

USE, MISUSE AND ABUSE OF INFORMATION

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INFORMATION

Information is data presented in a form that is meaningful to the recipient. It has real or perceived value to the user and adds to what he/she already knows about an event or an area of concern. It must tell the recipient something that was not previously known or could not be predicted. In other words, it adds to knowledge but must be relevant for the situation in which it is applied (such as deciding what action to take to make the most of an opportunity or to deal with a problem). The lack of knowledge (i.e. the absence of information about a particular area of concern) is uncertainty.

INFORMATION SOCIETY

We continue to evolve further as an information society. During the 1980s, trend watcher John Naisbitt, in his book *Magatrend: Ten Directions Transforming Our Lives*, emphasized the occurrence of an information explosion. The most dramatic of Naisbitt's trend is the recognition that we have been converted from an industrial society to an information society. Our economy is now built on production, management, and the use of information. Since countless companies are devoted to the production of information it is those that acquire and use information more efficiently and effectively that will be successful at the expense of those that do not.¹

Majority of workers today are knowledge workers (i.e. they spend their time creating, distributing, or using information). Many experts estimate that nearly 70% of the American work force is employed in such knowledge worker positions as bankers, stockbrokers, computer programmers, accountants, market analysts, and insurance agents. They have been participating in the transformation of a society which started as an agricultural society, became an industrial society, and is now emerging as an information society.

An attribute of information is that it adds to relevant knowledge, reduces uncertainty, and supports the decision making process in an organization. We are all users of information, whether for leisure or for work and whether or not we are also creators of knowledge or of information products. The user community is concerned about information and its creation, communication and use.

LACK OF AWARENESS

However, there is general lack of knowledge about the use, and the value of electronic information services among some users. Many of them still focus on the existing, traditional and familiar sources like printed media and personal contacts. Information from such contacts should, however, be used as a supplement to the more objective in-

formation retrieved from recognized sources. The European users obviously feel that there is the need for highly condensed, easy-to-grasp, practical information in electronic format. This type of information, however, is not easy to obtain, since it is not adequately provided for by existing information services.²

They have found that there are deficiencies in the information offered at three different levels:

- a. The information searched for is not available (there is some superstition around saying that all relevant information is available in electronic format).
- b. The information offered is not user-oriented (not every user is capable of understanding some hard core bibliographic references in MARC format).
- c. The information offered is not complete (full-text/original sources are expected by many contemporary users. In general users experience these deficits as market barriers caused by the supply side).

LACK OF NETWORK CAPACITIES AND LACK OF USER-FRIENDLINESS

In some less favoured regions network deficiencies caused many problems, however in recent times these seem to have been solved. In Europe many users thought that usage of electronic network systems could be higher if the services were made more user friendly. The old problem of user-friendliness, however, is not an easy one. Many definitions have been proposed, but gen-

erally, a system may be characterised as user-friendly if it is easy to learn, and use it effectively and satisfactorily.³ For example, the World Wide Web (WWW) is easy to learn and to use, but only up to a point. Professional use implies what could be called "Web Information Literacy".

A recent survey has pointed out two main components; knowledge (about information and the internet) and innovativeness. It was found that:

- Librarians who are more knowledgeable about the internet will have more positive attitudes toward the internet and will use it more than librarians who are less knowledgeable.
- Librarians who are innovative will have more positive attitudes towards the internet and will use it more than librarians who are not innovative.

While innovativeness is merely a sort of creative intelligence in the individual person, knowledge may be increased and modified to a great extent by means of training.

To most users a shortage of time to find and digest information is the real obstacle to meeting their information needs. Present trends in information development have opened up a great deal of the world to people through various means especially through the internet - the information "super highway." Free flow of information by itself is important if the world has to advance. What appears crucial, however, is the method of use of information. Without doubt much of the information

that people receive is inappropriately used, or simply either misused or abused.

The US Vice-President Al Gore has put forward 5 principles in global information infrastructure development. These are private investment; competition; flexible regulation; non-discriminatory access; and universal service.

Yet these are the same reasons why the abuse and misuse of information are gross and pronounced. For example, competition knows no bounds and drives people to all sorts of oddities in the acquisition and use of information.

