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The CERN Electronic Mail User Guide

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Abstract

This guide is intended for newcomers in electronic mail and for those unfamiliar with the address syntax to send mail to users on different computers on and off the CERN site. Some advice is also provided to outsiders wishing to send mail to CERN. Familiarity with basic computer access is assumed, but you need no previous knowledge of electronic mail systems. This guide is not intended for users interested in the more advanced features, but some references to more detailed information are included.

To get a copy of this Mail guide type **XFIND MAILGUIDE** on CERNVM or pick one up from the self-service section of the User Consultancy Office (UCO), reference no. DD/US/6. This guide is also available on WWW with URL (Uniform Resource Location)
ftp://dxcoms.cern.ch/pub/htc-mail/cernmailg.ps for a PostScript version or
ftp://dxcoms.cern.ch/pub/htc-mail/cernmailg.txt for plain text.
The location of the HTML version will be published in the Computer Newsletter (CNL) and in the newsgroup *cern.mail*. If you don't want to type the URL you can get to the document from the CERN home page by following the path via computing, then documentation and newsletter index. WWW users can see in the same way all the helpfiles that can be found with the **XFIND** command on CERNVM.

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Chapter 1: Selecting and Getting Started with a Mail System at CERN

You should select one of the recommended CERN mail systems based on a computer system you regularly use for your work and/or the mail system user interface you prefer. For new workstations, make sure that the Email system is correctly configured (see later in this guide for details). Then read the appropriate section to help you get started. This guide includes only simple information to help you to read and send mail.

1.1 Which mail system to use

1.1.1 Background

A number of incompatible mail systems are in use at CERN which require interfaces (gateways) to communicate with each other. In the longer term the gateways can perhaps become obsolete by introducing mail systems conforming to the international standards. Until then we have selected recommended mail systems for each major computer system in use at CERN interconnected via the MINT gateway. These recommended mail systems are listed below and a brief introduction to each is given in this guide.

Machine/Operating System	**Mail package**
VAX or Alpha/VMS	VMS Mail
Various/Unix	Unix Mail or Elm or Pine or native per architecture
IBM/VM	MAIL on VM/CMS
Apple/Macintosh	QuickMail
PC on Novell/DOS and-or Windows	Microsoft Mail

1.1.2 Why use one of the recommended mail systems?

They offer:

- access to the other recommended mail systems
- access to external networks
- help with problems, mechanisms for improvements in facilities
- a standard addressing format for mail

1.1.3 How to get help with problems

For general problems contact the User Consultancy Office, `user.support@cern.ch` which is equivalent to `uco@cernvm.cern.ch`, (or phone 4952).

The recommended mail systems are described in the following sections.

1.2 How to get started with VMS Mail

VMS Mail is the default mail system for VMS. It exists on all VMS systems and it is designed for communication with other VMS users, locally or across DECnet. The MINT gateway at CERN provides the facility to exchange messages with users on other networks as well.

1.2.1 Getting Started

- To invoke VMS Mail, type `mail`. (Type `help mail` to get more details).
- To read waiting messages, type `read/new` and press carriage return for each new message.
- To list a summary of saved messages, type `directory`.
- To copy the current message to a VMS file, type `extract` *`filename`*.
- To send a message, type `send` and enter an address after the 'to:' prompt. (Address formats are described below.)
- To reply to a message you are now reading, type `reply`.
- To send a file as a message, type `send` *`filename`*.
- For information on other mail commands, type `help`.
- To exit from VMS Mail, type `exit`.

The possible addressing schemes from VMS are shown below:

Destination	**Syntax**	**Example**
local user	username	`bloggs`
DECnet user	host::user	`vxcern::bloggs`
others at CERN	MINT::"user@host"	`MINT::"uco@cernvm"`
others outside CERN	MINT::"user@host.domain"	`MINT::"joey@slac.stanford.edu"`
PSI mail users	PSI%digits::user	`PSI%0123456789::smith`

PSI MAIL is an addition to VMS Mail which allows mail exchange between VMS systems across a public switched data network. PSI MAIL is only possible from a VMS hosts with PSI or PSI access installed. For further information from the VAX/VMS prompt, type `HELP P.S.I.` and if you have an Alpha architecture with Open VMS, type `HELP X.25`.

Please, note that PSI Mail costs real money if the destination address contains a '*digits*' part starting with zero as the message will be carried by a chargeable PTT network.

For further information on addressing 'others' and on PSI Mail see the section 'Addressing Mail from within CERN' in the next chapter.

1.2.2 Quoting your address to colleagues

Your address from VMS Mail systems connected to the CERN DECnet is `hostname::user`. To receive mail from other mail systems (e.g. CERNVM) you should quote your address as `user@hostname.CERN.CH`

1.2.3 How to get help with problems

If the MINT logical name is not defined on your node ask the System Manager to add `def/sys/exec mint dxmint` to the system wide login. For other problems contact the User Consultancy Office, `vxcern::uco` (or phone 4952).

1.3 How to get started with mail on a Unix system

This section appears as well in the document 'The CERN Unix User Guide'. A sophisticated mail program comes bundled with most flavors of Unix operating systems (e.g. *Mail* on Berkeley Unix or *mailx* on System V). It interfaces to sendmail, a Unix facility for mail routing.

Some Unix users prefer to use the *elm* or *pine* user interface to Unix mail. Elm (with the underlying metamail)and pine are public domain mail reading programs with multimedia capabilities. They are available on dxcern and on asis for workstation users. Information on release changes and documentation will be published in the newsgroup **cern.mail**.

In order to try them type **elm** or **pine** from the shell prompt. The most common *mail(x), elm, pine* commands are listed in the relevant 'Getting Started' sections below.

Unix workstation owners should also read chapter 3 at the end of this guide.

1.3.1 Getting Started with mail

- To send a message, type **mail *recipient-address***.
- To read waiting messages, type **mail**.
- To list a summary of saved messages in a *folder*, type **mail -f *folder***.
- To print on the screen of one of the listed messages, type **p *message-number*** or **t *message-number***.
- To reply to the current message, type **R**.
- To list the message headers in the current folder, type **h**. If the list exceeds one page, type **z**.
- To delete the current message, type **d**.
- To undelete the current message, type **u**.
- To extract the current message into a file, type **s *filename***.
- To send a file as a message, type **mail -s "*subject-text*" *recipient-address* < *filename***.
- For information on other mail commands, type **help** or **?**.
- To quit from *mail* , type **q**.

Address examples from Unix mail are shown below:

Destination	**Syntax**	**Example**
local user	username	**bloggs**
others at CERN	user@host	**pretty@cernvm**
others outside CERN	user@host.domain	**dear@math.utexas.edu**

For further information on addressing 'others' see the section 'Addressing Mail from within CERN'.

