MH: ELECTRONIC MAIL ON TEXT PROCESSORS 1, 2, AND 3

Sue Payne

April 1985

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Prepared for

The Rand Computation Center
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MH: ELECTRONIC MAIL ON TEXT
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The Rand Computation Center
This reference manual describes Rand's Message Handling (MH) System on Text Processors 1, 2, and 3. This system of sending and receiving electronic mail was created at Rand during the late 1970s.

A different version of MH, called MH5, is now used on computers running under the 4.2BSD version of UNIX.\(^1\) At the time of this writing, MH5 is on Text Processor 4, the Classified Text Processor, the ISD VAXs (randvax and randgr), and the MOSVAX. However, sometime in 1985, Text Processor 3 will be converted to 4.2BSD, and at that time will use MH5. Documentation for MH5 will be available in MH5: Electronic Mail on Text Processor 4, N-2281-RCC (forthcoming).

A similar electronic mail system, called hm, can also be used on computers at Rand. Hm is an experimental system designed and supported by the Information Sciences Department.

There are often several ways to do things on the text processor. This document describes only the most common and useful parts of what is a very elaborate electronic mail system. Technically oriented users may wish to look at the many options described in The MH Message Handling System: User's Manual, by Bruce S. Borden, R. Stockton Gaines, and Norman Z. Shapiro, R-2367-AF, November 1979.

A basic understanding of the editor is helpful for sending mail, since all editing functions are available in MH. Users unfamiliar with the editor should first consult The Self-Teaching Guide to Rand's Text Processor, N-2056-RC, October 1983.

\(^1\)Unix is a trademark of Bell Laboratories.
ACKNOWLEDGMENTS

The author wishes to thank Jerry Koory for reviewing this document, and Lynn Anderson, Phyllis Kantar, and Anne Marie Segal for their many helpful comments on earlier drafts.
HOW TO USE THIS DOCUMENT

Different typefaces and symbols are used in this document to denote the keys you must press on your keyboard.

**TYPEFACES**

**bold** Bold indicates that you must type characters exactly as they are shown. Thus, if you are told to type

```plaintext
comp
```

you must type `comp` to compose a message.

**italics** Italics indicate that you must type characters like the ones that are shown. They may be the name of a file or a number. Thus, if you are told to type

```plaintext
show 8
```

you must type the word `show` exactly as it appears and then type a number.

**<BRACKETS>** Angled brackets indicate that you must press a key with a particular label on it. Thus, if you are told to press

```plaintext
<RETURN>
```

you must press the key with the label RETURN on it.

**|KEY+KEY|** Vertical lines indicate that you must hold down one key and then press a second. Thus, if you are told to press

```plaintext
|CTRL+b|
```

you must hold down the CTRL key and then press the b key.

**SYMBOLS**

The "pipe" is used in several print commands to direct the output of one command to be used as the input of another. The pipe symbol looks like an elongated colon on the screen, and it looks like a vertical bar (`|`) in this document. To type a pipe symbol, press the key that looks like an elongated colon on Ann Arbor and Ambassador terminals, and like a vertical bar on the XL terminals.

The "block" is used with other characters to make the printer perform special tasks when printing text. The block symbol looks like a bright box on the screen, and like a in this document. To insert a block symbol in your file, press `<CNTL CHAR>` if you have an Ambassador or XL terminal or `|CTRL+\|` if you have an earlier-model Ann Arbor terminal.
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1. INTRODUCTION

This document describes MH, the electronic mail system on Text Processors 1, 2, and 3 that allows users to send and receive messages while logged on to a computer or text processor. A variety of terms are used to indicate such systems (electronic mail, message handling, electronic messaging, electronic mail messages, mail, etc.), but they all perform similar functions.

While logged on to Rand's text processors, you can send messages to other people at Rand, both text processor users and non-users. You can issue MH commands in response to the % prompt at any time, regardless of the directory or text processor on which you are working. You can receive printed copies, on-line copies of messages, or both. And you can reply to messages, forward them to others, print them, organize them in computer "file folders," and remove them from the text processor.
II. RAND'S INFORMATION DATABASE

An on-line database containing information about all Rand employees and resident consultants is used both to produce Rand's telephone directory and to deliver messages that are typed on the text processor. The electronic mail system checks the database when delivering messages to see whether the recipient gets a printed (hard) copy or an on-line (soft) copy,\(^1\) and, in the case of soft copies, which text processor is the recipient's home machine.\(^2\)

INFORMATION IN THE DATABASE

The database contains the following information for each Rand employee and resident consultant:

<table>
<thead>
<tr>
<th>Name:</th>
<th>John M. Doe (Johnny)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ext:</td>
<td>* 678</td>
</tr>
<tr>
<td>Alt:</td>
<td>444</td>
</tr>
<tr>
<td>Dept:</td>
<td>csd</td>
</tr>
<tr>
<td>Room:</td>
<td>1732</td>
</tr>
<tr>
<td>Mail:</td>
<td>csd/1</td>
</tr>
<tr>
<td>Person:</td>
<td>d8910</td>
</tr>
<tr>
<td>Login:</td>
<td>jdoe</td>
</tr>
<tr>
<td>Home:</td>
<td>tp3</td>
</tr>
<tr>
<td>Routes:</td>
<td>soft</td>
</tr>
</tbody>
</table>

An asterisk before the person's extension (Ext) indicates that the phone has a message center signal light, "Login" refers to the person's computer username, "Home" refers to the person's home machine, and "Routes" refers to the form in which messages are delivered (soft, hard, or both).

If you wish to change information in the database, inform your department administrator or Rand's Santa Monica telephone office (x605).

---

\(^1\)The expression "hard copy" refers to copies of electronic mail that are actually printed on paper; in this case, they are automatically printed by the MH system. "Soft copy" refers to copies that are seen only on the computer terminal; they can be read only after you are told that you have mail and have collected it using the inc command.

\(^2\)The expressions "home text processor," "home computer," "home system," and "home machine" refer to the computer to which the user has been assigned: TP1, TP2, TP3, TP4, randvax, randgr, or mosvax. Users are assigned to a text processor according to department or project, unless special arrangements have been made.
SEEING THE DATABASE

To see the information about someone in the database, type **name** and the person's name:

```
% name John Doe <RETURN>
```

The rules for typing names for this command are the same as those for addressing a message. The person's name can be specified in a number of different ways: Capital letters can be used only for the first letter of a name, but they are not necessary at all. Initials can be used if they uniquely identify the person; periods are not necessary. Nicknames can be used if they are in the database. An abbreviation works if it identifies only one person. A period can be used within a name in place of one or more characters.

You can use the name command to look for John Doe in any of the following ways:

```
% name John Doe <RETURN>
% name john doe <RETURN>
% name john m doe <RETURN>
% name JMD <RETURN>
% name j m d <RETURN>
% name j doe <RETURN>
% name jo do <RETURN>
% name johnny doe <RETURN>
% name j.n d.e <RETURN>
```

You will then see something like the following displayed on your screen:

```
% name john doe <RETURN>
Name:    John M. Doe (Johnny)
Ext:    * 678
Alt:    444
Dept:    csd
Room:    1732
Mail:    csd/1
Person:  d8910
Login:   jdoe
Home:    tp3
Routes:  soft
```
% name J. Doe <RETURN>

"J. Doe" is ambiguous. It matches:

<table>
<thead>
<tr>
<th>Name</th>
<th>Ext</th>
<th>Alt</th>
<th>Dept</th>
<th>Room</th>
<th>Mailstop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joan Doe</td>
<td>7451</td>
<td>7606</td>
<td>bsd</td>
<td>1395</td>
<td>bsd/4-a</td>
</tr>
<tr>
<td>John Doe</td>
<td>7570</td>
<td>7709</td>
<td>csd</td>
<td>1760a</td>
<td>csd/1</td>
</tr>
</tbody>
</table>

or

% name Jon Doe <RETURN>

"Jon Doe" not found.
No match.

