EQUIPMENT BOARD
MINUTES

Meeting No. 1-67 of the Equipment Board was held on 7 April 1967 in the OC Conference Room. Those present were:

25X1A [redacted]

D/CO
DD/CO (Chairman)
OC-OS
OC-E
OC-O
OC-XO
OC-E
OC-E
OC-A
OC-T
OC-P
OC-P
OC-E
OC-E
OC-SP
OC-E
OC-E
OC-A/B&F
OC-OS
OC-OS
OC-S
OC-OS (Secretary)

I. OLD BUSINESS

None

II. NEW BUSINESS

Procurement of production model RS-101
Procurement of a small general purpose computer for OC-E
25X1A Expansion of [redacted] crystal processing facility
Standardization of Delta Model High Frequency Antenna System

1. Introduction

The purpose of this Board meeting was to review and take appropriate action on the above recommended programs.

2. Discussion - RS-101

25X1A a. The status of the RS-101 program was reviewed. Discussion centered on cost figures quoted by [redacted] for production quantities, the amount of FY-67 funds presently allocated for production, technical improvements that will have to be made in the set before production and the selection/procurement of accessory devices.

QUANTITY/PRICE QUOTES [redacted] 25X1A

QTY	PRICE
100	$7356
200	5376
400	4245
500	3964
1000	3614
1500	3381
2000	3243

b. Consideration was given to procurement of a small number of RS-101's to permit evaluation of technical changes before quantity production. However, after further review of evaluation data collected to date, it was generally agreed that technical changes could be incooperated into the fifth service test model. This would allow adequate evaluation of changes before production plans are finalized. Four of five service test models called for by this phase of development have 25X1A been delivered by [redacted] At present $600,000 of FY-67 funds are allocated for RS-101 procurement. This would allow purchase of only a limited quantity of sets at a high unit cost. Additional funds, if available, 25X1A would allow purchase of a sizeable quantity at reduced unit cost. Mr. [redacted] would make necessary inquiries to determine if additional funds could be obtained for the program. [redacted] suggested that 25X1A possibly agreement could be reached with [redacted] whereby they would per- 25X1A form necessary design work to insure that all required changes are 25X1A incooperated into production models. Toward this end it was deemed advisable to submit to [redacted] a list of required design changes. This action, coupled with an indication on our part that a large order - in 25X1A the vicinity of 500 units - was being contemplated would provide the necessary guidance and motivation to [redacted] for a concentrated effort on their part to see the initial production phase of the RS-101 to a successful conclusion. It was agreed that OC-OS would write a memorandum for Chief, OC-E, info Chairman of the Equipment Board, outlining technical changes required in production model RS-101's. Also OC-OS and OC-E will continue to give the RS-101 program full attention including selection and procurement of accessory devices.

2. 100 Watt Linear Amplifier

25X1A [redacted] displayed a mock-up of a 100 Watt Linear Amplifier. This project (R&D Laboratory) is currently in the proposal stage. This amplifier will provide 100 watts output when excited by a 15-20 watt transmitter and will be [redacted] 25X1C
25X1C [redacted] The amplifier has a compartment into which the RS-101 fits. When so installed the RS-101 becomes the exciter for the 100-watt linear. A self-contained AC power supply provides power for the system. The RS-101 can be used as an integral part of the amplifier or if necessary can be removed and used separately. Also [redacted] noted that the 25X1A 100 watt amplifier would contain packaging features which would permit simple conversion to rack mounting. A number of applications are foreseen for this package i.e. [redacted] re- 25X1A placement for the URT-11. Copies of laboratories proposal were distributed to Board members.

