file

INTERDEPARTMENTAL

MASSACHUSETTS INSTITUTE OF TECHNOLOGY *CAMBRIDGE, MASS. 02139*

from the office of

August 13, 1969

Mr. Morton Berlan
Telecommunications Office
E18-204

Dear Mort:

This note is to keep you informed of the progress of the 103E dataset installation at M.I.T. Project MAC, for the GE-645 (Multics) computer system. The installation is not yet complete, but some of the datasets have been turned over to us for initial use. Current status is as follows:

1. 32 8-level trunks attached to 32 103E datasets are installed. Of these, two are out of service because of (presumed) bad datasets.

2. 14 7-level trunks attached to 14 103E datasets are installed. Of these, two are out of service because of (presumed) bad datasets.

3. 20 4 digit numbers and associated 103E datasets are not yet installed.

4. 26 4 digit numbers and associated 103A datasets have not yet been removed.

Several problems have been uncovered during the initial shakedown of these new datasets:

1. The "loss of carrier disconnect" option was ordered no; This option should have been ordered yes; the installers have changed the option from no to yes at our request.

2. In the case where a handshake did not take place, the 103E datasets do not disconnect on hangup of the calling party. This is a difference from the 103A specification, and leads to some confusion when another party calls and is converted to the dataset which never disconnected. We need to look further into this problem to see whether or not the difference is intended.

3. The installers inform us that the "make-busy" supervisory function will not work on the 20 4-digit numbers. The problem here seems to be that the dataswitch does not include wiring to bring the supervisory lead from a 4-digit number out to the panel on which the lines to Tech Square are attached. The installers have referred this problem back to the telephone company engineers for resolution, and you will probably hear from them.

4. The "make-busy" function does not work on the lowest-numbered trunk in the 7-level group and also on the lowest-numbered trunk in the 8-level group. The reason seems to be that the trunks in question are placed as the 10th trunk on every selector, and counters are attached to them to give a measure of busy signal frequency. These counters are incompatible with the "make-busy" function. I would like to suggest that either you or I (or both) talk to the appropriate telephone company engineer to see if there is some alternate arrangement which will allow both the "make-busy" function to operate, and appropriate statistics to be gathered, simultaneously.

In general, the switching to 103E's has begun smoothly, although the first few days were quite painful as the above problems (and several of our own) were untangled. We are beginning to encounter grading problems on level-8, with busy signals encountered by our programmers despite the fact that as many as 15 of the 32 level-8 lines are not in use. We are maintaining records of caller numbers and the lines not in use when busy signals occur, to aid in regrading. It would be very helpful to us both in understanding the situation and in trying to send programmers to a different console to get past a busy signal, if you could supply me with

- The chaining order of the linefinders
- The rule for determining which linefinder is the initial target for a given off hook telephone
- The grading charts for level-7 and level-8

I will keep you posted on future developments.

Sincerely yours,

Jerome H. Saltzer
Assistant Professor of
Electrical Engineering

XC: F.J. Corbató
R.G. Mills
M.M. Jones
W. Burner
R.C. Daley
T.H. VanVleck
R. Stetson
F. Donovan, New England Telephone