HANDLE VIA [redacted] SECRET
CONTROL SYSTEM IDEALIST/OXCART

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[redacted]-2269-67
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23 May 1967

MEMORANDUM FOR: Deputy for Operations, OSA

SUBJECT: Support for Project PHOENIX at [redacted] 25X1A6a

1. On 24 March 1967, a meeting was held between members of Operations and Comptroller's office to discuss the impact of the move to [redacted] on Project PHOENIX computer support. This report is a follow-up to that meeting. It outlines four possible alternatives. 25X1A6a

2. Some of the basic assumptions affecting the alternatives in this paper are:

a. The design specifications to have the Project PHOENIX program built for operational usage during mission countdown have not changed.

b. The OXCART program will terminate as planned in January of 1968 and that data processing support for that project will cease at that time.

c. Project OXCART requires no data link communication equipment at [redacted] and can solve their communication needs by couriering. 25X1A6a

d. The Automation Division will cease to exist in January of 1968.

e. Project PHOENIX will be turned over to OSA Intelligence Division in May of 1967.

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f. OCS will provide computer programming and program analysis support to Project PHOENIX as directed by OSA Intelligence Division.

g. High speed data communications to remote sites is not anticipated for Project PHOENIX data.

h. The EAI 3440 data plotter will be transferred to OCS or some other component at the termination of Project OXCART.

3. Alternative #1 - The first alternative is to courier information to and from the OCS computer in Project Headquarters. Courier time per trip runs between 15 to 30 minutes and would satisfy the Project PHOENIX requirement if a two-hour time frame is acceptable per computer run.

a. OCS computers and support hardware would be used and, therefore, no data processing equipment would be required at [redacted] 25X1A6a

b. The personnel requirement would be satisfied with three people: one systems analyst, who would interface between all supporting units, and two operator analysts, who would maintain computer files and act as couriers to and from Headquarters. The three OSA individuals would be designated as a Branch within the OSA Intelligence Division. In addition, OCS would provide one and possibly two computer programmers.

c. The OSA cost incurred by this alternative should not exceed the salaries of the three OSA personnel. It is estimated that not more than three hours per day would be used on the computer. This cost will be borne by OCS and would be approximately $150 per hour.

4. Alternative #2 - This plan calls for a UNIVAC 1004 data link communication between [redacted] and the fifth floor. Program input would be generated at [redacted] 25X1A6a 25X1A6a
25X1A6a [redacted] key punched at [redacted] and transmitted via 1004. On the fifth floor this information will be received,

collated with other input data and couriered to the OCS computer center. After the run has been made, the output information will be couriered back to the fifth floor and transmitted to [redacted] via 1004. 25X1A6a

a. The three personnel described in Alternative #1 would be required to man the remote data link terminal.

b. The space requirement for the two operators, the terminal and key punch equipment would be 500 square feet. This area should be shielded to Commo specifications due to machine radiation. The third individual, the systems analyst, would be seated within the Intelligence Division.

5. Alternative #3 - Under this plan an IBM 2780 on-line computer terminal would be installed at [redacted] 25X1A6a
In November/December 1967 an on-line remote terminal can
25X1A6a be installed between [redacted] and the OCS IBM 360 computer allowing card reading, card punching, and printing at a maximum cost of $3,000 per month. This would reduce the run time per job to the absolute minimum - approximately 45 to 60 minutes per run. A key punch and verifier will be required for source document generation at [redacted] 25X1A6a

a. The reason for the choice of the IBM console as opposed to the UNIVAC 1004 was a software decision. IBM supports the 2780 and not the 1004. OCS has indicated a preference to remain with one manufacturer, and I feel this is a wise decision.

b. The three OSA personnel described in Alternative #1 would be required to man the remote terminal.

c. The space requirement for the two OSA operator personnel and the terminal and key punch equipment would be 500 square feet. This area should be shielded to Commo specifications due to machine radiation. The third individual would be seated within the Intelligence Division.

6. Alternative #4 - This alternative requires OSA to
25X1A6a purchase or lease their own computer at [redacted] The cost

of such a system would be approximately $22,500 per month. A T/O of 16 slots, similar to the structure of the ADP Division, would be required as an absolute minimum. The space requirement over and above that required for personnel would be 1600 square feet.

7. Alternative #1 can only be considered an adequate solution after a decision regarding the program's usage has been made. This decision is not expected until August 1967. If we adopt this alternative now and do not allocate facilities at [redacted] and later decide a remote terminal is required, a major facilities problem will arise. Therefore, it is suggested that we drop further consideration of Alternative #1.

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8. A UNIVAC 1004 data link communication between [redacted] and the fifth floor center seems to be impractical because it only eliminates the courier, increases costs, and does not measurably decrease the run time required per mission. I do not feel that the five or ten minute decrease in turnaround time adequately justifies this alternative.

9. Since it is projected that OSA will require only three hours of computer support per day as a maximum, Alternative #4 appears to be unrealistic. The side benefits of having absolute control over the ADP effort do not appear to justify this alternative. Furthermore, the decrease in response time per run over Alternative #2 or #3 would not exceed 15 minutes. Therefore, it is suggested that OSA cease any further consideration of a computer facility at [redacted]

10. It is suggested that Alternative #3 be adopted because it best balances the factors of cost, time, human resources, and available hardware. The alternative decreases the wait-time for computer output to an absolute minimum. The relatively small cost per month ($3,000) gives the maximum in data processing capability and a change in requirements or implementation should be the only reason to alter this alternative.

a. Immediate action be taken to plan for a shielded area of 500 square feet for ADP equipment and personnel at [redacted]

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b. The ADP Division be tasked to determine the exact operational hardware and software requirements for implementation of a computer remote terminal. The due date for this study to be 1 August 1967.

c. Task OCS to immediately order an IBM 2780 terminal and associated equipment for delivery in November of 1967. This action is required to insure hardware availability due to equipment lead times. The equipment can be cancelled sixty days prior to delivery without penalty.

d. Task the Intelligence Division to determine the best manner with which to use the Project PHOENIX program. At this stage the program is coming out of an R&D environment and its use in an operational environment is yet to be determined. If the program is not to be used during the actual countdown, a remote at [redacted] should not be required. This determination can only be made after rather extensive study of the program's internal mechanisms. A firm determination must be made by 1 August 1967 in order to insure console installation by 1 January 1968.

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e. Task the ADP Division with the responsibility to staff the two operator analysts slots from the ADP Division T/O. The effective transfer date to be negotiated at a later date based upon OXCART and Project PHOENIX requirements.

f. Task OCS with a software support requirement when a firm determination has been made regarding the computer remote terminal. A feasible installation date for the computer remote terminal is 1 January 1968 provided exact specifications be given to OCS prior to 1 September 1967.

11. In conclusion, it is recommended that Alternative #3 as outlined in Paragraph #5 be adopted and implemented.

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Chief
Automatic Data Processing Division, OSA

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