Electronic Mail Systems for IAMSLIC members: Which to choose?

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Abstract

This paper deals with electronic mail systems for the use of IAMSLIC members. An attempt is made to describe a few of the various systems available. The network world is divided into two parts, commercial and non-commercial networks. The difference between commercial networks like OMNET and DIALMAIL and Non-Commercial networks like BITNET, ARPANET and USENET is discussed. The services of these networks are evaluated according to the specialized uses of IAMSLIC members.

INTRODUCTION

In December last year I wrote a short note on electronic mail in the IAMSLIC Newsletter and asked if anyone was interested in using such a service. In the May 1987 newsletter there were two responses, one from Eric Marshall and the other from Allen Varley. I also received a letter from OMNET wherein they introduced their services. No contacts were made on DIALMAIL and USENET. Nevertheless, the interest seems to be there, as there is a whole session dedicated to electronic mail at this annual conference. As I started the discussion, I decided to follow up the response and therefore I am writing this paper.

It is predicted that by the end of 1987 seven million electronic mailboxes will be in use, with 1.3 million public users and about 5.6 million private users. Electronic mail systems fall into two major groups: Public and private mail systems. Further division is possible in the private sector but that’s outside the scope of this paper. I will further subdivide public electronic mail systems by distinguishing Commercial and Non-Commercial systems. Systems like the big university networks in the United States and in Europe are Non-Commercial. Systems like DIALMAIL, OMNET and ALANET on the other hand are examples of Commercial networks.

In an electronic mail system an individual is able to communicate in three different ways:
- one-to-one: he can send a message to another individual;
- one-to-many: he can send a message to a bulletin board;
- many-to-many: he can participate in an online conference.

The Non-Commercial Networks

John S. Quarterman and Josiah C. Hoskins describe computer networks in their article on *Notable Computer Networks* published in 1986. They divide them into five kinds of networks: Research networks, Company networks, Cooperative networks, Metanetworks, which are non-commercial and the Commercial networks which I will discuss later. The Non-Commercial networks comply with Quarterman’s and Hoskins’ definition: “A computer network is a set of computers using common protocols to communicate over connecting transmission media.” Networks such as BITNET, ARPANET and USenet in the U.S. and EUNET, JANET and others are types of non-commercial networks where each user pays his own communications bill when he sends a message. All of these networks are interconnected through computers which participate in more than one network and are set up as “gateways” between networks. Gateways also exist to the Commercial systems.

USENET is the network I know best as my institute is the “backbone” or primary site for USENET in Iceland, and most of what I say about USENET applies to the other Non-Commercial networks.

USENET is a mostly UNIX based network, in fact it is the news feed part of a bigger network, the UUCP network. It is connected through one or more gateways to the ARPANET and BITNET and therefore we are able to send messages to addresses in any of these networks.

The network carries many “news-groups” which are similar to the bulletin boards on OMNET or DIALMAIL. One of them is “alt.gourmand” which is an online cookbook! Other news-groups we receive are mainly concerned with computers. Of course there are many more groups for pleasure than the cookbook, such as several music oriented groups, groups for jokes, computer games, sports and whatever people are interested in. Besides this there are several mailing lists. For example, I subscribe to a mailing list for jazz lovers.

How do you send a message by a computer to someone far away? And how does he know that he has a message waiting for him? When you send an ordinary letter to someone, you write his address on an envelope, and the next thing you know is that you receive an answer several days or weeks later. But what happens at the post office? I think everyone knows. In the instance of electronic mail, you don’t need paper or an envelope. In most systems you are prompted for the name and computer address
of the receiver. My address on USENET is eirikur@hafro.UUCP where eirikur is my name, hafro is the name of the inhouse computer at my Institute and UUCP is identification of the network. The backbones on USENET will recognize this address and send the mail to my user area or mailbox. Another method of writing my address is \{mcvax,enea\}hafro!eirikur.UUCP where mcvax is a computer in Holland which feeds all other backbone computers in Europe. This means that all messages from the USA to Europe are received by mcvax and distributed to the backbones in Europe. Enea is a computer in Stockholm, Sweden and the two computers in the curly braces are parts of the path to me. You may choose which one you use, but you must not use both of them. Now you write your letter using your word processor in your computer and when you are finished, you just send it! It is as simple as that.

Paths must be established in order to route the message to the receiver. A path is the hops or a list of computers through which your message must go in order to be delivered to the correct address. One of my addresses given previously, for instance contains a path: mcvax!hafro.

When you have sent the letter, it goes to the next computer on the list, then to next after that, and so on until your letter has finally arrived at the computer you wrote to. Usually this takes several hours or at the most, one or two days. In fact computers come instead of the mailmen.

How do you know you have received a message? Well, in my case, I see it when I log on for the first time in the day. Then a message appears on the screen: “You have mail”.

The greatest advantage of these networks is that all you pay for their use is the communications costs. A great drawback is the complicated addressing used on these networks.

