

LIN. LAB. DIV. ~~CONFIDENTIAL~~
DOCUMENT ROOM

DO NOT REMOVE
FROM
THIS ROOM

Memorandum M-2806

~~CONFIDENTIAL~~
UNCLASSIFIED

COPY NO. 29 OF 85 COPIES
Page 1 of 2

Division 6 - Lincoln Laboratory
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

CLASSIFICATION CHANGED TO:
Auth: DD 259
By: R.R. Everett
Date: 2-15-60

SUBJECT: Group 62 Section Leaders Meeting -- May 3, 1954

To: Division 6 Group Leaders; Group 62 Staff Members

From: P. J. Gray

Abstract: The IBM designed light gun has been installed and tested on Cape Cod. Evaluation of sources of prime power and the problem of power interruption is under way. Studies will be under taken concerning the use of transistors in various parts of Duplex Central.

1. Display

The experimental IBM designed light gun has been installed and tested on the Cape Cod System and after some adjustment was found to work satisfactorily. The system for projecting a red spot on the face of the tube works quite well and appears helpful. Some difficulties were encountered due to an intermittent short in the phototube.

Consideration is being given to provide for erasing of typotron tubes at each console. This would require two additional vacuum tubes per console but would greatly simplify cabling. This may be a simpler method if as many as thirty-two different erase times are required.

Work is continuing on the first approximation of the frame layout for the central display frames.

2. Power

A discussion of sources of prime power and the problem of power interruption indicate that there are several alternatives which should be carefully evaluated. Batteries are not suitable to back up the DC supplies due to voltage variation of about 8% depending on the state of the battery charge. The possibilities which appear to be open are:

- a. Use of three part motor generator sets consisting of an AC motor, DC motor and an AC generator. Under normal operation the AC motor would drive the generator, receiving its power from the utility transformers. In the event of utility failure the DC motor would drive the generator, receiving power from standby batteries. This would carry the central until diesel standbys could be put into operation.

~~CONFIDENTIAL~~
UNCLASSIFIED

- b. Providing no special back up power other than diesel stand-by and relying on the ability to start the diesels and switch them on to the line rapidly enough to allow resumption of operation of the central without serious loss of data.
- c. Steam generation of all power at the central location.

Alternate b. is the method currently proposed and may be sufficient. However, it was the opinion of the group that further study should be made of the prime power problem by consultants if required.

3. Transistors

Some preliminary studies of the use of transistors in the display decoders indicate that their use is feasible. However, temperature variations might be a problem since both saturation current and current gain vary quite severely with temperature. Further evaluation will be started of the use of transistors in later duplex centrals.


It was suggested that a study be made of the possibility of using transistors in the light gun since it appears there is a premium on the size of this unit.

4. Meetings This Week and Next

- a. Tuesday, May 4 - meeting on display in Cambridge.
- b. Thursday and Friday, May 6 and 7 - Jacobs and Hopkins in meeting at Westinghouse concerning Bomarc and its operation with AN/FSQ-7.
- c. Tuesday, May 11 - review of miscellaneous radar input and radar mapper specifications at Poughkeepsie.

5. MTC

Every effort is being made to implement the moving of MTC to Lexington in early June. Construction of a new accumulator for the computer is under way. It is hoped that this will be completed prior to the moving.

Signed: 

P. J. Gray

Approved: 

A. H. Kromer

PJG:mo

CC: J. W. Forrester, R. R. Everett