

J. Nevins
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MIT Management Development Plan Meeting #8

5 December 1967

DEC 7 1967

J. L. NEVINS

1. Group 35 Personnel

The question was raised as to what specific people from Group 35 were being assigned to assist Group 23B in the programming of Flight Programs.

Action Item - R. Ragan to contact E. Hall and obtain the names of personnel assigned to assist Group 23 B.

2. Survey of Computer Usage

A survey of planned computer usage for testing and debugging of programs was taken by E. Copps.

Action Item - R. Millard is to analyze the data received and present the results at the next meeting.

3. Computer Facility

The utilization of the H-1800 and the IBM 360 Facilities was discussed. Present utilization reports indicate very little usage of the H-1800 by the programmers. The H-1800 is apparently almost a free machine yet programmers do not seem to be taking advantage of the availability.

Action Item - R. Battin is to investigate what runs could be directed to the H-1800 facility and why this is not presently being done.

4. Sundisk DAP

The preparation of Chapter 3 and intermediate issuing of flow charts or a memo specifying that REV 267 should be considered as the Specification for the DAP until Chapter 3 publication was discussed at great lengths.

The conclusions were that MIT should continue with emphasis placed on the preparation of Chapter 3 of Sundisk. Also that the Chapter 3 of Sundisk would be used as the initial publication of Chapter 3 of Colossus. Changes to this initial publication of Colossus would then be done through PCR procedures.

Mr. J. Williams of NASA stated that a letter of direction was being prepared at NASA directing MIT to use the Assembly Listing Rev. 267 of Sundisk as the specification for the DAP. He said that he would attempt to withhold the issuing of this directive or see if a directive cancelling the directive could be issued.

Action Item - W. Widnall is to present at the 12/12 meeting a detail development schedule for Chapter 3 of Sundisk and Colossus.

5. Sundance DAP

A Sundance DAP schedule was handed out listing the major milestone for the DAP Development.

From the presentation given on the DAP development status it was intimated that this area was not indeed a source of personnel for the other assignments but that additional personnel could be used in this area.

R. Goss and L. Hull were scheduled to go to E. Copps group on or about the first of January. If E. Copps could get replacements for these two people this would help the DAP personnel problem. The possibility of using two people from AC Electronics in E. Copps area was mentioned as a possible solution.

Action Item - W. Widnall is to present at the 12/12 meeting a Development Plan for the DAP's.

6. Chapter I "Prelaunch"

The following outline of the content of Chapter 1 for Sundance was presented by A. Laats.

- 1.1 Introduction
- 1.2 AGC Self Test
- 1.3 Performance Test Computation
 - 1.3.1 Filter for Gyro Drift
 - 1.3.2 Accelerometer Scale Factor
 - 1.3.3 IRIG Scale Factor (An erasable program)
- 1.4 Functional Diagrams
 - 1.4.1 Performance Tests
 - 1.4.2 IRIG Scale Factor
- 1.5 Data Analysis

The content for Sundisk would be the same as above with the addition of Prelaunch Alignment.

The tentative schedule for distribution of Chapter 1 was given as follows:

Sundance	12/24/67
Colossus	2/15/68
Luminary	12/24/67

7. Software Change Control Board

The Software Change Control Board is processing approximately 50 to 60 changes per week which results in 1500 to 2000 cards per week. The updating of assemblies are now done on a weekly basis. The cut-off for changes is Thursday noon and the generation of an "approved assembly" available before the weekend. The Change Control Board is functioning well and is providing good insight to problem areas and program status.

NASA/MSC had stated in the past their desires that certain data be located in the same address of erasable on Sundance, Luminary and Colossus. The definition of data to be handled in this manner must be received by MIT/IL before 12/15/67.

Action Item - K. Greene - the 12/15/67 cutoff data should be flagged out on the Action Item TWX.

8. Word Budgets

Word Storage budgets for Colossus and Luminary may be in trouble, but presently Sundance looks okay. The addition of VHF ranging in Colossus may force the removal of something else to make room for VHF ranging.

