

Product Planning - Poughkeepsie
February 8, 1957

File Memorandum

Subject: Report of Meeting on the Exchange on 2-7-57

Subject meeting was called by W. Buchholz and attended by members of both STRETCH Product Development and STRETCH Product Planning. Its purpose was to discuss operational aspects of the Exchange (rather than circuitry).

Recommendations:

1. It appears feasible to operate the STRETCH system under a multiprogrammed mode—a technique where several programs are in memory and executed asynchronously so that the computing in one program and the input-output of the others occur simultaneously.
2. The basic exchange unit will not accept input-output units with transmission rates in excess of 25 K. C.
3. The byte crosspoint switch will have and be constructed for maximum dimension 64 x 16, but it will be made available in smaller dimension on a module basis.
4. The COPY CONTROL WORD instruction will be changed to LOAD. (Probably an inverse instruction STORE will be desirable).
5. A new instruction DISCONNECT will be provided to :
 - a. Stop further entry of data into memory
 - b. Permit input device to continue to the end of its record.
 - c. Stop further modification of the control word.
 - d. Release the crosspoint channel. (Probably this instruction will also be desirable when applied to Input-output units in modes other than input).

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6. Break-in - at the programmer's option - will be provided when a new control word is sought on input in grouping or distribution mode. (Probably similar operation for output will be desirable. A decision was not reached on method of indicating - to the program - the input-output unit involved).
7. "Ready" shall be defined as the status of an input-output unit that is not currently occupied with the execution of any input-output instruction.

"Busy" shall be defined as the status of an input-output unit that is currently occupied with the execution of an input-output instruction.

Some provision must be made to indicate physical readiness of input-output unit for operation.

Jack C. Gibson
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JCG/jv