1.3.2 Getting started with mailx

The commands are similar to **mail**. For example: **mailx user@host.domain** or **mailx *aliasname***

Type the message text, terminate and send your message with $< Ctrl - d >$ or with a last line containing a single . (period) in column one.

Mail a file:
`mailx -s "subject" recipient-address < filename`

Reading, forwarding, replying, filing, sorting and editing mail are done inside the mail utility. Invoke:
`mailx`
then use any of the following subcommands:

m	send mail, invoke editor
h	header displays list of messages in your mailbox
?	help
d	delete current message
e	edit the current message
[n]	read message number [n]
[-]	read previous message
s	save current message in personal mailbox
s file	save current message to file
s [n] file	save message number [n] to file
c [n][file]	same as s but do not delete message from incoming mailbox
r	reply to current message
a	display aliases
a hd	display alias hd
q	quit mail, discard deleted messages
x	quit mail, do not discard deleted messages

Note: Ultrix, HP-UX and AIX use `r` to reply to all the people contained within the **To** and **CC:** lists and `R` to reply to the sender only. In SunOs the reverse occurs. However, the **man** pages on the different systems correctly describle the behaviour on the different systems.

By default mail uses the vi editor. Insert a line

`set EDITOR=/usr/local/bin/emacs`
into your **$HOME/.mailrc** file to change the default editor to emacs.
If you want to work with your personal mailbox instead of the system mailbox, type `mailx -f`.

Work with an arbitrary mail folder is started as

`mailx -f filename`

1.3.3 Useful facilities

From some Unix machines it is possible to check if a destination address within CERN is correct, by typing the command `mverify recipient-address` from the shell prompt, where *recipient-address* must be of the form `user@host`.

The command `mverify` for CERNVM users must be entered as: `mverify userid@crnvmb`.

Alias names of your frequent correspondants can be entered in the **.mailrc** file in your home directory in the format: `alias name address` (e.g. `alias dear you@cernapo`). Example of **$HOME/.mailrc** contents:

```
alias    hd       dob@hp9a.gsi.de
alias    um       rz02@mvs.gsi.de
alias    rb       brun@cernvm.cern.ch
alias    he       goofy@v6000a.gsi.de
alias    body     user@cageir5a.bitnet
```

Aliases may contain lists of addresses but not lists of aliases.

1.3.4 The `elm` mail system

elm is a screen-oriented public domain electronic mail processing system. In interactive use, the main header index and mini-menu of commands are displayed upon initial invocation and at any point when the program is waiting for input.

You can invoke **elm** by typing **elm** at the shell prompt.

You can easily send a mail (**m**), reply (**r**) or forward (**f**) a mail, save it to a folder (**s**) or delete an incoming mail (**d**), (**?**) to get help.
Aliases are stored in the file **~/.elm/aliases.text**, which can be edited by any text editor. After having edited this file, the internal alias database has to be updated by the command **newalias**. In the latest elm version the option **a** enters the alias menu. Editing the aliases.text file is then possible, in which case the update of the database takes place automatically. An elm alias may also contain a list of previously defined aliases.
As elm is installed at CERN, i.e. with the underlying software package *metamail* multimedia mail according to the internet standard MIME (Multipart Internet Mail Extensions) is possible using in the message body the command: **[include *filename MIME_Content-Type Encoding*]** e.g. [include /path/to/my/photo image/gif base64].
A full postscript documentation of Elm is available on dxcern, directory: /usr/local/doc/postscript/elm2.4-doc. Also on asis, directory: /asis/share/usr.local/doc/elm.

1.3.5 The `pine` mail system

pine is a mail user agent designed primarily for novice users, but it is full featured enough for processing large amounts of mail.

Like **elm** the main header index and mini-menu of commands are displayed upon initialisation and at any point when awaiting input. The help screens in **pine** constitute the main documentation, but if more information is required refer to the man pages.

pine can be invoked be typing **pine** at the shell prompt.

The major features of **pine** include: view, save, export, delete, print, reply and forwarding of incoming mail, as well as the composition and sending of mail. Use of the control keys as described on the bottom line of the main menu and following the instructions on the bottom of the screen, will enable easy use of **pine**.

It is possible to read **elm** folders through **pine** if you enter:
mail-directory=Mail in your ~/.pinerc file.

pine supports MIME, The Multipart Internet Mail Extensions, which enables **pine** to send and receive multimedia Email.

Optional features include sorting, address book and spelling checker.

For more information on pine refer to the man pages and to the file /usr/local/lib/pine.info on dxcern. Also on asis refer to the directory /asis/share/usr.local/doc/pine.

1.3.6 How to get help with problems

For online help, use the relevant **man** pages. For general problems contact the User Consultancy Office, **user.support@cern.ch** which is equivalent to **uco@cernvm.cern.ch**, (or phone 4952). For elm or pine specific questions write to **mail.support@cern.ch**.

1.4 How to get started with MAIL on VM/CMS

The MIT/Rice MAIL exec with the Columbia Mailer is the recommended mail package for users on the IBM VM/CMS system.

1.4.1 Getting started

- To send mail, type `MAIL recipient-address` (*recipient-address* formats are described in the next chapter.)
- To read mail, type `MAIL`.
- For help at any stage within a function, select the help key (PF1).

The possible addressing schemes from MAIL on VM/CMS are shown below:

Destination	**Syntax**	**Example**
local user	username	`uco`
EARN/BITNET user	user@host	`R01SRG@FRSAC12`
others at CERN	user@host.cern.ch	`pretty@dxcern.cern.ch`
others outside CERN	user@host.domain	`dear@math.utexas.edu`

Email to some popular CERN hosts, e.g. dxcern, vxcern, cernapo is possible without the domain part '.cern.ch', e.g. it is enough to type: lida@dxcern, apollo@vxcern, artemis@cernapo.

1.4.2 Useful Facilities

- The document: "A User's Guide to Electronic MAIL on CERNVM" exists on paper, obtainable from the UCO, Document number CN/AS/141.
- The MAILBOOK exec allows you to handle mail you have stored in notebooks with the MAIL command. For more information, type `HELP MAILBOOK`.
- The NAMES command allows you to set up nicknames and distribution lists. For more information, type `HELP NAMES`.
- You can tailor the behaviour of MAIL and MAILBOOK by having your own MAILUSER XEDIT macro. For more information, type `HELP MAIL PROFILE`.
- CERN Changes to the MAIL/MAILBOOK environment are documented in a pseudo command called 'LOCAL', i.e. `HELP MAIL LOCAL`.
- Information on all the facilities is available in the online HELP files. From VM/CMS prompt type `HELP MAIL` and/or `XFIND MAIL`.

