

SCENARIOS FOR USING ARPANET COMPUTERS

This scenario booklet is provided to facilitate the use of ARPANET host computer systems via the ARPANET. The objective of these scenarios is to aid a user in sampling host computers on the ARPANET, thereby stimulating this interest in using ARPANET.

The scenarios describe the login procedure, the use of some simple or interesting facilities, and obtaining on-line help facilities such as on-line documentation and interactive dialog with experienced users via "link" or "message" type mechanisms. The use of TELNETS for "piggy-back login" is included to help system programmers in debugging and testing their protocol implementations. An exercise of editing and running a very simple program is also included, where appropriate.

The scenarios assume the environment of the MIT-DMCG PDP-10 computer system, but are readily adaptable to use from other systems. The annotated script is provided to assist you in the use of a particular host computer. Comments are enclosed in parenthesis, and user input is underlined. In the scripts, a carriage return is indicated by '<CR>', and a space by blank (i.e., no type). Escape to local user TELNET is indicated by backslash, the default escape character in the MIT_DMCG system. Additional blank lines have been introduced in many instances to improve readability of the script.

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NOTE: Your comments and suggestions will be greatly appreciated. Please direct all comments to Abhay Bhushan, Room 208, 545 Technology Square, Cambridge, Mass 02139. (Tel. 817-864-6900 x1428).

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UCLA-NMC SIGMA-7 SEX Network address 1.

SEX treats network interaction as being half-duplex and line-at-a-time, and assumes local echo. Sex does not accept commands in lower case alphabets (hit <BRK> on the MIT_DMG IMLAC if you are not in upper case mode.)

```
\_SEX<CR>_-ucla connection is: completed.\ (you typed "SEX<CR>")
LOG ON* (SEX is requesting login)
ARPA<CR> (you login as ARPA)
***message waiting*** (if there is a message for you)
! (the SEX prompt character in MASTER)
S .MSG:C<CR> (to read message, and to send messages)
002 MSG STARTED (Message if any will be typed out)
> (prompt character in MSG)
S HB<CR> (to send message to user HB)

_MY MESSAGE<EOT><CR>_ (message terminated with <EOT>
                        or <Control-D>)
```



```
>
_L ARPA<CR>_      (to list messages for user ARPA
.....           (message are listed)

>
_D ARPA<CR>_      (to delete messages for user ARPA)
>
_X<CR>_          (attention getting character, back to
                 MASTER)
!               (MASTER prompts)
_S .WHO:C<CR>_    (to see who is using the system)
002      WHO      STARTED
USER PORT
.....           (list follows)

_X<CR>_          (to get back to MASTER)
!               (MASTER prompts)
_S*, TIMMY:C<CR>_ (starts question-answering program)
002      TIMMY    STARTED
MY NAME IS TIMMY THE TERMINAL, WHAT'S YOURS?
.....           (you converse now)

_GOODBYE<CR>_    (to exit from TIMMY)
!               (normal exit, MASTER will prompt)
_S .TELNET:C<CR>_ (to start user TELNET)

002      TELNET    STARTED
VERSION=25 OCTOBER 1971
ESCAPE CHARACTER MUST PREFIX COMMANDS
? DISPLAYS COMMANDS
ENTER ESCAPE CHARACTER
>               (TELNET prompt character)
_;<CR>_          (you enter escape character, ';'
                 in this case)

_;<ODMCG<CR>_    (to connect to our DMCG PDP-10)
>
CONNECTED TO 070
.....           (you can now log into foreign host)

_;<CL<CR>_       (to close connections)
>
_;<X<CR>_        (to exit TELNET and back to MASTER)
BYE
!
_S* .ABACUS<CR>_ (starts self-explanatory calculator
.....           program)
.....           (instructions on use follow)
```



```

_X<CR>_                (to get back to MASTER)
!
_S .EDIT:C<CR>_        (to start the editor)
002                     STARTED
WORK NAME?
<CR>_                 (EDIT will use default)
>                     (prompt in EDIT)
_I<CR>_                (to insert a file)
_    CALL IASSGN('OC', 1)<CR>_ (6 spaces, not a <HT>)
_    WRITE(1, 101)<CR>_
_ 101  FORMAT ('HELLO')<CR>_
_    END <CR>_
_<EOT><CR>_            (you type <EOT> or <Control-D> to
                        get EDIT)
>
_W<CR>_                (to write file)
_TEST<CR>_             (you name it TEST)
>
_X<CR>_                (to get back to MASTER)
!
_S .FORT(TEST)<CR>_     (to compile program)
002 FORTRAN STARTED
!
002 FORTRAN DONE
!
_S .FDLD(TEST)<CR>_     (will create the file TEST/E which
                        you can run)
002 FDLD STARTED
!
_S .TEST/E: C<CR>_     (to run program)
002 TEST/E STARTED
HELLO                  (the program works)
STOP
NORMAL EXIT
!
_V<CR>_                (to view your root directory)
    .....             (list follows)
!
_X<CR>_                (to logout of SEX)
_\\DISCONNECTED<CR>\\_ (escape to NETWRK and disconnect)