THE AFRICAN MATRIX

The African continent has the least developed telecommunication network in the world. The International Telecommunication Union (ITU) indicates for the African continent in 1994, a teledensity of 1.6 (45 in Europe) and 1.2 outside the large urban centres. These numbers are much lower in sub-saharan Africa (South Africa is the exception) where the number of telephones is lower than in Manhattan. The telecommunications infrastructure is insufficient, not well adapted to the need of the African environment and unequally distributed on the continent. Most of these equipment are concentrated in urban zones leaving out the rural area where most of the population live.⁴

The most recent survey shows that 40 African countries have full connection to the internet and these are mainly located in the Northern, Western and Southern parts of the continent. A full internet connection means the users can

take advantage of networking services such as e-mail, conferences, newsgroups, distribution lists, remote log-in, File Transfer Protocol, (FTP), gopher, Wide Area Information Servers (WAIS) and the Web. Some other countries are also connected to other networks such as BitNet, FidoNet and UUCP with which an internet connection is possible.

OBSTACLES AND BARRIERS TO THE DEVELOPMENT OF ELECTRONIC COMMUNICATION NETWORKS IN AFRICA

The exchange of information is the first objective in the process of connecting to the internet. Consequently, countries must come to terms with the fact that access to information and information sources forms the basis of this technological developments. Even though the internet is an open environment through which users get in touch with the rest of the world it has its own problems and limitations. Beyond the language barrier, the internet raises important cultural issues. This means that some elements of information related to the culture of some countries might offend either the religious or political agenda of some governments and be unacceptable to the people in question. In such a situation the tendency will be for the people to oppose whatever it stands for and thus generate some resistance towards it.

Nevertheless, these elements should not be the reason for over-regulation or restricted access to communication or information dissemination technology. Appropriate measures should be taken

to avoid "culture shocks" via electronic networks. Training and consultation should also be applied to demonstrate the benefits of sharing information and communication in societies that lack this "information exchange culture".

The second difficulty concerns the inadaptability of the infrastructure. In most African countries, the unavailability of telecommunications infrastructure slows down and delays the development of this technology. Some countries lack the basic network infrastructure upon which telecommunications services can be developed. Day-in day-out scientists, researchers, and the general population are confronted with and have to cope with power outages and surges, unreliable telephone circuits when available, low availability of high band width digital systems etc..

However, poor infrastructure and technology are not insurmountable barriers in the development of networks and the internet. When terrestrial equipment is not usable or non-existent, new technologies such as Very Small Aperture Terminal (VSAT) and Packet Radio allow connection to electronic networks. Terrestrial packet radio allows the communication of two computers via radio. Remote stations can form a network that can be connected to other networks. Packet radio with Low-Earth-Orbit satellite (LEOsat) is another attractive technology because of the small size and the low cost of VHF technology. The satellites store messages from ground stations and forward them when they are over the receiving ground station thus making the tech-

nology another interesting and practical way of transmitting data. The VSAT technology allows for the purchase of space segments and connection to the internet through providers anywhere in the world. Data are transmitted from little satellite dishes to data transmission centres via satellites in geostationary orbit.

The third element that needs to be addressed is the human factor. The introduction of new technology has always brought up important human issues in developed and developing countries. Qualification and adaptation of individuals are necessary steps in the development and diffusion of new technologies. Users and future users must be able to use the newly received and available information. Africa has the highest information level of illiteracy in the world, and since human resource is a key element in the sustainable development of information and communication infrastructure, as well as their success, then in countries where there are insufficient pool of experts the result is that they are unable to organize and develop reliable information systems. This lack of qualified personnel also causes a lack of training of users.

Most of the institutions and professionals involved in the early development of networking in Africa had problems in coping with unavailability of local expertise. Even though they recognise that technology, infrastructure, and equipment are existing obstacles these were not insurmountable particularly with appropriate training and management of network project.

The development and installation of new information technologies imply a level of financing that sometimes goes beyond the available resources of African countries. The dedication of some individuals, the availability of funds and loans and, above all a change of perception among political leaders towards the impact of information technology are essential elements contributing to the appearance and development of electronic networks in the poorest nations.

Underlying all these problems is the political issue. Many recognise that key problems are not technical, cultural or financial, but lie in political institutions. Some African governments are regularly putting in place rules and regulations that impede the growth of this sector (eg. over-regulation and imposition of high taxes on imported telecommunications equipment, etc.). In some countries new independent service providers are not welcome since the telecommunication sector represents an important source of revenue to the government. Governments are also cautious about full-scale implementation of telematics since they are aware of the power of the internet and the likelihood that some people may use them to publicise and spread sensitive or embarrassing information about them. These obstacles make access to information relatively impossible for potential users of the technology.