1.4.3 How to get help with problems

If you need help with the MAIL exec or associated utilities, send mail to User Consultancy Office `user.support@cern.ch`, alternatively `uco@cernvm.cern.ch` (or phone 4952).

1.5 How to get started with QuickMail on a Macintosh

When receiving a Mac, connect to the network and get in touch with AS-SU operations tel. 3510 who will introduce you in QuickMail.

1.5.1 Getting started

The Email address of most QuickMail users at CERN is:

`Firstname_Surname@macmail.cern.ch`

A group of physicists that investigates Emerging Energy Technologies is reachable as:

`Firstname_Surname@eet.cern.ch`

- In order to send mail the main steps follow:
  - Select "**QuickMail**" from the Apple menu.
  - If you are not already logged on to the QuickMail system you now have to give your name and password (assigned by your group administrator).
  - The QuickMail window should now be opened and here you find a "**New**" button.
  - Click on it and select the **form** you want to use for the message you are about to send.
  - An empty mail form is now shown and you can start filling in the **Subject** and the main text.
  - When you are ready with the text and want to send the message click on the "**Address**" field at the top and a dialog box will appear.
  - If you do not have the address of the recepient in one of your address books then click on the "**Find**" button.
  - Now you can search a database for the correct address of the person you want to send the mail to. Give First Name and/or Last Name as search criteria. If the person is found you can click twice on his name and his name and address is copied into the "**To:**" field of your message.
  - To send the mail simply press the "**Send**" button.
  - In the "**Mail Log**" you can then see if the person has read the message or not. In the latter case and if your correspondent is another QuickMail user, you can "unsend" the message, if you want.
  - If you are sending to someone outside CERN then click on "**Special**" in order to give the correct address. In this case the MailCenter must be MACMAIL and the zone should be ETHERNET. In the address field you then type the foreign address (e.g. username@cernvm).
- To read an incoming message click twice on the message in the main QuickMail window and the message will be opened for reading.
- To reply to a message click on the **Reply** and finally on the **Send** buttons.
- To forward a message click on the **Forward** and finally on the **Send** buttons.
- To include a document in a message, click on the **Enclose** button. A list of folders is displayed. Choose one and click twice. Click on the file needed and on **Enclose** . Click on **Done** to confirm. In general, enclosures other than plain text only work if the recipient is on another QuickMail system or on Microsoft Mail as explained in the section 'Document Interchange Possibilities via Email' further on.

1.5.2 How to get help with problems

If you need help with the QuickMail or associated utilities, send mail to `postmaster_MIS@macmail.cern.ch` (or phone AS-SU operations tel. 3510).

1.6 How to get started with Microsoft Mail on a PC

This section is adapted for the needs of this guide from the document 'A Guide to Personal Computer Networks at CERN', which is available from the UCO. Microsoft Mail is called MS Mail for convenience further in this text.

1.6.1 Who can use MS mail

You must have a Novell account. Your home directory Novell server must have a MS Mail post office. You need to request a mailbox in the post office from your local Novell Supervisor. It is only recommended to have one mailbox per person (not one on each server where you have an account). General purpose accounts are not allowed to have mailboxes (e.g. GUEST, TRAINING) for security reasons.. The mailbox name must be the same as the Novell account name.

1.6.2 About MS mail applications

Normally you should use the Windows version of MS Mail. However, it can be accessed with DOS applications as well:

```
mail [mailbox]                Enter DOS mail

newmail [mailbox]             Check if new mail

gomail postoffice [mailbox]   For users with multiple mailboxes
```

The DOS applications are only compatible with a subset of the functionality in the Windows version (e.g. the DOS version understands the Inbox but not the other mail folders).

You will be prompted for mailbox password each time you use a mail application to access your mailbox. This password is in addition to the password protecting your Novell account.

1.6.3 First things to do

The mail icon The Mail application is in the Mail group. You have to install the Mail group using the More Group icon in the Applications group. Then you will see a README file which is the online version of the 'Guide to Personal Computer Networks at CERN'.

To attach Word documents to your messages To be able to send a Word document as an attachment, you need to enter the Word menu "Tools" "Options" "General" and check the option "Send Mail As Attachment". If this option is not checked, the document will be sent as text without formatting information.

Create the MSMAIL.INI file Create a MSMAIL.INI file in your Windows directory. Use the Icon that is available in the Mail group.

Start Microsoft Mail Use the Icon that is available in the Mail group.

Change your password Please change your password once you have got a mailbox. A mailbox without password can be accessed by other mail users in the same post office (same home directory server).

To change your password select Mail Change Password.

The post office administrator can reset the password if you forget it.

You do not have to use the same password as the Novell account. The password will not expire, but you should change it at regular intervals.

Automatically starting MS mail To automatically run MS Mail upon entering Windows you should copy the MS Mail icon to your startup group and set the minimized property.

To copy the mail icon hold the CTRL key down and drag the icon to your startup group.

To set the minimized property: select the mail icon in the startup group; from the Program Manager select "File Properties" and check the "Run minimized" check box.

When you subsequently enter Windows, MS Mail will automatically start and you will be prompted for you mailbox password (the mailbox name is always defaulted to the same as first time).

Mail Options The "Mail" menu contains an "Options" command from which you can change some automatic mail features e.g. how often MS Mail checks for new mail. Check that the options are set as you want them.

1.6.4 Using MS Mail

Mailbox Size When you delete mail from your mailbox the actual size of your mail box remains the same. You will eventually have disk space problems unless you both delete unwanted mail and "compress" your mailbox. MS Mail will automatically start to compress your mailbox after some minutes of idle time (if you let MS Mail run and do not use the PC for a while). To manually compress your mailbox:

1. Start MS Mail 2. Type your password but DO NOT press Enter 3. hold the F5 key down and press Enter 4. Continue to hold down the F5 key until a new dialog-box appears.

Sending Mail To send mail either click on the *Compose* button on the control bar or select "Compose Note" from the "Mail" menu. The Send note window appears. It is recommended that you fill in the "To" and "CC" fields by selecting the "Address" command button from the control bar. If you choose to type a name it must be exactly as the name is in the address book.

Note that you cannot type in directly addresses in the `user@host` *form.* To send mail to non MS Mail users (Example in the Internet) who are not in the address book, type their email address in the following format:

`[smtp:user@host.domain]` E.g. `[smtp:roberts@cernvm.cern.ch]`

Mail Notification If you iconise MS Mail instead of exiting, the mail icon will indicate if you have new mail by beeping and appearing with mail in the letter box. If you have sound configured for Windows, it is possible to configure a voice or chime as well!

The Address Book The address book lists all the people that you can send mail to.

To access the address book select "Mail" "Address Book" or if you are sending mail, click the "Address" button.

