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Information Science & Technology for Library Schools in Africa

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Chapter 5

INTERNET COMMUNICATION: E-MAIL AND MEDICAL RESEARCH

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INTRODUCTION

Personal correspondence has long served as a source of historical information. The long history assisting scholars for decades to understanding events and times. Electronic mail [E-mail] the most popular application in the internet enhances the personal correspondences such that it also benefits over traditional communication methods such as postal systems, fax machine and even the telephone. The internet and by implication the electronic mail have changed the promulgation and publication of scientific and medical research very profoundly in recent times. Even though there are varying degrees of agreement of importance to scholarship, a definitive body of work are testifying to the value and importance of information among scholars including medical academics. Specifically, in the Internet, data are moved around cheaply and easily as quantitative change to what happened before the advent to internet when computers were only for the initiated among authors and scientists. Communication among medical researchers is now virtually impossible without them. This paper looks at the effect of Internet communications on medical research. Special emphasis will be paid to the impact of the e-mail on scholarly research in medicine.

2. Brief history of the Internet

The Internet is a huge computer network made up of many individual computers or servers. The Internet commenced in 1969 under a contract by the Advance Research Projects Agency (ARPA) which connected four major computers at Universities in the South Western United States (UCLA, Stanford Research Institute, UCSB and the University of Utah). The Internet was designed in part to provide a communication network that would work even if some of the sites were destroyed by nuclear attack (Software, A B 2001).

The earliest Internet was used by computer experts, engineers and scientists. There was nothing friendly about it. There were no home or office personal computers in those days. Anyone who used it whether a computer professional, an engineer or scientists had to learn how to use a very complex system. While the number of sites on the Internet was small, it was fairly easy to keep track of the resources of Internet that were available. However as more Universities and organizations connected to the Internet, it became harder and harder to keep track. There were more need for tools to index the resources that were available. Peter Deutsch created one in 1989 named Archie. The command for Archie was Unix commands, and it took some knowledge of Unix to use it to its full capacity.

In 1991 the just trendy interface to the Internet was developed at the University of Minnesota. This was called a gopher after the of Minnesota Mascot, the golden gopher, the gopher proved to be very prolific and within a few years there were over 10,000 gophers around the World. An improvement of the gopher was the veronica searchable index developed by University of Nevada at Reno. It was purported to be an acronym for very Easy Rodent-Oriented Network index of computerized Archives.

In 1993 Marc Andersen and his team at the National center for supercomputing Applications (NCSA) developed the graphical browser Mosaic later, the Netscape Corp that produced the most successful graphical type of browser and server until Microsoft declared war, developed its Microsoft Internet Explorer.

Since government initially funded the Internet, it was originally limited to research, education, and government uses. Commercial users were prohibited unless they directly served the goal of research and education. This policy continued until the early 90's when independent commercial network began to grow. It then became possible to route traffic, access the country from one commercial site to another without passing through the government funded NsfNet [Internet backbone]. Delphi was the first national commercial online services to offer access to its subscribers.

A current trend with major implications for the future is the growth of high-speed connections. 56k modems and the providers who support them are spreading widely, but this is just a small step compared to what will follow. 56k is not fast enough to carry multimedia, such as sound and video in low quality. New technologies many times faster, such as cable modems, digital subscribe line (DSL), and satellite broadcast are

available in limited locations now and will become widely available in the next few years.

During the period of enormous growth businesses entering the Internet arena are scrambling to find economic models that work. Free services supported by advertising have shifted some of the direct costs away from the consumer. Services such as Delphi are now offering free web pages, chat rooms, and message boards. Online sales are growing rapidly for such products as books and music CDs and computers, but the profit margins are slim when price comparisons are so easy, and public trust in online security is still shaky.

3. Internet Communications

Definitions

Internet has been given different definitions by scholars. Some say it is one of the constituencies of *Cyberspace*. What is Cyber space you might ask? It is a name coined by William Gibson to describe the world of computers and the society that gathers round it, used to describe all information available over the Internet. There are several Windows (information networks) through which one gets information. Internet is one of such windows. For the purpose of this paper, *Internet* is a worldwide network of millions of computers linked together by telephone line worldwide.