RESEARCH

Electronic networks provide easy access to information that hitherto would not have been available to several countries

on the continent. Databases, and other important websites could be browsed, searched, etc.. Again, most of the best libraries in the world are available with a few keystrokes from any location on the earth to facilitate acquisition, use and exchange of information.

The issue doesn't only concern access to information outside the African continent but also touches on the control and production of African data in Africa. These networks permit African scientists to download important data hitherto unavailable to them even though they originate from African sources but have been stored in research centres and libraries in countries of the North. The technology makes it possible for the creation and development of structured information such as directories and indexes. With this tool, a large number of scientists and African researchers are able to make their writings known and distribute them electronically. In effect, electronic communication networks facilitate the global acknowledgement of African scientists.

In research centres the internet is used as a support for international discussion, and as a communication tool between researchers (writing of articles, exchange of bibliographic information, fast distribution of questions and answers, newsletters and request for information).

EDUCATION

Networks allow the contribution of new educational sources, such as database searching for class material, facilitates

discussions and exchanges between students and teachers in the same country or in another country as well as the development of educational resources. These new technologies already have an important educational role in Africa, where schools and the education system are in crisis and where the level of teaching of some science-based subjects are comparably below standard. These technologies are changing and challenging the ways of learning and acquisition of knowledge.

The development of electronic networks is preparing the African nations to react to, and to participate more actively in the fast changing world economy where the flow of free information and ideas is not only important but also serve to influence all the sectors of human endeavour.

The World Bank in collaboration with UNESCO is playing a major role in pioneering the development of information and communication technologies (ICTs) in some African countries by providing funding and training under the Information Development (InfoDev) programme. The programme aims to show governments and decision-makers the full import of ICTs to provide training. The objective is to help developing countries fully integrate into the information economy. This effort is being complemented by the measures taken by African leaders in May 1995 at the UNCEA Conference of African Ministers Responsible for Economic and Social Development and Planning. A resolution entitled "Building the Information Highway in Africa" was

signed by the Ministers. The resolution laid emphasis on information as a tool for planning and decision making as well as building of national information and communication networks and the creation of a group of African experts, (the High Level Working Group) on ICTs.

The message of all institutions and other organisation involved in development programmes emphasizes the urgency of providing Africa with ways to enter and participate in the world economy, where ICTs are a factor of economic development. However, the large number of projects raises questions regarding the duplication of effort. These projects might bring together different systems that cannot interconnect efficiently. In this regard, close collaboration between these projects is strongly recommended. This collaboration could be achieved, as suggested by an ANI report, by the creation of an African Internet Society, a clearinghouse on all networking development programmes, achieved or in progress.

MISUSE/ABUSE

1. Journalists and Politicians pry into the private lives of people unfairly. The concern here is when they delve into the personal lives of individuals. Several of such examples exist in Ghana and elsewhere.
2. Abuse also comes in with the proliferation of pornographic material to the distaste of many people accessing information through films, Internet, and so on.
3. Piracy: Information flow, profuse as it is today, is subject to abuse by

way of piracy when people use materials created by others as if they were the originators. Accessing information this way is a clear way of sabotaging the progress of technology and innovation.

However distressing arguments for these kinds of use/abuse may be, what is far more alarming is the rapid widening of access to the internet on the input side. The computer/network literature is awash with articles, columns, and advertisements encouraging readers to establish a presence on the internet with a site in the World Wide Web. Though, distressing, readers are responding to this rising chorus of persuasion in growing numbers. Consequently, the gate of opportunity to see not just the banal but the positively corrupt has grown immeasurably. Some readers may consider this an excessively bleak appraisal of the ability to do harm through the medium of the internet.⁵

CONCLUSION

The initiatives and resolutions taken by the different academic and research institutions, governments, NGOs, and some private companies show the fundamental role of information and net-

working communication technologies in the development of our social, cultural and economic environment. These technologies have become essential in the acquisition of knowledge, the exchange of ideas and development of individuals and societies. In a global economy based more and more on knowledge, and in an information age society, technologies of information diffusion become as important as any project dedicated to health, education and research. These projects, and the sustainable development of African countries, can be achieved with the creation of communication networks, which provide a way to spread and share vital information in all sectors of society.

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