% 

Who Has a Specific Username?

You may also see information about someone in the database by typing his or her username. Type name and the username, immediately preceded by an equal sign:

% name =username <RETURN>

This command searches the database for the individual who has the specified username listed on the "Login" line.
You will then see something like the following displayed on your screen:

```plaintext
% name = jdoe <RETURN>
Name:    John M. Doe (Johnny)
Ext:     * 678
Alt:     444
Dept:    csd
Room:    1732
Mail:    csd/1
Person:  d8910
Login:   jdoe
Home:    tp3
Routes:  soft
%
```

or

```plaintext
% name = johnd <RETURN>
"=johnd" not found.
No match.
%
```
III. SENDING MESSAGES

COMPOSING A MESSAGE

To compose a message, type `comp`. A window will appear with a blank message form for you to complete:

```
% comp <RETURN>
+--------------------------------------------------------+
:To:    :
:Cc:    :
:Subject: :
:--------
;         :
+--------------------------------------------------------+
```

This is a file called `/a/username/Mail/draft`, and all of the editor's capabilities can be used when writing in it.

Addressing the Message

Messages can be sent to anyone listed in the Rand telephone directory or database, whether or not they have text processor accounts.

The computer reads the header lines to determine the proper distribution of the message. **CAUTION:** Do not delete the colons or change the spelling of `To:`, `Cc:`, or `Subject:`; and do not leave blank lines between these lines. Do not delete the dashes that separate the header lines from the text of the message.

The same rules that apply to the name command (Sec. II) should be followed when typing names (when the message is sent, the system automatically "expands" abbreviated names to the full names and addresses as they appear in the database):

- Type first name first, placing commas between recipients' names when there are more than one.
- If you need more than one line for names, open a blank line, indent at least one space, and continue typing the names of the recipients.
- Use capital letters only for the first letter of a name; however, the whole name can be typed in lowercase letters (John Doe, John Doe).
• Use initials only if they uniquely identify one person; you do not have to use periods with initials (J Doe, JMD).
• Use part of a name only if it identifies just one person (J Do).
• A period can be used within a name in place of one or more characters (J.n D.e).
• Use nicknames only if they are in the database (Bob, instead of Robert).

To: After "To:" type the names of people to whom the message should be sent.

Copies: After "Cc:" type the names of people who should receive copies of the message. Add your name if you wish to have a copy of the message; you will not automatically receive one. This line may be left blank or may be deleted (by <CLOSE>).

Subject: Type the subject of the message.

Example

+---------------------------------------------------------------+
:To: jane buckley, john doe, fred kant, shelley smith
: charleen thompson
:Cc: a jones
:Subject: YESTERDAY
:---------
:+---------------------------------------------------------------+

From: You do not type or fill in a "From" line. When the message is sent, the system automatically adds this line.

Date: You do not type a date on the message. When the message is sent, the system automatically adds the current date and time.

Address Options

Other header lines can be added to the message.

Hard Copies: You can send hard (printed on paper) copies of messages by opening a blank line after the "Cc" line and typing Hardcopy: followed by the recipient's name. Also, any name typed on the "To" or "Cc" line whose database entry calls for hard copy will automatically receive a printed (paper) copy of the message instead of an on-line copy.

CAUTION: Any name on the hardcopy line must be in the database or the printed hard copy of the message cannot be delivered (do not send hardcopies to aliases or usernames).
Blind Carbon Copies: You can send blind carbon copies of messages by opening a line following the "Cc" line and typing Bcc: followed by the names of people who should receive copies. CAUTION: The "Bcc" line and the names on it will not appear on any delivered copies of the message. Furthermore, Bcc recipients will not automatically receive copies of messages that are sent in reply to the original message.

Folder Carbon Copies: You can send a copy of your message to your inbox (or another folder, described in Sec. VIII). In this case, the message automatically will be placed in your inbox; you do not incorporate it to receive it, and you do not need to put your name on the "To" or "Cc" line to receive a copy. To send a folder carbon copy, open a line before the "Subject" line and type Fcc: inbox (or replace inbox with a different foldername).

The "Fcc" line will not appear on any delivered message. Your name will appear on the "From" line, however, so you will receive any messages sent in reply to yours.

Example

+----------------------------------------------------------------------+
  :To:  jane buckley, john doe, fred kant, shelley smith,          :
  :     charleen thompson                                             :
  :Cc:   a jones                                                     :
  :Hardcopy:  c w.berg                                               :
  :Bcc:   m black                                                    :
  :Fcc:   inbox                                                     :
  :Subject:  YESTERDAY                                               :
  :--------                                                        :
  ;                                                             :
+----------------------------------------------------------------------+

Getting a Copy of Your Own Message

IMPORTANT: You will not automatically receive a copy of your message, nor will a copy be saved once the message is sent. To get a copy, you must include your own name on one of the address lines ("To," "Cc," "Bcc," or "Hardcopy") or add an "Fcc" line.
Typing the Message

Type the message below the dashed line (do not delete the dashes):

```
+--------------------------------------------------+
:To: jane buckley, john doe, fred kant, shelley smith,
 : charleen thompson
 :Cc: a jones
 :Hardcopy: c w.berg
 :Bcc: m black
 :Fcc: inbox
 :Subject: YESTERDAY
 -----
 :-----
 :
 :Let's meet Wednesday at 2:00 pm to discuss yesterday's
 :seminar.
 ;
 +--------------------------------------------------+
```

When you are composing a message, you are working in a file, so all of
the editor's functions are available.

CAUTION: The system will not paginate the message. Do not use eR or
formatting macros, because they will not be interpreted.

SENDING A MESSAGE

When you are finished typing the message, exit from the message file by
pressing <CMD> exit <RETURN>. You will receive the "What now?" prompt:

```
<CMD> exit <RETURN>

What now? (To see options press <RETURN>):
```

Your options are:

- list (see the message)
- edit (change the message)
- quit (stop working and save the message)
- quit -delete (delete the message without sending it)
- xpand (change the abbreviated names on the "To," "Cc," "Bcc," and "Hardcopy" lines to full database names)
Sending Messages

- 10 -

- name (check the database for a name)
- send (send the message)
- send -verbose (send the message and show notification that the message was sent)

Seeing the Message

You may look at a message before sending it. In response to "What now?" type list (or l), and the message will be displayed on the screen for you to read. If the message is longer than one screenful, press <RETURN> to see the next screenful; if you do not wish to see any more of the message, press <DEL> or <US_DEL>. You will be prompted with "What now?" again, and you can choose any of the options:

```
What now? (To see options press <RETURN>): list <RETURN>

To: jane buckley, john doe, fred kant, shelley smith, charleen thompson
Cc: a jones
Hardcopy: c w.berg
Bcc: m black
Fcc: inbox
Subject: YESTERDAY
--------

Let's meet Wednesday at 2:00 pm to discuss yesterday's seminar.

What now? (To see options press <RETURN>):
```
Changing the Message

You can change a message after you have exited but before you have sent it. In response to "What now?" type edit (or e) and you will be placed back in the message to do more work:

```
What now? (To see options press <RETURN>): edit <RETURN>
```

```
To: jane buckley, john doe, fred kant, shelley smith, charleen thompson
Cc: a jones
Hardcopy: c w.berg
Bcc: m black
Fcc: inbox
Subject: YESTERDAY

Let's meet Wednesday at 2:00 pm to discuss yesterday's seminar.
```

When you have finished your editing changes, exit from the message. You will be prompted with "What now?" again, and you can choose any of the options.