```


UCLA-CCN IBM 360/91 Network address 65.

CCN also offers a Remote Job Service. Their TELNET service is currently by arrangement only. We have not used it yet.

_ \ccn<CR>_ -ucla connection is : completed.\ (success)

UCLA CCN 360/91 TELNET
 TELNET SERVICE AVAILABLE BY ARRANGEMENT ONLY
 FOR INFORMATION CALL R.T. BRADEN, STEVE WOLFE, OR STU FEIGIN AT
 (213) 825-7518 OR 825-7424

_ \disconnected<CR>_ (you escape to NETWRK and
 disconnect)

SRI (NIC) PDP-10 TENEX Network address 2.

NIC is best used in character-at-a-time mode with remote echo. After connection is completed you should change your mode to full-duplex at NIC (their default is half-duplex). NIC can also be used in half-duplex (with local echo), line-at-a-time mode, but use is not as convenient. Although NIC commands are similar to BBN TENEX, the NLS subsystem is different.

_ \nic<CR>_ connection is: completed.\ (to connect to NIC)

NETWORK USERS SHOULD LOGIN AS ONE OF THE FOLLOWING USERS: MIT-
 MULTICS MIT-DMCG MITRE UCLA-CCN UTAH ILLINOIS RAND BBN-TENEX BBN-IMP
 AMES-ILLIAC UCLA-7

ARC TENEX 1.26.01.04 DATE ARC EXEC 1.32 (NIC herald)

@_FULL<CR>_ (you request full-duplex mode,
 "FULL" will not print)

@_LOGIN MIT-DMCG<CR>_ (@ is NIC prompt, you login)
 (password) ARPA<CR> (password is not printed)

(account #) 3<CR>

JOB nnn AT CONSOLE mmm

@_SYSTAT<CR>_ (to see who is using system)
 (list follows)

@_?_ (will display commands)
 (list follows)