The Global Address List When you access the address book the Global Address List appears. It contains all the addresses of everyone who is registered as an MS Mail user and people's preferred mail address from the EMDIR database. If an MS Mail user does not set their preferred in EMDIR to their MS Mail address then they will have two entries in the GAL. We recommend that your MS Mail address is also your preferred mail address.

Everyone can change their entry in the Global Address List by using EMDIR on several heosts (See the relevant section in chapter 2).

People are listed with first name in lower case and last name in upper case. The list is sorted by first name.

Other Address Lists If you click on the address book icon you can select a different address list or your personnel address book. Apart from the Global address list; there are:

- Your post office's address list - listing only those MS Mail users registered at your local post office.
- Other post office's address lists - listing MS Mail users registered at other post offices.

- The SMTP gateway list - listing users external to MS Mail, added by the mail administrator (e.g. EMDIR).

Your Personal Address Book Your Personal Address book is only available to you. Initially it is empty, however, anyone that you send mail to will automatically be added. If you do not wish this to happen change the appropriate option by selecting "Options" from the "Mail" menu.

You can manually add people to your personal address book by selecting their name from the global address lists and clicking on the Personal Address book icon. If the person does not appear in the Global Address list you should fill out a new card .

When you fill out a new card you will be asked what kind of address you wish to add, select "SMTP" if appropriate.

Entries in the Personal Address Book (PAB) are not automatically updated. This also applies to entries in your PAB which has been selected from the Global Address List (which is regularly updated). The reason is that the PAB has it own copies of addresses instead of references.

You therefore need to maintain your PAB as people change their mail address. To make this work easier (but not too easy!) you should use the command Check Addresses in PAB in the Mail menu. This command will check your PAB against the GAL and generate a report of duplicate entries and strange addresses. Note that some of the problems reported may not be problems at all (do not trust it blindly!).

SMTP If you select SMTP, you will be asked for an "Alias" and their "Address". In the alias box type in the name that you wish to appear in the address book. This is usually the persons name in the format firstname LASTNAME (NB this name will appear on mail that you send to the person). In the address box type the persons full email address, e.g. `bill@microsoft.com` or `roberts@cernvm.cern.ch`. When you have filled in the new card click on the PAB icon to add it to your card file.

Email addresses of people connected with CERN can also be looked up via EMDIR available in the "Oracle Accessories" program group.

Who am I To find out your MS Mail address: select your name from either your Post Office's address list or the Global address list; and click on "Details". Addresses of MS Mail users are in the format:

`mailbox@postoffice.msm.cern.ch`, for example: `roberts@ps.msm.cern.ch`

1.6.5 How to get help with problems

If you need help with MS Mail or associated utilities send mail to `nice@cern.ch` which is equivalent to `nice@dxmint.cern.ch`.

1.7 Document Interchange Possibilities via Email

This section appears as well in the document 'Document Interchange Possibilities at CERN', available from the UCO.

In general a file transfer protocol should be used instead of Email for the following reasons:

Document size The formated documents especially if they include images and moreover if they are PostScript files are very large. In most cases Email messages have to cross a number of relays or even gateways (hidden by the uniformity of the address format `user@domains`) before they reach the destination. Therefore, body truncation, fragmentation or even rejection might occur as there is no common size limit across Email protocols.

Content type The most commonly used Simple Mail Transfer Protocol (SMTP) can handle 7-bit ASCII data only. Thus, accented characters, alphabets other than US-ASCII and binary data (naturally 8-bit) get truncated [1] when crossing a SMTP relay/gateway unless :

- either the sender explicitly runs the 'uuencode' program before sending the message and the recipient (recognising the uuencoded data by the 'begin' statement at the beginning of the message) runs 'uudecode' hoping to restore the original data format (not always possible between platforms),
- or a more sophisticated mail reader encodes 8-bit message contents into 7-bit and a program of similar functionality exists on the recipient end. More specifically:
  - MS Mail enclosures between PC's can be exchanged without problem. When a MS Mail enclosure crosses the SMTP gateway it gets automatically uuencoded. MS Mail messages should include bodyparts with accented characters as enclosures (instead of the sender simply typing the text while composing the mail) to make sure that they will be correctly deployed at the recipient end.
  - QuickMail enclosures between Macintoshes can be exchanged without problem. When a QuickMail enclosure crosses the SMTP gateway it gets automatically uuencoded. QuickMail messages should include bodyparts with accented characters as enclosures (instead of the sender simply typing the text while composing the mail) to make sure that they will be correctly deployed at the recipient end.
  - Enclosures can be exchanged between MS Mail and QuickMail with a use of a CERN-developed program provided the Mac and PC are registered at the level of the MS Mail gateway. For CERN internal mail no registration is necessary. Outside CERN users should send a request to `admin@smtpgw.msm.cern.ch` including the domain name of the external QuickMail community. If messages are autoforwarded from other systems (VM, VMS, Unix) to MS Mail or QuickMail then the above inter-ex-changeability is not available; therefore PC and Mac users should register in EMDIR their PC or Macintosh preferred Email address, if they want to enjoy the additional functionality of the relevant Email systems.
  - Mail reading programs claiming to be conformant to the Multipart Internet Mail Extensions (MIME) standard (mostly public domain, a few commercial ones for the moment) running on almost any Unix platform provide similar functionality between Unix systems. Currently MIME requires the use of a 'Content-Type' header where the ISO-8859-x (for the character set used) is explicitly mentioned. Thus the mix of different character sets within the same text is not convenient. If QuickMail and MSmail become MIME conformant too, then all these content types will be exchanged between Mac, Unix and PC mail readers.
  - Mail from/to VM and VMS mail is US-ASCII only.
  - Security consideration! Beware of receiving binary files (check the file type[2] where possible) that might hide harmful programs.

[1] some places support 8-bit non-standard SMTP

[2] e.g. `.EXE`, `.COM`, or `.BAT` on PC, executable files on Unix, *etc.*

1.8 Using Email to send faxes

An Email-to-fax gateway pilot service is offered for CERN official users only. You can send an Email message containing plain text or a postscript file to a fax destination using the following addressing scheme:

FirstName.SurName@FaxNumber.MyDivisionFAX.CERN.CH

where:

FirstName.SurName: The full name of the fax recipient as you want it to appear on the fax cover page.

