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 his 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 user 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-DHCG 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-DHCG system. Additional blank lines have been introduced in many instances to improve readability of the script.

Acknowledgements: The author wishes to acknowledge the help of Bob Dressler, Rich Guida, Bob Metcalfe, Jim Nichener, and Neal Ryan in preparing this Scenarios booklet.

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. 617-664-6900 x1428).
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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 alphabetics (hit \<CRK> on the MIT-DNCG INLAC 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)
> $ .MSG:<CR> (the SEX prompt character in MASTER)
002 MSG STARTED (to read message, and to send messages)
> $ .HB<CR> (Message if any will be typed out)
= prompt character in MSG)
> $ .HB<CR> (to send message to user HB)
MY MESSAGE<EOJ><CR> (message terminated with \<EOJ> or \<Control-D>)
> 1 ARPA<CR> (to list messages for user ARPA)
..... (messages are listed)

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

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

GOODBYE<CR> (to exit from TINY)
! $ .TELNET:<CR> (normal exit, MASTER will prompt)
002 TELNET STARTED (to start user TELNET)
VERSION=25 OCTOBER 71
ESCAPE CHARACTER MUST PREFIX COMMANDS
? DISPLAYS COMMANDS
ENTER ESCAPE CHARACTER
;<CR> (TELNET prompt character)
(you enter escape character, ';' in this case)
Scenario for Using ARPANET Computers
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(ODMC<CR>
> CONNECTED TO 070

......

<CR>
> X<CR>
BYE
>
S* ADAGUS<CR>

......

X<CR>
>
S. EDIT:<CR>
002 EDIT

WORK NAME?
<CR>
>
I<CR>

CALL IASSGN('LOC ',1)<CR>

WRITE(1,101)<CR>

101 FORMAT('HELLO')<CR>

END<CR>
<EO<CR>
>
W<CR>

TEST<CR>
>
X<CR>
>
S. FORT(IFST)<CR>

002 FORTRAN STARTED

002 FORTRAN DONE
!
S. FLD(IFST)<CR>

002 FLD STARTED
!
S. TEST/E:(<CR>

002 TEST/E STARTED
HELLO
STOP
NORMAL EXIT
!
V<CR>

......
!
X<CR>

\DISCONNECT<CR>

(to connect to our DMC G PDP-10)

(you can now log into foreign host)

(to close connections)

(to exit TELNET and back to MASTER)

(starts self-explanatory calculator program)

(instructions on use follow)

(to get back to MASTER)

(to start the editor)

(EDIT will use .default)

(prompt in EDIT)

(to insert a file)

(6 spaces, not a <HT>)

(you type <EO> or <Control-D> to get EDIT)

(to write file)

(you name it TEST)

(to get back to MASTER)

(to compile program)

(will create the file TEST/E which you can run)

(to run program)

(the program works)

(to view your root directory)

(list follows)

(to logout of SEX)

(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\-ucla connection is: completed.\newline

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

\disconnect\ (you escape to NETWK 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-DHCG MITRE UCLA-CCN UTAH ILLINOIS RAND
BBN-TENEX BBN-IMP AINES-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-DHCG<CR> (w is NIC prompt, you login)
(password) ARPACR (password is not printed)
(account #) <CR>
JOB mmm AT CONSOLE mmm

@SYSTAT<CR> (to see who is using system)
.............. (list follows)

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

link<ESC> (to) <ESC> (user) NELVIN (links your console to MELVIN's)
:hello are you there?<CR> (prefix comments with ",", whatever is typed at either console appears on both consoles)
@break<CR> (this disconnects any "links" to other NIC users)
@DIR<CR> (list files in user's directory)
.............. (list follows)

@NLS<CR> (to use NIC text editing system TNLS)
ID: <your initials><EOT> (terminate with <EOT> or <Control-D>)
DEVICE: TI-TERMINAL (type "," if you are in FULLDUPLEX or type "," 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)
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*execute journal
submit message
This is a test message. <EOT>
number <EOT> yyyy

title: Test Message <EOT>
distribution id1 id2 <EOT>

status <EOT>
go: <EOT>

JOURNAL SYSTEM IN PROGRESS
<EOT>
@continue<CR>
<CAN>

*print branch 0.1 <EOT>
......