link<ESC> (to) _<ESC>_ (user) _MELVIN_ (links your console to
 MELVIN'S)


```

_;hello are you there?<CR>_      (prefix comments with ";", whatever is
                                   is typed at either console appears on
                                   both console)
@_break_(links)<CR>_              (this disconnects any "links" to
                                   other NIC users)
@_DIR<CR>_                        (list files in user's directory)
    <MIT-DMCG>
    .....                        (list follows)

@_NLS<CR>_                        (to use NIC text editing system TNLS)
ID:<your initials><EOT>            (terminate with <EOT> or <Control-D>)
DEVICE: _T_I-TERMINAL             (type "T" if you are in FULL DUPLEX
                                   or type "N" if you are in HALFDUPLEX)

                                   (NLS will load or create your initial file)

                                   ("*" is NLS prompt, <EOT> or <Control-D> is default
                                   command accept character, <CAN> or <Control-X> kills
                                   the current line, and <SOH> or <Control-A> serves the
                                   rubout or character delete function)

*_e_xecute _j_ournal             (to access journal system)
submit _m_essage                  (to send a message using the NIC Journal)
_This is a test message.<EOT>_
Number _<EOT>_ yyyy              (typing <EOT>, the default command accept
                                   accept causes system to assign a unique
                                   catalogue number yyyy to the message)
title: _Test Message<EOT>_       (you enter a title)

distribution _id1 id2 <EOT>_      (id1, and id2 are identifications of
                                   persons known to system)

status _<EOT>_                   (system reiterates information entered
                                   by user)
go: _<EOT>_                      (begins journal process, assumes you
                                   as author)

    JOURNAL SYSTEM IN PROGRESS
    _<ETX>_                      (<ETX> or <Control-C> is the attention
                                   getting character to get EXEC)
    @_CONTINUE<CR>_              (to resume NLS)
    _<CAN>_                      (<CAN> or <Control-X> to get NLS prompt)

*_p_rint _b_ranch 0.1<EOT>       (to print some files)
    .....                      (list follows)

*_e_xecute _q_uit<EOT>           (to quit NLS and return to EXEC)
@_LOGOUT<CR>_                   (to logout from NIC)

```


Job nnn logged out at

_ \disconnected<CR> _ (escape to NETWRK and disconnect)

SRI(AI) PDP-10 TENEX Network address 66.

(The SRI (AI) computer uses the TENEX operating system, and is similar to the system at BBN. We have not been able to log into SRI (AI) system as they are currently not functioning as a server. Hence no scenario is provided. This section will be updated as soon as SRI (AI) is able to accept login over the ARPANET.)

[Most of page 9 was illegible: RFC Editor]

FOREIGN SITE NO. = _70 <CR>_ (70 is DMCG)

FOREIGN SOCKET NO. = _1;<CR>_ (logger socket)

1

..... (you are now connected)

;2 ;ID <CR> (to display host status)

KNOWN HOSTS ARE --

..... (list follows)

;RES<CR> (to reset connections)

RESET COMPLETED

;1 ;DEL <CR> (to purge sockets)

SOCKET PURGED

HELP< CR> (lists all non-standard keys)

..... (list follows)

;STATE <CR>

(will list NETOLS states)

PREFIX IS;

HALFDUPLEX

SHIFT IS OFF

;PREFIX !<CR> (will change prefix to "!")

!SHIFT !STATE <CR> (to get both upper and lower case alphabets. This may be required for example, to piggy back to Multics. ";lfd" will send <LF>.)

PREFIX IS !

HALF DUPLEX

SHIFT IS ON

```

_!PREFIX; <CR>_      (prefix is again ";" )
_;UNSHIFT <CR>_      (to turn SHIFT "OFF" )
_;SHIFT ON<CR>_      (to get both upper and lower case.
                      This may be required, for example
                      to "piggy back" to Multics. ";"LFD"
                      will send <LF>.)
_;SYST <CR>_          (to get back to SYS level again)
WORK AREAS UPDATED
_;DOWN_              (DOWN will logout but not disconnect)
WORK AREAS PURGED    (you are logged out but connected)
_;SYS <CR>_          (to login to UCSB again)

ENTER USER NUMBER
_;LOGOUT _            (will logout and disconnect)
_\DISCONNECT<CR>\_    (escape to NETWRK and disconnect,
                      if not already disconnected by UCSB

```

UTAH PDP-10 TENEX Network address 4.

(The Utah computer uses the TENEX Operating System, and is similar to the system at BBN. The password for Network users will be:

THISISANINTENTIONALLYLONGPASSWORD

As yet, their logger is unavailable, and we have been unable to login on their system hence, no scenario script is provided.)

