

APPLICATION OF THE CONCEPTS AND TECHNIQUES OF 'E-G' AND 'G2C INTERFACE' TO THE INFLIBNET PROGRAMME: AN OUTLINE FOR MANIPUR

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National Informatics Centre, Community Information Centres and INFLIBNET Node, Manipur are three important e-systems engaged in transferring information/data in Manipu. The State Government is also likely to introduce soon the "State Wide Area Network" under its IT policy 2003. Since some "gaps" are identified in the functioning of INFLIBNET Centre of Manipur University Library, it is suggested that all the e-systems of the State should work together sharing each other's resources. It is expected that the said gaps will be minimized because of the joint-venture. To make the proposal distinctive, two models are designed for consideration of all concerned agencies. The proposed models, look for new set of responsibilities for the personnel and end users.

INTRODUCTION

The INFLIBNET (Information and Library Network), established during the Eighth Five-Year Plan period (1990-95) by the University Grants Commission (UGC), is a computer communication and cooperative network. It is a 'major national effort to improve capability in information transfer and access' [1]. The objective of this programme is to contribute to 'pooling, sharing and optimization of resources, facilities and services of libraries and information-centres in the university system'. The Manipur University Library is one such selected INFLIBNET centre that shares the responsibility to fulfill the objectives of INFLIBNET.

In Manipur, besides INFLIBNET, the other three important e-systems engaged with transferring information/data are the National Informatics Centre (NIC), Community Information Centres (CICs) and the proposed "State Wide Area Network" of Government of Manipur. The basic concepts on which these three e-systems stand are the "Electronic-Governance (e-G)" and the

"Government to Citizen (G2C) Interface" for reaching people at any location of the State. These two concepts are used as guidelines for reinforcing the traditional management process of any e-system so that it can (i) produce better output, and (ii) disseminate/transmit the same to its target groups of any location efficiently and effectively. In this backdrop, two designs are suggested in this paper. The first one is concerned with the application of the "e-G" concept to the INFLIBNET management and the second model deals with application of the "G2C Interface" concept linking INFLIBNET with other three important e-systems. The objective of these new "designs" is to propose the INFLIBNET-system" as a part of the State Government's new IT programme (2003) so that it can use the e-infrastructure of the Government to serve the people of the State in a better way.

THE CONCEPTS AND TECHNIQUES e-Governance

The "e-G" may be defined here as providing efficient, effective and good governance (i.e. administration with control-capacities) to all the components i.e., operating, storing and using components through the proper use of information technology for achieving the objectives of the system. The e-G thus is nothing but "application of information, communication and electronic technology to the process of government functioning" to bring about simple, accountable, responsive and transparent administration so that the purpose of the functions can be achieved. The technique, as mentioned in IT policy of Government of Manipur, 2003 is used "to

upgrade the standard and quality of administration and to provide the citizens user oriented, efficient and cost effective government" [2].

Two main contributions of the e-G, as presumed, may be:

- a) improvement of the administrative process;
- b) establishment of an efficient and effective communication system between the electronic-services and the end-users.

The objectives of the e-G may be realized from:

- i) better internal efficiency;
- ii) better law/rule enforcement;
- iii) appropriate dissemination and retrieval of information;
- iv) transparency in work;
- v) reduction of cost in serving users;
- vi) improved quality of user-services; and
- vii) for providing facilities for equal access to every user.

The task to implement good governance in the management of any system is complicated and vast. Five essential elements are thus identified which include vision (objectives), skills (qualities of the personnel), incentives (rewarding the personnel, motivation for personnel), resources (money, material, manpower i.e. 3Ms and communication facilities) and action plan (planning for management i.e. a good MIS).

G2C Interface

Introducing technology either in business or governance results in high processing efficiency, high user satisfaction, minimum transaction cost, minimum transaction time, etc. In a customer centric model of modern market, success of the business lies in how effectively one handles the customer contacts by providing them call centres, multimedia contact centres etc. In the same manner, e-G will be useful if the government provides ample opportunity for

the citizens to access the facilities available to them. While the former concept is known as B2C Interface(Business to Customer), the later is known as G2C Interface (Government to Citizen).