*execute quit <EOT>
@logout<CR>
Job nnn logged out at ....
\disconnect<CR>

(to access journal system)
(to send a message using the NIC Journal)
(typing <EOT>, the default command accept accept causes system to assign a unique catalogue number yyyy to the message)
(you enter a title)
(id1 and id2 are identifications of persons known to system)
(system reiterates information entered by user)
(begins journal process, assumes you as author)
(<EOT> or <Control-C> is the attention getting character to get EXEC)
(to resume NLS)
(<CAN> or <Control-X> to get NLS prompt)
(to print some files)
(list follows)
(to quit NLS and return to EXEC)
(escape to NETURK 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.)
UCSB  IBM 360/75 OLS  Network address 3.

UCSB OLS normally treats network interaction as half duplex, and assumes local echo. Both character-at-a-time and line-at-a-time modes can be used. The user can obtain remote echo by going full-duplex. Normally upper case alphabets are mapped into alphabets and lower case alphabets into Greek characters. (Hit <BRK> on MIT-DMCG IMLAC if you are not in upper case mode). The following scenario assumes, line-at-a-time mode with local echo.

\UCSB<CR>connection is: completed\ (connects to UCSB)

\UCSB ON-LINE SYSTEM
ENTER USER NUMBER 196<CR>
196
ID NUMBER= 57372<CR>
USER NAME= ARPA<CR>
ARPA
JOB NAME= SITE-NAME<CR>
SITE-NAME
AUTOSAVE CODE = 4
LOAD MOLSF<CR>
MOLSF
FILE LOADED:1 ;REAL ;LOAD 5;STOR X;DISP X <CR>
(the default prefix is ";"). Every key must be preceded by the prefix and followed by a space. LOG, STOR, etc., are all keys on the UCSB system)

5.  1.0944  +00;LOG X;STOR Y;DISP Y <CR> (more calculations)
1.0000  +00 (the MOLSF subsystem is actually very powerful,
;SYS<CR> refer to UCSB OLS Manual for details)
;LOAD NET<CR> (to go back to SYS from MOLSF)

;STOR NET<CR> (to use UCSB Network subsystem)
FILE LOADED :2 ;LOG 70<CR>
FOREIGN SITE NO. = 70;<CR>
(70 is DMCG)
FOREIGN SOCKET NO. = 1<CR>
(600 logger socket)

YOU ARE NOW CONNECTED
;S;ID <CR>
(464 you are now connected)

KNOWN HOSTS ARE --
(list follows)
;RFS<CR>
(564 to reset connections)
RESET COMPLETED
;1 ;DEL <CR>
(to purge sockets)
SOCKETS PURGED

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

;STATE <CR>
(will list NETOLS states)

PREFIX IS ;
HALFDUPLEX
SHIFT IS OFF

;PREFIX !<CR>
;SHIFT ;STATE <CR>
(will change prefix to "!")
(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>
;UNSHIFT <CR>
;SHIFT ON<CR>
(prefix is again ";")
(to turn SHIFT "OFF")
(to get both upper and lower case.
This may be required, for example
to "piggy back" to Multics. ";lfd"
will send <LF>.)
(to get back to SYS level again)

;SYST <CR>
WORK AREAS UPDATED
;DOWN
WORK AREAS PURGED
;SYS <CR>

ENTER USER NUMBER
;LOGOUT
;DISCONNECT<CR>!

(DOWN will logout but not disconnect)
(you are logged out but connected)
(to login to UCSB again)

(will logout and disconnect)
(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.)
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 NETWK 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.

