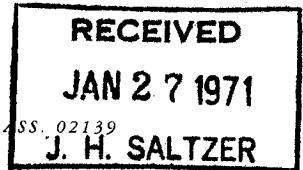


INTERDEPARTMENTAL

MASSACHUSETTS INSTITUTE OF TECHNOLOGY CAMBRIDGE, MASS. 02139



from the office of Telecommunications

January 19, 1971

To: J. Saltzer

Subject: Data Switch & Centrex

In regards to the introduction of CENTREX (No. 1 ESS) at M.I.T., I think that many of the questions that have come up about No. 1 ESS can best be answered by reviewing Bell Telephone System Monograph 4853 - No. 1 Electronic Switching System. I assume that you have a copy of this monograph; if not, I would be most happy to lend you mine. The reason I refer to this monograph is your question "...what amount of blocking will the CENTREX really have?" In response, the No. 1 ESS offices are designed with 2 designs of line switch frames being provided. The line switch frames, as you know, perform the first 2 stages of switching in the interconnecting process in No. 1 ESS; i.e., connecting lines on their inputs to B links on their outputs. The line switching frames also perform the second basic network function of traffic concentration.

As indicated, No. 1 ESS has 2 designs of line switch frames. One concentrates traffic by a ratio of 4:1 between input lines and B links, and the second concentrates traffic by a ratio of 2:1. In any office, only 1 of the 2 types of frames is used. I have been advised by representatives of NET that MIT's CENTREX system will have a 2:1 ratio.

Further, in terms of the grade of service that will be provided by the MIT CENTREX system, i.e., the probability of the number of calls originated during a busy hour that will not be completed, it will be P.01 which, as you know, means 1 call in 100 will be uncompleted. In other words, P.01 is the grade of service that NET is engineering the No. 1 ESS for M.I.T.

I appreciate the dialogue we have had on CENTREX, and would be happy to answer any other questions that you may have.

A handwritten signature in cursive script, appearing to read "M. Berlan".

M. Berlan

xc: F. Corbato R. Scott
W. Burner W. Dickson

ew