In G2C interface prototype, human face comes in the form of citizens and their level of engagement with the government initiatives is very important. This can be done by the application of right technology. Thus, an ICT (Information Communication Technology) enabled 'G2C interface' can minimize the response time to address any problem of citizens as well as information can easily be accessible to everyone.

To provide the facilities for information retrieval to each and every citizen, the Government of Manipur has formulated its IT policy in the year 2003. Some provisions of the said IT policy may be rephrased here to find the guidelines for extension of services to the citizens (i.e. G2C interface).

State Wide Area Network

The State shall establish a 'Wide Area Network' covering various departments of Manipur through VSAT, fiber optics and radio links. The network will facilitate multi-services such as, video conferencing, file transfer facility, e-mail, online application processing, query and response, etc.

Transaction Information Data-banks

To achieve accountability and efficiency in administration, the state shall develop databases for the related information.

Smart Cards

A multifunctional electronic smart card will be issued to citizens that will enable them to interact with services, make payments and serve as ration card, driving license and identity card etc.

Standardization of IT Infrastructure

The departmental IT infrastructure will be procured according to the specifications and

standardization laid down by the IT department. Standardization of data structure shall also be carried out by organizations up to the feasible extent. These steps are necessary for the creation of centralized data warehouse.

Use of GIS Technology

A Geographical Information System (GIS) will be developed, which will be used in integrating, analyzing and visualizing different types of data for special planning, environmental protection, utility management and traffic regulation.

IT Budget

Each department and corporation shall earmark 3% of its budget for IT applications. The allocated budget shall be spent on procurement of IT infrastructure.

Digital Library

The state shall develop a digital library, which would be a central storehouse of digitized data containing government records and other information, such as academic, industry, tourism and archeology.

National Informatics Centre (NIC)

NIC is an organization concerned with Information Technology (IT) application for effective information management and dissemination under the Ministry of Communication & Information Technology (MCIT).

The NIC, Imphal started functioning in the year 1988, and other district centres of Manipur became operational in the year 1990. NIC, Manipur is actively trying to implement e-G solutions for the Government of Manipur. "Citizen-Centric" services are the high priority for implementation of G2C interface in the state.

Community Information Centres (CICs)

Community Information Centres (CICs) are also block-level IT Organizations, also under the same Ministry of Communication and

Information Technology. So far, 33 different blocks of Manipur have established CICs. All CICs are connected to the District and "State Information Centres" through VSAT. Each CIC is having six computers and two CIC operators for managing and providing services to the public. Some of the services provided by the CICs are internet access, e-mail service, database retrieval, computer awareness training programme, etc. Any user can use these computers [4].

INFLIBNET PROGRAMME OF MANIPUR UNIVERSITY (MU)

The Manipur University Library was declared as one of the INFLIBNET nodes in the year 1993. The centre has been actively participating in all the programmes which were arranged by the INFLIBNET from time to time. The UGC has released required sanctions to meet the expenditure for the automation of the Library. The University has also procured most of the items as per configuration prescribed by the INFLIBNET [5].

Despite limitations, the INFLIBNET section has, provided commendable services to MU Library, particularly in its effort of library automation. Other notable services provided by the section are directed to the benefits of the user-communities. It has been able to:

- i) connect to other libraries of the country;
- ii) utilize information-resources of the MU Library by creating databases for books, journals and theses/ dissertations;
- iii) check duplicate purchasing in the library;
- iv) provide reliable access to the Online Union Catalogue of documents created from the collections of different libraries;
- v) provide e-mail facilities for the scientists, researchers, faculty, staff and students;
- vi) provide OPAC to different departments through campus network over the web; and
- vii) offer the facilities for downloading e-papers from different places (print/non-printmedia).

