenue:** New Gujarat interstate border check posts system has produced three-fold increase in tax collection over 2 years. Revenue increased from US \$ 12mn to US \$ 35mn, paying back the total project cost of US \$ 4mn in just 6 months^[9].
- **Service Delivery to Citizen:** Total 35021 complaints have been redressed by SWAGAT programme during 24/04/2003 to 14/07/2009^[10].
- **Increase Transparency and Speed up Routine Procedure:** IWDMS provides Document Management, Workflow Management, Collaborative Environment and Knowledge Management in an integrated fashion and delivers an Electronic Workplace that result in productivity improvement in Government^[10].

References

- [1] Hai, J.C. (2007), Fundamentals of Development Administration. Selangor: Scholar Press, ISBN 978-967-504-5080.^[2]
- [2] Sangita, S. N. and Dash, B.C. (2005), Electronic Governance and Service Delivery in India: Theory and Practice, Working Paper. Institute for Social and Economic Change, pp. 38.^[12]

- [3] Tejasvee, S., Sarangdevot, S.S., Gahlot, D., Sandal, S. (2010), E-Governance and Effective Deliverance of Information and Services to Citizens Architecture, International Journal of Computer Science and Technologies, Vol.1 (4). pp. 292-302.^[9]
- [4] E- gov Magazine, Awards-Bagged-by-Gujarat, available at, <<http://www.egovonline.net/news/news-details.asp?Title=Five-e-Governance-Awards-Bagged-by-Gujarat&newsid=15789>>.^[10]
- [5] Gujarat Government Official Portal, Initiatives by Gujarat Government, available at, <<http://www.gujaratindia.com/initiatives/initiatives.htm?enc=TEnmkal8rLd9cWRBUEx85lswfZZ+o8b+w+YfQPy7dU93tk/rntr0H+OnwOK0bub2EDtalPUvqvPLGKKcTK769ZRjaLEqAPRKs+bzTZ4Qx88f2jvEln1KN9vHo952cZT4xIPfNGhSDhZZypCT5fYNg>>.^[11]
- [6] Chakravarti V.K., Initiatives in E-governance, Frontline, The Hindu, March 15 - 28, 2003, available at <<http://www.hindu.com/fline/fl2006/stories/20030328006111600.htm>>.^[12]
- [7] GSWAN (Gujarat State Wide Area Network): Implementing Converged IP based Networks, (2003), available at <<http://www.gujaratinformatics.com/pdf/vol1/NewsletterJan03.pdf>>.^[13]
- [8] Narendra Modi, available at <http://www.narendramodi.in/news/news_detail/1162>.^[14]
- [9] Gujarat Informatics Ltd., available at <<http://www.aditonline.com/gilprojects/swagat.html>>.^[15]
- [10] IIT Bombay, E- gov Success Stories Gujarat, available at <http://www.it.iitb.ac.in/~prathabk/egovernance/egov_success_stories_gujrat.html>.^[16]
- [11] E-governance Project & Initiatives (2012), available at <<http://www.gujaratindia.com>>.^[17]
- [12] Amdavad Municipal Corporation, available at <<http://www.egovamc.com>>.^[18]
