

U N C L A S S I F I E D

[] - TASK ORDER 04

STAT

MONTHLY REPORT

NUMBER 7

19 DECEMBER 1964 - 19 JANUARY 1965

LASER DISPLAY FEASIBILITY STUDY

Submitted by:

[]

STAT

[]

STAT

U N C L A S S I F I E D

in reply refer to:

January 19, 1965

STAT

Subject: Laser Display Feasibility Study Monthly Status Report No. 7
[redacted] Task Order No. 04

STAT

TECHNICAL PROGRAM STATUS

The projection viewer concept described in Monthly Status Report No. 6, dated December 23, 1964, was pursued further this month. A configuration which appears feasible within the present state-of-the-art was investigated (we will term the device an "Optical Scanner"). The configuration is based on the use of a laser having output lines in the blue, yellow, red and infrared regions of the electromagnetic spectrum. The three visible beams are separated, passed through three optical modulators, then recombined for projection through a film transparency. Feedback electronics are included to permit automatic, real-time dodging. Zoom optics provide controllable magnification of regions on the film selected by the Photo-Interpreter.

Two "rough cuts" or preliminary analyses were conducted for the concept. Although these are far from the optimum design at this point, they indicate a high degree of plausibility for the concept. These analyses included computations and parametric plots of most of the critical system parameters, including magnification, magnification ratios, zoom ratios, resolution, and bandwidth. The quantitative results of these computations will be included in the Final Technical Report.

The plan for the next month is to continue making rough cuts for the system, the objective being to narrow down on a realizable system.

ADMINISTRATIVE STATUS

Now that a specific conceptual design has been pinpointed, an acceleration of the effort is anticipated to permit a high degree of optimization of the concept. The percentage of the total estimated engineering dollars for the Contract Task Order expended to date is approximately 56 percent.

STAT