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THE EFFECTS OF PHOTOGRAPHIC
GROUND RESOLUTION ON PHOTOINTERPRETATION



25X1

Progress Report No. 1

19 August 1970

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GROUND RESOLUTION ON PHOTOINTERPRETATION



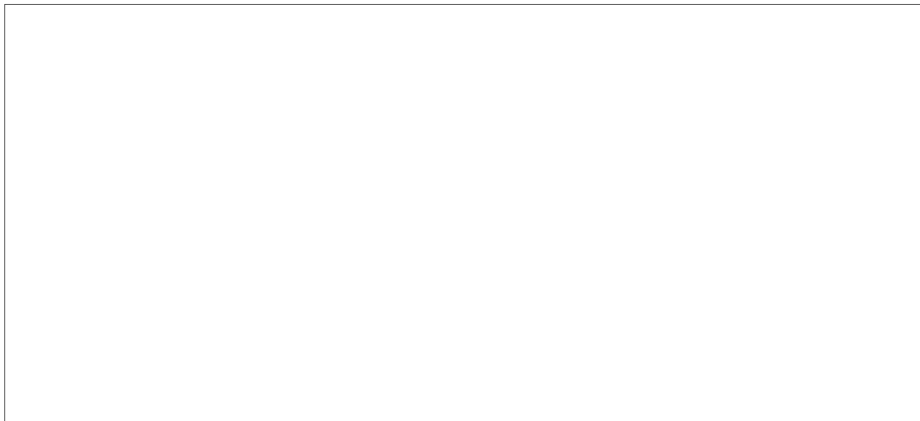
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Progress Report No. 1

For the Period: June 18, 1970 to August 18, 1970

CONTRACT STATUS

1. Period of Contract: June 18, 1970 to December 31, 1970.



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6. Percentage of Funds Expended: 17.7%
7. Percentage of Work Completed: 20%
8. The work is on schedule.
9. The contract can be completed in the authorized time.
10. The contract can be completed with the authorized funds.

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PROGRESS

Task No. 1 in the contract is:

Finalization of the experimental and statistical design, books containing the "ground-truth" information, subject requirements and instructions, and data collection forms.

In the proposal, it was estimated that this task would take two and one-half months to complete. It is almost completed now and will be completed by the end of August when Task No. 2, the data collection, is scheduled to begin.

Prior to the award of the contract, [] made two trips with the technical monitor to Eastman Kodak in New York to discuss the specifications of the images required for the study. EK prepared the images and delivered them to the customer in July.

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During the week of 20 July, [] met with the technical monitor and []
The purposes of the meeting were to make the final selection of targets, determine how the PIs will locate the targets to be identified, establish the number of PIs needed and the time required of each PI, and design the experiment.

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Early in the week, [] selected the targets that would be used in the experiment. Approximately 45 targets were selected. The targets were artillery, tanks, armored personnel carriers, self-propelled guns, trucks, and missile carrying trucks.

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Because many of the targets are very close together, it was felt there might be a problem in indicating to the PIs which ones they are to identify. It was found that the PIs could easily locate the targets if they were provided with a "map" of each photograph. The map will be a line drawing of key features in the photograph with squares representing

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the targets. The targets to be identified will be numbered on the map and the PI will be required to write his response in the square on the map representing the target. His response will be the number of the target in the keys that will be given to him.

One PI at [] participated in a pilot experiment to determine the time required to identify the targets. He was provided with the appropriate maps and the target keys which were in booklet form. He was required to identify the targets at each of three ground resolutions. []

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It took him approximately five hours to complete the task; thus, all six resolutions should take about ten hours. It was apparent in watching the PI perform that about one-third of his time was spent going back and forth through the key trying to find the target. A significant amount of time can be saved by placing the target keys in a compact array on the wall in front of the PI. By doing this, it is anticipated that the PIs will be able to go through all resolutions and targets in about a day.

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[] and the technical monitor discussed the results of the pilot experiment and their implications for the experimental design. It was concluded that 30 PIs will be required for the main experiment. Twenty PIs will view all ground resolutions working from the worst [] to the best []

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Each PI will complete the six resolutions in two sessions on consecutive days. The PIs will be tested two at a time. The targets will be viewed stereoscopically with the exception of the artillery pieces and a few others. The remaining group of ten PIs will view all targets except the artillery monoscopically. These PIs will also view all ground resolutions working from the worst to the best. Each PI in this group will look at two-thirds of the targets and, consequently, should take slightly over a half a day to complete the experiment.

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A comparison of stereoscopic versus monoscopic viewing is not the main objective of the study, which is to determine the effects of ground resolution on the identification of ground order-of-battle targets. However, the stereo vs. mono comparison will be made in terms of target identification performance.

During the week of 10 August, [redacted] performed a portion of the PI identification task and found a few minor problems in the experimental procedure. They can easily be solved before the main experiment is scheduled to begin.

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Also during the week of 10 August, [redacted] briefed the technical monitor and several other representatives of the customer on the status of the study.

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PLANS

During the next two months, we plan:

1. To complete Task No. 1, which means little more than solving the aforementioned minor procedural problems.
2. To complete Task No. 2: The collection of the experimental data.
3. To complete Task No. 3: The analysis of the experimental data.

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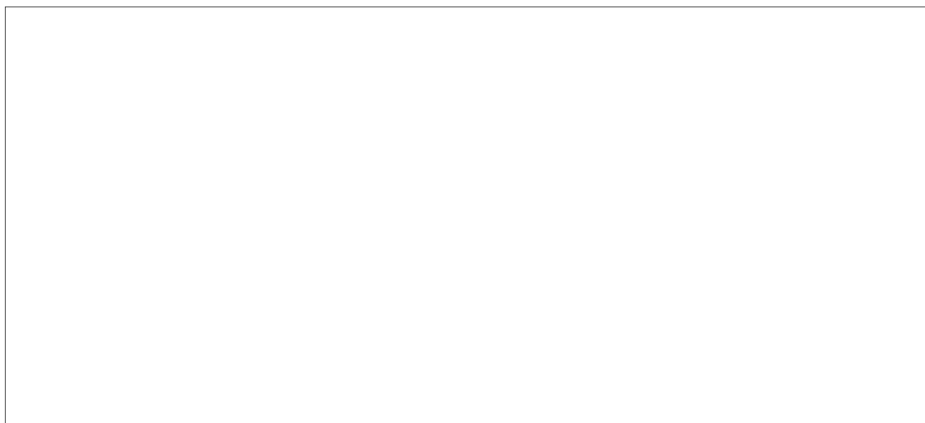
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Project Director

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