TOWARDS CYBER CIVILISATION INITIATIVE

S.Lakshminarayanan, A.B. Patki, S. Sivasubramanian
Department of Information Technology Government of India
India

ABSTRACT
The Government of India has set up Community Information Centres (CICs) in North Eastern States of India. CIC is expected to act as a catalyst for spreading cyber civilisation. This paper discusses Cyber Civilisation, how to spread it, its advantages and disadvantages strategies for controlling disadvantages.

INTRODUCTION
The aim of man’s life, since time immemorial has been to lead a life of comfort. Ever since the Stone Age after the discovery that meat cooked on fire tastes better than raw animal flesh to the jet age when home appliances became remote controlled, the ultimate aim of every invention has been to provide more comforts. A giant leap in that direction came with the dawn of civilisation era. In the last century, computers had brought out a phase that without these IT systems, which were originally meant to make calculations easier to compute, many social changes would not have taken place. Today the word ‘computer’ has more far-reaching connotations to it than anyone had ever imagined. Man, apart from being a comfort addict has an insatiable desire to know more, go further, march ahead. It is this unquenchable thirst that has led to the age we live in being christened the ‘Information Age’ where anything one may want to know that anyone anywhere may know is, quite literally, ‘at our fingertips’. A few clicks of the mouse here and a few taps on the keyboard there and any picture, any statement, any information required is (again very literally), staring the face. It is this reliance that human kind has grown to have on computers and Cyber Life that is leading to ‘Cyber Civilisation’, where all transactions, financial (e-commerce) or intellectual (e-education etc.), will be taking place through networked computer systems.

A general observation indicates that in developing countries it is mostly the people living in urban areas who are moving faster towards cyber civilisation. The masses living in rural areas do not have the resources & opportunities to get cyber civilised. To bridge this digital divide and to make them cyber civilised, the Government has come forth with the initiative to establish Community Information Centers in rural areas, where the people are not able to get the benefit of IT either due to lack of infrastructure or affordability. The concept of Community Information Center was formally put forward in a seminal paper on Information Technology for Masses in the context of MISNOS Technology Development Initiative by Bandyopadhyay (1996).

PILOT EXPERIMENT
The pilot experiment undertaken by the Government of India in North Eastern States to establish CICs at block level has yielded good results. The aim of this experiment is to help the masses towards empowerment by giving them following facilities:

- ICT infrastructure at block level
- web access and internet services such as e-mail
- market access and e-commerce
- access to socio-economic databases
- e-learning (computer aided learning processes) and e-education
- internet connectivity to schools
- e-medicine, e-consulting, telemedicine, internet connectivity to local hospitals
- e-governance applications, government to citizen (citizen centric) services
- weather information and agricultural information
• electronic deliveries of newspapers at remote locations (where there is substantial delay)
• IT awareness among local people
• computer training programmes
• e-entertainment
• tender notification and online response to e-procurement requests
• e-employment notification and online responses
• information regarding road, rail and air reservation and status
• To achieve the above, the Government provided the following computing infrastructure to each CIC and these CICs were inaugurated in August 2000:
  • One server level computer system (with P III processor) connected to five client level PC (with Intel Celeron Processor) connected in LAN
  • A Ku-Band V-SAT to provide internet connectivity
  • A router to help the Block Level Government institutions and NGO’s to get connected to the CIC for service delivery to the people
  • A generator set up to provide power backup in remote blocks
  • A set of laser/inkjet/dot matrix printer to facilitate printing of forms, reports etc.

The pilot experiment, which comprised of 30 centers, was evaluated and the objectives were successfully met. The improvements for enhancing the effectiveness of CIC were analysed. CIC should provide facility to children, youngsters as well as senior citizens. Their association in the development process was also felt to be a necessity for designing application.

TIME SCHEDULE FOR CIC

It was observed that merely establishing CICs is not enough for spreading cyber civilisation. Its working time is also important. Whether it is working on one shift, two shifts or three shifts has an impact on the effectiveness of the CIC. The optimum trend is felt to be in two shifts. Most of the people go to work and children go to school from 9 AM to 5 PM and only a limited number of people can use the CIC in the prime shift. Therefore if a CIC functions from 8 AM to 10 PM it will give an opportunity for all to get the benefit of CIC infrastructure. A day in the life of cyber civilisation is depicted in figure1.