FaxNumber: The recipient fax number with an additional leading zero if outside CERN, e.g.

```
7155           is a fax number in CERN
01234567       is a fax number in Geneva
10FFFFFFFF     is a fax number in France (province)
101614FFFFFFF  is a fax number in France (Paris)
00211234567    is a fax number in another region in Switzerland
000CCTTFFFFFFF is a fax number FFFFFFF in country CC and town TT.
```

MyDivisionFAX: A symbolic subdomain that reflects your (the SENDER's) division. Its value will determine your (originating) fax number in case the fax recipient wants to reply to you by fax.
Some of the defined 'MyDivisionFAX' subdomains so far are the following :

cnfax	will generate on the fax cover From: CERN CN fax service +41 22 767 7155
ps561fax	will generate on the fax cover From: CERN/PS building 561 fax service +41 22 767 8590
psfax	will generate on the fax cover From: CERN/PS fax service +41 22 767 9145
stfax	will generate on the fax cover From: CERN/ST/DI fax service +41 22 767 2200
asfax	will generate on the fax cover From: CERN/AS fax service +41 22 767 8780
ppefax	will generate on the fax cover From: CERN/PPE fax service +41 22 767 8760
ecpfax	will generate on the fax cover From: CERN/ECP fax service +41 22 783 0600
delphifax	will generate on the fax cover From: CERN/DELPHI fax service +41 22 782 3084
fifax	will generate on the fax cover From: CERN/Finance division leader +41 22 782 1918

Example: A member of ECP division can send a fax to Mr Joe Bloggs in central London by addressing his/her Email message to: **Joe.Bloggs@00044719999999.ecpfax.cern.ch**

There is a utility that allows the fax sender to check the faxes still queued and not delivered. For more details and installation instructions contact **fax.support@cern.ch**.

Warning: Faxes cost real money. Excessive usage will be billed.

1.8.1 How to get help with problems

For any questions related to this facility you can send Email to **fax.support@cern.ch** which is equivalent to **fax-support@dxmint.cern.ch**.

Chapter 2: How to formulate or find Email addresses

The address syntax for sending mail to different computers both on and off the CERN site is described as well as commands to access EMDIR, the CERN Electronic Mail Directory. A few facilities to help you find addresses of users not in EMDIR are introduced and some hints are given to outside collaborators on how to address people at CERN. A small section is included on how to automatically forward your mail to another address.

2.1 User friendly addresses for CERN users

Users with computer accounts at CERN can now be addressed with the format:

`[firstname.]surname@cern.ch`

2.1.1 Syntactic rules and semantics

The part in square brackets, **firstname**, is optional. You can include up to 3 firstnames separated by any combination of: dots (.), hyphens (-), underscores (_) or single quote (') (it must be escaped or typed twice).

The firstname(s) can be abbreviated in any possible prefix. (e.g., **maria**, **mari**, **mar**, **ma**, **m**)

A dot must separate the firstname(s) (if present) from the surname.

The presence of **surname** is mandatory. Within surnames with many parts e.g. Van De Welde all the above separators are allowed *except* the dot.

Case is not significant.

In case of first or last names with many parts it is *not* mandatory to use all of them.

If no match for the specified **[firstname.]surname** is found, then the program tries to do approximate matching of up to *two* mistakes for each of the firstnames first and then for each of the lastnames.

If multiple matches have been found then a list of all the matching recipients is returned by mail.

A program tries to match the recipient's name to the approximately relevant entries in the computer centre database and their Email address in **EMDIR**. Obviously, this means that the form **[firstname.]surname@CERN.CH** *must not* be stored in **EMDIR**, which *must* contain your preferred real address in the form **user@COMPUTER.cern.ch**. Please allow one day in order for the change to take place.

If you want to change the value of your preferred firstname do it via your group administrator in **USERREG**.

People outside CERN can use this addressing scheme if they want to sent mail to someone that has a CERN computer account.

If you receive in return a list of multiple matching recipients e.g. for the destination **jean.dupond@cern.ch**

```
1. First name(s): JEAN  *****  Last name(s): DUPOND
   Cern phone number:1234  *****  Beep number:13+5678
   Division:PPE/BLA  *****  Office:000/R-006
   E-mail address: DUPONDJE@CERNVM.CERN.CH

2. First name(s): JEAN PAUL  *****  Last name(s): DUPOND
   Cern phone number:9876  *****  Beep number:
   Division:BLI/LE  *****  Office:99/9-999
   E-mail address: DUPONDJP@CERNVM.CERN.CH
```

and you are interested in Jean Dupond with no middlename you can either type **jean..dupond@cern.ch** or use his "real" email address as received from **EMDIR**, i.e., **dupondje@cernvm.cern.ch**

For any questions please send mail to **mail.support@cern.ch** which is equivalent to **mail.support@dxmint.cern.ch**

2.2 Addressing mail from within CERN

This section explains how to address mail users from any of the recommended mail systems described in this guide. The same address format is valid from all these systems. The address can be composed in upper or lower case characters.

2.2.1 Sending mail to users on the same computer

Users on the same computer as yourself can be addressed by their registered username e.g. fred.

2.2.2 Sending mail to other computers at CERN

Depending on the destination host CERN addresses can be:

`user@host.cern.ch`

where

user is a computer registered username

host is a computer at CERN

From most hosts at CERN simply `user@host` is also accepted.

The above syntax is valid from all CERN recommended mail systems except **VMS Mail** where the syntax `MINT::"user@host.cern.ch"` (also possible: `MINT::"user@host"`) must be entered after the 'to:' prompt.

2.2.3 Sending mail to users outside CERN

All external addresses are of the form:

`user@host.domain` (`MINT::"user@host.domain"` from VMS Mail)

where:

user is a computer registered user name

host is a computer name

domain is (or ends in) a unique identifier for a country or mail distribution 'network' (e.g. ch, fr, de, uk, bitnet, uucp)

A domain may consist of several subdomains separated by dots and a host name might be missing. (e.g. `user@subdomain1.subdomain2.domain`)

A list of some accessible domains is given at the end of this chapter.

2.2.3.1 Addressing DECnet Users `host::user`

DECnet users tend to quote their address in the form `host::user`. Provided their host is connected to the CERN DECnet they can be addressed from any of the recommended mail systems by `user@host.CERN.CH`, even if their host is not physically at CERN.

If the DECnet host is not known by name but only but its DECnet numerical address in the form *area.subaddress* or in decimal, the syntax to be used has to be: `user@`*DECnet-address*`.DECNET.cern.ch` *NB! This is the only case when the 'decnet' subdomain is mandatory.*

2.2.4 PSI Mail (psi%digits::user)

Addresses quoted as **PSI%*digits*::user** can be sent directly from some VMS systems by authorised users (e.g. users on vxcern). There is no way today to send PSI mail from other systems.

Please, note that PSI Mail costs real money if the destination address contains a '*digits*' part starting with zero. The PTT bill is sent to the group administrator.