BBN PDP-10 (A) TENEX Network address 69

TENEX is best used in character-at-a-time mode with remote echo. However, as TENEX treats network users as half-duplex by default, you should either change your mode to FULLDUPLEX, or escape into NETWRK and request local echo. At command level TENEX does not distinguish between upper and lower case alphabetics. The programs "DOCTOR" and "LIFE" may not be available to you in the BBN PDP-10(A) system, but can still be used from the BBN PDP-10(B) system.

```

\_TENEX<CR>_settings loaded. and connection is: completed.\
                      (to connect to BBNA TENEX)
BBN-TENEX 1.26.0 6-AUG-71 EXE 1.32.2
@_FULL<CR>_          (you request full-duplex mode)

@_LOGIN TENAR<CR> _   (you login)
(PASSWORD)

```


ARPA<CR> (ACCOUNT) _MIT-AKB<CR>_	(this will not be printed) (appropriate account)
JOB 3 ON TTYG1 10-OCT-71 3:30 You have a message	(if a message is waiting)
@_?_ COMMANDS ARE:	(@ is TENEX PROMPT CHARACTER "?" will list TENEX commands) (list follows)
@_TYPE MESSAGE.TXT<CR>_ ;<TENAR> MESSAGE.TXT;1	(to read your message) (message follows)
@_SYSTAT_	(to see who is using the system,) (list follows)
LINK<ESC> (to) _<ESC>_ (user) _TOMLINSON_ _;HELLO THERE?<CR>_	(will link your console to TOMLINSON's) (prefix comments with ";" whatever is typed at either console appears on both consoles)
@_BREAK_ (links)_<CR>_	(this disconnects any "links" to TENEX users)
@_LIFE<CR>_ DO YOU WISH TO SEE AN EXPLANATION? _YES<CR>_	(to play game of life) (explanation follows)
<ETX> @_DOCTOR<CR>_	(<ETX> or <Control-C> is the attention getting character to get EXEC) (psychiatrist service--self explanatory) (you now converse with DOCTOR)
*_GOODBYE._	(normal exit, * is prompt from DOCTOR) (the Doctor's charges, etc.)
@_DIR <name><CR>_	(to list the directory called <name>; try "DIR SYSTEM".) (listing follows)
@_TYPE <name><CR>_	(to print the file called <name>) (list follows)


```

@_TTYIST<CR>_      (to test teletype communications)
.....            (test data follows)

_<DEL>_            (<DEL> or <rubout> will end tests
                  prematurely)
_<ETX>_           (<EXT> or <Control-C> will get you
                  back to EXEC)
@_TELNET<CR>_      (to use BBN User TELNET)

TELNET 30-AUG-71 RST

VERBOSE?_Y<CR>_    (this will instruct you to proceed)
.....            (instructions on use follow)

HOST: _106<CR> _    (to connect to DMCG, i.e., octal 106)
.....            (you are connected to DMCG)

_<ETX>_           (to get back to EXEC)

@_LOGOUT<CR>_      (to logout of TENEX)

_\\DISCONNECT<CR>_\\ (escape to NETWRK and disconnect)

```

BBN PDP-10 (B) TENEX Network address 133.

The BBN PDP-10(B) is an experimental TENEX system similar to the BBN PDP-10(A) TENEX system (network address 69.). Because of the similarities of the two TENEX systems, no scenario is given here. Please refer to the BBN PDP-10(A) system (page12) for the scenario. The account number to be used for the system is "1" instead of the "site name" used in the BBN PDP-10(A) system.

MIT H 645 MULTICS Network address 6.

