Technical Memorandum EDIS SAC 1

A USER'S GUIDE TO EDIS CONFER, THE
ENVIRONMENTAL DATA AND INFORMATION
SERVICE COMPUTER CONFERENCE SYSTEM

Robert R. Freeman

Rockville, Md.
February 1979

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ATMOSPHERIC ADMINISTRATION / Information Service

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PREFACE

Computer conferencing is a recently developed management tool that offers a potentially significant improvement in communications for decentralized organizations and groups of individuals or even those who simply need a convenient, informal record of their discussions. In less than 2 years it has benefited the Environmental Data and Information Service (EDIS) through the development of EDIS CONFER.

A number of EDIS individuals contributed to one or more aspects of the development of CONFER. Joseph F. Caponio suggested that computer conferencing could have applications in EDIS. Robert R. Freeman introduced the concept to the Systems Advisory Council (SAC) and served as manager of the SAC Computer Conferencing Project. Thomas S. Austin enthusiastically backed the project and made the resources available for the development of CONFER.

EDIS CONFER would not exist as it does without the inspiration and hard work of Darrel R. Knoll, who saw the link between the concept discussed by SAC and the capabilities of the existing software. He served as technical consultant, systems analyst, and programer to build CONFER, and also acted as manager for the conferences in 1977 and 1978. EDIS also acknowledges the contribution of Gregory Ott of the ADP First Data Corporation, who worked with us in programing Version 3 of EDIS CONFER.

A separate Conference Manager's Guide, published as NOAA TM EDIS—SAC-2, tells how to establish and maintain a conference.

A. Newton Page, Chairman
EDIS Systems Advisory Council

CONTENTS

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DATA AND INFORMATION SERVICE
COMPUTER CONFERENCE SYSTEM

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ABSTRACT. This guide discusses how to obtain EDIS
CONFER, the background of its development, and the
concept and applications of computer conferencing.
Detailed instructions are given on the organization
of CONFER and the commands used to activate its
parts. EDIS CONFER permits users to retrieve and
display messages; compose, edit, and send messages;
and locate information about other members of a
conference.

1. INTRODUCTION

1.1 Ownership, Access, and Use of EDIS CONFER

   EDIS CONFER is a computer conferencing system developed by the Environ-
mental Data and Information Service (EDIS) of the National Oceanic and
Atmospheric Administration, U.S. Department of Commerce. It has been used
successfully since 1977 for more than a dozen conferences.

   EDIS will make the software and associated documentation available to
interested parties under the following terms and conditions:

   (1) One copy of the documentation, the User's Guide, and the Conference
Manager's Guide will be made available at no charge on receipt of a written
request on institutional letterhead. EDIS reserves the right to change this
policy without notice by referring requestors to a source where copies may be
purchased. Write to:

               Chief, Systems Integration and Planning (Dx4)
               Environmental Data and Information Service
               National Oceanic and Atmospheric Administration
               Washington, D.C 20235

   (2) The EDIS CONFER programs are located on computer systems operated by
the ADP First Data Corporation. EDIS makes no charge for the programs, but
those interested will need to establish an account with ADP First Data Corp.
in order to use the programs. Contact:

```
ADP First Data Corp.
40 Second Avenue          or          1333 New Hampshire Avenue, NW
Waltham, MA  02154                    Washington, DC  20036
```

(3) EDIS assumes no responsibility for maintenance of the software,
for correcting any problems detected by users, or for any costs incurred
by users as a result of either correct or faulty operation. EDIS will
be interested in hearing from users who encounter any "bugs" or wish to
report new uses or extensions to the software for their applications.
Contact the address given in (1) above.

1.2 Development of EDIS CONFER

EDIS is a decentralized organization comprising a headquarters and five
centers. Including both these centers and its field liaison offices,
EDIS has facilities in nine States and the District of Columbia. Numerous
communication problems ensue from this decentralization.

As a result, when an EDIS-wide Systems Advisory Council was formed in
1976, it took up intercenter communication as one of its early concerns.
Members of the Council had long experience in database management, infor-
mation retrieval, the use of interactive text-editing systems, and many
aspects of data communications. The idea of computer conferencing was
quickly and enthusiastically grasped.

The Council became familiar with the Electronic Information Exchange
System (EIES) being developed at New Jersey Institute of Technology by
Murray Turoff and his colleagues under National Science Foundation (NSF)
sponsorship. The Council surveyed information available on EIES, the
PLANET system of The Institute for The Future, the Mailbox facility
available on NOAA's XDS-940 computer system in Boulder, Colo., and
fragmentary descriptions of other systems.

After deciding on the features it felt were required and others con-
sidered desirable, the Council compared these features with the charac-
teristics of the several known systems. As of early 1977 it was apparent
that no known publicly available computer conference system met our needs.
We judged the EIES to be more than adequate, but at that time NSF limited
its use to groups of practicing scientists. Although entirely involved in
managing scientific data and information, EDIS did not meet NSF criteria.