<table>
<thead>
<tr>
<th>TENEX&lt;CR&gt; settings loaded, and connection is: completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>(to connect to BBNA TENEX)</td>
</tr>
<tr>
<td>BBN-TENEX 1.26.0 6-AUG-71 EXEC 1.32.2</td>
</tr>
<tr>
<td>@FULL&lt;CR&gt;</td>
</tr>
<tr>
<td>(you request full-duplex mode)</td>
</tr>
<tr>
<td>@LOGIN TENAR&lt;CR&gt; (PASSWORD)</td>
</tr>
<tr>
<td>(you login)</td>
</tr>
<tr>
<td>ARPA&lt;CR&gt; (ACCOUNT) HIT-AKB&lt;CR&gt;</td>
</tr>
<tr>
<td>(this will not be printed)</td>
</tr>
<tr>
<td>(appropriate account)</td>
</tr>
<tr>
<td>JOB 3 ON TTY61 10-OCT-71 3:30</td>
</tr>
<tr>
<td>YOU HAVE A MESSAGE</td>
</tr>
<tr>
<td>(if a message is waiting)</td>
</tr>
<tr>
<td>@?</td>
</tr>
<tr>
<td>@ is TENEX prompt character; &quot;?&quot; will list TENEX commands</td>
</tr>
<tr>
<td>COMMANDS ARE:</td>
</tr>
<tr>
<td>..........</td>
</tr>
<tr>
<td>@TYPE MESSAGE.TXT&lt;CR&gt;</td>
</tr>
<tr>
<td>; &lt;TENAR&gt; MESSAGE.TXT;1</td>
</tr>
<tr>
<td>..........</td>
</tr>
<tr>
<td>@SYSTAT&lt;CR&gt;</td>
</tr>
<tr>
<td>..........</td>
</tr>
<tr>
<td>LINK&lt;ESC&gt; (to) &lt;ESC&gt; (user) TOMLINSON (will link your console to TOMLINSON's)</td>
</tr>
<tr>
<td>;HELLO THERE?&lt;CR&gt;</td>
</tr>
<tr>
<td>(prefix comments with &quot;;&quot;, whatever is typed at either console appears on both consoles)</td>
</tr>
<tr>
<td>@BREAK (links)&lt;CR&gt;</td>
</tr>
<tr>
<td>(this disconnects any &quot;links&quot; to TENEX users)</td>
</tr>
<tr>
<td>@LIFE&lt;CR&gt;</td>
</tr>
<tr>
<td>(to play game of life)</td>
</tr>
<tr>
<td>DO YOU WISH TO SEE AN EXPLANATION? YES&lt;CR&gt;</td>
</tr>
<tr>
<td>(explanation follows)</td>
</tr>
<tr>
<td>..........</td>
</tr>
<tr>
<td>&lt;ETX&gt;</td>
</tr>
<tr>
<td>(&lt;ETX&gt; or &lt;Control-C&gt;) is the attention getting character to get EXEC)</td>
</tr>
</tbody>
</table>
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Request for Comments 254

Abhay Bhushan
MIT Project MAC

@DOCTOR <CR>
       (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)

@ITYIST<CR>
       (to test teletype communications)
       (test data follows)

<DEL>
       (<DEL> or <rubout> will end tests
        prematurely)

<ETX>
       (<ETX> or <Control-C> will get you
        back to EXEC)
       (to use BBN User TELNET)

TELNET 30-AUG-71 RST

VERBOISE? 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 (page 12) 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.
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Abhay Bhushan
MIT Project MAC

MIT H645 MULTICS Network address G.

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

\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 your 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 .304 10+59

help pl1<CR>

(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

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 .305 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>

Segments = 2, Records = 1
.....

(list of files follows)
ls -p >udd>message *.info (lists all help files)

Segments= 177, Records= 223.

........
synch

QUIT
r 1409  3.200  4+78

mail * Vezza CompNet<CR>
Input
This is the sample mail that we are sending<CR>
this is the last line.<CR>
<CR>
r 1410  1.905  12+114

mail<CR>
No mail now.
Reads mail sent to anonymous CMet.)
r 1411 .450  13+51

cdm test.pll<CR>
Segment not found.
Input.
test:procedure<CR>
put edit ("hello") (a(5));<CR>
put skip;<CR>
end test;<CR>
<CR>
Edit.
w<CR>
g<CR>
r 1414  3.653  74+114

print test.pll<CR>
pl1 test<CR>
PL1
r 1417  5.918  27+485

tes<CR>
hello
r 1419  2.315  6+123

logout<CR>

Name CNet logged out 09/23/71 1420.1 edt Thu
CPU usage 45 sec
hangup
\?CONNECTIONS ABORTED\?
(M ultics 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.