Multics interacts line-at-a-time and assumes local echo. Multics require both upper and lower case alphabets. Commands are in lower case alphabets.

```

\_mult<CR>_ics connection is: completed.\ (you type "mult<CR>")
Multics 15.20 MIT, Cambridge, Mass.
Load = 39.0 out of 41.0 units; users = 38
_Enter Name CNet<CR>      (log in by your last name in this
                           form)
Anonymous user Name CNet logged in: 09/23/71 1340.8 edt Thu
                           from terminal "NET"
(Multics will now type the message of the day)

```



```

r 1405   .034   10+59           (This is the ready message
                                printed at the end of
                                processing of every command
                                line of the form:  time of day,
                                cpu time for last command,
                                pre-paged segments+page faults)
_hef#1p p11<CR>_               ("help p11" prints help file for p11;
                                "#" deleted the previous character,
                                "@" deleted current line.)

(12 lines follow)

.....                          (help file is printed out)
                                (Other useful help files are:
                                news -- recent system news
                                crashes -- info on recent crashes
                                command name -- gives info on particular command)

r 1406   1.653   6+59           (the Multics ready message)

_who<CR>_                       (gives list of users currently on system)
Multics 15.20, load 42.0/54.0; 41 users
Absentee users = 0/1
.....                          (list of users follows)

r 1407   .035   5+7

_'Please help me on-line<CR>_   (statements prefixed with an
                                apostrophe will be sent to
                                network consultant or to user
                                logged in the CompNet project.
                                This will happen only if you are
                                Logged in CNet project.)

_list<CR>_                      (list segments in current working dir)
Segments = 2, Records = 1
.....                          (list of files follows)

r 1408   .206   4+8

_ls -p >udd>message *.info<CR>_ (list all help files)

Segments = 177, Records = 223

.....                          (long list of info files follows)
synch                          (to interrupt this type-out you
                                "QUIT"by sending the NCP interrupt)

QUIT
r 1409   3.200   4+78

```



```
_mail * Vezza CompNet<CR>_      (send mail to Vezza CompNet, mail is
                                   terminated by line of just a period)
_THIS IS THE SAMPLE MAIL THAT WE ARE SENDING<CR>_
_THIS IS THE LAST LINE.<CR>_
_.<CR>_                          (this will send the mail)
r 1410   1.905   12+114

_mail <CR>_                      (see if anyone has sent us mail.
no mail                          Reads mail sent to anonymous CNet.)
r 1411   .450

_edm test.p11<CR>_              (call an editor to create p11 program)
Segments not found.             (as segment does not exist, edm puts
Input.                          you in input mode.)
_test:procedure;<CR>_
_put edit("hello") (a(5));<CR>_
_put skip;<CR>_
_end test;<CR>_
_.<CR>_                          (this will get you into edit mode)
Edit.                           (you can edit if you made mistakes)
_w<CR>_                         (to write the file)
_g<CR>_                         (to quit from edm)
r 1414   3.653   74+114

_print test.p11<CR>_            (print the source file we just made)
_p11 test<CR>_                 (compile that p11 program)
PL/1
r 1417   5.918   27+485

_test<CR>_                      (run the program we just compiled)
hello                          (the program works)
r 1419   2.315   6+123

_logout<CR>_                    (We are done so we log out.)

Name CNet logged out 09/23/71 1420.1 edt Thu
CPU usage 45 sec
hangup
!?CONNECTIONS ABORTED?\        (Multics disconnects you)

MIT PDP-10 (DMCG) ITS Network address 70.
```