At that time, members of EDIS programing staffs had begun to use the
System 1022 database management system, one of a number of software
packages available under a NOAA time-sharing services contract with ADP
First Data Corp. It became apparent after some study that System 1022
offered the features required for the storage and retrieval of message
text and personal information. Additional programs were needed to handle
the creation of several 1022 files and the receipt and distribution of
messages between user terminals and 1022.

After a preliminary test (CONFER Version 1), the Systems Advisory
Council proposed to proceed with the development of CONFER to achieve an
EDIS computer conferencing capability. The Director of EDIS approved the
proposal in September 1977.

The current version described in this User's Guide is version 3. EDIS
has used versions 2 and 3 extensively in communications with other organ-
izations in the United States and elsewhere. At least a dozen conferences
have been held since mid-1977, some of them still in existence and exceed-
ing a thousand messages.

1.3. Computer Conferencing Concepts and Uses

A computer conferencing system is an aid to communication among groups
of individuals. The members of a group are permitted to communicate via
text on a one-to-one or one-to-many basis without the constraints of
being in the same place at the same time.

Members of a computer conference may exchange messages in unstructured
note form, hold seminars or meetings, develop jointly authored reports,
and seek information. The style of communication may be collegial, or
there may be definite preassigned roles to participants, such as critic,
reviewer, editor, or expert.

Computer conferences originally were developed as a technique to facili-
tate communication in crisis situations (e.g., natural disasters) and in
consensus building or confrontational situations, such as conferences and
meetings. The common aspect of the two is the need for numbers of people
to communicate with one another when it may be difficult or undesirable
for them to be physically together. In addition, the nature of their
communication may require recourse to previously stored information as
well as the ability to make certain computations on the information or
transform it. Some typical applications are:

a. Computer-managed conferences. Conferences serve a number of
important social functions, including presenting of new information,
assuring that all members of a group share a common information base, and
confronting and resolving differences of opinion within a group. Unless
there is a particular urgency, it may be unnecessary for members of the
group to meet in one another's physical presence. In certain situations,
a freer and more reflective exchange of information may take place if
the pressures of personalities and time are removed.

b. Message transmission and switching. The simplest application is
a form of electronic mail, which involves simply sending messages between
two people or between one person and a group. The advantages over tele-
phone communication include having a printed record, if desired; not
requiring all parties to be present; and, in some cases, costing less.
Unlike teletype systems, a computer conference system provides electronic
storage of a message until the recipient is ready to call for for it,
possibly even days later.

3

c. <u>Multi-party development of textual material</u>. Some uses of computer conferences involve combining standard text-editing software with message transmission to enable several individuals indifferent locations to participate in writing reports. Each may maintain a copy and make comments or suggest revisions to others' text, thus speeding up the process of multiparty authorship and saving the labor of retyping.

d. <u>More rapid communication among organizations</u>. Geographically decentralized organizations often face continuing problems of communication when a printed record is required. Time differences contribute to this problem as well. The computer conference is advantageous because it can store the text until the receiving location signals its readiness to receive. Written communication with foreign and international contacts is notoriously slow, requiring more than a week for a simple exchange of letters and much longer for more complicated transactions. As satellite data transmission links between North America and Europe are already in place, it is entirely feasible to communicate with individuals and organizations outside one's own country.

e. <u>Development and review of special ad hoc studies requiring several rounds of communication</u>. In support of coordinating bodies, special studies often require input from more than one organization. The computer conference facilitates the collection of the required data and development of mutually acceptable positions.

f. <u>Issuance of instructions and advice to staff</u>. The continuing development of products and services requires extensive communication of detailed lists, instructions, and advice. Some of this material must be sent to all units of an organization, whereas other portions are meant for one or two specific units. The computer conference system makes it possible to communicate this type of material and to receive comments and responses more rapidly.

2. SYSTEM OVERVIEW

CONFER operates on a DECsystem-10 time-shared computer system. Users gain access via a computer terminal, a voice-grade telephone line, and a packet-switched data communications network. CONFER makes extensive use of the System 1022 data base management system, although the terminal user does not have to be aware of 1022 or perform any steps directly related to it. System 1022 is a proprietary software package developed by Software House, Inc., for the DECsystem-10.* As presently implemented, CONFER is running on computer systems operated by ADP Services, Inc., in Ann Arbor, Mich., and by ADP First Data Corp. in Waltham, Mass. The process of using CONFER looks schematically like this diagram:

---

*For more information, refer to <u>First Data 1022 Primer</u>, available from ADP First Data Corp., 40 Second Avenue, Waltham, MA 02154.

```
 _____      _____      _____      _____      _____      _____
|        |    |        |    | Data   |    |        |    |        |    |        |
|Your    |--> | Tele-  |--> |Communi-|--> | Host   |--> | EDIS   |--> |System  |
|term-   |    | phone  |    |cations |    |Computer|    |CONFER  |    | 1022   |
|inal    |    |        |    |Network |    |System  |    |Program |    |        |
|_____|    |_____|    |_____|    |_____|    |_____|    |_____|
```
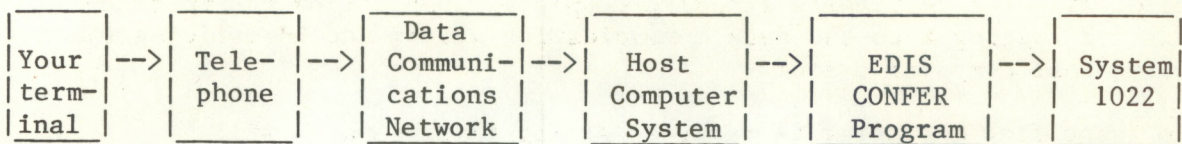
3. GETTING CONNECTED TO EDIS CONFER

There are several steps to go through in order to "sign on" each time you use EDIS CONFER. These steps connect together a number of "pieces" and establish your identity to the system.

To use EDIS CONFER, follow these instructions:

3.1 Terminals

1. You should have a terminal with the standard ASCII keyboard and code set.

2. If there is a variable transmission speed switch, set it at 30 characters per second.

3. If there is an upper/lower case switch, and you wish to use both upper and lower case characters, you may set the switch at its upper/lower setting.

4. If there is a transmission mode switch (half/full duplex), its setting should be full duplex.

3.2 Telecommunications

ADP Network Services maintains a data communications network, CypherNet, which may be used to access the host computer from locations in the United States and Europe. Terminals in the Canada, Mexico, Puerto Rico, the United States, many countries of Western Europe, and other locations also may access a host computer readily via Telenet and Tymnet. Users in some countries must make prior arrangements through national telecommunication authorities (PTT's).

Detailed instructions, if needed, will be furnished by your Conference Manager.

3.3 Starting CONFER

Dial the appropriate telephone number for the data communication system. When you hear the high-pitched signal, connect the telephone

handset with the terminal's acoustic coupler. Then follow the instruc-
tions for logging into the data communication system and identifying the
desired host computer system.

An identifier character is required at log-in time which will
depend on the transmission speed of the terminal being used. At 300
baud, this character is a <control p>. After entry of this character,
the host computer system will identify itself and request identification
from you in the following manner:

ACCOUNT-USER NUMBER--

Enter the account user number supplied by your Conference Manager.

PASSWORD:

Enter the conference password supplied by your Conference Manager.

ACCOUNT ID:

Enter your initials or any code specified by your Conference Manager.
Then EDIS CONFER must be started by typing:

.RUN CONFER   (The period indicates a system prompt.)

CONFER will introduce itself by printing

    EDIS COMPUTER CONFERENCE SYSTEM V.3.0 [TIME] [DATE]
    [NAME OF CONFERENCE]
    ENTER CONFER PASSWORD?

The user should enter the assigned password, followed by a carriage
return. In some implementations this password will not print on the
terminal's paper, while in others the printing will be blocked out by
repeated printing of a variety of other characters.

CONFER will then print:

    THERE ARE (number) MESSAGES ON THIS CONFERENCE, YOU HAVE NOT SEEN
    (number) OF YOUR MESSAGES (or) YOU HAVE SEEN ALL OF YOUR MESSAGES.
    ENTER OPTION - RETRIEVE, WRITE, ATTENDEES, QUIT (R W A Q):

Instructions for use of CONFER are in section 4.

3.4 TERMINATING A CONFER SESSION

At any time the user is presented with the basic set of options:

ENTER OPTION - RETRIEVE, WRITE, ATTENDEES, QUIT (R W A Q):

Exercising the Quit option will cause the session to be terminated. Depending on the particular implementation of CONFER, it may be necessary also to quit System 1022, terminate the job on the host computer system (.KJOB), and terminate the use of the data communication network. See the detailed instructions for each conference.

4. INSTRUCTIONS FOR THE USE OF EDIS CONFER

CONFER is constructed as a hierarchy of four modules containing eight distinct functions. On selecting a module, the user is given a choice of commands that may be executed. There are two universal commands, H ("help") and Q ("quit"). The former produces a description of the commands available to the user in the module that is active, whereas the latter returns the user to a previous function or terminates use of the conference. Table 1 lists the modules, functions, and commands. Figure 1 shows their relationships.

In the following sections, messages transmitted by CONFER and printed at the user's terminal are printed in upper case letters. Those requiring a response from the user are underscored.

4.1 Basic Module

The user enters the basic module automatically upon initiating the use of CONFER. The basic module requests the user to choose which of the other three modules is to be used. The choices are R (Retrieve), W (Write), and A (Attendance). Example:

.Run confer

EDIS COMPUTER CONFERENCE SYSTEM V3.0 09:50   JANUARY 5, 1979
SYSTEMS ADVISORY COUNCIL (SAC) CONFERENCE
ENTER CONFER PASSWORD? (User enters password)
THERE ARE 1345 MESSAGES ON THIS CONFERENCE, YOU HAVE NOT SEEN 5 OF THEM.
ENTER OPTION - RETRIEVE, WRITE, ATTENDEES, QUIT (R W A Q):

4.2 Retrieve Module

The retrieve module has two functions. The first permits the user to specify criteria for selecting messages from the file, whereas the second provides a variety of options for displaying the messages on the terminal.