Table 1 — Gaps in Ideal and Real Situation

	COMPONENTS	IDEAL SITUATION	ACTUAL SITUATION
1	User Requirement (UR)	Full updated knowledge	Incomplete knowledge
2	Availability of Planned Resources (PR)	Complete planned resources	Partial
3	Manpower Requirements	Both Operator & Administrator	Only operator
4	Technological infrastructure problem (HW/SW etc.)	High configuration with sufficient number of machines and updated softwares	Insufficient number of machines and old softwares
5	Uniform standards for database	Uniform standards required	Standards not followed
6	Time Factor	Economic (minimum time should be taken for implementing every stage of the programme)	Expensive (maximum time consumption for every stage of the programme)
7	Dissemination mechanism	Faster/ Accurate/ To the Point	Traditional (Slow)
8	Geographical area for dissemination	All over State and outside State	Limited to MU Campus only
9	Internet access	High speed internet access	Low speed internet access because of VSAT & other technical problem

However, a number of gaps can be identified in between the ideal and actual situation on different components as shown in Table 1.

E-G & G2C MODEL FOR INFLIBNET PROGRAMME: A PROPOSAL

A four phased model of e-governance is presently used in INFLIBNET programme :

- i) Selection and accumulation of bibliographical data;
- ii) Interaction with users (user-study) to know their requirements and searching behavior/ pattern (through various e-methods like e-mail, e-chat, etc);
- iii) Integration and storage of bibliographical data as per user requirements/ searching behaviour.
- iv) Transferring bibliographical data to the end-users with their full satisfaction (making the searching and transferring process simple, user-friendly, economic and time saving) –transactions can be done by any user from any place and at any time without visiting the centre.

What is required now is to review the infra-structural set-up of present INFLIBNET unit of MU Library in the line of e-G model as shown in Table 1. It is expected that, the gap between ideal situation and real performance as pointed out above may be narrowed down with the application of e-G model.

Similarly, G2C Interface policy of Government of Manipur, in case adopted for the dissemination of information (from INFLIBNET Databases), will certainly minimize the gap regarding dissemination and retrieval facilities. Based on "Government to Citizen" programme, the concept "INFLIBNET to Citizen" can be introduced for reaching every citizen all over the State. The IT policy of Government of Manipur has brought an opportunity for INFLIBNET to reach to the citizens using the same infrastructural set-up of the Government. By establishing link with "State Wide Area Network", NICs and CICs set-up by Central Government (Fig 2), the INFLIBNET service can be reached easily to the citizens of the State without incurring any additional expenditure. It is expected that the Government of Manipur, too, will be ready to entertain and encourage