The following is an extract from the document 'The VXCERN cluster users guide' and explains how the billing is calculated. X.25 PSI Access is a Digital product which allows suitably configured VMS systems to connect to and/or access Packet Switching Data networks (PSDNs) conforming to CCITT recommendation X.25, i.e. to function as a DTE (Data Terminal Equipment) connected to a PSDN.

The user process can send data to, and receive data from, other user applications at remote DTEs (written in any programming language under any operating system and on any machine which can connect to the PSDN), by assigning a channel and setting up a virtual circuit.

PSI Charging:
Please note that PSI outgoing calls made using normal PTT telephone lines (as opposed to the calls made via leased lines) will be charged. (Calls to DTE addresses which start with the digit 0 are charged.) The bill will be sent to the group administrators on a regular basis. The size of the cost depends on the destination of the call, and is calculated according to the PTT tariffs in effect. Each month, the VMS Central Support team runs a PSI accounting procedure that tots up the total cost of calls for all users over the preceding month. These costs can be examined by Group Administrators using the command

`psi_charges`

which will show all the available monthly data. The administrator can choose whether to save a copy of the file or not. In any case, at the end of a four month period (so at the start of May, September and January) the individual group charges are collected together and a TID sent to each group administrator responsible. In cases where the group administrator would like to prevent one or more of his/her users from generating PSI calls, this can be arranged. Please contact the UCO as a first step. *Warning:*Some groups hold their individual users personally responsible for charges incurred through the use of PSI. Users should be aware that sizeable costs can be incurred through calling some PSI addresses!

2.2.5 Addressing host!user

Addresses quoted in the form **`host!user`** may be addressed from CERN mail systems to **`user@host.uucp`**. Addresses like **`host1!host2!...hostn!user`** should be converted to **`user@hostn.uucp`** or **`host1!host2!...hostn!user@dxmint`**. Unix users should note that for some shells the '!' should be escaped with a backslash (\).

2.2.6 Addressing 'user AT host' (user@host)

Some users on EARN/BITNET quote their address in the form **`user AT host`** or **`user@host`**. Whilst this syntax may be acceptable on CERNVM (see note below), the correct syntax is **`user@host.bitnet`**.

Since the middle of 1993 there has been a growing number of BITNET/EARN nodes leaving the network, which practically means that instead of the form **`user@host`** or **`user@host.BITNET`** the Internet (domain style) addressing should be used, i.e. **`user@host.domain`**, e.g. **`user@cernvm.cern.ch`**. Unfortunately, some sites are leaving EARN/BITNET without having really prepared a graceful transition to Internet style electronic mail addresses and are therefore indirectly causing problems to users used to reach them via their old but no longer functional address. In the latter case, it may be useful to know that a file containing the list of new and deleted EARN/BITNET nodes since November 1992 has been installed on CERNVM's "P" disk under the name BITEARN NEWDEL. This file will also be updated on a monthly basis as soon as the monthly EARN tables are distributed. In most cases, the file contains information about the new Internet style address. The same information is also available via gopher from gopher.earn.net in the subtree "Network information", item "Node changes".

2.3 EMDIR - The CERN Electronic Mail Directory

EMDIR is an Electronic Mail Directory Service returning the preferred addresses for CERN personnel and some of their regular correspondents. It is accessible from cernvm, dxcern, vxcern and several other nodes. For a complete documentation on EMDIR contact **emdir@cern.ch**.

2.3.1 Examples

To search for someone with a name like Denys Smithers, type:

Unix users should replace the wild card characters '*', '?' by '%', '_' respectively or precede them by a backslash (\).

```
EMDIR   smithers              all entries with surname Smithers
EMDIR   * denys               all entries with first name Denys
EMDIR   smith* den*           search on partial names
```

If EMDIR returns '(no mail address defined yet)' then either this person does not use electronic mail or their EMDIR entry is not updated.

2.3.2 Where to find further information

For information on how to use EMDIR, type:

```
VM/CMS:     HELP EMDIR
VMS:        HELP EMDIR
Unix:       man emdir
```

2.3.3 Updating your preferred electronic mail address

Send an Email message to **emdir@cern.ch** which is equivalent to **emdirmgr@vxcern.cern.ch** asking for the creation of your EMDIR entry. Then, you are responsible for its update. The EMDIR update procedure from all computers (except CERNVM) follows. The commands for Denys Smithers to enter the address **smithers@cernvm.cern.ch** are:

```
emdir
Emdir>  query smithers              (emdir entry for smithers is displayed)
Emdir>  update
Update> 8 smithers@cernvm.cern.ch   (8 = line no. of mail address in display)
Update> go
Emdir>  exit
```

After the 'go' command your update will be accepted without a password if it is attempted from a host and username known to the CCDB (Computer Centre Data Base), e.g. cernvm,vxcern,dxcern,cernapo,vxeng. If the update is attempted from another host you will be prompted for a password if there is one. If you never assigned a password your entry is not protected against unauthorized changes unless you have delegated the authority to somebody known to the EMDIR database. If you have forgotten this password from a previous update , contact: **emdir@cern.ch** . If you decide to assign a password, while updating from a host and username known to the CCDB, you can, in the future, perform subsequent updates using this same password from any other machine, e.g. a private workstation. A more detailed example is given in the online help.

2.3.4 EMDIR update procedure from CERNVM

Another interface to EMDIR, The Electronic Mail Directory, is available on CERNVM. Some new features are:

- It is accessed through a panel interface
- A password is no longer needed for entry update (for CERN central computer users only)
- Some help is provided to build e-mail addresses
- User registration updates (databases USERREG, USERINFO) are reflected also in EMDIR.
- XWHO uses EMDIR data

For the users who REALLY prefer the old interface on CERNVM, EMDIR supports DEFAULTS as follows:
`DEFAULTS SET EMDIR VERSION OLD` will switch to the old version
`DEFAULTS SET EMDIR VERSION PRO` will switch to the production version

2.3.5 To install EMDIR on DECnet and TCP/IP nodes at CERN

If you have DECNET or TCP/IP access and wish to install EMDIR, send a request to **emdir@cern.ch**. EMDIR is a portable C program using remote procedure calls to access the Oracle data base on dbsrv01.cern.ch.