- It links thousands of Universities, governments and corporate networks including CompuServe and American on-line (AOL), which hosts hundreds of databases.
- It is the largest system serving E-mail, message-essentially "a store and forward system" Communication on the other hand, is it is a "means of communicating, as of a highway or passage, also a telephone, telegraph, of radio system, etc." *Internet communication therefore refers to conveyance of information or correspondences that take place within the Internet.*

Requirements essential for the participation in the global inter communication

- a. Requirement essential for the participation in the global inter communication are need for information. Considering the amount of money involved in setting up e-mail, a person intending to set up the facility must consider cost-effective and beneficial
- b. A computer with multimedia facilities, which will enable it to play sounds, show video and games.

Modulator-demodulator (MODEM), Browser(s) software that enables a computer to access websites.

- c. Communication Access, this could be a dial-up telephone line.
- d. A wireless telephone capable of data and voice transmission.
- e. A capable communication system, and/or a microwave satellite communication system.
- f. Internet connectivity with any of the Internet Service providers (ISP's). Most of the computers on the net are personal computers. More recently, smaller devices like palm pilot and palm VII have facilities to access the web, at least check e-mails, stocks and whether reports. The current trend is towards Internet access via the use of mobile phones (Anne, E. Bridges and Russell T. Clement (1997).

4. ELECTRONIC MAIL

Definition:

- Electronic -mail (E-mail). Is a component of the Internet through it can be sent : the Internet (Millekelsen, E.B. 1997). Simply, it is a system by which persons belonging to a network can use their Computer to send and receive messages.
- It is also a service that allows us to send and receive messages to and from any location in our Country or the World in so far as the person we are sending the message has an e-mail address.
- The message sent could be text only, or it could be binary file such as graphics and audio files. E-mail is a core Internet application used for communicating with others. Its constraints and capabilities are largely determined by the least common denomination of the two. So it is usually more effective to raise your overall functionality by giving your correspondence better software (Kennedy, Angus J. (1999).

E-Mail programmes

- To send e-mail you need an e-mail programme of which there are many both commercial and shareware.
- Most e-mail programmes let you compose, send and receive/reply to messages.

Understanding E-mail addresses' format

- E-mail addresses point to a person whose account is on a computer.
- An e-mail address breaks neatly into two sections-the name of the person you are sending the mail to (User name) which is before the @ sign and the host name which is after it.
- The host name is similar to the street, town and country part of a conventional postal address. Thus, the standard e-mail address consists of name. e.g.

E-mail address usually has

- This symbol divides the address into two parts on the left part; a number, a full name, a code or an abbreviation that represents the owners of the e-mail account is written. In the above address, anibegwam is owner of the account.
- The right section represents the name of the ISP where the account is connected. i.e. Linkserve is the ISP where anibegwam is connected.
- The abbreviation COM means Commercial, like any business company
- Sometimes instead of COM you may have Org-non-profit organization.
- Mil for military institution
- net for company that provide network services
- gov for government institutions; and
- edu for educational institutions
- ng represents the Country in this case Nigeria.
- UK United Kingdom It-Italy; fr-France; br-Brazil, za-South Africa; ca-Canada. Only the USA has no abbreviation included in its e-mail. This is because as the first Country to introduce the Internet they kept the right not to identify their nation.

Benefits of E-mail

Several benefits abound for the health science professional that uses the e-mail. These include, A letter routed electronically has enormous advantages over conventional mail

- Speed of its delivery -compared to the conventional mail, the postal service is a "snail-mail,
- Unlike a letter printed on paper, an e-mail message can be stored on your computer disk. This means you can handle it like any other file, putting it into your processor for editing or printing, or perhaps forwarding it to another person you think would be interested.
- It is easier to use a brief computer command to package and send message than to look up a persons address, print out the letter address and envelop and send the whole thing off with a stamp.
- E-mail is immune to distance -it can go anywhere in the world as long as they have a computer connected to the Internet.
- One e-mail message can easily be sent to multiple sites (e.g. as the case in user groups) as cheaply, quickly and easily as to one person.
- E-mail allows one to handle business when one has the time. This is because messages are stored up in the computer for you to access at your own time unlike the telephone, which you must answer at the time it is ringing, or miss the call.
- E-mail is not limited to textual data. Once can send documents, graphics, sound file, software, indeed any file along with your e-mail, provided both you and the person you are sending the files to have e-mail programmes which support these "attachments". Many modern e-mail programmes make sending such files effortless and deal with all the complicated bits for you.