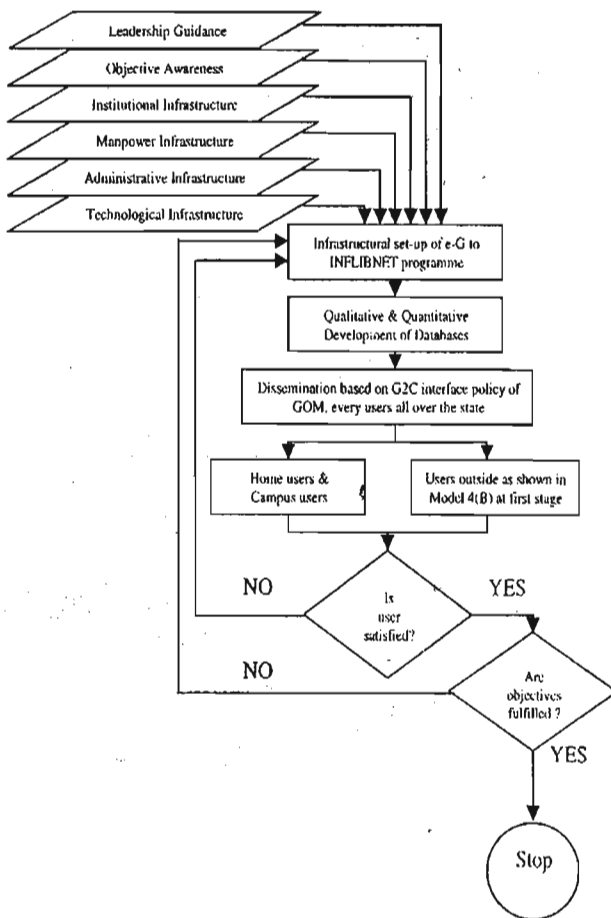


Fig 1— Model For INFLIBNET Manipur

such proposal for the betterment of the citizens of the State. The citizens (particularly the academic community at all levels) living at any place, will ultimately be benefited in case the INFLIBNET becomes an ally and part of the IT programme of the Government of Manipur. The Government of Manipur, NIC, CICs and the INFLIBNET centre of MU Library may work together to make the citizens of the State information literate. It is, however, required to formulate modalities for efficient and effective implementation of such objectives.

ANTICIPATED PROBLEM AREAS

A number of problem areas are expected in implementing e-governance to the INFLIBNET programme. Some of them may be related to :

- i) cost of equipment
- ii) technical support
- iii) reliable power supply

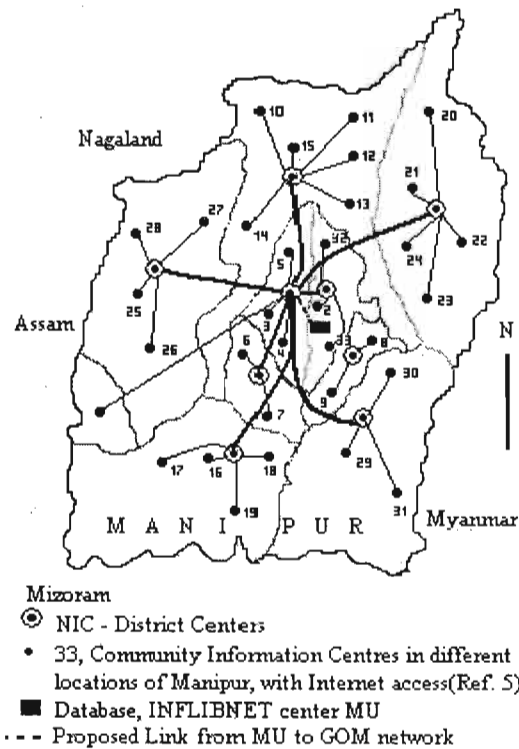


Fig 2 — Services of INFLIBNET, MU based on G2C interface Policy of GOM (Phase-I) : A Proposed Model

- iv) access to telephone network
- v) internet service providers
- vi) telecommunication bandwidth
- vii) knowledge of staff regarding equipments and value of use
- viii) on-line resource materials
- ix) standardization of resources
- x) maintenance of databases
- xi) organizational structure
- xii) cost of telecommunications within and outside country
- xiii) Skilled Manpower Trained in a holistic way etc.

CONCLUSION

The suggested models are designed for qualitative output, better service and for larger audience/user/recipient community. The budgetary requirements to implement such joint endeavours will certainly not ask for any big additional economic commitment because of the existence of proposed "State Wide Area Network" of Government of Manipur. By sharing economic resources, e-infrastructure and

expertise of each other, all the e-systems of the State will be, expectedly, more efficient and more effective in creating "State Wide Area Network". The monitory-package supposed to be borne by the State Government on building technological-infrastructure under its IT policy 2003 will be rewarded only when technologies provided are used appropriately by all sections. With such technological support, some of the gaps observed in the INFLIBNET Manipur Centre functioning are expected to be filled .

The successful implementation of both the models may also call for a new set of responsibilities for both the personnel and the end users associated with the same. Library and computer/ network staff and managers need to know enough about each other's area of expertise so that they can communicate properly. The real needs of the different sections of the users must be taken into account in the design. Service centres/workstations need to

be suitably designed for its potential users. The users need to be guided properly by the well-trained personnel so that the former could learn to surf the network and sometimes to swim in information without drowning in data. Human factors should, therefore, be considered at all stages of any e-system.

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