\[\text{its}<CR>\text{connection is: completed}\] (to connect to DMCG-ITS)

Please login with host no. and initials (e.g., "login 70mm")

\[\text{MONIT.49}\] (Message of the day will follow)

; \[\text{login 70akb}<CR>\] (MONIT prompts with ";")

; \[?<CR>\] (you login with the form asked)

; \[?<CR>\] (will list MONIT commands)

; \[listtty<CR>\] (list follows)

; \[litf dsk:.info.<CR>\] (to display status of users and jobs)

; \[litf dsk:.info.<CR>\] (to list files on disk for user name ".info.". Note that device name is followed by ";", and user name by ";;."

; \[print dsk:.info:.info_info<CR>\] (will print file "Info info")

; \[peek<CR>\] (to display status of time-sharing monitor)

; \[<CR>\] (lists PEEK's commands)

0 \[<SUB>\] (exit from PEEK, upper case Q)

<<SUB>> or <Control-Z> is the attention getting character. It causes control to move one level up a job tree.

; \[TTYST<CR>\] (to test communications, will spit out test data)

; \[<SUB>\] (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

; \[NETWKR<CR>\] (to use network, i.e., ARPANET via user TELNET)

NETWKRK herald, and help message)


```
\?<CR>
......
\host<CR>
\host_name<CR>
\quit<CR>
......
\monit<CR>
;+<CR>

"\" is NETURK escape and prompt, ?<CR> gets help)
(help info for you)
(will print list of acceptable host names)
(to connect to a host, e.g., SEX, HIC, UCSP, etc.)
(this will get you back to MONIT)
(NETURK flushed, etc.)

;+<CR>

(to get TECO, the text editor)

1 TITLE SIMPLE TEST<CR>
:;A SIMPLE TEST PROGRAM<CR>
(RELOCATABL<CR>
. GLOBAL TYO, TYOR, LIMACH, OPEN, CLOSE, LOT, A, F, C, P, D, ARGP<CR>
A==1<CR>
P==2<CR>
C==3<CR>
D==4<CR>
P==17<CR>
ARGP==16<CR>
PDLTH==20<CR>
PDLTH==20<CR>
FIRST: :CHT:MOVE P: :PDLTH, .PDL<CR>
<HT> MOVEI A,[ASC17/This is a test/]<CR>
<HT> PUSHI P,LIMACH<CR>
<HT> .VALUE [ASC17/:KILL/]<CR>
<HT> END FIRST<CR>
<ESC><ESC>
(ESC) or (ALT) will end input)
FREE DSK:NETURK; SIMPLE TEST<ESC><ESC></ESC> (to write program on disk)
<BS><ESC><ESC>
(ESC or Control-H) to exit)
;SH<CR>
(MIDAS 39)

DSK:NETURK; SIMPLE TEST<CR>

......
(program assembles and creates a file
with name SIMPLE BB:

;D<CR>
(to use DDT, the debugging tool)
ITS .747, DDT .1334
STSH<VT1> (to get loader, <VT> is <Control-K>)
STSH .760
J SIMPLE<ESC><ESC>
we call the job SIMPLE

HDSK:NETURK; SIMPLE BB<ESC>1<ESC>1<ESC>1<ESC>1<ESC>
HCOM: ;HINIT BB<ESC>1<ESC>1<ESC>1<ESC>1<ESC>
HCOM: ;TDY BB<ESC>1<ESC>1<ESC>1<ESC>1<ESC>
HCOM: ;CHN BB<ESC>1<ESC>1<ESC>1<ESC>1<ESC>
HDD<ESC>1<ESC>1<ESC>1<ESC>1<ESC>
(we go back to DDT)
$G
(to run the program)
This is a test
(program works!!!)
:KILL
<SUB>
(ESC or Control-Z to get MONIT)

;LOGOUT<CR>
(legs you out, but leaves you connected)
ITS 795 Console 23 Free
\disconnect<CR>
(escape to NETURK and disconnect)
```
MIT PDP-10(A1) ITS Network address 134.