OPPORTUNITY FOR DEVELOPING NATIONS

The greatest benefit cyber civilisation offers to developing nations is creation of new jobs, which in turn help in enriching community capital leading to opening of new areas for wealth generation. One of these is IT enabled services which covers Information Technology based decision making, and Information Delivery Services. Back office operations, creating and maintaining data bases, medical transcripts, call centers, data digitisation etc are covered under IT enabled services. Cost effective Telecommunication has made delivery of IT enabled services easier and economical and are certainly a source for community capital building. Technological aspects and software development methodologies are discussed by Patki et al.(2003-a, 2003-b)

GLOBAL DISASTER AND CALAMITIES WARNING SYSTEMS

Cyber Civilisation helps in promoting community participation by enabling people to interact and send help for the nations when there is a natural calamity or disaster. People come to know very quickly about the disaster / calamity through Internet and E-mail and make contact with the concerned people and friends without loss of time. Further, offices like the Meteorological Department can put their early warning news like heavy rains, cyclone etc on their web site which can be accessed by people to take adequate precautions to face the problems. The health ministry can inform the public through their web site about the epidemics which are likely to hit after a disaster / calamity and steps to be taken to prevent them.

EVIL EFFECTS OF CYBER CIVILISATION

The benefit of computerising the world is so dazzling that it is disheartening to note the evil effects in cyber civilisation. Unlike as it may seems the computer does have its share of bad influences.
Constant exposure to the flickering figures on a monitor damage the eyes. It is very interesting to work on a computer, so children, especially, sit in front of the monitor for hours, thus exposing themselves to harmful radiation causing damage to the eyes. It is probably for this reason that nowadays we see many children under the age of ten, wearing spectacles.

Working on the mouse constantly, or tapping the keys on the keyboard cause the tender fingers of children to be adversely affected. Muscular development of young hands is impaired. The not so tender hands of adults too fall prey to a cramp that is painful. Sitting for a considerable length of time in the same posture causes backaches. This could be due to damage to the vertebral column. In the case of children, this problem could be more serious than in adults. It has been realised that constant exposure to the radiation emitted by the monitor causes severe damage to the nervous systems. It has been found that such people are restless, their body movements are jerky and they show other symptoms of facing severe nervous problems.

Since people get so used to getting all that they want from the ‘Net’, their own ability to think and reason slowly deteriorates. The answer to any question being available on the ‘Net’ people do not even think about trying to find answers by experiments or other means.

Nowadays, chatting on the net is prevalent everywhere. Since all this chatting is done using abbreviations and symbols, social skills are lost. People no longer remember the common courtesies to be exchanged before a serious conversation begins. Besides, all these abbreviations have played havoc with the spellings of the people who use them.

Relationships at home have touched a new low because of “Cyber Civilisation”. One is so busy tapping keys and fingering the mouse that other things at home are forgotten, including the spouse! This provides yet another cause for divorce. Last but not the least, pornographic sites are easily accessible to everyone – what’s worse, to children. This causes them to get information that they do not understand and do not need at that age. This can be dangerous. It is also dangerous for a slightly higher age group – the teenagers. It stimulates all the base feelings in them causing them to neglect their studies and lose their way. It is very necessary that a strategy be devised to tackle this menace in a foolproof way.

**LAW AND ORDER ISSUES AND SECURITY CONCERNS**

One of the evil effects of cyber civilisation is E-terrorism. E-crimes and hacking of websites and pasting unwanted things on the hacked websites pose a challenge to be tackled. The IT Act has provisions for penalty / punishment for hackers. Further Govt. of India has established CERT-IN (Computer Emergency Response Teams) to advise people about the steps to be taken for security of their computer systems. However, as cyber civilisation spreads, cyber crimes also assume larger dimensions; therefore, it is important to emphasize cyber ethics.

**CONCLUSIONS**

Cyber civilisation empowers human beings with knowledge and this provides opportunities for economic, social and cultural development. New strategies are to be further developed to tackle evil effects of cyber civilisation like E-crimes, health hazards etc.

**ACKNOWLEDGEMENTS**

The authors wish to thank the officers of Department of Information Technology and other related Departments for sharing their valuable experience in connection with IT for masses. The interactions with industry representatives were enlightening and thought provoking.

**REFERENCES**


MISNOS: CIC using Multi-Lingual Information Services Network Operating System (MISNOS) and An Integrated Networking System (INS).

Humanised Civilization : Selfless human services for stress-free life

Cyber Civilisation : Computer Services as human companions.


Figure 1: A day in the life of Cyber Civilised society.
[Adapted from MINOS Technology Presentation]