Digital Computer Laboratory
Massachusetts Institute of Technology
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SUBJECT: MTC MEETING OF AUGUST 15, 1952

To: MTC Planning Group

From: W. A. Hosier

Date: August 20, 1952

Abstract: Decisions and progress relevant to the proposed Memory Test Computer (MTC) are summarized for distribution to those interested, and to trace development of the computer.

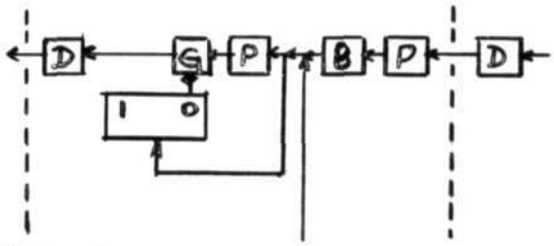
Present:			
	D. R. Brown	R. Hughes	K. H. Olsen
	J. D. Crane	R. P. Mayer	W. N. Papian
	R. R. Everett	W. Ogden	H. Smead
	W. A. Hosier		N. H. Taylor

The meeting was held to try to settle certain engineering considerations which affect the system block diagram.

First, K. Olsen stated that he would rather have shift-counting done in some separate counter than in four digits of the A-register, since the physical symmetry of an A-register composed of plug-in units would be disrupted by trying to make it count. Such a separate counter would also facilitate multiplying, and if it were large enough, might prove convenient in case a magnetic tape input were ever desired.

It was therefore agreed to go ahead and build such a separate counter.

The second question concerned the type of carry circuit to be used in the accumulator. Olsen proposed a low-speed carry with four tubes and a delay line per digit, as follows:



P = Peaker

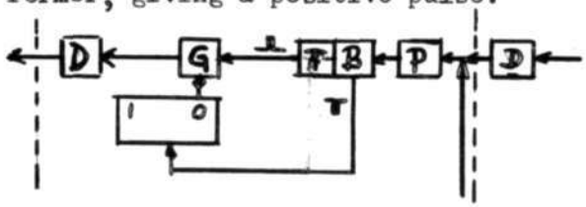
B = Buffer Amplifier

G = Gate

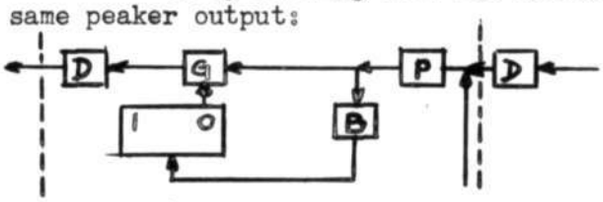
D = Delay

(Actually crystal discriminators would precede the peakers to reject noise pulses).

It was suggested that one of the peakers could be eliminated by coupling the buffer to the gate through a transformer, giving a positive pulse:



Or by driving both the buffer and the gate from the same peaker output:



A third question to arise was that of a test storage independent of the magnetic memory - principally toggle switch registers, possibly with a couple of flip-flops or a B-box. It was agreed that if the test-storage register should turn out to be full of headaches for Ogden's group, thus tending to hold up the magnetic memory, it would certainly be advisable for Olsen's group to fabricate some substitute of this sort; and probably would be a good idea even if the magnetic group does not hit any snags.

Use of such test storage, especially with a B-box, would necessitate certain alterations in the logic of the machine; these will be looked into.

Signed W. A. Hosier
W. A. Hosier

Approved RRE
R. R. Everett