4.2.1 Select Messages

The user may specify one or more criteria for selection. The only exception is that if the user elects to receive the new messages routed to him, no other criterion may be used. If two or more criteria are specified, the resulting set is the intersection of those specified, i.e., a logical "and."

Table 1.--CONFER organization

Modules and functions	Commands*
A. BASIC	
1. Activity choice	R, W, A
B. RETRIEVE	
2. Select messages	I, C, M, D, K, N, P
3. Display messages	A, P, T, I
C. WRITE	
4. Write messages	N, E
5. Edit messages	F, K, R, C, I, S, M, A, D, L
6. Send messages	M, P, K, S
D. ATTENDANCE	
7. Identify attendees	I, C, A
8. List attendees	L, D, P, A

Universal commands (may be used with any module):

H (Help) - explains commands

Q (Quit) - terminates use of module or conference

*See following sections for descriptions.

Enter

```
          ┌─────────────────────────┐
          │      BASIC MODULE        │
          │   "Activity" function    │
          │          R,W,A           │
          └─────────────────────────┘
```

RETRIEVE MODULE   WRITE MODULE   ATTENDANCE MODULE

```
┌────────────────────┐   ┌────────────────────┐   ┌────────────────────┐
│  "Select" function │   │   Write" function  │   │ "Identity" function│
│   I,C,M,D,K,N,P    │   │        N,E         │   │        I,C,A       │
└────────────────────┘   └────────────────────┘   └────────────────────┘

┌────────────────────┐   ┌────────────────────┐   ┌────────────────────┐
│ "Display" function │   │   "Edit: function  │   │   "List" function  │
│      A,P,T,I       │   │    F,K,R,C,I,S,    │   │       L,D,P,A      │
│                    │   │       M,A,D,L      │   │                    │
└────────────────────┘   └────────────────────┘   └────────────────────┘

                         ┌────────────────────┐
                         │   "Send" function  │
                         │       M,P,K,S      │
                         └────────────────────┘
```
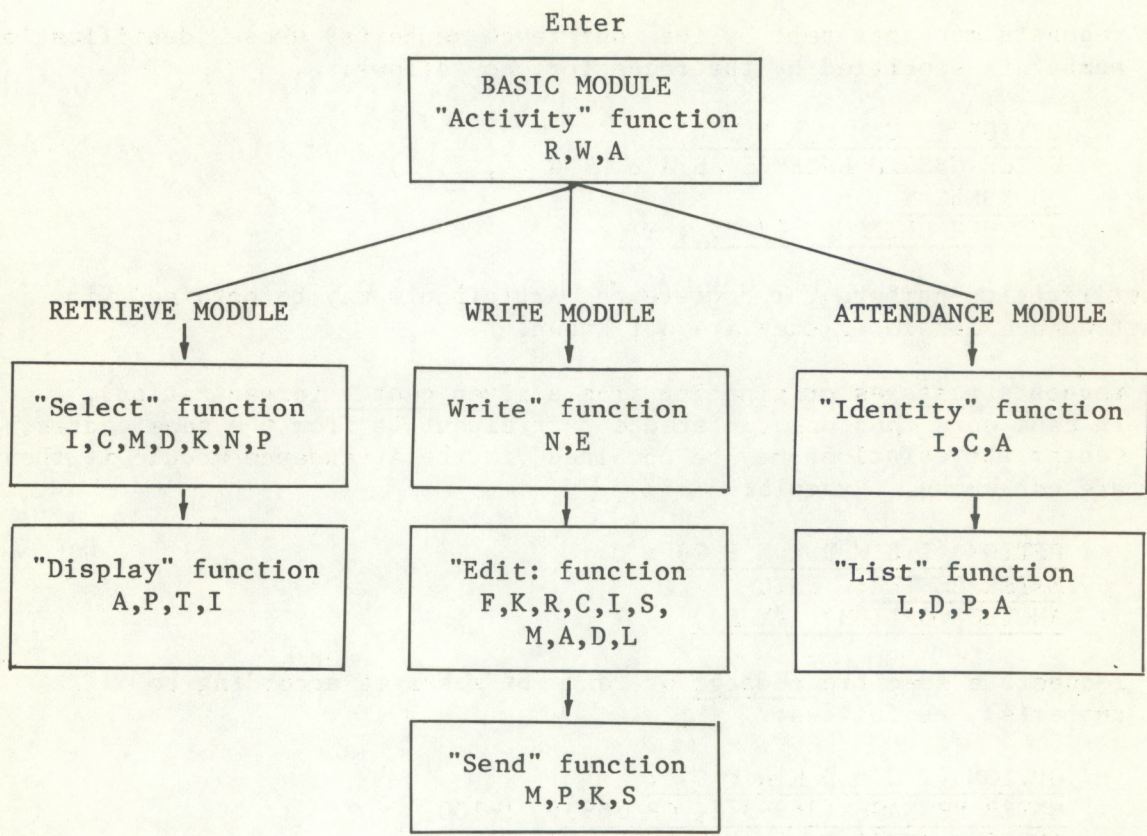
Use of the "Quit" (Q) Command has the following effect:

In the "Activity" function, terminates use of CONFER.