Stopping Work on a Message and Resuming Work Later

If you need to stop working on a message but are not ready to send it, exit from the message and respond to "What now?" by typing quit (or q):

```
What now? (To see options press <RETURN>): quit <RETURN>
```

You will receive a % prompt. The message is saved with the pathname /a/username/Mail/draft. This draft message must be sent (or deleted) before another message can be written using the standard comp command. However, you can have more than one draft message by following the instructions for composing a second message, on p. 16.
Sending Messages

When you are ready to resume working on the message, type `comp -use` and you will be placed in a message file containing the draft message:

```
% comp -use <RETURN>

+-------------------------------+ 
<p>| :To:  jane buckley, john doe, fred kant, shelley smith, : |
| : charleen thompson            : |
| :Cc:  a jones                  : |
| :Hardcopy: c w.berg            : |
| :Bcc:  m black                 : |
| :Fcc:  inbox                   : |</p>
<table>
<thead>
<tr>
<th align="center">:Subject: YESTERDAY            :</th>
</tr>
</thead>
<tbody>
<tr>
<td align="center">:Let's meet Wednesday at 2:00 pm to discuss yesterday's :</td>
</tr>
<tr>
<td align="center">: seminar.                    :</td>
</tr>
<tr>
<td align="center">;                               :</td>
</tr>
</tbody>
</table>
+-------------------------------+ 
```

When you exit from the message, you will be prompted with "What now?" and you can choose any of the options.

Deleting a Message without Sending It

If you decide that you do not want to send the message you have been working on, exit from the message and respond to "What now?" by typing `quit -delete` (or `q -d`):

```
What now? (To see options press <RETURN>): quit -delete <RETURN> 
%
```

This destroys the draft message. You will receive a % prompt.

Expanding or Checking the Names of Addressees

After you have composed a message, you can verify that you used correct names on the "To," "Cc," "Bcc," and "Hardcopy" lines.
To do so, exit from the message and respond to "What now?" by typing `xpand` (or `x`). If there is any problem with a name, you will be notified and prompted with "What now?" again. Edit the message and make the appropriate changes. Then xpand the names again after the next "What now?" prompt. When you don't get any error messages after issuing the xpand command, type `list` (or `l`) when prompted with "What now?":

```
What now? (To see options press <RETURN>): xpand <RETURN>
What now? (To see options press <RETURN>): list <RETURN>

To: tp2!buck (Jane_Buckley), tp3!jdoe (John_Doe),
    tp3!fred (Fred_Kant), tp2!smith (Shelley_Smith),
    tpl!ct (Charleen_Thompson)
Cc:  tp1!ann (Ann_Jones)
Hardcopy: Christopher Weisterberg _psd/1-b
Bcc: randvax!marilyn (Marilyn_Black)
Fcc: inbox
Subject: YESTERDAY
-------
Let's meet Wednesday at 2:00 pm to discuss yesterday's seminar.
```

You will be shown the message. Names on the header lines will have been expanded with additional information from the database. The names will now include the home machine (TP1, TP2, TP3, TP4, randvax, randgr, or mosvax), the username, and the real name of on-line copy recipients, and the real name and mail stop of hardcopy recipients.

You will again be prompted with "What now?." If the addresses are correct, you can send the message. If there is a problem, edit the message and make the appropriate changes before sending it.

**Checking the Database for a Name**

If you have trouble addressing your message and want to check the database for spelling, you can use the name command.
In response to "What now?", type `name` (or `n`) followed by the person's name. (Follow the rules listed in "Seeing the Database," p. 3.) If you are in a message file, you must exit first to get the "What now?" prompt:

```
What now? (To see options press <RETURN>): name j doel <RETURN>
Name: John M. Doe (Johnny)
Ext: * 678
Alt: 444
Dept: csd
Room: 1732
Mail: csd/1
Person: d8910
Login: jdoe
Home: tp3
Routes: soft
```

You will be shown the database information for the name, then you will be prompted again with "What now?." To make changes in the message, type `edit`.

**Sending the Message**

When you have composed a message and are ready to send it, exit from the message and respond to "What now?" by typing `send` (or `s`). When the address information has been verified as correct, you will receive a % prompt:

```
What now? (To see options press <RETURN>): send <RETURN>
%```

If the addressee is someone whose home text processor is the same as the text processor it was sent from, he or she will receive notification of new mail within a few minutes (if he or she is logged on at that time). If the message must go to a different text processor, it may take several hours to reach the recipient.¹ Harpcopies of messages are sent

¹Messages that go between computers have to wait for a "port," just as users need a port to log on. When many users are logged on, there may be no ports left, and therefore messages sometimes must wait until the noon hour or until 5:00 pm, when ports are available.
to the laser printer and are then put in the Rand internal mail distribution system for delivery to the recipient's mail stop.

After a message is sent, the draft is saved as /a/username/Mail/draft until a new message is composed or until the comma files are deleted late that night.

**Sending the Message with the Verbose Option**

You can add the `-verbose` flag to the `send` instruction: `send -verbose` (or `s -v`). This option gives notification that the message actually was sent. The drawback is that it can take an extra minute to get the `% prompt after issuing the command. When you use the verbose option, you will see something like the following:

```
What now? (To see options press <RETURN>): send -verbose <RETURN>
buck At tp2 (via uux): queued
jdoe At tp3 (via uux): queued
fred At tp3 (via uux): queued
smith At tp2 (via uux): queued
ct: Sent.
an: Sent.
Invoking hardcopy to Christopher R. Weisterberg _psd/1-b
marilyn At randvax (via uux): queued
Fcc: inbox
%
```

This means the message has been sent to buck, jdoe, fred, smith, ct, ann, and marilyn (usernames) and to Christopher Weisterberg (a real name), and that a copy was placed in the sender's inbox. It does not mean that the recipients have actually received the message.

"Queued" means that the message must go into a queue to be transferred to another text processor. "Sent" means that the recipient's home machine is the same as the one you are using, so he or she will receive notification of new mail in a few minutes or upon logging on. "Invoking hardcopy" means that a copy of the message has been sent to the laser printer with a cover sheet directing it to the person listed on the hardcopy line (you can see your username in the print queue at this time). A computer operator puts the printed copy into the Rand internal mail system for delivery to the recipient. "Fcc" means that a copy of the message was placed in the designated folder of the sender.
COMPOSING A SECOND MESSAGE

If you have composed a draft message but have not yet sent it, and you wish to write another one, you can do so by specifying a name for the new message. Type `comp` and a filename for the new message:

```
% comp filename <RETURN>
```

You can send this message like any other message (see "Sending a Message," p. 9). If you leave the message in draft form by typing quit in response to "What now?", it is saved with the pathname `/a/username/Mail/filename` and can be accessed for further work by typing `comp -use` and the name it was assigned:

```
% comp -use filename <RETURN>
```

PROBLEMS

.mi_profile File

In order to use MH commands, you must have a file called `.mi_profile` and a directory called Mail located in your login directory. They are created automatically when your login is established, and they are on each text processor so that you can send mail from any text processor.

Many users are unaware of having a `.mi_profile` file because they do not create it and because it is listed only when the `ls -a` command is given (because it begins with a dot).

This file contains information for MH. A typical `.mi_profile` file might look like the following:

```
+---------------------------------------------------------------+
| :Path: Mail                                                      |
| :current-folder: inbox                                         |
| ;                                                               |
+---------------------------------------------------------------+
```

In this example, the message system uses a directory named Mail and the current folder is inbox (see "Grouping Messages in Folders," Sec. VIII).

CAUTION: Generally, you should not edit or delete this file; it is created and changed as necessary by the system or system manager.
"Can't Create '/a/username/Mail/draft'"

If you type comp and the system responds with "Can't create '/a/username/Mail/draft'," this means that you do not have the MH directory called Mail. To solve the problem, make sure you are in your login directory, and type mkdir Mail. When you receive a % prompt, type comp and proceed with the message:

```
% comp <RETURN>
comp: Can't create "/a/username/Mail/draft"
% cd <RETURN>
% mkdir Mail <RETURN>
% comp <RETURN>
```

"Prior to Using MH..."

Under rare circumstances, when you try to compose a message you will be told:

```
Prior to using MH, it is necessary to have a file in your
login directory (/a/username) named .mh_profile which
contains information to direct certain MH operations.
The only item which is required is the path to use for all
MH folder operations. The suggested MH path for you is
/a/username/Mail...
```

Then you will be prompted with one of the following:

```
You already have the standard MH directory "/a/username/Mail".
Do you want to use it for MH?
```

or
Sending Messages - 18 -

Do you want the standard MH path "/a/username/Mail"?
"Mail" doesn't exist; Create it?

These messages mean that you do not have a file called .mh_profile in your login directory, and you might not have an MH directory called Mail in your login directory. Respond by typing yes (or y) to all the questions and you will then be able to compose your message.

"Draft Exists--Delete?"

Occasionally when you type comp, the system will respond with the following prompt:

"/a/username/Mail/draft" exists; delete?

This means that you had previously begun a message but ended your session by typing quit. The message was given draft status by the system, and you must either (1) send or delete it before you can write a new message, or (2) assign a name for the new message when you use comp (see "Composing a Second Message," p. 16).

Your options are:

- list (see the draft message)
- use (edit the draft message)
- no (do not delete the draft message, get % prompt)
- yes (delete the draft message, get new blank message form)
List: If you wish to see your draft message, type list (or l) and you will be shown the draft message:

```
% comp <RETURN>
"/a/username/Mail/draft" exists; delete? list <RETURN>
To:  j doe,  s smith  
Cc:  a jones  
Subject:  YESTERDAY  
-------  
Let's meet Wednesday at 2:00 pm to discuss  
"/a/username/Mail/draft" exists; delete?
```

After the message is shown, you will again be prompted with "draft exists; delete?," and you can choose any of the options.

Use: If you wish to work on the pre-existing draft, type use (or u) and you will be put back into a message file containing the original message:

```
% comp <RETURN>
"/a/username/Mail/draft" exists; delete? use <RETURN>
+-----------------------------+
:To:  j doe,  s smith :  
:Cc:  a jones :  
:Subject:  YESTERDAY :  
:------- :  
:Let's meet Wednesday at 2:00 pm to discuss :  
;
+-----------------------------+
```
No: If you do not wish to destroy this draft message, type no (or n) and you will receive a % prompt:

```
% comp <RETURN>
"/a/username/Mail/draft" exists; delete? no <RETURN>
%
```

This keeps the draft for you to work on later. You can compose a different message by assigning a name to the new message (see "Composing a Second Message," p. 16).

Yes: If you no longer wish to keep this draft, type yes (or y) and the draft will be destroyed. You will be given a new, blank message file to work in:

```
% comp <RETURN>
"/a/username/Mail/draft" exists; delete? yes <RETURN>
+-----------------------------------------------------+
:To: : 
:Cc: : 
:Subject: : 
:------- : 
; : 
+-----------------------------------------------------+
```

Address Problems

If there is a problem with an address of a message, you will be notified of the problem when you exit from the message and issue the "send" or "xpand" command.
"Name' Not Found": Sometimes a name you have typed isn't in the database, usually because you have spelled it incorrectly. For example, if you address a message to D Leon, and there is no one at Rand who could be identified as D Leon, you would be notified:

"D Leon" not found.
What now? (To see options press <RETURN>):

Edit the message to change the name (messages will not be sent to any of the recipients until all the names are accepted by the system). Check the telephone directory or database (using the name command) for the spelling of the name, or try using a period to replace characters in the name, e.g., D L.n.

"Name' is Ambiguous": Sometimes a name you have typed can identify more than one person in the database, usually because you used abbreviations. For example, if you address a message to J Doe, and there are two people who could be identified as J Doe, you would be notified:

"J Doe" is ambiguous. It matches:

<table>
<thead>
<tr>
<th>Name</th>
<th>Ext</th>
<th>Alt</th>
<th>Dept</th>
<th>Room</th>
<th>Mailstop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joan Doe</td>
<td>7451</td>
<td>7606</td>
<td>bsd</td>
<td>1395</td>
<td>bsd/4-a</td>
</tr>
<tr>
<td>John Doe</td>
<td>7570</td>
<td>7709</td>
<td>csd</td>
<td>1760a</td>
<td>csd/1</td>
</tr>
</tbody>
</table>

What now? (To see options press <RETURN>):

Edit the message to change the name to a full name. (Messages will not be sent to any of the recipients until all the names are accepted by the system.)

"Message Queued": This notification tells you that the message has to move to a different text processor for delivery because the recipient's home text processor is different from the one you are working on. You do not need to do anything.
IV. RECEIVING MESSAGES

WHERE ARE MESSAGES DELIVERED?

Messages are delivered according to the route defined in the Rand database, that is, "soft" or "hard." Soft copies (on-line copies) are sent to your home text processor. Hard copies are printed and sent through the Rand internal mail distribution system to your mail stop. You can receive your messages in either or both forms.

If you wish to change the "Route" line in the database, notify your department administrator or Rand's Santa Monica telephone office, x605.

COLLECTING NEW MESSAGES

When you first logon, if you have a message you will be notified:

```
You have mail.
%`
```

If a new message arrives during a session, you will be notified when you receive a % prompt:

```
You have new mail.
%`
```

To incorporate your mail message(s) (that is, collect them so you can read them), type inc and you will see something like the following:

```
% inc <RETURN>

Incorporating new mail into inbox...

3+ 8/1 randvax!maril REVIEW FOR YOUR REPORT <<I h
4 8/5 To:tp3!jdoe ( NEW COPY OF REPORT <<There i
```
All new messages automatically go into "inbox," where they become available to you. In this example, two messages were incorporated. This listing shows the message numbers (assigned automatically by the system as they are added to your inbox), the dates the messages were sent, who they are from or to, the subject line, and the first few words of the message. You must issue another command to read the entire message (see "Reading a Message," below).

THE CURRENT MESSAGE

The current message is the message that you most recently incorporated, looked at, replied to, etc. It is identified by a plus sign immediately following the message number. In this example, 3 is the current message:

```
1 7/14 buck (Jane Bu YOU WERE LATE <<We waited fo
2 7/14 To:buck (Jane MEETING <<Sorry. I just rea
3+ 8/ 1 randvax!maril REVIEW FOR YOUR REPORT <<I h
4 8/ 5 To:tp3!jdoe ( NEW COPY OF REPORT <<There i
```

READING A MESSAGE

Reading a Specific Message

To read a message, type show and the number of the message. (If you type show without a message number, you will see the current message.) The message, 4 in this example, will be displayed on the screen:

```
% show 4 <RETURN>

(Message inbox: 4)
Date: Wednesday, 5 Aug 1984 09:06-PST
To: tp3!jdoe (John_Doe), tp2!smith (Shelley_Smith)
Cc: tp1!ann (Ann_Jones)
Subject: NEW COPY OF REPORT
From: tp1!ann (Ann_Jones)