ITS treats network interaction as being full-duplex and assumes local echo. Interaction is character-at-a-time, however user processes such as MONIT require a <CR> to be typed. No distinction is made at command level between upper and lower case alphabetics.


```

\_its<CR>_ connection is: completed.\ (to connect to DMCG-ITS)
MIT Project MAC DMCG PDP-10
Telnet Server in operation.
Please login with host no. and initials (e.g., "login 70rmm")
MONIT.49 (Message of the day will follow)
; (MONIT prompts with ";")
\_login 70akb<CR>_ (you login with the form asked)
;_?<CR> _ (will list MONIT commands)
..... (list follows)

;_listf tty<CR>_ (to display status of users
..... and jobs)
..... (list follows)

;_listf dsk:.info.;<CR> (to list files on disk for user
..... name ".info.". Note that device
name is followed by ":", and
user name by ";".)
..... (list follows)

;_print dsk:.info.;info info<CR> (will print file "info info")
..... (list follows)
;_peek<CR> (to display status of time-
..... sharing monitor)
..... (display follows)

\_?<CR>_ (list PEEK's commands)
\_Q_ (exit from PEEK, upper case Q)
\_<SUB>_ (<SUB> or <Control-Z> is the
attention getting character.
It causes control to move one
level up a job tree.)

;_TTYTST<CR>_ (to test communications, will
..... spit out test data)
..... (test data follows)

\_<SUB>_ (<SUB> or <Control-Z> to get
attention)

;_DIRECT<CR>_ (to use a directory program for
MIT-DMCG personnel)

DRCTY .52
TYPE ? FOR HELP
> IS THE PROMPT CHARACTER.
>_?_ (to obtain help, self explanatory)
..... (explanation follows)
>_*_ (normal exit from program)
:KILL
;_NETWRK<CR>_ (to use network, i.e., ARPANET

```



```

.....
via user TELNET)
(NETWRK herald, and help message)
\_?<CR>_
(prompt, ?<cr> gets help)
.....
(help info for you)
\_hosts<CR>_
(will print list of
acceptable host names)
\_<host name><CR>_
(to connect to a host, e.g.,
SEX, NIC, UCSB, etc)
\_quit<CR>_
(this will get you back to MONIT)
.....
(NETWRK flushed, etc.)
;_t<CR>_
(to get TECO, the text editor)
TECO.175
_| TITLE SIMPLE TEST<CR>_
(A comment follows ";" in MIDAS)
;_A SIMPLE TEST PROGRAM<CR>_
_RELOCATABLE<CR>_
_.GLOBAL TYO, TYOB, LINACR, OPEN, CLOSE, IOT,A,B,C,P,D,ARGP<CR>_
_A==1<CR>_
_B==2<CR>_
_C==3<CR>_
_D==4<CR>_
_P==17<CR>_
_ARGP==16<CR>_
_PDLNTH==20<CR>_
_PDL:BLOCK PDLNTH<CR>_
_FIRST:<HT>MOVE P, [-PDLNTH,,PDL]<CR>_
<HT> MOVEI A,[ASCIZ/This is a test/]<CR>_
<HT> PUSHJ P, LINARCR<CR>_
<HT> .VALUE [ASCIZ/:KILL/]<CR>_
<HT> END FIRST<CR>_
<ESC><ESC> _ (<ESC> or <ALT> will end input)
_FILE DSK:NETWRK; SIMPLE TEST<ESC><ESC>_ (to write program on disk)
<BS><ESC><ESC>_ (<BS> or <Control-H> to exit)
;_SM<CR>_
(to assemble program using small
MIDAS)

MIDAS .39
_DSK:NETWRK;SIMPLE TEST<CR>_
.....
(program assembles and creates a
file with name SIMPLE BIN)
;_D<CR>_
(to use DDT, the debugging tool)
ITS .747.DDT .1334
_STINK<VT>_!
(to get loader, <VT> is
<Control-K>)

STINK .T60
_J SIMPLE<ESC><ESC> _ (we call the job SIMPLE)
_MDSK:NETWRK;SIMPLE BIN<ESC>L<ESC><ESC>_
_MCOM:LINOUT BIN<ESC>L<ESC><ESC>_
_MCOM:TSTTY BIN<ESC>L<ESC><ESC>_

```



```
_MCOM:CHAN BIN<ESC>L<ESC><ESC>_  
_TD<ESC><ESC>_          (we go back to DDT)  
_$_                    (to run the program)  
This is a test          (program works!!!)  
:kill  
_<SUB>_                (<SUB> or <Control-Z> to get MONIT)  
  
;_LOGOUT<CR>            (logs you out, but leaves you  
                        connected)  
  
ITS 795 console 23 Free  
_\\disconnect<CR>\\_    (escape to NETWRK and disconnect)  
  
MIT PDP-10(AI) ITS Network address 134.
```

(The MIT PDP-10(AI) system uses the ITS operating system and is similar to the MIT PDP-10(DMCG) system. At present the host is not connected to the ARPANET.)