In all other functions, returns control to "Activity" function.

Figure 1.--CONFER schematic diagram.

9

The choices are:

I - requests messages sent by the conference member(s) whose identification
    number is specified by the requestor, as follows:

        OPTION (I C M D K N P Q) : I
        ENTER USERID NUMBERS AS A STRING (1, 2, 3)
        ID NUMBERS : 6
        ANOTHER OPTION? (Y N) : Y

Identification numbers for conference participants may be obtained via
the Attendance module if they are not known.

C - requests messages originating from a given center (organization),
    in case more than one conference participant is from the same center.
    Center abbreviations may be obtained via the Attendance module if they
    are not known. Example:

        OPTION (I C M D K N P Q) : C
        ENTER CENTER: ESIC
        ANOTHER OPTION? (Y N) : Y

M - requests a specific message or range of messages according to
    number(s), as follows:

        OPTION (I C M D K N P Q) : M
        ENTER MESSAGE (369-372, OR 369): 1-100
        ANOTHER OPTION? (Y N) : Y

D - requests all messages sent on a specific date or range of dates.
    (Note: The American style is used, i.e., month, day, year, con-
    verted to six-digit numerical form.) Example:

        OPTION (I C M D K N P Q) : D
        ENTER DATE (051478-060178, or 051478):   051478
        ANOTHER OPTION? (Y N) : Y

K - requests all messages that have been indexed by specified keywords,
    as follows:

        OPTION (I C M D K N P Q) : K
        ENTER KEYWORDS ONE AT A TIME (CARRIER RETURN ONLY = END LIST)
        KEYWORD :Apples
        KEYWORD :Oranges   Note: Keywords may be entered in
        KEYWORD :Pears   upper and lower case letters.
        Keyword :(CR)   CONFER automatically converts the
                                  letters to upper case for storage
                                  and retrieval.

        ANOTHER OPTION? (Y N) : Y

N - requests all <u>new</u> messages (except those authored by the user),
   i.e., public messages and private messages directed to the user
   which the user has not yet seen. (Note: This option cannot be
   "and-ed" with another option.) Example:

> <u>OPTION (I C M D K N P Q) : N</u>
> 70 MESSAGES SELECTED.

P - requests all <u>private</u> messages sent to or by the user.

> <u>OPTION (I C M D K N P Q) : P</u>
> <u>ANOTHER OPTION? (Y N) : N</u>
> 137 MESSAGES SELECTED.

4.2.2 Display Messages

   This function permits the user to print the messages retrieved by the
Select function in any of several formats. As a convenience, after the
messages have been displayed, the user is given the option of printing
them again in a different format. This capability permits the headings
of a lengthy selection to be displayed quickly while the options are
retained to see the total text or to select only certain messages by number.

   The function is introduced automatically as soon as the user declines
the option to select messages by another criterion in the Select function.
Example:

> RETRIEVE BY ID(I), CENTER(C), MESSAGE(M), DATE(D), KEYWORD(K),
>   NEW(N), PRIVATE(P), OR QUIT(Q).
> <u>OPTION (I C M D K N P Q) : I</u>
> ENTER USER ID NUMBERS A STRING (1, 2, 3).
> <u>ID NUMBERS : 6</u>
> <u>ANOTHER OPTION? (Y N) : N</u>   (User declines further options; display
>   function introduced automatically.)
>
> 3 MESSAGES SELECTED
>
> DISPLAY OPTIONS ARE: HEADER - ALL(A), HEADER - PAUSE(P),
>   TOTAL MESSAGE - ALL(T), TOTAL MESSAGE - PAUSE(I), QUIT(Q).
> <u>ENTER OPTION (A P T I Q) :</u>

The choices are:

A - Prints the headers of <u>all</u> messages selected. The header consists
   of the message number, sender's name and identification number, the
   date and time the message was sent, the sender's center, and any
   keywords assigned to the message.

P - Prints the headers of selected messages, but allows the user to
   set a <u>pause</u> in the printing after a specified number. For example,

> <u>PAUSE INTERVAL: 3</u>

11

When the pause occurs, the system will prompt with:

MORE? (Y N):

The user then has the option to continue, to quit, or to change to another function.

T - Prints the total content of all selected messages.

I - Prints the total content of selected messages, but permits an interruption (pause) to be set after a specified interval.

