1 December 1966

VIEWGRAPH MAKER - STAFF STUDY

1. PROBLEM

To make possible a more rapid utilization of the information gained from imagery exploitation.

2. FACTS BEARING ON THE PROBLEM

a. Vital briefings may be delayed or reduced in value when viewgraphs are not immediately available because of the irreducible time element in standard photographic processes.

b. Viewgraphs are required in the many briefing sessions for working level personnel and for appropriate officials regarding the results of analyses performed on imagery obtained from reconnaissance missions.

c. Viewgraphs under this project would be prepared from transparent and reflective copy originals ranging in size from 70 mm to 40" x 40". A viewgraph would be mounted and ready for projection in less than five minutes.

d. The recently developed [redacted] material will be utilized in the device to make viewgraphs, it produces a projection-quality, reduced or enlarged, positive transparency within one minute. 50X1

e. Currently, viewgraphs must be prepared in the Center's photo laboratory with a copy camera or photographic printer, using standard photographic processes. This process takes hours; a viewgraph work order must also compete with other work the lab must do, thus production delays are experienced.

3. DISCUSSION

a. Current Procedures - Viewgraphs are produced by the Center's photo laboratory. A viewgraph is produced from an original image on film by either projection or contact printing on to a conventional photographic material. When viewgraphs are made from reflective copy, negatives are produced in a copy camera, processed, and contact printed to obtain the viewgraph positives. In either case, the production requires several hours or days, depending on the priority of the work. The viewgraphs thus produced are of very high quality and are ideal for use in briefings when there is ample lead time. However, for immediate response briefings, the present system is not appropriate.

b. Origin of Concept - The need for immediately available viewgraphs has been recognized by NPIC components for several years. The requirement was formalized in a recommendation from the NPIC/Publications Division in July 1966.

An investigation determined that the suggestion is valid and that no other developments under consideration will render this project unnecessary.

An investigation of rapid access photographic materials, to find a possible material to satisfy the requirement, considered such materials as Diazo, Kalvar, and Bimat. The Bimat diffusion transfer material seemed to offer a solution to the requirement and became a candidate for consideration. 50X1

In September of 1966, [redacted] demonstrated the [redacted] material to the NPIC/TDS. This material had definite advantages over the Bimat. The Bimat requires presoaking of the transfer material. The [redacted] does not, and therefore requires a less complicated handling and storage system. The [redacted] material is faster than Bimat. The entire [redacted] process from exposure to a finished positive requires approximately one-half the time required for Bimat. 50X1

c. Selection of Contractor - [redacted] has submitted an unsolicited proposal to modify an [redacted] to utilize the [redacted] material for viewgraph production. [redacted] is the supplier of the [redacted] material. The [redacted] is an "off-the-shelf" equipment, and the modification as proposed by [redacted] is expected to result in a very successful system for solving the rapid access viewgraph requirement.

d. Proposed Work - The main console of the [redacted] will be modified to accept the [redacted] drive system. The input platen will be modified to include a light table for photographically reproducing transparent film to viewgraph size, by either reduction or magnification. Manually adjustable lightmasks will be used for light table operation. The optical system of the [redacted] will be modified because of the reduction magnification range required.

e. Phasing - This development modification program will require approximately four months for the first unit to be delivered and an additional two months for delivery of the second unit. As illustrated in Tab C, roughly equal time will be spent on equipment modification design, fabrication, and assembly. The contractor will provide monthly reports which will make it possible to control the scope of the project as it progresses.

f. Coordination - There is no known equipment either under development or available commercially which will satisfy this requirement. This project has been coordinated with [redacted] of DDS&T/ORD, [redacted] of Navy Photographic Center, and [redacted] of DIA.

g. Alternatives - The new transfer material which forms the basis for the proposal makes it possible to solve the problem of rapid access viewgraphs for immediate briefings. Alternative approaches would be to continue to live with the present problem, at the expense of further waste in manpower and efficiency; or to invite other proposals. However, preliminary investigation has shown that the [redacted] material best answers the requirement and that the modification of the [redacted] would be the most economical approach to a satisfactory equipment development. 50X1 50X1

4. CONCLUSIONS

There has been a need for a means of producing rapid, good-quality viewgraphs for four or five years. The requirement was formalized by a project suggestion from an additional NPIC component. The proposal from the [redacted] to accept the [redacted] material, should result in a very successful answer to the problem of producing viewgraphs rapidly. The company has the required technically competent personnel and facilities, and the funding quoted is reasonable. 50X1 50X1

5. RECOMMENDATION

It is recommended that a contract be let with [redacted] for the modification-development project, as proposed, for two Viewgraph Makers at a funding level of $69,743. 50X1

6. REFERENCES AND ATTACHMENTS

Tab A Catalog Form
Tab B Memoranda from IAD, PD
Tab C Program Phasing
Attachment: [redacted] Proposal 50X1