D. Lickly and F. Martin are to review the GSOP and Budget for Colossus. An MIT internal budget review should be scheduled for about 12/20/67. The possible removal of TLI in Colossus by NASA may provide some relief.

Action Item - E. Copps and F. Martin are to report on the Word Budget Status.

9. Colossus Development Plan

The updated pages of the Colossus Development Plan were presented and discussed.

10. Sundance Development Plan

The updated Sundance Development Plans were presented and discussed. R30, R31 and R63 were identified as the problem items in completion of level 3 testing of Sundance.

R31 status was discussed by J. Saponaro and the quoted 12/29 date still appears to be the best estimate of completion of testing at this time. It was brought out during the discussion that the displays obtained from R31 should not be used to evaluate the Rendezvous performance during level 4 testing. It was decided that although R31 delivery exceeded the 12/22 date for completion of level III testing that the FACI date would not be changed now. Caution was expressed; the progress of this routine should be kept under close watch. R30 and R63 were also identified as trouble areas because of the inexperienced AGC programmers assigned to the task and the tightness of the required completion dates of level III testing.

G. Cherry requested that Group 23C give a report at the next meeting on the present status of the hybrid and future plans and milestones for the Hybrid Facility.

Chapter 6 of Sundance shall be published on about 12/15/67. The philosophy being that the initial issue will contain the data which NASA says represents the vehicle for Sundance; it does not represent the status or content of the MIT/IL simulator. The simulation data will be added later by PCN procedures.

Action Item - E. Copps is to provide at the next meeting a new predicted date for the publication of a Sundance Verification Plan.

Action Item - A. Kosmala is to add R63 to one of the level 4 Sundance test sequences. It is assumed that Level 4 can be started before R63 becomes available.

Action Item - E. Copps /D. Lickly are to keep surveillance on the progress of level 3 testing of R30, R31 and R63.

Action Item - K. Greene should add a footnote to the Level 3 test page of the Sundance Development Plan explaining why P32, P33, P34, and P35 show fraction of tests as completed but the actual date not filled in.

Action Item - J. S. Miller is to report on the hybrid status and future plans for the Hybrid Facility.

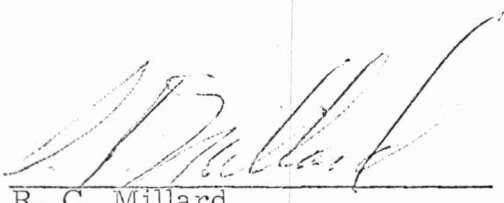
11. Luminary Development Plan

The updated Luminary Development Plan was presented and discussed. "R-29 was discussed briefly but additional definition work is required in this area. Group 23A has the basic requirements for R-29.

Luminary Memo #4 from G. Cherry to E. Copps was read. This memo urged that a schedule for the availability of working Ascent and Descent programs be established, so that plans could be made to check the computer execution time during these phases.

Action Item - G. Cherry has a continuing action item to co-ordinate the efforts of defining R-29 for Luminary.

Action Item - E. Copps is to review the personnel resources that might be applied to R-29.



R. C. Millard

RCM/KG/km

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|---------------|---------------------|
| cc:* R. Ragan | * R. Weisser |
| * D. Hoag | * R. Battin |
| * L. Larson | * W. Kupfer |
| * M. Johnston | * K. Greene |
| * J. Kernan | * J. Williams, NASA |
| * G. Cherry | * W. Widnall |
| * W. Marscher | * A. Laats |
| * N. Sears | * J. Saponaro |
| * F. Martin | * E. Copps |
| * P. Peck | * J.S. Miller |
| * J. Dahlen | * J. Vittek |
| * A. Kosmala | * J. Shillingford |
| * D. Lickly | * J. Nevins |
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| J. Sutherland | J. Henize |
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| R. Scholten | C. Schulenberg |
| P. Felleman | Files |

* Attendees of Meeting