4.3 Write Module

The write module has three functions. The "write" function allows the user to signal whether new text is going to be entered or an already existing text is to be used as the basis for a message. The "edit" function permits changes to be made in the message that is being composed. The "send" function provides for designation of who is to receive a message, indexing for later retrieval by subject, capability to send the message anonymously, and final clearance to send the message.

4.3.1 Write Messages

This function permits the user to write a message consisting of entirely new text or to modify a copy of the text of a message already stored in the message file. The choices are:

N - Indicates that the user wishes to write an entirely new message. CONFER signals readiness to receive the message by printing the number of the first line. Text may be entered in lines of not more than 76 characters. On striking the "return" key, the user should wait until CONFER prints the next line number before continuing to enter text.

To signal the end of a message, strike the "return" key, wait for a new line number, then type $END. Doing this will cause control to be transferred automatically to the "edit" function. (Note: If the line ends with a hyphen (-) the user must hit an extra carrier return before CONFER will prompt for the next line.) Example:

```
ENTER OPTION - RETRIEVE, WRITE, ATTENDEES, QUIT (R W A Q) : W
YOUR MESSAGE NUMBER IS 1346
NOTE - CMD ==> IS THE PROMPT FOR EDIT COMMANDS.
ENTER WRITE OPTION, NEW(N), EXISTING(E), QUIT(Q)
 (N E Q)  >N
NOTE - $END ENDS INPUT.   (MUST BE IN UPPER CASE.)

   10  This is an example.  It is being written for use in the
   20  CONFER User's Guide.
   30  $END
```

E – Indicates that the user wishes to use the text of an <u>existing</u>
message as the basis for a new message. CONFER will ask for the
number of the desired message, make a copy of it in the message
workspace, then enter the "edit" function (see below), and wait for
the user to begin modifying the message. Only the copy is modi-
fied; the original message remains in the file as it was. The
text of the message to be modified may be displayed by using the
"List" (L) command described below.

Using the "E" command causes retrieval of the desired message and
automatic transfer of control to the "edit" function.
Example: (See under following section.)

4.3.2 Edit Messages.

The edit function provides a variety of commands that the user may
use to modify a message before to sending it. CONFER signals readiness
to receive an edit command by printing "CMD ==>". Each edit command may
be entered by using the whole word or truncating the word down to as
little as only the first letter.

The valid edit commands are:

INPUT ##1	– Used to insert a line of text starting at a specified line, with an increment of 1.
INPUT *	– Start inserting at the end of the message with an increment of 10.
SUBSTITUTE ##1	– Replace line ##1 with a new line.
DELETE ##1	– Will drop line ##1 from message, forever.
DELETE ##1 ##2	– Will drop a range of line numbers, begin- ning with line ##1 thru line ##2 inclusive.
LIST	– Will type out the complete message.
LIST ##1	– Will type out one line, line ##1.
LIST ##1 ##2	– Will type a range of lines from ##1 thru ##2 inclusive.
CHANGE ##1 /STR1/STR2/NNN	– This command is used to change string one (STR1) to string two (STR2) on line ##1. NNN is used to specify that the first NNN occurrences of (STR1) should be changed. NNN is a number from 1 to 999. If NNN is not specified, all is assumed. <u>Note</u>: Neither the single quote (') nor the double quote (") may appear in a string to be changed. If you wish to change a string containing either of these characters, use the "substitute" command.
CHANGE ##1 ##2 STR1/STR2/NNN	– This is the same as the last change, ex- cept it specifies a range, from ##1 thru ##2, inclusive.
RENUMBER ##1 INC	– Renumber the complete message giving the first line ##1, and incrementing by INC.

```
MOVE ##1                          - Will transfer line ##1 from one location
                                    in the file to another.  You will be asked
                                    where to transfer the line.
MOVE ##1 ##2                      - Will transfer a range of lines.
AGAIN ##1                         - Will insert a copy of line ##1 into the
                                    message.  You will be asked where to
                                    copy the line.
AGAIN ##1 ##2                     - Will insert a copy of a range of lines in
                                    the message.
KEEP                              - If you get tired playing with a message,
                                    you can hold it and finish it later.
QUIT                              - This is the same as KEEP
HELP                              - Display this text again.
FINISH                            - Message is completed.
```