RAND 360/65 MVT OPERATING SYSTEM Network address 7.

(We have not been able to log into RAND, as they are currently intending to be users only. Hence, no scenario script is provided. This section will be updated as soon as RAND can accept out login over the ARPANET, and provide service on a regular basis.)

RAND PDP-10 TENEX Network address 71.

(Rand PDP-10 is currently not functioning over the ARPANET. Hence no scenario is provided. This section will be updated as soon as the host is providing service.)

SDC IBM 360/75 Network address 8.

(We have not been able to log into SDC. as their logger is not available. Hence no scenario script is provided. This section will be updated as soon as SDC can accept login over the ARPANET)

HARVARD PDP-10 DEC 10/50 MONITOR Network address 9.

Harvard system treats network interaction as half-duplex, character-at-a-time, and assumes local echo. The prompt character is ".", and the escape character is <Control-C>. No lower case text is accepted (hit the <BRK> key on the IMLAC if you are not in upper case mode).

HARVARD<CR> connection is: completed.\ (you type "HARVARD<CR>")

JOB N HARVARD 4S72BU.40

TTYMM

#_62,5_

(you type "62,50")

_ RLS_

(you type "RLS" which is not printed)

(the message of the day is now printed out)

.SY<CR>

(to see who is using the system)

.....

(list follows)

*_ICP 106 _

(to connect to MIT-DMCG, I.E., OCTAL 106)

(* is the prompt character in TELNET)

IMPn CONNECTED TO MIT(1)

.....

(you can now login to MIT-DMCG system)

__<US>_

(you type <US> or <Control-__>, octal 037 to escape to the Harvard system)

BACK TO HARVARD JOB nn

*_CLOSE IMPn_

(this will close connections)

*_<ETX>_

(you type <Control-C> or <EXT>, octal 003 to get back to top level)

editor TEC0)

*_| <TAB> TYPE 100 <CR>_

(* is the editor prompt character)

100 <TAB> FORMAT('HELLO THERE.') <CR>

__<TAB> END <CR>_

__\$__\$ <CR>

(you type <ESC> or <ALT> which is echoed as "\$")

*_EWDSK:TEST.FOR\$__\$__\$ <CR>_

*_PWEF\$__\$__\$ <CR>_

(file it on disk with the name TEST.FOR)

*_<ETX>_

(<ETX> or <Control-C> to exit to top level)


```

                                your program)
                                (the program works)
HELLO THERE.

                                (this will log you out)
CONFIRM:  _K_

                                (appropriate logout message)

_ \DISCONNECT<CR>_ \
                                (you escape to NETWRK and
                                disconnect)

LINCOLN LABS IBM 360/67 CP-CMS Network address 12.

```

Lincoln CP-67 interacts line-at-a-time and assumes local echo. No distinction is made between upper and lower case alphabetic at command and service level.

```

\ _11<CR>_ -67 connection is:  completed.\ (you type "11<CR>")
LINCOLN LABORATORY CP/67 ONLINE
_login net<CR>_
ENTER PASSWORD:
_ arpa<CR>_                                (this will not print)
SYSTEM FULL, YOU ARE 8 IN LINE
READY AT 16:18:02 ON 10/01/71
_ how<CR>_                                (find out how long before you
                                         can run)

30 MINUTES AT MOST
_g users<CR>_                                (find number of users)
  48 USERS 37 RUNNING  2 PERMITTED  1 REQUESTS  8 WAITING 0 INLOG
_g names<CR>_                                (find names of others logged
                                         in but not running)

NCP      MONIT      LLMPs      RER      XLES      POPE      VELZ
NET

_g user names<CR>                            (to find names of every one
                                         logged in)

.....                                (list follows)

_req<CR>                                (you can type this command if
                                         you want an immediate, 5
                                         minute only, shot at the
                                         computer, use sparingly)

YOU MAY NOW RUN                                (the time has come)
_i cms<CR>                                (get into cms)
CMS..VERSION 37
WELCOME TO THENET ACCOUNT

