

Memorandum 6M-3751

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

SUBJECT: CONCURRENCE PROCEDURES FOR SAGE OPERATIONAL SPECIFICATIONS

To: Distribution List

From: J. A. Arnow, D. R. Israel

Date 15 July 1955

Abstract: Operational specifications for the SAGE Direction and Combat Centers will be prepared in M-note form. Within one week after distribution, formal concurrence will be sought from various people and organizations within Lincoln. ADC approval will be obtained through Col. J. D. Lee of the 4620th Air Defense Wing. Following concurrence, the memos will be turned over to the PCO for release and distribution. Similar procedures will be instituted for all changes to the original specifications.

This memo outlines the procedures to be used in preparing and obtaining concurrence on SAGE operational specifications.

A. Operational specifications (see 6M-3618 and 6M-3566) will be written for:

Direction Center

1. Guide to Direction Center Operation
2. Radar Inputs
3. Automatic Tracking
4. Track Initiation
5. Track Monitoring
6. Cross-Telling
7. Height-Finding
8. Identification
9. Raid Forming
10. Weapons Assignment and Control
11. Intercept Direction
12. Anti-Aircraft

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A. Direction Center (continued)

13. Manual Inputs
14. Weather
15. Command Post
16. Training and Battle Simulation
17. Recording
18. Duplex Operation and Standby

Combat Center

1. Guide to Combat Center Operation
2. Air Surveillance
3. Weapons Allocation
4. Command Post
5. Liaison and Observers
6. Training and Battle Simulation
7. Manual Inputs
8. Recording
9. Duplex Operation and Standby

This is only a current listing and additional specifications may be added.

- B. C. A. Zraket will have the responsibility for the preparation of all specifications, with the exception of Duplex Operation and Standby (DC and CC) to be handled by H. Benington.
- C. Concurrence as described below must be obtained for each of the specifications.
- D. Details of obtaining concurrence will be handled by Tilda Finocchio under the general supervision of J. Arnow and D. Israel.
- E. Initial drafts of each of the specifications will be prepared for discussion within Group 61 and with the 4620th Air Defense Wing. Revised drafts will be prepared until substantial agreement has been reached.
- F. During the preparation of initial drafts, H. Rising will be responsible for checking on the compatibility of the operational specifications and the equipment involved: consoles, switches, displays, warning lights, light guns, communication facilities, etc. (All requests for equipment changes will be channeled through Rising, who will prepare the necessary memos describing equipment allocation and usage.)

- G. When informal agreement has been reached with the 4620th and within Group 61, the specification will be issued in M-note form. The M-note will be addressed to C. R. Wieser and will be approved by C. Zraket.
- H. Distribution of the M-notes prior to concurrence will be as follows:
1. Systems Office (H. Anderson)
 2. 4620th Air Defense Wing (Col. J. D. Lee)
 3. Production Coordination Office (B. Morris)
 4. Lincoln Project Office (Col. R. LaMontagne)
 5. Test Planning and Coordination Section (K. McVicar)
 6. F. Frick
 7. H. Boehmer
 8. J. Harrington
 9. H. Sherman
 10. W. Melahn (Rand)
 11. R. R. Everett
 12. J. W. Forrester
 13. Group 61 (all staff)
- I. Comments and suggestions will be welcomed from all of those listed above and should be sent to Miss Finocchio. Copies will be made and sent to interested parties.
- J. A separate brief will be maintained for each specification and will contain all comments and other pertinent information.
- K. Within one week after the distribution of the specification memo, formal concurrence by signature or comments will be solicited from:
1. H. Anderson (for the Systems Office)
 2. Col. J. D. Lee (for the 4620th Air Defense Wing and for Air Defense Command.)
 3. H. Boehmer
 4. J. Harrington
 5. H. Sherman
 6. J. Arnow
 7. H. Benington
 8. D. Israel
 9. W. Wells
 10. C. R. Wieser
 11. R. R. Everett
 12. J. W. Forrester

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- L. If the comments are minor, C. A. Zraket will attempt to work out a satisfactory solution. If major objections are made or major changes requested, an immediate formal concurrence meeting will be held to iron out the difficulties. J. Arnow or D. Israel will chairman such a meeting.
- M. Any approved changes made to the specification during concurrence will be issued as a supplement to the initial memo. In the case of major changes, the initial memo will be rewritten.
- N. Following concurrence each specification memo will be given to the Production Coordination Office (PCO) for release and distribution as a Lincoln- and ADC- approved document.
- O. If, following concurrence, Group 61 suggests a specification revision, Zraket's section will prepare a supplement for the concurrence procedure. This supplement will then be processed as in Section H, I, J, and K. A brief description of the need for the change will be issued with the supplement.
- P. If suggestions for changes arise from other than within Group 61, they will be channeled through Arnow and Israel to Zraket. He will study the change and if it is felt to be desirable, the change will be processed as in O.
- Q. Policing methods will be instituted to ensure that all subsequent mathematical, program, and coding specifications conform to the concurred-upon operational specifications.
- R. Up-to-date versions of the operational specifications will be maintained and distributed to those listed in H. If a large number of supplements arise to one memo, the memo will be rewritten.

Signed J. A. Arnow (enc)
J. A. Arnow

Signed D. R. Israel
D. R. Israel

JAA:DRI:mvb

Distribution

J. W. Forrester
R. R. Everett
C. R. Wieser
H. Boehmer
J. Harrington
H. Sherman
F. Frick

Systems Office (H. Anderson)
Production Coordination Office (B. Morris)
Lincoln Project Office (Col. R. LaMontagne)
Test Planning Section (K. McVicar)
4620th Air Defense Wing (Col. J. D. Lee)
Group 61 (all staff)