**Commercial networks**

The Commercial networks are most often based on a single computer which you must log on to check if something has been sent to your user area. In this type of system you pay for having your user area (mailbox) created and you pay for the connect time of the computer in addition to the telecommunications.

**DIALMAIL**

As you are all aware of, DIALMAIL is a part of the DIALOG information system and is intended as a method for sending timely prints from online searches and SDI’s and as a forum for communication between DIALOG users. I have used DIALMAIL
since early last year. The system is very easy to use and in fact it would be very
convenient for IAMSLIC members to use it, as I think that many of them use the
DIALOG Information Service and therefore can access DIALMAIL very easily. The
same password works on both systems. Separate logon is needed as it is not possible to
connect to DIALMAIL while using DIALOG. When searching the DIALOG databases,
you can send the prints to your mailbox on DIALMAIL and download it more cheaply
than when connected to an expensive database. You can read the prints in your mailbox
online and send immediately for photocopies, while still online, by using the interlibrary
loan form online.

DIALMAIL has mailing lists, bulletin boards and conferences, but does not support
file transfer protocols.

There is no possibility for DIALMAIL users to send a message to other electronic
mail systems, but it is possible to send papermail to be delivered by the U.S. mail. Some
user groups have chosen DIALMAIL for communications because it is cheap and very
easy to learn. The cost per hour of connect time is $12.00 and no setup fee is required,
but charges are made for storing messages.

OMNET

I began using OMNET only recently, but from what I have experienced, the service
seems very good. It is easy to use and is a very user friendly system. Addresses are in
the form of “first initial-period-last name” and therefore easy to remember. OMNET
allows telex messages to be sent and received through your mailbox and sending ordinary
papermail to be delivered by the U.S. mail.

Like DIALMAIL, OMNET carries bulletin boards and mailing lists, but no con-
ferences. The OMNET bulletin boards are a many-to-many form of communication
and therefore bear a greater resemblance to a conference than a bulletin board. The
OMNET service people are willing to set up an interlibrary loan form.

OMNET allows users to send messages to other e-mail systems. You are able to
send mail through OMNET to five other systems in the US, to Canada, Japan, Taiwan,
Sweden and Italy. OMNET has also links to BITNET, ARPANET and USENET, the
non-commercial network world.

OMNET is more expensive than DIALMAIL. Cost for an hour of connect time is US
$15.60 plus the setup fee which US $75.00 for the first mailbox and $35.00 for additional
mailboxes.

Uses

Now you might ask: What does all this concern us? How can we use these systems?
One obvious use of electronic mail is for communication between IAMSLIC members on whatever comes to mind and whenever you feel you have something to say. It does not matter what time of day you write your message, the recipient reads it when he/she is ready to do so. You need not spend time waiting for someone on the phone. The time difference between Iceland and the west coast of America is 8 or 9 hours which means that when I am ending my workday, people in San Diego are starting theirs.

There are bulletin boards running on both DIALMAIL and OMNET in the name of IAMSLIC and are ready to use by all interested members.

The greatest use I see for the electronic mail systems is for interlibrary loan requests. DIALMAIL has an option in the menu for ILL form creation. You are prompted for all items and you fill it just like you were typing the information on your typewriter.

As IAMSLIC is a relatively small group, I think that if we would choose to use USENET or some of the other Non-Commercial Networks to communicate then we would have to do it by a mailing list. Someone would be a moderator and receive all the messages and post them to everyone on the list. At least 20% of the IAMSLIC membership are employed at universities and should therefore have connections to either ARPANET, BITNET or some other network.

Finally I must tell you how effective the electronic mail systems can be in comparison to the ordinary mail. One of our scientists is writing a paper with a scientist from San Diego, California. They used the DHL service, which is a fast delivery service. It took 5 days to send the paper from San Diego to Iceland and the cost was US $100.00. Because of cost, they decided to use the electronic mail available to both through USENET. Now the delivery time dropped to 4 hours and the cost was US $5.00.

Conclusions

The uses of Commercial and Non-Commercial networks for IAMSLIC members are in fact the same: for interlibrary loans, exchange of ideas, even publish the newsletter.

The one thing the Non-Commercial networks have in favour of the Commercial ones is that you only pay the communications but no connection charges. Therefore it is much cheaper to use. You do not have to logon to another computer to send or receive a message. A drawback is that the addresses are complicated and it takes a message more time to reach you than with the Commercial systems. They are more complicated to use but they are very widespread.

The Commercial networks are usually based on a single computer which makes messages reach you quicker. The addresses are user friendly, either numbers like telephone numbers (DIALMAIL) or personal names (OMNET). Often these systems are specialized by profession; OMNET is in the field of earth sciences.
I called this paper "Electronic mail systems for IAMSLIC members: Which to choose?" and now I have tried to describe the systems I know of and how they work.

I suppose you are waiting for the answer. As you have probably noticed, I could not choose any one system. I have all of them! I am going to leave it up to you to choose the system you think you will be most happy to use.

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