2.3.6 EMDIR inquiry via Email

You can send an Email message to **cerndir@cern.ch** or **cerndir@dxmint.cern.ch** and on the "Subject:" field and/or in the body enter the names of persons you look for separated by semicolon (;) or carriage return. You will receive a reply with the retrieved EMDIR entries that match exactly or (in case of no exact match) approximately your query. The service has the capability of searching for approximate matches, up to two mistakes and accepts the use of two wildcards, '?' for any one character and '*' for any number of characters. If just one string is entered, e.g. *dupond*, it will be treated as a surname, if you want to specify firstnames as well, the syntax firstname.surname should be used e.g. *herve.dupond*, if you want to retrieve all entries of a certain firstname, you have to terminate it with a dot and leave a blank before the separator e.g. *herve. ;*. The allowed separators within parts of the firstname(s) and/or surname(s) are the dot, hyphen, underscore, whitespace and single quote. E.g. sending mail to cerndir@cern.ch with 'Subject: Alcibiades. ; and no message body, you will receive a message as follows:

```
From CERNDIR Tue Feb  8 15:57:25 1994
Date: Tue, 8 Feb 1994 15:57:24 +0100
From: CERNDIR
Subject: Re: Your query to CERN DIRectory
Apparently-To: dimou

 ****** CERN DIRectory Lookup Mail Service ******

 The following records match exactly your
 requested query :  Alcibiades.

1. First name(s): ALCIBIADES  *****Last name(s): APOSTOLAKIS
   Cern phone number:6039  *****Beep number:
   Division:PPE/LR  *****  Office:20/R-030
   E-mail address: APOST@CERNVM.CERN.CH
```

2.3.7 How to get help with problems

For further information or problems with EMDIR contact **emdir@cern.ch**. If you wish to be added to EMDIR include in the message your surname, firstname, CERN Division or Institute, and preferred electronic mail address in the form **user@HOST.DOMAIN**.

2.4 Relevant information retrieval facilities

EMDIR should contain entries for all central computer users at CERN. If an entry is missing or no mail address has been entered, please request the person to enter their preferred electronic mail address as outlined in the previous section. Although EMDIR contains some non-CERN entries (e.g. INFN and SLAC users) in many cases the only way to learn someone's address will be to ask them. You may however find the following facilities helpful.

2.4.1 Finding BITNET nodes

On CERNVM from the VM/CMS prompt, type **xfind nodes** to get help on the syntax of the most popular command sequences. To enter the NODES menu type the following commands in the given order:

`gime earn`
`nodes`

2.4.2 Finding CERN usernames

To find CERN user login information

- from VM/CMS type `xwho` *`name or username`*.
- from some Unix systems type **phone** *`name or username`*.

The `XWHO` and **phone** commands display personal and login information for all CERN central computers as well as the preferred Email address extracted from EMDIR. The **phoneb** *name* command available on VXCERN and VXENG clusters provide the CERN telephone book information, i.e. Name, tel. extension, division, building and office number.

2.5 Automatically Forwarding Mail

Below is a brief table describing how to automatically forward your mail from various mail systems at CERN to the address **user@host.domain**. All commands must be entered locally on the system you wish to forward from. **ALWAYS test your autoforwarding**. Incorrect addresses cause mail loops!

2.5.1 MAIL on VM/CMS

Type XFIND MAILFWD for help. The usage of MAILFWD is:

```
MAILFWD new-electronic-mail-address  (to start forwarding)
MAILFWD *                            (to stop forwarding)
MAILFWD                              (to query forwarding)
```

The MAILFWD command hides two commands that have to be issued one after the other for each operation (initialization,cancellation,query of autoforward):

```
TELL LISTSERV /FORWARD user@host.domain  and
TELL MAILER SET FORWARD user@host.domain (to initiate autoforwarding).
TELL LISTSERV /FORWARD *                    and
TELL MAILER SET FORWARD *                   (to cancel autoforwarding).
TELL LISTSERV /FORWARD Query                and
TELL MAILER Q FORWARD                       (to query current autoforwarding).
```

If you do need to have your mail forwarded to multiple addresses, here is how to do it. You first issue a normal SET FORWARD command with the first address, and then, for each additional address you want your mail forwarded to, you send a SET FORWARD command with a plus sign before the address. Example:

```
SET FORWARD Jack@WS1.Blue-Lake.EDU
SET FORWARD +Jack-Smith@CC.Blue-Lake.EDU
SET FORWARD +J.Smith@LIB.Blue-Lake.EDU
```

You now have three addresses in your forward list. If you issue a normal SET FORWARD again, all three addresses will be replaced with the new one, or deleted if you did SET FORWARD OFF. To remove just one address, prefix it with a minus sign:

```
SET FORWARD -Jack@WS1.Blue-Lake.EDU
```

would remove the first address in the list. You can check where your mail is going at any time by sending a SHOW FORWARD command. If you want to keep a copy of each forwarded item in your VM mailbox, ie if you only want an extra copy sent to the address of your choice, simply include your own VM address in your forwarding list.

2.5.2 VMS MAIL

Do not set an autoforward address to a PSI Mail destination. Unfortunately, we can no longer forward Email to such addresses due to additional security measures we needed to introduce in order to keep control of the PTT X.25 costs. Even more unfortunately we have no technical means to selectively allow forwarding over non-PTT X.25 lines. To invoke VMS Mail type:

```
mail
MAIL> set forward MINT::"""user@host.domain"""
MAIL> show forward                    query current autoforwarding
MAIL> show all                        show all mail parameters
MAIL> set noforward                   cancel autoforwarding
MAIL> exit                            exit from VMS Mail
```

Note that the **forward** command invoking MINT initiates autoforwarding to a non-VMS Mail user account. Three pairs of double quotes are required as shown above. The syntax **set forward host::user** is also possible to another VMS Mail account.

2.5.3 Unix Mail

cd	move to home directory
echo `user@host.domain` > .forward	initiate autoforwarding
more .forward	query current autoforwarding
(Note: the existence of this file is necessary for autoforwarding to happen)	
rm .forward	cancel autoforwarding

2.5.4 QuickMail on a Mac and MS Mail on a PC

Autoforwarding is not possible.

2.6 Hints to Outsiders

This section offers hints to external collaborators wishing to address electronic mail to users at CERN. They will normally need to give an address of the form:

`[firstname.]surname@cern.ch` or `user@host.cern.ch`

If the above address format is not accepted by their mail system, then the following list suggests an alternative syntax.

- Between DECNET hosts: `host::user`
- From a DECNET host to a non-DECnet one: `DXMINT::"user@host.CERN.CH"`
- From EUNET/USENET/UUCP: `dxcern!host!user` (from systems using Unix bang (!) addressing)
- From some JANET systems not yet converted to the Internet world order: `user@CH.CERN.host`
- From X.400: `C=ch;ADMD=arcom;PRMD=cern;O=cern;OU=host;S=username`

Restrictions:

Use of CERN mail facilities to route mail between two non-CERN machines is not permitted without prior agreement by CERN.

2.7 Domain Summary Information

A complete list of the valid International Standards Organisation (ISO) country codes together with some other connectivity information is available on CERNVM by typing: **XFIND COUNTRY**. Some country codes often appearing as top-level-domain in Email messages are listed below, but, of course the list is not exhaustive.

