POUGHKEEPSIE

August 2, 1957

MEMO TO: Mr. J. C. Gibson

SUBJECT: Project 7000 - High Speed Exchange

REFERENCE: Your letter of July 30, 1957 - same subject

Many factors were considered in adopting the serial-parallel approach to the organization of High Speed Disk rather than the strictly parallel approach. Although the word rate of the parallel arrangement is 4 usecs per word as opposed to 8 usecs per word in the serial-parallel arrangement there are other factors which were considered.

Let us refer to the serial-parallel arrangement as S-P and the parallel arrangement as P.

Contrary to your statements in paragraph 2 of your letter the bit density proposed for the S-P is more than double that for P. The number of words stored on one S-P disk assembly is more than double that which can be stored on one P disk assembly.

The S-P Disk assembly is compatable with the proposed requirements for commercial Disk assemblies by Poughkeepsie Product Development for the 700 series machines.

The S-P Disk is compatable with the tentative organization of the Tractor Tape system thus allowing the use of a common High Speed Exchange.

With the S-P Disk we can provide simultaneous Read/Write with one disk assembly whereas with the P Disk we would need two.

The High Speed Exchange does not place an upper limit upon the repetition rate of the I/O devices connected to it. The limit is imposed by the 2 usec main memory. A faster main memory however, would result in less complexity in both the High Speed Exchange and the Memory Bus system.

H. K. Wild

HKW:ps

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