DEVELOPMENT OBJECTIVE

COLOR SHEET FILM DRYER

1.0 INTRODUCTION:

1.1 PURPOSE: This document contains the requirements for a Government sponsored study and development project covering the investigation of advanced methods of drying photographic color sheet films.

1.2 BACKGROUND: Proper drying of color cut sheet film materials has always been a difficult problem. Many of the methods and techniques employed to dry black and white photographic materials cannot be successfully applied to color films due to the softness of the color emulsions and the tendency of these emulsions to become excessively "tacky" during the drying process.

1.2.1 CURRENT PROCEDURE: Cut sheet color films, both transparency and negative materials, are presently dried in a drying chamber or cabinet. The films are usually placed in film hangers in the drying cabinet and hot air is circulated around the film. This method is time consuming and does not dry the film in a quality fashion, that is, does not dry the film so that there is no evidence of water marks, abrasions, scratches, image distortion, peeling, curl, fading, color shifts, mottling, etc.

2.0 CONCEPT

2.1 PURPOSE: The proposed program will encompass a thorough investigation and analysis of all advanced techniques in the area of film drying. These techniques will be evaluated and the most practical and feasible method of color sheet film drying will be selected. Based on the selected technique a prototype color film dryer will then be developed which will not only dry color sheet film rapidly but which will also overcome the quality defects specified in Par 1.2.1.

2.2 SCOPE: The total effort, as outlined above, will be divided into two separate but interrelated phases; continuance from the first phase to the second phase will be dependent on the successful accomplishments of Phase I. Proposals solicited at this time are restricted to the tasks outlined in Phase I.

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2.2.1 Phase I: INVESTIGATION AND DESIGN ANALYSIS

The contractor is expected to extensively and exhaustively investigate all advanced drying techniques (example: air bearing, ultrasonics) that may apply to the problem of drying both color negative and color positive types of sheet film. Emphasis should be placed on feasible and practical solutions directed toward a rapid, automated, high quality drying system. The techniques must be applicable to a system which will dry color film in the best quality manner possible; (Ref. Par. 1.2.1). At the conclusion of the investigation portion of Phase I, the contractor will present to the Government Representative a recommended technique or techniques which can be applied to the development of a color film dryer. Advantages and disadvantages and ease of application of each alternate technique will be presented. Upon concurrence of the recommendations by the Government, the contractor will proceed to develop laboratory models or breadboard hardware which will successfully demonstrate the application of the recommended technique.

2.2.2 Phase II: EQUIPMENT PROTOTYPE

Based upon the successful demonstration of techniques in Phase I, it is presently planned to proceed to a hardware prototype stage. The prototype hardware will be suitable for installation and use in an operational area. More definitive specifications for the prototype equipment will accompany the request for a proposal for performing this phase of the program.

3.0 GENERAL:

3.1. PROPOSALS: Proposals submitted here under should be clear concise, and limited in content to that information required to qualify the prospective bidder and demonstrate ability to perform satisfactorily within the scope of this document. Information on existing equipment which may be modified to meet the goals of this study may be included at the contractor's option.

3.1.1 DELIVERY: While it is the wish of the Government to accomplish the aims of this project as expeditiously as possible, sufficient time should be allotted for thorough and complete accomplishment of the aims set forth herein. It is envisioned that Phase I should take approximately eight months. The time span for Phase II will be discussed upon solicitation of a proposal for performing that portion of the work.

3.2. ADMINISTRATION: The Government will retain overall control of this project. Objectives, costs, priorities, subcontractors and consultants involved in this program fall within the jurisdiction of the Government and approval must be obtained before these factors are employed.

3.3 CONTRACT INFORMATION: The contractor is expected to provide competent and cooperative administrative service. He will be vested with certain authority, with the guidance of the technical monitor, to control the direction and degree of technical effort within the bounds of the estimated costs.

3.3.1 CONTRACTOR RESPONSIBILITY: As a part of the overall responsibility, the contractor will be responsible for the work performed by all of his subcontractors and consultants.

3.3.2 TECHNICAL REPRESENTATIVE: The contracting officer will designate a Technical Representative to authorize specific development efforts of the contractor. Such authorization shall be given in writing in its original form or in confirmation of an oral authorization. The contractor will accept no other authorization except that of the Technical Officer or the contracting officer.

3.4 DOCUMENTATION:

3.4.1 Regular monthly reports and a final report will be required from the contractor under this program.

3.4.2 All reports will meet the requirements of the applicable portions of Specification DB 1001 dated 31 August 1966, GENERAL REQUIREMENTS FOR CONTRACTUAL DOCUMENTATION.