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May 20, 1958

MEMO TO: Dr. W. Buchholz
SUBJECT: ECC Operation with I/O Equipment

We have recently been investigating possible error conditions in the operation of the Card Reader. This investigation has brought out the fact that any failure in the data flow within the reader can and probably will result in multiple errors. This includes such component failures as brushes, core buffer read in drivers, core buffer read out drivers, core buffer control rings, sense amplifiers, and output data register. In fact most any failure which involves the data path could cause multiple errors. Any multiple error could easily be odd in which case improper correction might take place when operating in the ECC mode. I, therefore, recommend that the ECC mode of operation be eliminated in the Card Reader and that all errors recognized within the unit result in a Cancel signal.

The elimination of the ECC mode will not significantly affect the hardware count in the Card Reader and should be decided from the programmer's point of view. In view of the facts on the Card Reader, I question the usefulness of the ECC mode on any of the medium or low speed units.

J. D. Calvert
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JDC:ps

cc: Mr. R. P. Fletcher
Mr. W. R. Stringfellow
Mr. D. W. Sweeney ✓
Mr. H. K. Wild