There is a new copy of the computer usage report. We need to talk about it!
```

%
Receiving Messages

If the message is longer than one screenful, press <RETURN> to continue reading or press <DEL> or <US_DEL> to get a % prompt. When reading a message, if you have pressed <RETURN> to move on in the message, you cannot go back without reissuing the show command.

Reading Several Messages

You can issue the show command for several messages at one time. For example, you may type show followed by the specific message numbers:

% show 2 5 8 <RETURN>  (show messages 2, 5, and 8)

Or, you can type show followed by a range of numbers that specifies a beginning and an ending message:

% show 2-7 <RETURN>    (show all messages from 2 through 7)
% show 15-last <RETURN> (show messages from 15 through the last)
% show 9:6 <RETURN>    (show 6 messages, beginning with number 9)
% show first:6 <RETURN> (show first 6 messages)
% show last:10 <RETURN> (show last 10 messages)
% show all <RETURN>    (show all messages)

Reading the Next Message

To see the message numerically following the current message, type next:

% next <RETURN>

This causes the message after the current one to be displayed on the screen and to become the current message. This can be done repeatedly to read many messages.

Reading the Previous Message

To see the message numerically previous to the current message, type.prev:

% prev <RETURN>

This causes the message immediately before the current message to be displayed on the screen and to become the current message. This can be done repeatedly to read many messages.
PROBLEMS

"Prior to Using MH..."

On very rare occasions, when you try to incorporate mail you are told:

Prior to using MH, it is necessary to have a file in your login directory (/a/username) named .mh_profile which contains information to direct certain MH operations. The only item which is required is the path to use for all MH folder operations. The suggested MH path for you is /a/username/Mail...

Then you are prompted with one or more of the following questions:

Do you want the standard MH path "/a/username/Mail"?

"Mail" doesn't exist; Create it?

Create folder "/a/username/Mail/inbox"?

You already have the standard MH directory "/a/username/Mail". Do you want to use it for MH?

This means that you do not have a file called .mh_profile in your login directory and/or you do not have the MH directory called Mail in your login directory and/or you do not have the subdirectory called inbox in your Mail directory. Respond by typing yes (or y) to all the questions and you can then incorporate your mail.
V. REPLYING TO AND FORWARDING MESSAGES

REPLYING TO A MESSAGE

You can use a special command to reply to an on-line message. This command will give you a message form with all the header information ("To," "Cc," "Subject," etc.) filled out from the message you are replying to. All you need to do is type the text of your message.

To reply to a message, type repl and the number of the message to which you wish to reply. (If you type repl without a message number, you will reply to the current message.) A reply form will be displayed on the screen (to message number 5, in this example), with the header lines already filled out:

```
% repl 5 <RETURN>
+------------------------------------------------------------+
:To: tp2!buck (Jane_Buckley)      :
:Cc: tp3!fred (Fred_Kant)        :
:Subject: Re: YOU WERE LATE     :
:In-reply-to: Your message of Mon, 14 Jul 1984 09:12-PST. :
:------
:
:
:+------------------------------------------------------------+
```

Type the text of your message below the dashed line (do not delete it). When you have finished, exit and send the message as usual.

The message that you are replying to is automatically an alternate file to the file that you are working in. To read the original message, press <ALT> or [CTRL+b]. Press the same key(s) to return to your reply message.

CAUTION: Your reply will be sent to all names listed on the "To," "Cc," and "Hardcopy" lines. If you wish, you can remove some of the names before sending the message. You can add names as well.
FORWARDING A MESSAGE

To forward a message you have received to another person, type `forw` and the number of the message you wish to forward. (If you type `forw` without a number, you will forward the current message.) A message file will appear on the screen, containing blank header lines for you to fill out and a copy of the message (6, in this example) to be forwarded:

```
% forw 6 <RETURN>

+-----------------------------------------------+
:To: :
:Cc: :
:Subject: :
:------ :
: :
:-------Forwarded Message :
: :
:Date: Wednesday, 14 Jul 1983 09:12-PST :
:To: tp3!fred (Fred_Kant) :
:Cc: tp2!buck (Jane_Buckley) :
:Subject: YOU WERE LATE :
:From: buck (Jane_Buckley) :
: :
:We waited around for half an hour, gave up, and went :
:to lunch without you. See if we invite you out :
:again!
: :
: :
:------- End of Forwarded Message :
;
+-----------------------------------------------+
```

Type in the name(s) of the person(s) to whom this message should be forwarded. You can open blank lines above "------- Forwarded Message" to add your own comments. When you are finished, exit and send the message as usual.
Forwarding Several Messages

You can forward several messages in one message. To do so, type `forw` followed by the specific message numbers:

```
% forw 2 5 8 <RETURN>  (forward messages 2, 5, and 8)
```

Or, you can type `forw` followed by a range of numbers that specifies a beginning and an ending message:

```
% forw 2-7 <RETURN>    (forward all messages from 2 through 7)
% forw 15-last <RETURN> (forward messages from 15 through the last)
% forw 9:6 <RETURN>     (forward 6 messages, beginning with number 9)
% forw first:6 <RETURN> (forward first 6 messages)
% forw last:10 <RETURN> (forward last 10 messages)
% forw all <RETURN>     (forward all messages)
```

Forwarding a Message and Annotating the Original Message

Instead of sending yourself a copy of a message you forward, you can have the original message marked to show when and to whom copies were forwarded. When you issue the forward command, add `-anno` at the end:

```
% forw @ -anno <RETURN>
```

You will be placed in a file containing the forwarded message(s). Fill out the header lines and send it as described in "Forwarding a Message," p. 27. When the forwarded message is sent, the system will add lines like the following to the top of the original message:

```
Forwarded: <<28-Jan-85 11:08>>
Forwarded: To: tp3!jdoe (John_Doe)
Forwarded: Cc: tp!ct (Charleen_Thompson)
```

You will only see these lines if you look at the original message.
VI. LISTING, REMOVING, AND RENUMBERING MESSAGES

LISTING A SUMMARY OF YOUR MESSAGES

To see a summary listing of all your messages, type scan. The list will include the message number (a plus sign indicates the current message), the date it was sent, the name of the sender or recipient, the subject line of the message, and the beginning of the message:

```
% scan <RETURN>

1 7/14 buck (Jane_Bu) YOU WERE LATE <<We waited fo
2 7/14 To:buck (Jane) MEETING <<Sorry. I just re
3 7/15 tp!ann SELL <<Thanks for the tip. I
4 7/18 smith (Shelle) YOUR DRAFT REPORT <<If you w
5 7/22 jdoe (John Do) CONGRATULATIONS <<Many peopl
6+ 8/ 1 randvax!maril REVIEW FOR YOUR REPORT <<I h

%
```

You can look at the listing of specified messages:

```
% scan 2 5 8 <RETURN> (scan messages 2, 5, and 8)
% scan 2-7 <RETURN> (scan all messages from 2 through 7)
% scan 15-last <RETURN> (scan messages from 15 through the last)
% scan 9:6 <RETURN> (scan 6 messages, beginning with number 9)
% scan first:6 <RETURN> (scan first 6 messages)
% scan last:10 <RETURN> (scan last 10 messages)
```

REMOVING MESSAGES

Messages are kept on-line after you incorporate them until you specifically delete them. The messages take up disk space and accrue charges.

To delete a message, type rmm and the number of the message (5, in this example):

