                    ARPANET HOST AVAILABILITY DATA

     Several months ago a SURVEY program was implemented on the
MIT-DMCG ITS PDP-10 system to aid in gathering information on the
availability of various HOSTS on the ARPANET. The purpose of this
Request for Comments is threefold:

     1. to inform the Network Working Group of the
        existence of this information gathering service
        and about getting access to it,

     2. to present the results of SURVEY for its first
        few months, and

     3. to correct errors in our data or collection methods.

     Briefly, the SURVEY program works as follows: At 15-minute
intervals whenever the MIT-DMCG ITS Time-Sharing system is in normal
operation, a SURVEY is started. The SURVEY program attempts to
establish a connection to the LOGGER (socket 1) of each HOST listed in
its table. The results of each connection attempt are recorded for
future reference. The Initial Connection Protocol is aborted prior to
reading the transmitted socket number so as to cause the minimum
amount of processing at SURVEYed HOSTS. If the LOGGER connection
succeeds, the average request-for connection response time (in
seconds) for the HOST is updated. This information can later be
viewed in several formats using the MIT-DMCG server TELNET "NETWRK" as
described below.

     Each test results in the assignment of one of the following
five statuses:

     1. LOGGER available - connection completed.

     2. LOGGER not responding - RFC sent (HOST-HOST OK), but
         no response (20 seconds allowed).

     3. LOGGER rejecting - CLOSE returned by NCP.

     4. NCP not responding - RESET timed out (15 seconds allowed).

     5. HOST dead - host-dead status returned by IMP.

Below you will find a summary of the information gathered to
date. It must be remembered that the SURVEY program can only run when
MIT-DMCG ITS Time-Sharing System is in normal operation and the MIT
IMP is operational. Thus the current figure of 94% for MIT-DMCG is
inaccurate. (It should actually be closer to 66%.)

     There are, in addition, two other shortcomings of which we are
aware. The first is that SURVEY is on a 24-hour basis and does _not_
consider advertised up time. For example, MIT-DMCG will never be
better than 67% on a Tuesday since the machine is always unavailable
from 4 p.m. to midnight. The second shortcoming is the fact that the
Lincoln Lab's TX-2 shows as "never available". This reflects an as
yet undiagnosed problem currently under investigation.

     To get availability information from DMCG, you must first follow
the scenario in RFC 254. Once in NETWRK, the DMCG user-TELNET, there
are seven available commands which pertain to SURVEY data:

     SUMMARY.OF.SURVEYS - summarizes most recent information.

     HISTORY.OF. <host name> - gives a detailed recent history
                    of the given host. This generates a lot
                    of output, so use it sparingly.

     ACTIVE.HOSTS - lists those hosts who accepted a connection
                    at least once during the last 24 hours.

     BEST.SURVEY - lists the best of the recent surveys.

     LONGTERM SUMMARY.OF.SURVEYS - summarizes all past
                    information. This was used to generate
                    the table on the next page.

     LONGTERM HISTORY.OF <host name> - gives a summary of
                    past history of the given host. It
                    does not generate as much output as the
                    HISTORY command.

     LONGTERM ACTIVE.HOSTS - lists those hosts who accepted a
                    connection at least once since December 13,
                    1971.

For the above seven commands, "recent" is define as "within the
last 24 hours or less".

        For help in accessing SURVEY data and comments on improving the
admittedly limited SURVEY service, please contact:

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            Cambridge, Mass. 02139
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```
6528 Surveys from 09:55:18 on 12/13/71 to 08:50:41 on 03/20/72
--HOST-- -#- -%-UP- -RESP- *
ucla-nmc 001  064%   00.93
sri-arc  002  064%   02.96
ucsb-75  003  048%   00.53
utah-10  004  057%   03.23
bbn-ncc  005  000%   00.00
multics  006  047%   05.60
rand-rcc 007  000%   00.13
sdcadept 010  000%   02.60
harv-10  011  022%   00.23
ll-67    012  021%   03.70
su-sail  013  000%   00.00
ill-11   014  000%   00.06
case-10  015  000%   00.00
cmu-10   016  034%   00.23
burr     017  000%   00.00
ames-67  020  000%   00.00
radc-645 022  000%   00.00 **
nbs-11   023  000%   00.00 **
tink-418 025  000%   00.00 **
usc-44   027  000%   01.13 **
ncar7600 031  000%   00.00 **
ucla-ccn 101  070%   00.30
sri-ai   102  000%   02.26
tenex    105  060%   02.40
mit-dmcg 106  093%   01.10 ***
rand-csg 107  013%   02.96 **
harv-1   111  000%   00.23
ll-tx2   112  000%   01.76
ill-6500 114  000%   00.00
burrtest 117  000%   00.00 **
tenexb   205  018%   02.93
mit-ai   206  000%   00.00
harv-11  211  000%   00.00
```

* Remember that "UP is defined as "Logger Accepting connections."
** Surveyed only since February 18, 1972.
*** MIT-DMCG is actually up about 66% of the time.