Electronic Mail Across JANET

Electronic Mail

Electronic mail (e-mail) is a computer-based system for the exchange of messages, and other information. Electronic mail is the most common application in use on computer networks, allowing rapid and easy communication between individuals and groups. A person does not have to be actively using the computer to be able to receive mail; it is received by the computer and the user is informed of its delivery the next time he/she logs in to the computer. This is extremely useful when communicating with colleagues on the other side of the world as there is no need to worry about the time differences.

Electronic Mail across JANET

The U.K. academic community uses an interim mail standard known as *Grey Book*. Most machines directly connected to JANET are capable of sending and receiving *Grey Book* mail.

The commands for dealing with electronic mail depend on the make of computer and the operating system in use, but the basic concept is the same.

Each mail message contains the following fields.

> *To:* This is the identification of the person or a list of people receiving the message. This may be the user identification number or username, or it could be the person's real name.
>
> *From:* This is the identification of the person sending the message. It is normally inserted automatically by the system.
>
> *Date:* This is automatically included by the system.

The above three fields form part of the header, which is like the heading on an office memo, showing the address of the person to receive the mail message and the return address.

> *Body:* The actual text of the message, which follows the mail header.

Information Needed

To send a message to a person who uses another computer connected to JANET the following information is needed.

> *person* mailname or username of the other person
>
> *site* name of their computer, as registered in the Name Registration Scheme.

The information is usually given as

person@site

e.g.   *S.Wood@uk.ac.jnt*
        NSIN20@uk.ac.rutherford.gec-b

Future Use of Electronic Mail

The U.K. academic community plans to use the International Standards Organisation's (ISO) mail standard, ISO 10021, when there are commercial stable products available.   This standard is closely aligned with the CCITT X.400 standard being used by public mailbox suppliers.   Currently the community is able to communicate with those sites running early versions of the new standard products, (ISO 10021 and its predecessor X.400 (84)) by relaying the mail through a relay, the MHS-RELAY.

Access to other Networks

JANET connects the academic computing services within the U.K.   There are also links between JANET and many other networks, both in the U.K. and around the world.

Access to another network is via a *gateway* to which both JANET and the other network are connected.   Gateways can be used in both directions, from JANET to the other network and from the other network to JANET.   A gateway is a computer that can translate the network traffic from JANET, which currently runs the *Grey Book* mail protocol, to whatever network protocols are used on the other network, and vice versa.

The gateway may check that a person is authorised to use the gateway, and records will be kept which may be used for billing purposes.

The following gateways and relays are either completely or partly supported by JANET.

MHS-RELAY	provides access to the X.400 mail services
NSFNET-RELAY	provides access to the Internet group of networks, centred in the USA.
EARN-RELAY	provides access to the European Academic and Research Network
UKnet Gateway	provides access to the network of computers in the UK and elsewhere that communicate using the Unix to Unix Communication Protocol, (UUCP).
PSS Gateway	provides access to other *Grey Book* sites on British Telecom's Packet SwitchStream (PSS) or International Packet SwitchStream (IPSS) service.

There are different authorisation and registration procedures for each gateway, and also different methods of recharging for their use.