```
% rmm 5 <RETURN>
%
```
Listing, Removing, & Renumbering - 30 -

Be careful to type the correct number, because the system will delete the message without further prompting. Deleted messages are renamed \textit{messagenumber} (e.g., ,5) and are removed from the system late that night.

You can remove several messages at one time:

\begin{verbatim}
\% rmm 2 5 8 <RETURN>  (remove messages 2, 5, and 8)
\% rmm 2-7 <RETURN>     (remove all messages from 2 through 7)
\% rmm 15-last <RETURN> (remove messages from 15 through the last)
\% rmm 9:6 <RETURN>     (remove 6 messages, beginning with number 9)
\% rmm first:6 <RETURN> (remove first 6 messages)
\% rmm last:10 <RETURN> (remove last 10 messages)
\% rmm all <RETURN>     (remove all messages)
\end{verbatim}

RENUMBERING MESSAGES

To renumber messages sequentially after some have been deleted, type \texttt{folder -pack}. The system will renumber the messages for you and then display the foldername, the number of messages in it, their new range of numbers, and the current message number:

\begin{verbatim}
\% folder -pack <RETURN>
\% inbox+ has 34 messages ( 1- 34); cur=34.
\end{verbatim}
VII. COPYING AND PRINTING MESSAGES

COPYING A MESSAGE INTO A FILE

To copy a message into a new file that you can edit later, type show, the message number, the greater-than sign, and a new filename:

% show 2 > newfilename <RETURN>

In this example, message 2 will be copied into a file. The file will automatically be created. It is important to be careful to use a new filename, because if you type the name of an existing file, you will lose the information in that file.

COPYING A FILE INTO A MESSAGE

To copy one of your files into a message, compose the message, fill in the header information, and type any message that should appear above the file that will be copied into the message. Then press <CMD> and type run cat and the pathname of the file:

<CMD> run cat /a/username/DIRECTORYNAME/filename <RETURN>

A copy of the material in the specified file will be inserted in the message at the point where the cursor is located. This will not delete the material from the original file.

PRINTING A MESSAGE

To print a message, type show, the number of the message (3, in these examples), the pipe sign, and the print command (if you do not specify a message number, you will print the current message):

% show 3 | print <RETURN>
% show 3 | print -laser <RETURN> (memo/impact printer)
% show 3 | print -laser <RETURN> (laser printer)

You can print several messages at one time by specifying the message numbers or a range of numbers (see "Reading Several Messages," p. 24) and adding -pr -162\(^1\) to the command:

% show -pr -162 3-4 | print -p=62 -o=6 <RETURN> (memo/impact printer)
% show -pr -162 3-4 | print -laser -p=62 <RETURN> (laser printer)

\(^{1}\) The -pr -162 (containing a letter ell, not a number one) is a Unix feature that causes each message to be printed on a separate page with the filename at the top of the page; without -pr -162, the messages will be printed one after another on the same page.
VIII. GROUPING MESSAGES IN FOLDERS

If you have many messages on-line that you need to keep for reference, you can organize them by grouping them into different "file folders." You can easily create and delete folders, and move messages among them. Each folder may contain 999 messages.

All folder commands, like all other message handling commands, can be issued from any directory in which you are working.

THE CURRENT FOLDER

Message handling commands work on only the current (or working) folder. For example, when you issue the scan command, you see listed only the messages contained in your current folder; you may have other folders, but you cannot get a listing of their messages without first taking some action to make one of them your current folder before issuing the scan command.

The only exception is the inc command, which always places messages in your inbox and, thereby, makes inbox the current folder.

To determine the folder you are working with (your current folder), type **folder**. The foldername and the number of messages it contains will be listed on the screen, somewhat like the following:

```
% folder <RETURN>
% inbox+ has 20 messages ( 1- 20); cur= 8.
```

In this example, inbox is the current folder, and it contains 20 messages, numbered 1 through 20, with 8 being the current message.

The current folder is always automatically marked with a plus sign immediately following the foldername. You do not type the plus sign.
LISTING FOLDER NAMES

To list the names of all your folders and the number of messages in each of them, type folders. The system will display the names of all folders, along with some additional information about them:

<table>
<thead>
<tr>
<th>Folder</th>
<th># of messages</th>
<th>( range ); cur msg (other files)</th>
</tr>
</thead>
<tbody>
<tr>
<td>inbox</td>
<td>5 messages</td>
<td>( 1- 5); cur= 4.</td>
</tr>
<tr>
<td>seminar+</td>
<td>2 messages</td>
<td>( 1- 2); cur= 2.</td>
</tr>
<tr>
<td>doc</td>
<td>2 messages</td>
<td>( 1- 2).</td>
</tr>
</tbody>
</table>

TOTAL= 9 messages in 3 Folders.

In this example, there are three folders: inbox (which contains 5 messages, numbered 1-5, 4 being the current message), seminar (the current folder, which contains 2 messages, numbered 1-2, 2 being the current message), and doc (which contains 2 messages, numbered 1-2, and has no current message). A folder will not have a current message if you have moved messages to it but have never done anything else with them (like show, repl, etc.) or if you have removed the current message.

MOVING MESSAGES TO FOLDERS

Moving a Message to a New Folder

To create a new folder and move a message to it, type file, the number of the message(s) you wish to put into the folder, and the name you wish to give to the folder, immediately preceded by a plus sign.

% file 4 +seminar <RETURN>

This example removes message number 4 from the current folder and places it as message number 1 in the newly created folder called seminar.
Grouping Messages in Folders

You can move more than one message at a time by specifying the numbers:

- \% file 4 6 9 seminar <RETURN> (moves messages 4, 6, and 9)
- \% file 4-7 seminar <RETURN> (moves all messages from 4 through 7)
- \% file 15-last seminar <RETURN> (moves messages from 15 through the last)
- \% file 9:6 seminar <RETURN> (moves 6 messages, beginning with 9)
- \% file first:6 seminar <RETURN> (moves first 6 messages)
- \% file last:10 seminar <RETURN> (moves last 10 messages)
- \% file all seminar <RETURN> (moves all messages)

The system will ask if you wish to create the new folder. Your options are:

- yes (create the folder)
- no (do not create the folder)

**Yes:** If you wish to create the new folder, type yes (or y):

\% file 4 seminar <RETURN>
Create folder "/a/username/Mail/seminar”? yes <RETURN>
%

The message will then be moved to the newly created folder and removed from the folder it was in. This command will not change which folder is designated as the current folder.

**No:** If you do not wish to create the new folder (because, say, you made a typo in the foldername, or because you changed your mind), type no (or n):

\% file 4 seminar <RETURN>
Create folder "/a/username/Mail/seminar”? no <RETURN>
%

The message will not be moved.

**Moving a Message to an Existing Folder**

To move a message to an existing folder, type file, the message number, and the foldername, immediately preceded by a plus sign.
For example, to store message number 5 in an existing folder called doc:

```plaintext
% file 5 +doc <RETURN>
%
```

The message is moved and assigned a new number (the next available number after the highest) in the specified folder. This does not change which folder is designated as the current folder. You will receive the % prompt.

You can move more than one message at a time by specifying the numbers (see p. 34 for examples).

**WORKING WITH A DIFFERENT FOLDER**

To work with a different folder, type `folder` and the name of the folder, immediately preceded by a plus sign (seminar, in this example). The system will respond with the name of the new current folder:

```plaintext
% folder +seminar <RETURN>
seminar+ has 2 messages ( 1- 2); cur= 2.
%
```

You can now give any message handling command (like scan, show, repl); the command will affect or work on only the messages in this folder (except `inc`, which changes the current folder to inbox).

**REMOVING A FOLDER**

To remove a folder and all of its messages, type `rmf` and the name of the folder, immediately preceded by a plus sign (seminar, in this example):

```plaintext
% rmf +seminar <RETURN>
%
```

**CAUTION:** This command will immediately remove all messages and the folder without any further prompting. You cannot recover messages deleted in this fashion.
IX. PROMPTER—ANOTHER WAY TO COMPOSE MESSAGES

Prompter is a program that may be used instead of the editor to compose messages. Prompter is especially helpful for working on short messages or for working on a personal computer that is connected to the Rand system but does not work with full-screen products like the Rand editor.

Prompter works very much like the regular message handling system, except that you are prompted for information instead of editing a message form.

Prompter is only a text collector and not an editor; therefore, you will be limited in your ability to revise what you type.

WRITING A MESSAGE

To compose a message, type comp -e prompter. You will be prompted with the "To" line:

```
% comp -e prompter <RETURN>

To:
```

Type the names of the recipients, and press <RETURN>. All the addressing rules for the regular message handling system work with prompter (see "Addressing the Message," p. 6). If you need more than one line for the "To," "Cc," or "Subject" line information, type a backslash (\) before pressing <RETURN>, then continue typing the information for that line:

```
% comp -e prompter <RETURN>

To: M. Black, J. Buckley, J. Doe, A. Jones, F. Kant,\ S. Smith
```

NOTE: Make changes to the line you are working on (either the header lines or the text of the message) by pressing the backspace key or [CTRL+h] and retyping. Do not use the arrow keys to move the cursor. Press <RETURN> to move to the next line. You cannot change a previously typed line.
After the "To" line is filled in and you have pressed <RETURN>, you will be prompted with the "Cc" line. Type the names of people who should receive copies of the message, including yourself if appropriate, and press <RETURN>. You cannot add "Bcc," "Hardcopy," or "Fcc" lines. You will next be prompted with the "Subject" line; fill it in and press <RETURN>.

After the header information is filled in, you will be prompted:

```
-------Enter text.
```

Type the text of your message. To end your message, press <RETURN> and then [CTRL+d] or <DEL>. Your screen will look something like the following:

```
% comp -e prompter <RETURN>
To: M. Black, J. Buckley, J. Doe, A. Jones, F. Kant,
   S. Smith
Cc: c thompson
Subject: SEMINAR

-------Enter text.
I thought yesterday's seminar went very well. I was impressed by the quality of the work that had been done, and I think most of the other listeners felt the same.
[CTRL+d]
What now? (To see options press <RETURN>):
```

You will be prompted with "What now?," and you can respond with any of the regular options listed in "Sending a Message," p. 9. Note that if you choose the edit option, you will not be able to change the message. However, you will be prompted for any "leading text" and "trailing text," which you can insert above or below your existing message.

Messages that are written using prompter are received just like any other message. Prompter affects only the way you write the message.
REPLYING TO A MESSAGE

Prompter can also be used to reply to a message. Type repl, the number of the message that you are replying to, and -e prompter (if you do not include a message number, you will reply to the current message). You will be shown the "To," "Cc," "Subject," and "In-reply-to" lines already filled out (from the message you are replying to), and you will be prompted to type the text of your message. To end your message, press <RETURN> and then |CTRL+d| or <DEL>. Your screen will look something like the following:

```
% repl 2 -e prompter <RETURN>

To: randvax!marilynb (Marilyn_Black),
    tp2!buck (Jane_Buckley), tp3!jdoe (John_Doe),
    tp1!ann (Ann_Jones), tp3!fred (Fred_Kant),
    tp2!smith (Shelley_Smith)
Cc: tp1!ct (Charleen_Thompson)
Subject: Re: SEMINAR
In-reply-to: Your message of Monday, 15 Oct 1984 13:01 PDT.

-------Enter text.
Congratulations! I also think things went well. I would like to see more description of the latest tests whenever it is presented again.
|CTRL+d|
What now? (To see options press <RETURN>):
```

NOTE: Make changes to the line you are working on by pressing the backspace key or |CTRL+h| and retyping. Do not use the arrow keys to move the cursor. Press <RETURN> to move to the next line. You cannot change a previously typed line.

You will be prompted with "What now?," and you can respond with any of the standard options listed in "Sending a Message," p. 9.

CAUTION: Everyone listed on the "To" and "Cc" lines will receive a copy of your reply.
FORWARDING A MESSAGE

Prompter can be used to forward a message that you have received to another person. Type **forw**, the number of the message that you wish to forward, and **-e prompter** (if you do not include a message number, you will forward the current message).

You will first be prompted with the "To" line. Type in the names of the recipients and press **<RETURN>**. All the addressing rules for the regular message handling system work with prompter (see "Addressing the Message," p. 6). If you need more than one line for the "To," "Cc," or "Subject" line information, type a backslash (\) before pressing **<RETURN>**, then continue typing the information for that line.

**NOTE:** Make changes to the line you are working on by pressing the backspace key or **[CTRL]+h** and retyping. Do not use the arrow keys to move the cursor. Press **<RETURN>** to move to the next line. You cannot change a previously typed line.

After the "To" line is filled in and you have pressed **<RETURN>**, you will be prompted with the "Cc" line. Type the names of people who should receive copies of the message, including yourself if appropriate, and press **<RETURN>**. You cannot add "Bcc," "Hardcopy," or "Fcc" lines. You will then be prompted with the "Subject" line; fill it in and press **<RETURN>**.

Once the header information is completed, you will be prompted for "leading text" that will be inserted above the forwarded message. Type in any message you wish to appear above the forwarded message. (You can leave this blank if you wish.) To end this section, press **<RETURN>** and then **[CTRL]+d** or **<DEL>**. You will then be prompted to enter "trailing text" that will be inserted after the text of the forwarded message. (You can leave this section blank also.) To end the message, press **<RETURN>** and then **[CTRL]+d** or **<DEL>**. You will be prompted with "What now?", and you can respond with any of the standard options listed in "Sending a Message," p. 9.
Your screen will look something like the following:

```
% forw 2 -e prompter <RETURN>

To: a jones
Cc: s smith
Subject: THIS MESSAGE

-------Enter leading text.
I thought you'd be interested in the following message.
|CTRL+d|

-------Enter trailing text.
Congratulations!
|CTRL+d|
What now? (To see options press <RETURN>):
```

The forwarded message will not appear on the screen when you are writing the message, but it will be included in the message when it is received. You can see the whole message by typing list in response to the "What now?" prompt when you have finished composing the message.

PROBLEMS

If you have made a serious error and need to change a previously typed line, you must exit from prompter by pressing |CTRL+d| or <DEL>, then type quit when prompted with "What now?." You can now edit the message and send it, using the regular message handling system; type comp -use when you receive the % prompt.

If you have made a serious error and do not have a full-screen editor, you will have to exit from prompter by pressing |CTRL+d| or <DEL>; then destroy your draft by typing quit -delete when prompted with "What now?." You can now compose a new message.
X. OTHER PROGRAMS THAT USE MESSAGE HANDLING

SENDING AN ORDER TO THE LIBRARY

To order a document from the Rand Library, type \texttt{liborder} and you will be placed in a file containing a library request order form:

\begin{verbatim}
% liborder <RETURN>

+-----------------------------------+
:To:     !Library
:Cc:     
:Subject: BOOK/PERIODICAL/REPORT REQUEST (FORM 98A)
:-----
:
:Personal Author     :
:Agency               :
:Title                :
:Journal/Volume/Pages :
:Publication Date     :
:Publisher            :
:Classification/Price :
:Rand Library No.     :
:Report No.           :
:Source Order No.     :
:Purchase or Borrow   :
:When Needed          :
:Name/Empl. No./Ext.  :
:Mail Stop            :
:Dept/Project No.(RCN): 
;
+-----------------------------------+
\end{verbatim}

Type your name on the "Cc" line if you want an on-line copy of the completed order. If you want a printed copy of the completed order, open a blank line after the "Cc" line and type \texttt{Hardcopy}: followed by your name. (Remember to type your name according to the rules in "Addressing the Message," p. 6.)

Fill in the required library request information. If approval is needed, the Library will forward a copy of the form for the appropriate signature.
When you are finished, exit from the message and you will be prompted with "What now?":

```
<CMD> exit <RETURN>

What now?  (To see options press <RETURN>):
```

Send this message like any mail message. You can choose any of the options listed in "Sending a Message," p. 9.

**Sending Several Orders to the Library**

You can send several library requests at one time. Get a blank library request form by typing:

```
% liborder <RETURN>
```

Type your name on the "Cc" line if you want an on-line copy of the order. If you want a printed copy of the order, open a blank line after the "Cc" line and type **Hardcopy**: followed by your name.

Fill in the library information that would be the same for all requests (Name, Extension, RCN, etc.). Copy the order form (but not the "To," "Cc," and "Subject" lines), using <MARK> and <PICK> and place the form, using <CMD> <PICK> at the end of the file, as many times as necessary. Type **M** flush left on a blank line between each library form and the next. Then finish filling in the order forms.

When you are finished, exit from the message and send it like any mail message (see "Sending a Message," p. 9).
SENDING AN ORDER TO THE PUBLICATIONS DEPARTMENT

To order a document from the Rand Publications Department for internal use, type **puborder** and you will be placed in a file containing a publications order form:

```
% puborder <RETURN>

+---------------------------------------------+
| To: !publ                                   |
| Cc:                                         |
| Subject: REQUEST FOR PUBLICATIONS           |
| :                                           |
| Please send ONE copy of each publication listed below: |
| :                                           |
| : Publication Number Partial Title          |
| :                                           |
| 1.                                           |
| 2.                                           |
| 3.                                           |
| 4.                                           |
| 5.                                           |
| Name:                                        |
| Extension:                                   |
| Department:                                  |
| Mail Stop:                                   |
+---------------------------------------------+
```

Type your name on the "Cc" line to get an on-line copy of the order. To get a printed copy of the order, open up a blank line following the "Cc" line and type **Hardcopy**: followed by your name. (Remember to type your name according to the rules in "Addressing the Message," p. 6.)

Type in the appropriate document request information.
Library & Publication Order - 44 -

When you are finished, exit from the message and you will be prompted with "What now?":

```
<CMD> exit <RETURN>
What now? (To see options press <RETURN>):
```

Send the message just like any mail message. You can choose any of the options listed in "Sending a Message," p. 9.

SENDING MAIL TO GROUPS

The liborder and puborder commands create messages addressed to !Library and !publ. The exclamation mark, sometimes called the "bang" character, is required when the recipient's name is an alias rather than a real name. In most cases, you should address mail to the real name of the user. A few projects, however, have set up special group mail aliases, such as "hasegroup." Mail addressed to "hasegroup" goes to all project members listed as being in the group.¹

PRINT/STORE/RETRIEVE/UUCP FAILURE MESSAGES

If there is a problem with a print, store, retrieve, or uucp command that you have typed, the system sends you an on-line message telling you of the problem. Even if the database says that you are to receive printed copies of messages, you will get on-line messages about problems or failures.

STATUS OF ARCHIVE MESSAGES

When you archive files from TP1 or TP2, the system sends you an on-line message telling you that the archive was completed and listing the pathname of the archived file. Even if the database says you receive printed copies of messages, you get on-line archive messages.

¹Group mail aliases must be set up through a Text Processing Consultant.
### Appendix A

**SUMMARY OF MESSAGE HANDLING COMMANDS**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>% comp &lt;RETURN&gt;</td>
<td>Composes a new message</td>
</tr>
<tr>
<td>% comp -e prompter &lt;RETURN&gt;</td>
<td>Composes a new message, using the interactive prompter instead of the full-screen editor</td>
</tr>
<tr>
<td>% comp workshop &lt;RETURN&gt;</td>
<td>Composes a new message and calls it a specified name (in this case, workshop)</td>
</tr>
<tr>
<td>% comp -use &lt;RETURN&gt;</td>
<td>Resumes work on a draft message after you have quit working on it</td>
</tr>
<tr>
<td>% comp -use workshop &lt;RETURN&gt;</td>
<td>Resumes work on a draft message with a specified name (in this case, workshop) after you quit working on it</td>
</tr>
<tr>
<td>% file 4 +seminar &lt;RETURN&gt;</td>
<td>Stores a message (in this case, 4) in a folder (in this case, seminar)</td>
</tr>
<tr>
<td>% folder &lt;RETURN&gt;</td>
<td>Shows the current folder</td>
</tr>
<tr>
<td>% folder +seminar &lt;RETURN&gt;</td>
<td>Makes the specified folder (in this case, seminar) the current folder</td>
</tr>
<tr>
<td>% folder -pack &lt;RETURN&gt;</td>
<td>Sequentially renumbers all messages in the current folder</td>
</tr>
<tr>
<td>% folders &lt;RETURN&gt;</td>
<td>Displays names of all folders and the number of messages in each</td>
</tr>
<tr>
<td>% forw 4 &lt;RETURN&gt;</td>
<td>Forwards to others a message you received (in this case, 4)</td>
</tr>
<tr>
<td>% forw 4 -anno &lt;RETURN&gt;</td>
<td>Forwards to others a message you received (in this case, 4) and marks the original message with notations as to whom copies were sent and when</td>
</tr>
<tr>
<td>% forw 4 -e prompter &lt;RETURN&gt;</td>
<td>Forwards to others a message you received (in this case, 4), using the interactive prompter</td>
</tr>
<tr>
<td>% inc &lt;RETURN&gt;</td>
<td>Incorporates new message(s) into your inbox</td>
</tr>
</tbody>
</table>
MH Commands (continued)

% liborder <RETURN> Orders a book, periodical, or report from the Rand Library

% name john doe <RETURN> Shows database information about a Rand employee or consultant (in this case, john doe)

% name=johnd <RETURN> Shows database information about a Rand employee or consultant by username (in this case, johnd)

% next <RETURN> Shows message numerically following current message

% prev <RETURN> Shows message numerically preceding current message

% puborder <RETURN> Orders a document from the Rand Publications Department

% repl 3 <RETURN> Replies to a message (in this case, 3)

% repl 3 -e prompter <RETURN> Replies to a message (in this case, 3), using the interactive prompter

% rmf +seminar <RETURN> Removes a folder (in this case, seminar) and all its contents

% rmm 3 <RETURN> Removes a message (in this case, 3) from current folder

% scan <RETURN> Lists all messages in current folder

% show 2 <RETURN> Displays a message (in this case, 2) in the current folder

% show 2 > jones <RETURN> Copies a message (in this case, 2) into a file (in this case, jones)

% show 3 | print <RETURN> Prints a message (in this case, 3) on the memo printer

% show -pr -l62 3-6 | print <RETURN> Prints messages (in this case, all messages from 3 through 6) on the memo printer, each on a new page
### Appendix B

**SUMMARY OF RESPONSES TO "WHAT NOW?"**

<table>
<thead>
<tr>
<th>Respond to &quot;What now?&quot; by typing:</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>What now? <strong>edit</strong> &lt;RETURN&gt;</td>
<td>Allows you to edit message</td>
</tr>
<tr>
<td>What now? <strong>list</strong> &lt;RETURN&gt;</td>
<td>Shows message; changes cannot be made</td>
</tr>
<tr>
<td>What now? <strong>name john doe</strong> &lt;RETURN&gt;</td>
<td>Shows database information about a Rand employee or consultant (in this case, john doe)</td>
</tr>
<tr>
<td>What now? <strong>name johnd</strong> &lt;RETURN&gt;</td>
<td>Shows database information about a Rand employee or consultant by username (in this case, johnd)</td>
</tr>
<tr>
<td>What now? <strong>quit</strong> &lt;RETURN&gt;</td>
<td>Causes message not to be sent; retains draft of message</td>
</tr>
<tr>
<td>What now? <strong>quit -delete</strong> &lt;RETURN&gt;</td>
<td>Causes message not to be sent; deletes draft of message</td>
</tr>
<tr>
<td>What now? <strong>send</strong> &lt;RETURN&gt;</td>
<td>Sends message</td>
</tr>
<tr>
<td>What now? <strong>send -verbose</strong> &lt;RETURN&gt;</td>
<td>Sends message, indicating to whom it was sent</td>
</tr>
<tr>
<td>What now? <strong>xpand</strong> &lt;RETURN&gt;</td>
<td>Shows full computer address(es) of recipient(s)</td>
</tr>
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