

PROGRAM SCHEDULE FOR  
"IMAGE RESTORATION"

A program schedule has been written for the mutual benefit of those involved with this contract. The schedule is outlined in generalized categories as it is only intended to give a view of the direction of the program and the scheduled progress desired during the time of the program. The outline has been divided into two parts, the first including the work that has been essentially completed to date, and the second consisting of the planned direction and schedule through the remainder of the contract. Because of the nature of a research contract it must be noted that the completion date of any one program goal does not preclude continued effort related to that goal. For instance, though the Fourier transform hologram system was basically completed at the end of the first month, several improvements have since been incorporated. The program schedule is as follows:

PART I

✓ Fourier Transform Hologram System

System fabrication

System testing

Illumination

Resolution

✓ Sensitometry

Film choice (MICROFILE)

Processing parameters (direct and reversal processing)

Measurement of Specular Transmission on Fourier Transform System  
(including coherence and wavelength parameters)

Relating Specular Measurements to Microdensitometer Measurements  
and Macrodensitometer Measurements

Confirmation of Linearity

✓ Coherent Spatial Filtering System

Lens Purchase and Set-up

Tentative Completion: 10 December 1966



*as of 21 Jan '67*

25X1

PART II

Symmetric Aberration Restoration

- Generation of Aberration (linear motion) ✓
- Filter Generation (hologram and inverse amplitude filter)
- Testing and Analysis of Hologram Filter
- Image Restoration
- Analysis and Comparison to In-Line Inverse Filtered Results

*as of  
1/Feb., 1967*

Tentative Completion: 27 January 1967

Asymmetric Aberration Restoration I

- Generation of Aberration (simple geometry e.g., "L" shaped)
- Filter Generation (hologram and inverse amplitude)
- Testing and Analysis of Filter
- Image Restoration
- Analysis and Comparison with Theoretical Estimates

Tentative Completion: 14 April 1967

**Asymmetric Aberration Restoration II**

**Generation of Random Aberration**

**Filter Generation**

**Image Restoration and Analysis**

**Obtaining Representative Data of Imagery**

**Tentative Completion: 21 July 1967**

**Comparison of filtered results with hologram filter alone (matched filtering)  
and with combined hologram and inverse amplitude filter (inverse filtering)**

**Comparison of above results will be made with those obtained from inverse  
filters generated by a computer-photofacsimile system, tentative on progress  
of the latter work for such a comparison.**

**Completion Date: 30 August 1967**