

2 August 1966

DEVELOPMENT OBJECTIVES

ADVANCED ANAMORPHIC EYEPIECES

STAT 1. INTRODUCTION. These development objectives describe the requirements to be met in the design and fabrication of a prototype Anamorphic System for the [] High Power Stereoviewer (Twin Dynazoom).

2. CONCEPT. This development will produce an anamorphic system that can quickly and simply be attached to and removed from the High Power Stereoviewer. Although the existing instrument has found general operator acceptance, an independent anamorphic magnification capability is required for each optical path. This anamorphic system must not significantly reduce the optical performance of the basic stereoviewer, but must be simple to operate and be reproducible in production quantities at a realistic price.

3. ADMINISTRATION.

3.1. Evaluation and selection of the successful proposal will be based on cost, indications of the contractor's commitment to fulfill these objectives, and the experience and ability indicated by the inclusion of relevant specifics.

3.2. Proposals should discuss problem areas and schedule major steps in the production process.

3.3. The program will be divided into two phases: Phase I will be the Design Study and Phase II will be the Fabrication Phase. Initiation of Phase II will be predicted upon the successful completion of the design study.

STAT 4. GENERAL DESCRIPTION. The [] High Power Stereoviewer is used in conjunction with the [] objective lenses and compensating eyepieces. The objective magnifications are 3X, 6X, and 10X and the compensating eyepiece magnifications are 6X and 10X. In addition, a [] 1.3X objective is being used. STAT This development will add an additional magnification range to one axis of the optical field.

5. REQUIREMENTS.

STAT 5.1. Existing Instrument. The basic High Power Stereoviewer is described in [] publication Number 53-335; however, a significant improvement in the optical performance has been achieved STAT utilizing the above mentioned [] objective lenses and compensating eyepieces. The anamorphic system must not significantly degrade the optical performance of this combination.

5.2. Optical.

5.2.1. Anamorphic Range. The system shall have a continuously variable anamorphic magnification from 1X to 2.2.X; i.e., the anamorphic ratio (ratio of the magnification of two perpendicular meridians of the optical field) shall be from 1:1 to 1:2.2.

5.2.2. Field. The maximum loss of field must not exceed 5% of the normal instrument's total field. The optical field must be as flat as the field of the instrument without the addition of the anamorphic system.

5.2.3. Anamorphic Axis Orientation. The direction of the anamorphic magnification (anamorphic axis) shall be rotatable through 360°.

5.3. Physical Configuration. The anamorphic system must be as compact as possible and must incorporate superior human engineering features. Simplicity of design and operation is of utmost importance. Specifically, the eyepoint shall not be extended more than three inches from the position of the present eyepoint and an operator wearing glasses must be able to operate the instrument. An estimate of the size and weight of the contemplated system must be given in the proposal and an artist's concept must be included.

5.4. Interchangeability. The system must be configured to allow disassembly of the anamorphic system from the stereoviewer within five minutes without the use of special tools. Accommodation must be made for utilizing the system on any High Power Stereoviewer.

5.5. Costs. The proposal must include the cost of producing one prototype and an estimate of the costs of building 5, 10, 20, and 30 units.

5.6. Drawings. Design and fabrication drawings are required.

5.7. Operator's Manual. A comprehensive operator's manual must be included with the prototype and must be in a form which can be easily updated for the production model.

5.8. Government-Furnished Equipment. The successful contractor will be furnished one High Power Stereoviewer as Government Furnished Equipment.

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WISHES AN APPOINTMENT

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