5, How to search for Medical information

Medical questions from health professionals can cover a wide variety of topics. Changes brought about by access to digital information can allow those topics to be explored in great details. Since medical questions can be highly specialized, it is important to use reputable dictionaries guides to affirm, spelling and nature of a medical query several good dictionaries and guides exists. (Kellerman Fi'ank and Mary Zammerella 1998) recommend Merck Manual and Current Medical Diagnosis and treatment

Merck manual can be found on-line at- Print resources in the holding of the library can also be consulted. This P includes Dewey Decimal Library of Congress Classification and National Library of Medicine Schedule. A broad based Internet search using logical combination of search engines and directories. However when the search engine is not used properly it can produce extraordinary number of irrelevant lists. At the end of the search, the searcher should evaluate for accuracy, objectivity, authority, currency and coverage.¹¹

Many Michael reference pertain to statistics. For such statistivcs on individual disease several data bases have been developed by public and private agencies. These tools include.

- ◆ Brown University Online Catalog at
- ◆ On diseases
- ◆ National Cancer society with the abundance of medical information in the Internet. It is important for health professionals to familiarise themselves with the possibilities in order to take advantage of these information resources.

A simple and time-consuming way to find lots of health related links is to access a general search engine like yahoo, select the category, science, click on medicine and pull up almost 100 categories. However, a more specific approach will be to direct health professionals to medical website as MEDLINE, one of the jewels of medical research

6. Advantages of E-mail to health professionals

E-mail could assist the health professional in the following ways

- Two-way conferencing with professionals of similar discipline
- User could subscribe to any of several electronic medical journals, newsletters and periodicals published on the Internet.
- User could even post interesting but challenging cases on the Internet for other health professionals contributions or education and this especially in war torn areas could attract the attention and of medical experts needed but not available at the war front.
- User could submit manuscripts of journals and discuss research with funding agencies or submit proposals.

7. Uses of Internet Access in Medical Libraries

Medical Libraries that establish a server and a website may offer any combination of the following to enhance their services to users.

- a. Basic Library information such as hours of operation, contact people addresses and policies. There is an opportunity to make information more interesting than through other media such as through the inclusion of pictures of staff, a short sound file, or direct e-mail which allow the user to send messages.
- b. New ways of access to library facilities such as
 - book request forms that can be completed by users and then converted into catalogue data.
 - remote access to catalogues
 - improved IPAC search interfaces
 - showcase to library resources, such as library forms or a video of story time electronic texts, data bases and other Internet resources (this can be designed for specific user groups, such as pharmacists, physicians, technologists etc.
- c. Interactive homepages offering facilities such as
 - fill-in forms to be used for feedback and services
 - requests for purchases, reservations of library materials and general library suggestions
 - inter library loan and circulation
 - reference questions.
- d. Link to remote information and connection to information resources around the world. Library staff can identify hot lists and book mart file of frequently used resources for support in answering frequently asked questions. In addition, some library operations can be supported by the use of the Internet.
- e. These include staff development which offers the staff the opportunity to be involved in the developments in this field.
- f. *Acquisitions*, the Internet provides access to databases provided by publishers of books and journals booksellers and journal distributors.

- g. *Catalogue and classification*, web pages can be used to distribute and access rules, schemes and recommendations concerning cataloguing and classification.**
- h. *Inter library lending and document delivery*. The use of networked public access catalogues of other libraries, document delivery services.**

The e-mail window varies depending on which search engine one is using. However, they are basically based on the principle of displaying inbox with the new mails, compose message for writing new mails send mails for dispatching the mail etc, the implication is that if one is familiar with a particular search engine e.g. Yahoo, it will not be too difficult to send or receive mail from another e.g. Hotmail. For the purpose of illustrating the above outlook express will be used to demonstrate an e-mail outside the Internet. Each time you open the mail window outlook express checks to see if you have any mail. If there is mail waiting, it downloads it from the server (if you are on-line at the time).