```


IF YOU PANIC, TYPE THE FOLLOWING

CP M ARPA HELP

OR

CP M WINETT HELP

CMS

listf<CR> (list the file in our disk area)

Q EXEC P1 1 11/05/70 10:10

....

T=0.08/0.28 16:35:54 (the ready message)

listf * * s<CR> (list all the system files)

.....

(list follows)

edit test fortran<CR> (this calls the editor to
write a fortran program,
this is a line oriented,
edm type editor.)

NEW FILE.

INPUT:

<TAB> WRITE (6,100)<CR>

100<TAB> FORMAT('HELLO!')<CR>

<TAB> END

<CR>

(null line gets you to EDIT)

EDIT:

FILE<CR> (you file the program)

T=0.07/0.37 16:40:56

fortran test<CR> (compile the program"test
fortran")

T=0.19/0.52 16:41:32

\$ test<CR> (load and begin execution of the
program)

EXECUTION BEGINS...

HELLO!

(the program runs)

T=0.42/1.20 16:43:13

telnet 46<CR> (to connect to host with
hexadecimal address of 46, i.e.,
DMCG)

ENTER SYSTEM ESCAPE CHARACTER..

/<CR> (you enter"/" as the escape)

/?<CR> (this will give you more
information)

logout<CR> (to log out of CMS)
T=0.48/1.85 16:44:36

CP ENTERED

logout<CR> (logs the user out and
disconnects him)
CONNECT=00:02:52 VIRTCPU= 000:00.48 TOTCPU= 000:01.86
LOGOUT AT 16:45:19 ON 10/01/71
\?connections aborted?\

LINCOLN LABS TX-2 Network address 74.

(The status of Lincoln TX-2 is uncertain. No scenario is provided as TX-2 is currently not functioning as server. This section will be updated as soon as TX-2 is able to accept login over the ARPANET.)

STANFORD (AI) PDP-10 Network address 11.

(The Stanford PDP-10 is currently not functioning over the ARPANET. Hence no scenario is provided. This section will be updated as soon as the host is providing service.)

ILLINOIS PDP-11 Network address 12.

(We have not been able to connect to Illinois as they are currently intended to be user only system. Hence no scenario is provided. This section will be updated as soon as Illinois is able to accept login over the ARPANET.)

CASE PDP-10 DEC 10/50 MONITOR Network address 13.

(The Case system uses the DEC 10/50 time-sharing monitor, and is identical to the Harvard system. No scenario script is provided as Case is not providing service over the ARPANET at the present time. This section will be updated as soon as Case will accept login over the ARPANET.)

CARNEGIE PDP-10 DEC 10/50 MONITOR Network address 14.

(The Carnegie system uses the DEC 10/50 time-sharing monitor, and is identical to the Harvard system. No scenario script is provided as Carnegie is not providing service over the ARPANET at the present time. This section will be updated as soon as Carnegie will accept login over the ARPANET.)

PAOLI B6500 ILLIAC Network address 15.

(The status of the Paoli system is uncertain. We have not been able to communicate via the ARPANET. Hence no scenario script is provided. This section will be updated as soon as Paoli is able to accept login over the ARPANET.)

[This RFC was put into machine readable form for entry]
[into the online RFC archives by Helene Morin, Via Genie, 12/1999]