`ar`	ISO country code for Argentina
`at`	ISO country code for Austria
`au`	ISO country code for Australia
`be`	ISO country code for Belgium
`bitnet`	Because It's Time NETwork (USA EARN network)
`br`	ISO country code for Brazil
`ca`	ISO country code for Canada (replaces 'cdn')
`ch`	ISO country code for Switzerland (replaces 'chunet')
`cn`	ISO country code for China
`cz`	ISO country code for the Czech republic
`com`	Commercial domain in Internet (USA)
`de`	ISO country code for Germany
`dk`	ISO country code for Denmark
`earn`	European Academic and Research Network (called BITNET in USA)
`edu`	Educational domain in Internet (USA)
`es`	ISO country code for Spain (replaces 'iris')
`fi`	ISO country code for Finland
`fr`	ISO country code for France
`gov`	Government domain in Internet (USA)
`gr`	ISO country code for Greece
`hu`	ISO country code for Hungary
`ie`	ISO country code for Ireland (replaces 'irl')
`il`	ISO country code for Israel
`in`	ISO country code for India
`int`	ISO country code for India
`it`	ISO country code for Italy
`is`	ISO country code for Iceland
`jp`	ISO country code for Japan
`mfenet`	Magnetic Fusion Energy Network
`mil`	Military domain in Internet (USA)
`net`	Top-level-domain grouping main network relay hosts
`nl`	ISO country code for the Netherlands
`no`	ISO country code for Norway
`nz`	ISO country code for New Zealand
`org`	Organisation domain in Internet (USA)
`pt`	ISO country code for Portugal
`se`	ISO country code for Sweden
`sk`	ISO country code for Slovakia
`uk`	United Kingdom (can also appear as the ISO code **gb**, mainly for X.400 mail)
`us`	ISO country code for USA
`uucp`	Unix mail network (EUNET/USENET)
`za`	ISO country code for South Africa

Chapter 3: Guidelines for Email on workstations

The workstation support team has prepared instruction documents for system installation that include Email. However, some basic information is included in this user guide in order to give some initial help to the workstations' users.

3.1 Email for Unix workstations

3.1.1 General rules

- The recommended protocol to use is SMTP over TCP/IP.
- The recommended model is that of a pool of workstations which send and receive Email via a server. The server should be equipped with the proper Email set up and disk space and should be always available and properly managed.
- The hostname of the server with complete domain information, i.e. **`user@server.cern.ch`** should appear on the message header instead of the name of the individual workstation.
- An aliasing mechanism on the server level should allow for routing to the individual workstation involved. *In any case, make sure the server knows that mail for* ***`user@myclientX`*** *should be delivered locally.*
- The Domain Name Server (DNS) should be updated with the appropriate internal MX records where every client host should be mapped to the appropriate server. To do that, the server owner should send mail to **`mail.support@cern.ch`** mentioning the clients' and server names.
- It is not recommended to forward the messages to mailer-daemon, root and postmaster aliases of any workstation to another host. In case of loops and general delivery problems it is useless to flood the network and the spool of another host. These aliases should rather point to an account local to the host or the server.

The 'pool model' is strongly recommended as opposed to isolated workstations connected to the central gateway service, although such cases exist and must be correctly configured. Some of the advantages of the 'pool model' are:

- Faster delivery of Email traffic between the pool members.
- Offload of the central gateway, which leads to faster delivery for the whole serviced community.
- A longer expiration time than in the central gateway is possible for Email messages stored in the server.
- The server offers disk space for message storing.
- The common address for the whole pool **`user@server.cern.ch`** is easier to remember than **`user@each-workstation.cern.ch`**.
- Workstations in a pool can be more easily shared or re-allocated.
- The quality of support from the server manager and the central gateway manager is much better for the users.
- Email to other hosts should be routed directly to selected popular CERN hosts and via the central gateway system (DXMINT) as a default relay for all others.

  For systems which do nameserver look up, the CERN nameservers will point to DXMINT or the destination system as appropriate.

- Note that all mail forwarded to individual workstations may be returned as undeliverable when you switch off your workstation during the week-end or your holidays if the autoforward pointing to the workstation is not cancelled. When most stations are off together, especially over Christmas, this problem leads to unacceptable mail backlogs for everybody.

  Such a risk does not exist in the case of the "pool" model, provided the server is running and receiving SMTP mail.

3.1.2 Support issues

Support for users and operations can be categorized as follows:

- Support of the workstation pool community and the server.

  This is performed by the system manager of the server and includes:

  - Email set-up and maintenance for the workstation and the server.
  - Workstation user support.
  - Workstation - server transport layer management.
  - Server SMTP and TCP/IP management.

- Support between the server and the central gateway system.

  This is performed by the manager of the central gateway system and includes:

  - Operation of the Email central gateway system.
  - Provision of sample configurations for use by the server manager.
  - Documentation for the workstation users.
  - Address re-writing and selection of route to the final destination.
  - Central gateway system SMTand TCP/Imanagement.
  - Fault detection and isolation.

It is very valuable for functional and operational reasons to adopt some computer naming conventions and follow them.

For all machine types reference sendmail configuration files have been prepared for the CERN workstation owners. The installation guide for every machine type explains how to obtain (if it is not already integrated in the system installation automated procedure) the appropriate sendmail.cf and how to install it. If people want to have a look in these reference sendmail configuration files they should regularly look into the newsgroup **cern.mail** and the relevant group to their platform, e.g. cern.sun.

In principle there should be no need to alter the contents of your sendmail.cf, but if you need to do so, remember that for your change to take effect you should:

Keep a copy of the previous sendmail.cf, just in case.

Install the new one in your /usr/lib (/etc/mail for Sun Solaris 2.X) directory .

Create the configuration freeze file with command: `/usr/lib/sendmail -bz`

Kill the sendmail daemon if it runs.

Restart it with command: `/usr/lib/sendmail -bd -q1h -om`

If your workstation is an Ultrix one AND it is provided WITH DECnet then communicate to `mail.support@cern.ch` its hostname. It is necessary for the central Email gateway system to have this information in order to use the appropriate protocol (SMTP instead of DECnet) to route Email to the workstation. In general, DECnet numbers are not available for new Ultrix stations, in which case this action is obsolete.

3.2 Email for VMS workstations

Unfortunately VMS mail is rather 'simple minded', giving little possibility of protection against system management problems. As a minimum, owners of VMS workstations are advised to:

- Publicize their Email address on a 'bigger' machine (which has a system manager monitoring its availability and the users' disk space).
- Set an autoforward on that node pointing to the VMS workstation. This autoforward should be cancelled when the station is shut down. Note that your mail may be returned as undeliverable when you switch off your workstation during the week-end or your holidays if the autoforward is not cancelled.