

October 27, 1959

MEMORANDUM TO: 1401 File

SUBJECT: Feed-Through Logic Sheets

In order to minimize the number of SMS card slots to be used for edge connector cables, some signals are rerouted through intermediate gates.

By this method, a signal leaves a gate through a cable to a second intermediate gate, from which it passes through another cable to a third and final gate. In some cases, the signal also feeds circuits in the intermediate gate and in other cases merely passes through to circuits in the final gate.

The method used to indicate this routing on the automated logic forms prepared for the computer diagnostic testing is as follows:

1. A signal generated on a given logic sheet in the source gate is referenced in the conventional manner to the sheet numbers of all the logic sheets on which this signal is used.
2. The edge connector reference for those signals which are rerouted shall be chained, so as to show the entire route of the signal, as follows:
  - a) gate, card slot, and pin used in leaving the source gate.
  - b) gate, card slot, and pin used in entering the intermediate gate.
  - c) gate, card slot, and pin used in leaving the intermediate gate.
  - d) Gate, card slot, and pin used in entering the final gate.

Example of a chained footnote reference:

\*K--01B1C02C--01B6B03C--01B6D04H--01B7A01H

3. The sheet number reference under the signal on the final gate sheet will be the sheet number of the logic sheet on the source gate. The edge connector reference will be the gate, card slot, and pin on which the signal enters the final gate.
4. A feed-through sheet is made up for every gate which acts as an intermediate gate for rerouted signals. This sheet is assigned a sheet number and is included in with the other logic sheets.
5. The feed-through sheet consists of the signal name and origin sheet number on the input side, with an edge connector reference to the intermediate gate, card slot and pin, on which the signal enters.

A straight line is drawn across the page.

The output side contains the signal name and the sheet number of the logic sheet on the final gate, with an edge connector reference to the intermediate gate, card slot, and pin on which the signal leaves.

By this method, the associated wiring for the rerouted signals will appear in the wiring lists as received from the computer laboratory.

The chaining of the edge connector references is intended to aid testing and servicing of the machine.

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