Example of text editing using an existing message:

```
ENTER OPTION - RETRIEVE, WRITE, ATTENDEES, QUIT (R W A Q) : W
YOUR MESSAGE NUMBER IS 1347
NOTE - CMD ==> IS THE PROMPT FOR EDIT COMMANDS.
ENTER WRITE OPTION, NEW(N), EXISTING(E), QUIT(Q)
 (N E Q)  >E
ENTER EXISTING MESSAGE NUMBER  >1346
CMD ==>List


   10   THIS IS AN EXAMPLE.  IT IS BEING WRITTEN FOR USE IN THE
   20   CONFER USER'S GUIDE.


CMD ==>Change 20 /Guide/Manual/

   20   CONFER USER'S MANUAL.


CMD ==>Input *
NOTE - $END  ENDS INPUT.


   30  We hope that you will find everything completely clear.
   40   $END


CMD ==>Again 30
MOVE TO LINE:40
CMD ==>Again 10 40
MOVE TO LINE:60
CMD ==>List


   10   THIS IS AN EXAMPLE.  IT IS BEING WRITTEN FOR USE IN THE
   20   CONFER USER'S MANUAL.
   30   WE HOPE THAT YOU WILL FIND EVERYTHING COMPLETELY CLEAR.
   40   WE HOPE THAT YOU WILL FIND EVERYTHING COMPLETELY CLEAR.
   60   THIS IS AN EXAMPLE.  IT IS BEING WRITTEN FOR USE IN THE
   61   CONFER USER'S MANUAL.
   62   WE HOPE THAT YOU WILL FIND EVERYTHING COMPLETELY CLEAR.
   63   WE HOPE THAT YOU WILL FIND EVERYTHING COMPLETELY CLEAR.
```

```
CMD ==>F
```
ENTER OPTION - SEND, MIDNIGHT SKULKER, PRIVATE, KEYWORDS
(S M P K) : P
DO YOU NEED A LIST OF USER ID NUMBERS? (Y N)   N
ENTER LIST OF USER ID'S   (1, 3, 4, 11)
ID NUMBERS : 6
YOUR MESSAGE WILL GO TO THE FOLLOWING PEOPLE
   6 DOSIE O. DOE
CORRECT? (Y N) Y
ENTER OPTION - SEND, MIDNIGHT SKULKER, PRIVATE,
KEYWORDS (S M P K) : S
MESSAGE 1347 ADDED!

4.3.3   Send Messages

The "send" module permits messages to be (1) indexed by keywords for later retrieval, (2) designated for receipt by all or any number of participants in the conference, (3) sent anonymously if desired, and (4) cleared to be sent. CONFER will continue to ask for user options until the "s" (send) command is exercised. The choices are:

M - Causes the sender's name to be removed from the message and the words "midnight skulker" substituted for purposes of anonymity.

P - Indicates that the sender wishes the message to be private, for delivery only to desired participants. If this command is not used, the message will be sent as a "public" message to all participants. Example:

ENTER OPTION - SEND, MIDNIGHT SKULKER, PRIVATE, KEYWORDS
 (S M P K) : P
DO YOU NEED A LIST OF USER ID NUMBERS? (Y N)   N
ENTER LIST OF USER ID'S   (1, 3, 4, 11).
ID NUMBERS : 6
YOUR MESSAGE WILL GO TO THE FOLLOWING PEOPLE.
   6 DOSIE O. DOE
CORRECT? (Y N)   Y

K - Permits the sender to enter up to five keywords that may be used to retrieve this and other similar messages later. Example:

ENTER OPTION - SEND, MIDNIGHT SKULKER, PRIVATE, KEYWORDS
 (S M P K) : K
ENTER KEYWORDS (UP TO 5) (CR)=END OF LIST.
KEYWORD(1):   Apples
KEYWORD(2):   Oranges
KEYWORD(3):   Pears   Note: Keywords may be
KEYWORD(4):   (CR)   entered in upper or lower
KEYWORDS: case. CONFER automatically
 APPLES, ORANGES, PEARS   converts them to upper case
                           for storage and retrieval.

CORRECT (Y N) ? Y

S – Signals to CONFER that the user is ready to send the message.
   After this command is exercised, the text is no longer available,
   except through the retrieve module. Example:

   ENTER OPTION – SEND, MIDNIGHT SKULKER, PRIVATE, KEYWORDS
    (S M P K) : S
   MESSAGE 1346 ADDED!
   ENTER OPTION – RETRIEVE, WRITE, ATTENDEES, QUIT (R W A Q) :

4.4   Attendance Module

The attendance module is designed to enable the user to find information
about other participants in the conference. It contains functions that
permit the type of information desired to be specified and then to be
displayed in several formats.

4.4.1 Identify function.

This function offers the user several alternatives for retrieving
information about conference attendees. The choices are:

I – Will cause the stored information about one or more conference
   attendees to be retrieved based on the user identification number
   of each.

C – Requests all of the information about attendees from a specified
   center (organization) to be retrieved.

A – Will cause the information about all members of the conference to
   be retrieved.

4.4.2 List Function

This function permits the information retrieved by the "identify"
function to be printed. The choices are:

L – Causes a list of the selected conference members to be printed with
   their user identification numbers, organization acronym, number of
   the last message retrieved, and date and time last active on CONFER.

D – Causes printing of the names and mailing addresses of the selected
   conference attendees.

P – Causes the telephone (phone) numbers of the selected conference
   attendees to be printed.

A – Causes all available information (as described in the explanation
   of the L, D, and P commands) about the selected members of the
   conference to be printed.