- If you remain on line, the mail window outlook express will check for your mail periodically and inform you if anything new has arrived.
- It does not however, download this new mail automatically, to retrieve mail from the server check the send and receive mail button or ICN.
- The mail window is broken into three "window panes-compose message, send and receive, and address book for storing addresses.
- The mail folders window contains a hierarchical list of mail folders and is divided into the following columns:
 - **Inbox**
 - **Outbox**
 - **Sent items**
 - **Deleted items**
 - **Drafts**
 - **Admin Inbox**
 - **Clinical Science Inbox**
 - **Dentistry Dept Inbox**

- ICH & PC Inbox
- Medlag Inbox
- Pharmacy INBOX
- Provost Inbox
- Provost Personal Inbox

New mail can be created by using the menu items " Compose Message".

Here you will find the following; :

- ◆ TO: - the recipient
- ◆ CC:- carbon copy recipients
- ◆ BCC:- blind carbon coy recipients
- ◆ Subject:- the topic.

National Cancer Society with the abundance of medical information in the Internet. It is important for health professionals to familiarise themselves with the possibilities in order to take advantage of these information resources.

A simple and time-consuming way to find lots of health related links is to access a general search engine like Yahoo, select the category, science, click on medicine and you pull up almost 100 categories. However, a more specific approach will be to directly access medical website as MEDLINE, one of the jewels of medical research¹⁵

8. Conclusion:

The Internet has revolutionized communication the world over in the last decade. A great deal of *information* is available to assist in patient education and medical decision making. The e-mail, a major component of the Internet has enhanced scholarly communication generally and medical education and research in particular. Once the vital requirements for establishing an e-mail are met, the next step is just to use it yourself- that's the only way to really become comfortable with e-mail or any other aspect of the Internet. It is also the way to benefit from the advantages that it has to offer.

REFERENCE

1. Olusesi Biodun & Clement Nwawolo (2000) *Doctors online: the pleasure of surfing the Medical Internet* Nig: Otonet. Afri Inc. p.I-135.
2. Millekelsen, E.B.[1997] The internet as tool in nutrition *Scandinavian journal of nutrition*. Vol. 14. 130-134.
3. Luk:esh, (2000) E-mail and potentials loss to future Archives and Scholarship or Dog' that didn't bark. dk/issues/issue 4-9/Lukesh March p 109-117.
4. Bridge, Anne & Clement R.T. (1997) crossing the threshold of Rocket mail. E-mail use by US. Humanities faculty. *Journal of Academic Librarianship*.march.p.1 09-11
5. Sofoluwe, AB (2001) Information technology for medical researches presented at a symposium by biomedical communication. College of Medicine University of Lagos.
6. Howe, Walt (1999) *A brief History of the Internet*,
7. Barom Rose *Message Introduction to Internet*.
<http://strom.com.email/chap I.html> pI-II
8. Adediyi .O.O. (2001) *Information sourcing on the Internet Libraries & Librianship in Nigeria* edited by S.D. Alanlokan
9. Stanley, Solomon, [1998] "*Corresponding Effects: Artless writing in the Age of e-mail*. *Modern Age* (Surname) pp.319-323.
10. Kellerman, F & Mary Zammerelli [1998] How to search for Medical information. Presented
11. *for the Rhode Island conference Round Table* on January 29, 1998. .
12. Anne E. bridges and Russell. T. Clement, [1997] "crossing the threshold of pocket mail; e-mail uses by U.S. Humanities faculty". *Academic Librarianship* (March) pp 109-117. I
13. Strom, Rose (1999) introduction to Internet message
14. Kennedy, Angus J. [1999] *The Internet: the rough guide*. London: Rough Guides Ltd, 5p
15. Ibib. Opcit.
16. Miccioli, G. *Researching medical literature on the Internet* – 2000, update