(The MIT PDP-10(A1) 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.)
RAID 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 our login over the ARPANET, and provide service on a regular basis.)
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**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.)
SNC  IBM 360/75  Network address 8.

(We have not been able to log into SNC, 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 system treats network interaction as half-duplex, character-at-a-line, 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 111LAC if you are not in upper case mode).

\HARVARDCR\ connection is: completed \ (you type "HARVARDCR") 
JOB N Harvard 4S72DU.40
TTYNM

#62,50
RLS
(you type "62,50")
(you type "RLS" which is not printed)
(the message of the day is now printed out)

.SYCR
......
(to see who is using the system)
(list follows)

.IMP
*ICP 106
(to use Harvard's user TELNET)
(to connect to MIT-DMCG, i.e., octal 106)
(* is the prompt character in TELNET)

.IMPg CONNECTED TO MIT(1)
......
(you can now log into MIT-DMCG system)

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

BACK TO HARVARD JOB nn
.IMP
*CLOSE IMPn
(to use Harvard TELNET again)
(this will close connections)

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

.R TECO CR
(you are now calling the editor TECO)
*1 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 "$")
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*PVEFS$$ $<CR>
*ETX> (file it on disk with the name TEST.FOR)
(ETX> or <Control-C> to exit to top level)

.EXECUTE TEST.FOR<CR>
HELLO THERE. (this compiles, runs and loads your program)

.KJ<CR> (the program works)
(CONFIRM: K (to kill job and logout)

(appropriate logout message)

\DISCONNECT<CR>\ (this will log you out)
(you escape to NETWRK and disconnect)
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LINCOLN LABS IBM 360/67 CP-CMS Network address 12

Lincoln CP-G7 interacts line-at-a-time and assumes local echo. No distinction is made between upper and lower case alphabets at command and service level.

\ll<CR>-G7 connection is: completed. (you type "ll<CR>"
LINCOLN LABORATORY CP/G7 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
q users<CR>(find number of users)
48 USERS 37 RUNNING 2 PERMITTED 1 REQUESTS 8 WAITING 0 INLOG
q names<CR>(find names of others logged in but not running)
NCP MONIT LLHPS RER XLES POPE VELZ
q user names<CR>(to find names of every one logged in)
......
req<CR>

YOU MAY NOW RUN
j cms<CR>
CMS..VERSION 37
WELCOME TO THE NET ACCOUNT
IF YOU PANIC, TYPE THE FOLLOWING
CP M ARPA HELP
OR
CP M WINETT HELP

CMS
listf<CR>
Q EXEC P1
T=0.08/0.28 16:35:54
listf * * s<CR>
......
edit test fortran<CR>

(list the file in our disk area)
1 11/05/70 10:10
(the ready message)
(lists all the system files)
(list follows)
(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>
<CR>

EDIT:

FILE<CR>
T=0.07/0.37 16:40:56

FORTRAN TEST<CR>
T=0.19/0.52 16:41:32

$ TEST<CR>
EXECUTION BEGINS...
HELLO!
T=0.42/1.20 16:43:13

telnet 46<CR>
ENTER SYSTEM ESCAPE CHARACTER...
/<CR>
/<CR>

LOGOUT<CR>
T=0.48/1.85 16:44:36

CP ENTERED

LOGOUT<CR>
CONNECT= 00:02:52 VIRTCPUS= 000:00.48 TOTCPU= 000:01.86
LOGOUT AT 16:45:19 ON 10/01/71
\?connections aborted?

(null line gets you to EDIT)
(you file the program)
(compile the program "test fortran")
(load and begin execution of the program)
(the program runs)
(to connect to host with hexadecimal address of 46, i.e., DMCG)
(you enter "/" as the escape)
(this will give you more information)
(to log out of CMS)
(logs the user out and disconnects him)
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.)
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MIT Project MAC

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.)