16

CONFER COMMAND DICTIONARY

Module	Function	Command Explanation
Basic		A (Attendance) signals that the user wishes to locate information about the conference attendees.
Retrieve	Display	A (All) is a request to have the leader section of all selected messages printed.
Write	Edit	A (Again) causes a specified range of lines in a message to be copied to a different location in the message.
Attendance	Identify	A (All) is a request for all of the attendees of the user's conference to be identified.
Attendance	List	A (All) will cause the information (list, address, phone) about the selected members of the conference to be printed.
Retrieve	Select	C (Center) is a request to select messages identified by the author's organizations or center.
Write	Edit	C (Change) indicates that a specified character string should be changed to another character string in one line or a range of lines. Also may be used to delete a string of characters.
Attendance	Identify	C (Center) is a request to identify conference attendees from a specified center or organization.
Retrieve	Select	D (Date) indicates that messages sent on a certain date or range of dates should be selected.
Write	Edit	D (Delete) indicates that a line or range of lines should be deleted.
Attendance	List	D (Addresses) indicates that the names and mailing addresses of selected attendees should be listed.

Module	Function	Command Explanation
Write	Write	E (Existing) signifies that the text of an already existing message is to be used as the basis for writing a new message.
Write	Edit	F (Finish) indicates that the writer has completed composing and editing a message.
All modules	All functions	H (Help) causes confer to print an explanation of the available commands for the module and unit being used at the time.
Retrieve	Select	I (Identification number) is a request to select messages that have been sent by the conference participant whose ID number is to be specified.
Retrieve	Display	I (Interrupt) indicates that the user wants the printing of whole messages to be interrupted after a specified number in order to permit a decision to be made to continue or not.
Attendance	Identify	I (Identification number) will cause the information about one or more specified conference members to be retrieved.
Write	Edit	I (Insert) indicates that the user wishes to insert one or more lines at a specified point in a message.
Retrieve	Select	K (Keyword) is a request to select messages that have been indexed by a particular keyword.
Write	Edit	K (Keep) indicates that the author of a message wishes to hold the message for later use without sending it to anyone yet.
Write	Send	K (Keyword) signals that the author of a message wishes to assign one or more keywords by which the message may be retrieved later.

Module	Function	Command Explanation
Write	Edit	L (List) requests confer to list all or a portion of a message, usually to verify that desired editing has been done correctly.
Attendance	List	L (List) causes the names of the conference members to be printed with their user identification numbers, organization acronym, last message number received, and date and time last active in the conference.
Retrieve	Select	M (Message number) is a request to retrieve a message or range of messages according to number.
Write	Edit	M (Move) causes a specified line or range of lines to be moved to a different place in a a message.
Write	Send	M (Midnight skulker) causes the author's identification to be deleted from a message so that it is sent anonymously.
Write	Write	N (New) signifies that the terminal user wishes to compose a new message.
Retrieve	Select	N (New) indicates that the user wishes to receive only the new messages, i.e., those not previously seen.
Retrieve	Select	P (Private) indicates that the user wishes to receive only private messages specifically sent to him or her.
Retrieve	Display	P (Pause) indicate that the user wishes to have only the leader portion of each message displayed with the printing stopped after a specified number of messages to permit a decision to be made to continue or not.
Write	Send	P (Private) enables the author of a message to restrict its distribution to specific members of the conference.
Attendance	List	P (Phone Numbers) causes the telephone numbers of the conference members to be printed.

Module	Function	Command	Explanation
Basic		Q	(Quit) causes the session to be terminated.
Retrieve Write Attendance	All func- tions	Q	(Quit) causes a return to the Basic module and a printout of the options for that module.
Basic		R	(Retrieve) signifies that the user wishes to retrieve existing messages from the data base.
Write	Edit	R	(Renumber) causes the lines of a message to be renumbered, which may be helpful during extensive editing of a message.
Write	Edit	S	(Substitute) causes the line to be entered on the keyboard to be substituted for a specified line.
Write	Send	S	(Send) causes the message to be sent to the designated recipients or to all members of the conference if none are specifically designated.
Retrieve	Display	T	(Total) indicates that the entire content of each retrieved message should be printed.
Basic		W	(Write) indicates that the user wishes to write a message.

APPENDIX 2

USE OF TERMINAL CONTROL KEY ON A DEC-SYSTEM 10

Here are some of the things that the control key followed by a character can do on a DEC-system 10:

(Holding down the control key will be indicated by a ©.)

©R - Retypes the line currently being input. (Handy after you have back-spaced and retyped the same word for the third time.)

©H - Backspace for terminals without a backspace key.

©U - Deletes the current input line and gives a line feed, carriage return.

©O - Suspends current output (including the next prompt). You must know what the next prompt will be and enter the command.

©S - Stop the output.

©Q - Restart the output after a ©S. You can stop in the middle of a word (with ©S) and restart (with ©Q) without missing a letter.

©C - Two of these get you out of the conference program and return control to the DEC 10, giving you a prompt (.)

©X - Same as ©U.

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