3. Procurement of a Small General Purpose Computer for OC-E

OC-E evaluation of new communications systems including COMSEC evaluation of systems could be expedited by the availability of small general purpose computer. System interface requirements which involve variations in codes, speeds, sequence signals and number/type of control lines, can be quickly and less expensively determined by computer than by the laborious and costly procedure of setting up test equipment for each system to be evaluated. DD/S&T/ORD has a computer in the Ames Building which can be programmed for our system evaluations but our work would seriously interfere with ORD as well as other customer use of this computer. A number of technical approaches have been considered to resolve the customer interference problems on the ORD computer as well as problems that exist when RFI evaluations are required. Each approach requires costly reconfiguration of the existing ORD computer installation and does not solve the problem of customer conflict for computer time. The obvious alternative appears to be the purchase of a small general purpose computer for OC-E for about $20,000 including installation. The PDP-8 computer manufactured by the [redacted] 25X1A has been examined by OC-E and meets requirements. The Board concurred in the Engineering Staff's need for its own computer. It was noted, however, that necessary coordination for the program with the Office of Computer Services should be carried out through the OC Executive Officer.

25X1A 4. [redacted] Crystal Processing Laboratory

Because of the large increase in crystal requirements in the [redacted] 25X1A areas it appears advisable to expand the crystal processing facility on 25X1A [redacted] During the first half of FY-67, 50% of [redacted] crystal lab 25X1A requirements originated in these areas as opposed to about 20% during FY-66. Approximately $100,000 is needed to establish this facility. Possibly a portion of FY-67 and FY-68 funds can be allocated for this requirement. This funding consideration will be investigated by Mr. 25X1A [redacted] OC-P. A CT/R position or contract employee will be required to supervise the establishment of the facility and to train local help at 25X1A [redacted] to process crystals. A new CT/R slot is perhaps the best means to provide necessary supervision during initial phases of the program. The CT/R could divide his time between [redacted] and the crystal 25X1A facility when supervisory requirements diminish as local help becomes proficient in the crystal processing technique.

5. Standardization of Delta Model High Frequency Antenna System

The Board agreed with the OC-E proposal for placement of the Delta High Frequency Antenna System on the Standard Equipment List.

6. Conclusions

a. RS-101: It was agreed that the RS-101 contains no serious technical problems which would delay production plans. However, a concentrated R&D effort should be continued to insure that necessary technical corrections are made before production plans are finalized. Additional work is required, by OC-E and OC-OS to define technical

25X1A problem areas and a listing of problems and suggested corrections should be submitted to the [redacted]. The possibility of obtaining additional FY-67 funds for the RS-101 procurement program should be investigated.

b. General Purpose Computer: It was agreed that a small general purpose computer is required for OC-E to properly evaluate new communications equipments/systems.

25X1A c. [redacted] requirements for timely delivery of crystals justifies the expansion of the crystal processing facility at [redacted] 25X1A

d. The Delta Model High Frequency Antenna is an essential item and should be placed on the Standard equipment list.

7. Recommendations

25X1A a. [redacted] is to write a letter to O/PPB through the DDS requesting that $1,400,000 be made available from year end savings to OC for FY-1967 procurement of RS-101's. This amount together with the $600,000 in our regular program would allow the purchases of 500 sets. In the meantime, OC-E should proceed with R&D on the RS-101 to insure that all specifications are satisfied before production commences. If additional funds cannot be obtained (FY-67) for procurement, OC will proceed to the limit of existing funds to provide a production model that is technically satisfactory. The number of sets to be procured will be determined by; successful completion of required technical changes, the amount of funds available for production quantities, both in FY-67 and FY-68, and overall Agency requirements for the equipment including RS-1 replacement requirements. Strategic reserve, DD/P as well as OC requirements should be determined before production quantities are made firm. The Technical Requirements Board should be apprised of the status of the RS-101 program including a complete description of the system and costs involved for the basic set and required accessories. OC-E and OC-OS should continue to give the RS-101 program full attention for the correction of technical problem and the selection of accessory devices.

25X1A b. OC-E should proceed with plans for procurement of the [redacted] 25X1A [redacted] PDP-8 computer. Necessary coordination for this program with DD/S Office of Computer Services should be carried out through the OC Executive Officer.

c. The Delta Model High Frequency should be placed on the Standard Equipment List.

d. OC-E should proceed with plans for the expansion of the [redacted] 25X1A crystal facility and plan on obligating in FY-67 approximately half of the funds required facility expansion. OC-OS is to make the necessary inquiries to determine if a CT/R position can be obtained to provide necessary supervision of the facility.

25X1A [redacted]