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Memorandum M-3056

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Division 6 - Lincoln Laboratory  
Massachusetts Institute of Technology  
Lexington 73, Massachusetts

SUBJECT: MINUTES OF GROUP 61 - GROUP 64 MEETING, 8 SEPTEMBER 1954

To: Group 61, Distribution List

From: H. D. Benington

Date: 21 September 1954

ABSTRACT: At a meeting held between representatives of Groups 61 and 64, use of WWI's magnetic tape and camera facilities by programmers and computer operators was discussed. Group 61 agreed to correct several deficiencies in its use of magnetic tapes, particularly when tapes are used for delayed printout. Both Groups will investigate means of improving the camera facilities.

On 8 September 1954, a meeting was held between Group 61 programmers and Group 64 equipment engineers to discuss the use of WWI magnetic tape facilities and WWI scope-camera photographs of computer-generated displays. The following attended:

G R O U P 6 1

W. S. Attridge, Jr.  
H. D. Benington  
C. H. Gaudette  
J. A. Levenson  
L. M. Murray

G R O U P 6 4

E. S. Rich  
L. L. Holmes  
A. J. Roberts

Group 64 engineers made the following points in connection with the use of WWI magnetic tape facilities by Group 61:

- 1) Systems time on WWI should not be used for delayed printout of Group 61's tapes. When time has been so used in the past, Systems engineers have often delayed turning off power until printouts were completed. (Group 61 agreed that this time will not be requested in the future).
- 2) Group 61 operators and programmers often request a perfectly typed copy from delayed printout rather than an adequately typed copy; as a result, valuable printout time is unnecessarily used. (Group 61 agreed to correct this tendency).

- 3) Group 61 computer operators should monitor delayed printouts to see that printing is proceeding satisfactorily. In the past, operators have occasionally been absent from the computer room when an error occurred; if this error had been detected earlier, printout time would have been saved. (Group 61 will insure that at least one operator is present throughout the time assigned to Group 61).
- 4) Group 61 should try to eliminate unnecessary delayed-printouts because of the difficulty which will arise in handling the volume of printouts which Group 61 requires for the 1954 Cape Cod System. (Group 61 pointed out that it is aware of this problem and that several techniques have been adopted for both program checkout and data analysis that are intended to minimize the volume).
- 5) Group 61 should not depend on being able to record data on magnetic tape for use several months later. The equipment engineers pointed out that successive alignment of tape heads causes a cumulative error which may make it impossible to read reliably an old tape. (Group 61 pointed out that it is developing procedures whereby output data tapes will be processed soon after the tests. Where this is not possible, as in the case of system program tapes and simulated data tapes, a paper tape record will be made of the magnetic tape).

Group 64 pointed out that, in general, the reliability of the magnetic tape system is excellent. This is particularly true if computer operators check the system before it is used. They pointed out that Group 61 should be able to expect 20 minutes of error-free operation at least 99% of the time. At present more accurate reliability estimates are impossible since operation is erratic and extensive reliability studies have not been made.

Group 64 requested that they be able to schedule occasional two-day periods during which individual tape units would not be available to programmers. This down time is necessary since the tape units have not been thoroughly overhauled since they were installed. Eventually, Group 64 hopes to check each unit once a month according to a definite schedule. Group 61 agreed that the two-day periods may be scheduled as long as one-week notice is given.

Group 61 indicated difficulties which have been experienced recently while using the scope-camera facilities. Those attending agreed that three phases of the camera situation must be improved before camera performance will equal that of other in-out units:

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- 1) The mechanical and electronic equipment must be maintained in better condition. Group 64 agreed that there has not been much stress placed on this problem in the past.
- 2) Computer operators must be educated to make best use of the camera facilities and associated programs.
- 3) Techniques and procedures for handling the film must be tightened all along the line.

Group 61 pointed out that extensive use will be made of camera facilities in performing data analysis of the 1954 Cape Cod System. A serious effort will be made by both Groups to improve the effectiveness of the camera facilities. If this effort is successful, more photographs will be taken of tabular data with a resultant reduction in the volume of delayed printouts.

Signed H. D. Benington  
H. D. Benington

HIE/bar

Approved C. A. Zraket  
C. A. Zraket

Distribution List:

E. S. Rich  
L. L. Holmes  
A. J. Roberts  
A. R. Curtiss  
W. Vecchia