

TOP SECRET



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DEPARTMENT OF THE AIR FORCE  
WASHINGTON

OFFICE OF THE SECRETARY

14 February 1962

MEMORANDUM FOR The Director, Defense Intelligence Agency

SUBJECT: MURAL (now CORONA-M) Background Summary

1. In accordance with our discussion, I have summarized below the essential background facts concerning the MURAL project.

2. The MURAL system consists of two CORONA cameras mounted in a single vehicle so as to provide stereo photography which can be used for detailed examination of specific targets. The film size and image format are identical to the CORONA camera. In addition, a small framing camera is included to provide plotting assistance in the intelligence exploitation of the photography from the two CORONA cameras.

3. The MURAL project was initiated in mid April 1961. The decision to include a framing camera in the MURAL configuration was made in early October 1961.

4. The purpose of the framing camera is to provide a fixed geometric reference to be used in plotting and rectifying the longer focal length higher resolution panoramic photographs. The framing camera is an auxiliary, secondary mission element, and is in no way to preclude a scheduled launch nor significantly reduce its reliability.

5. Preparation by the intelligence community to handle MURAL photography is closely related to preparation to handle E-6 photography. E-6 and MURAL systems both have stereo camera configurations. Under the present state of the art, the results of both systems are viewed in stereo only on light tables for detailed examination of particular targets by individual photo interpreters. The E-6 format is 6.5" x 45" and the MURAL format is only 3" x 24". An intelligence organization having developed the capability to handle E-6 will be completely capable of handling MURAL, since the first E-6 and MURAL missions are scheduled to be launched within the same month.

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ARGON  
~~HANDLE VIA THE CORONA CONTROL SYSTEM ONLY~~



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6. a. The following persons were briefed on the schedule and technical details of the E-6 system on July 21, 1961:

<u>Name</u>	<u>Office</u>
	U. S. Army Technical Advisor, Army Map Service
	Technical Advisor, GIMRADA Navy Hydrographic Office Navy Hydrographic Office ACIC ACIC

With the exception of all of the above persons visited to actually observe E-6 camera equipment under assembly, at which time they were briefed in considerable technical detail and allowed to make notes of these details.

b. The R&D group assigned to NPIC (this group includes Army, Navy, Air Force officers and Civil Service technical personnel) were briefed on the MURAL system during the summer of 1961. As of this date they have found no major new equipment developments which are required. Although such items as stereo rear projection viewers were considered, and feasibility studies are under contract to include hardware demonstration, practical technical feasibility has not been established.

c. This R&D group has recommended several minor modifications to light tables to allow for viewing stereo images as they exist on separate rolls of film. (These modifications are considered minor because the total cost involved to all Air Force units is in the realm of requiring something less than one month to accomplish.)

7. The precedent of developing collection systems without detailed briefings to the intelligence community in general, has long been established and in all probability will continue for good reasons. For example, at the time the MURAL configuration was initiated there were about 2700 persons cleared for CORONA information. Recently when MURAL was briefed to COMOR representatives there were only 300 knowledgeable of MURAL. Yet, as pointed out above, a minimum, but





adequate number of key personnel in each service and agency concerned had sufficient and timely knowledge to be prepared to exploit the stereo products without all of them being exposed to the complete details of each specific project.

8. In January, a change was made in the MURAL security structure. The COMOR was initially briefed by [REDACTED] (DPD/CIA) and [REDACTED] (CIA) on 11 Jan 62. They pointed out that there is a stereo camera involved, the knowledge of which is controlled in the MURAL system. Again on 26 January, [REDACTED] (CIA) briefed the COMOR that information formerly controlled in the MURAL system will now be incorporated in future CORONA briefings on a must-know basis. There will be no more MURAL briefings and the MURAL system will phase into the CORONA system with no formal de-briefings required. At this time it was discussed and decided that the COMOR members would initiate required actions within their respective organizations to insure that individuals who "must know" would be made knowledgeable of this new information, within the CORONA system.

9. It is, of course, possible to make some use of any vertical photography as well as panoramic photography in the production of cartographic materials. As you know, the Air Force has exploited the TALENT photography for several years at ACIC in the preparation of air target charts and missile target data sheets. We also plan to make whatever use we can of the MURAL photography for this purpose, using both the framing camera and the stereo panoramic photography. In fact, any organization with the capability of exploiting conventional mapping and charting photography should be capable of getting some usefulness from the MURAL framing camera by relatively straightforward procedures. This camera differs from a conventional mapping camera in having a smaller format, shorter focal length, and higher resolution. These characteristics can, if necessary, be translated into normal mapping sizes by the simple feature of enlargement. However, regardless of whatever cartographic use is made of this camera, it is strictly an ancillary utility, and the framing camera is not and never has been intended as a substitute for the mapping projects such as ARGON and E-4.

Joseph V. Charyk  
Under Secretary of the Air Force

