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THE AIR FORCE
SYSTEMS PROGRAM OFFICE (OSAF)
OFFICE, LOS ANGELES, CALIFORNIA 90045



12 JUN 1967

MEMORANDUM FOR GEN STEWART

SUBJECT: MOL Computer Program Management

Reference the minutes of the 11 May 1967 MOL Management Meeting which require Systems Office action pertaining to a back-up software plan.

Early in the MOL program software was recognized as a significant potential problem area. Accordingly, a Software Management Group (SMG) was organized in May 1966. The basic purpose was to assure early, intensive, careful review of both technical and management aspects of the software packages.

A copy of the SMG Charter is enclosed as Attachment 1. It was signed by Brig Gen R. A. Berg for the USAF and Dr. B. P. Leonard for the Aerospace Corporation. It was transmitted to all associate contractors as part of a Software Roles and Responsibilities letter dated 13 May 1966.

The SMG, at the time of its organization, reviewed the software situation and established five subgroups. These subgroups are currently conducting regular technical information exchange meetings. This assures early detection and correction of potential interface problems and technical or contractual misunderstandings. The following five subgroups are currently operating under the SMG charter:

AGE Software Subgroup (Aerospace Ground Equipment)

Orbital Support Software Subgroup

Ascent/Re-entry Software Subgroup

Simulator Software Subgroup

Powered Flight Guidance Software Subgroup

Shortly after its organization, the SMG recognized limitations in the use of SSD Exhibit 61-47. In order to establish an improved standard for software development which was also consistent with the management techniques defined in AFSC Exhibit 375-1 a new software control document was created. This was issued on 1 Sep 1966 as SAFSL Exhibit 20012.

A brief description of the computer program milestones defined by this document is contained in Attachment 2.

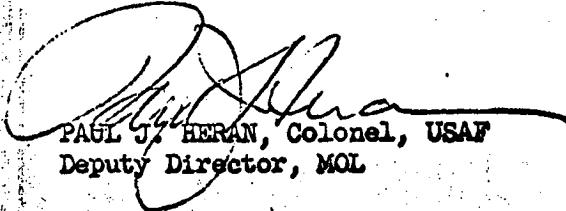
Recent program rescheduling action has necessitated corresponding changes in software schedules. The new schedule for each subgroup is shown in Attachments 3 through 7. These schedules represent the culmination of extensive coordination activity and are consistent with corresponding "Compact 12" hardware schedules.

A back-up software program is difficult to define in a meaningful and cost effective manner. The most effective option is what we are doing--making certain that modest and achievable objectives for software are identified and implemented. Our existing program will be re-evaluated at any time those objectives appear to be in jeopardy. In particular, early emphasis was placed on all software packages to identify feasibility before extended implementation was undertaken. Beyond this, minimum requirements cannot really be met by a back-up program with reduced objectives, especially when the cost and management implications of parallel contracting for a redundant effort is definitely not justified.

In view of the SMG's extensive planning and review of the MOL software, it is our considered opinion that our existing program is adequate and on schedule and that no back-up activity is necessary.

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1. MOL SMG Charter
2. Milestone Definitions
3. Chart, Ascent/Re-entry
4. Chart, AGE
5. Chart, Flt Guidance
6. Chart, OSG Int. Schedule
7. Chart, Simulator (OTEF)


PAUL J. HERAN, Colonel, USAF
Deputy Director, MOL

MOL SOFTWARE MANAGEMENT GROUP

SCOPE:

This charter describes functions, authority and limitations of a working group which will coordinate the development, testing, and modification of all computer program elements of Manned Orbiting Laboratory system segments.

AUTHORITY:

The MOL Software Management Group is delegated authority to: assign action items; recommend approval, disapproval or modification of computer program milestone products; and initiate technical direction.

IMPLEMENTATION:

Action to contractually implement requirements derived from SMG activities will be accomplished through the project officer and contracting officer assigned to each contractor, through the Configuration Control Board for modification of approved products, and through similar appropriate action channels when direction of agencies other than the MOL SPO is required.

RESPONSIBILITY:

The MOL SMG is responsible for initiating activities to ensure that: all required computer program elements are developed in a timely manner; responsibilities for Interface Assurance and/or Computer Program Integration are assigned as needed; and appropriate techniques are developed to validate resulting computer programs. The MOL SMG will maintain cognizance, through review and coordination of appropriate milestone products, of progress toward the completion and validation of MOL computer program elements. Specifically, the SMG or its sub-groups will coordinate on all Milestone 1 and Milestone 3 products prior to their approval. The SMG will report periodically to the MOL SPO Director of Engineering/Director of Operations on the progress of all activities cited in this charter.

MEMBERSHIP:

The SMG will consist of single representatives from each of the following organizations:

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MOL SPO Engineering Directorate
MOL SPO Operations Directorate
Aerospace MOL SEO Vehicle Engineering
Aerospace MOL SEO Operations
Air Force Satellite Control Facility
Aerospace Satellite Control Office
Titan III SPO
Other special technical divisions as required.

The MOL SPO Engineering Directorate/Operations Directorate will select the chairmanship of the SMG. Aerospace MOL SEO will designate one of its members as co-chairman. In addition to the representation cited above, Aerospace will designate a secretary for the SMG. The SMG may invite representation from other agencies or contractors as required to effectively conduct its business.

SUB-GROUPS:

The SMG may establish sub-groups as required to effectively conduct its business and may delegate to these sub-groups such authority and responsibilities as required for implementation of the SMG policy and guidance. Sub-groups shall be functionally oriented and staffed by responsible MOL SPO, Aerospace MOL SEO, and contractor and government agency personnel.

Signed

B. P. LEONARD
Vice President, General Manager
MOL Systems Engineering Office

Signed

RUSSELL A. BERG
Brigadier General, USAF
Deputy Director, MOL

MOL COMPUTER PROGRAM MILESTONE DEFINITIONS

ACCORDING TO SAFSL EXHIBIT 20012

- Milestone 1 Computer Program Design Criteria
- Milestone 2 Computer Program Contract End Item (CPCEI)
Performance Design Requirements - Part I and
Item Test Plan
- Milestone 3 Integrated Computer Program Performance/Design
Requirements - Part I and System Test Plan
- Milestone 4 CPCEI - Detail Technical Requirements - Part II
Item Test Procedures
- Milestone 5 Computer Program Development Product and
Support Documentation
- Milestone 6 Integrated System Test Procedures
- Milestone 7 Users' Manuals and Handbooks
- Milestone 8 Integrated Computer Program Development Product
- Milestone 9 Integrated System Readiness Demonstration