

**TOP SECRET**

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**TOP SECRET**

August 1977  
TP-2-009

Technical Proposal

PHOTOGRAPHIC INTERPRETER  
SUPPORT SERVICES  
FOR OIA

Submitted to  
Office of Imagery Analysis

Submitted by

25X1A

**NATIONAL SECURITY INFORMATION  
UNAUTHORIZED DISCLOSURE SUBJECT  
TO CRIMINAL SANCTIONS**

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FOREWORD

25X1A [redacted] is pleased to submit this unsolicited proposal for providing Photographic Interpreter services to the Office of Imagery Analysis at the National Photographic Interpretation Center. 25X1A For over eighteen years [redacted] personnel have been performing detailed photographic interpretation in support of our own, as well as customer requirements. This interpretation has been performed on all of the conventional photographic system images as well as on the more esoteric SLAR, IR, other radar and other unconventional sensor images. Special attention has been paid to analysis of [redacted] imagery 25X1D by a number of our interpreters. As can be seen from a review of their resumes, included at the end of this proposal, many of our interpreters received their training in the formal military P.I. schools and thus their background and capabilities should be similar to those of your own interpreters.

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1. INTRODUCTION

1.1 Background

25X1A [redacted] was founded independently in 1957, offering research and development services in the then new and exotic field of remote sensing. In 1962, [redacted]

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25X1A [redacted]  
25X1A [redacted] now offers a full range of services in three related technical areas: photogrammetric engineering and mapping; remote sensor image interpretation and analysis; and map based information systems.

25X1A Personnel of [redacted] have been involved in the design, evaluation and reduction of conventional and unconventional photogrammetric systems for almost twenty years. They have been involved in the reduction, analysis, and interpretation of satellite imagery from the beginning of the space program. Much effort has been expended determining the exploitation potential of such uncon-

25X1D

25X1A Currently [redacted]  
25X1A [redacted]

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25X1A [redacted] has a professional staff of nearly forty (40) individuals with expertise in various aspects of reconnaissance system data reduction and exploitation. Of this group nearly ten (10) are experienced Photo Interpreters. Other personnel include senior and junior level Photogrammetrists, Mathematicians, Computer

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2. TECHNICAL APPROACH

25X1A [redacted] proposes a time and materials (T&M) type contract to OIA as being the most suitable for their needs. A given funding level may be designated by OIA, and a contract written not to exceed this amount. Then, as tasks are defined, personnel can be supplied to carry out the work. [redacted] personnel are available to provide detailed photographic interpretation of any type desired by the customer. As is common in this field, some interpreters have more experience with certain sensor images, geographic regions, and target specialties than others. The specific experience of each interpreter can be found in the individual's resume presented at the end of this proposal.

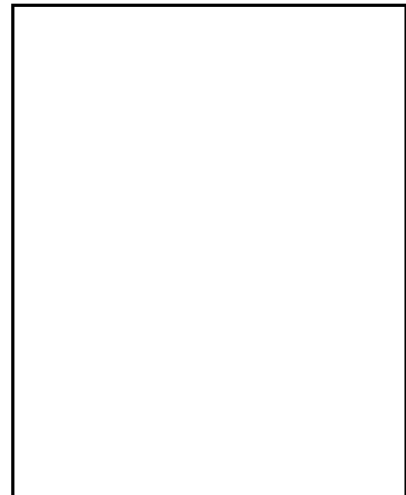
25X1A

Photographic Interpreters, as detailed at the end of this proposal, could be made available as their commitment to other jobs permits. Specific, long term commitments for specific individuals can be agreed to during contract negotiations. In order for you to be able to estimate the cost of a particular level of effort, the following forward pricing rates are given below. These should only be used for budgetary purposes; final rates will be agreed to during contract negotiations.

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Category

- Consulting Scientist
- Principal Scientist
- Senior Scientist
- Scientist
- Associate Scientist
- Senior Technical Clerk



The cost of a particular individual may be determined by comparing his labor category, as determined from his resume, with the above rates.



3.           STATEMENTS OF QUALIFICATIONS

Of particular interest for this proposal are the summaries of classified Photographic Interpreter related jobs beginning on page 14 and the detailed personnel resumes' beginning on page 27.

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**STATEMENT  
OF  
CAPABILITIES**

IMAGERY EXPLOITATION  
INFORMATION EXTRACTION



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1. BACKGROUND

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[redacted] now offers a full range of services in three related technical areas: photogrammetric engineering and mapping; remote sensor image interpretation and analysis; and map based informations systems.

2. CAPABILITIES

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In it's field, [redacted] provides the link between user requirements and system hardware/software design which is essential to effective development of reconnaissance/remote sensing/mapping systems and is becoming increasingly important as systems and potential users proliferate.

Whether in system development or application, a user faces two basic problems. He must (1) select and develop the reconnaissance/remote sensing system with the greatest Information EXtraction potential for his purposes, and (2) employ the Imagery EXploitation technology through which this potential can best be realized. Only when the IEX functions are successfully exercised at all stages of research, development, test, evaluation, and operational application are remote sensing systems optimized or optimum information products generated.

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[redacted] focuses on these IEX functions for its clients, providing superior qualitative and quantitative image analyses and evaluations, exploitation system designs and development, and associated data processing and software systems which are both cost-effective and fully responsive to user technical requirements.

25X1A In almost two decades of highly varied activity in the remote sensing field, [ ] has developed expertise in dealing with frame, panoramic and strip cameras; the full range of photographic film types; infra-red imagers; brute-force, coherent side-looking and spotlight radars; electro-optical systems; laser imagers; and other multi-spectral sensors. We have worked successfully for and with military, governmental and commercial organizations alike. Figure 1 shows where [ ] brings its expertise to bear in the reconnaissance/remote sensing chain. A representative list of clients is presented in Table 1. 25X1A

3. ORGANIZATION

25X1A The [ ] staff, numbering approximately forty, is made up of scientists, engineers, and skilled technicians drawn from the primary disciplines necessary to successful pursuit of our role in the remote/sensing/reconnaissance cycle. Specifically, the human resources which [ ] can bring to bear on military, intelligence, and civil applications programs include the following: 25X1A

- . Imagery Interpreters
- . Exploitation Systems Engineers
- . Human Factors
- . Geoscientists
- . Photogrammetrist/Mensuration Specialists
- . Computer Systems Analysts/Programmers
- . Intelligence Analysts
- . Mapping/Civil Engineers

This interdisciplinary staff, acting together within the flexible management structure shown in Figure 2, assures the ultimate information user that all aspects of his particular remote sensing or reconnaissance problem are fully considered, and properly weighed and balanced against one another. This, in turn, ensures technical and cost-effectiveness in the design or application of the acquisition, processing or exploitation system.

25X1A An example of the successful transfer of remote sensing research into superior system development is the Analytical Photogrammetric Processing System (APPS). [ ] pioneered in the evaluation and special software

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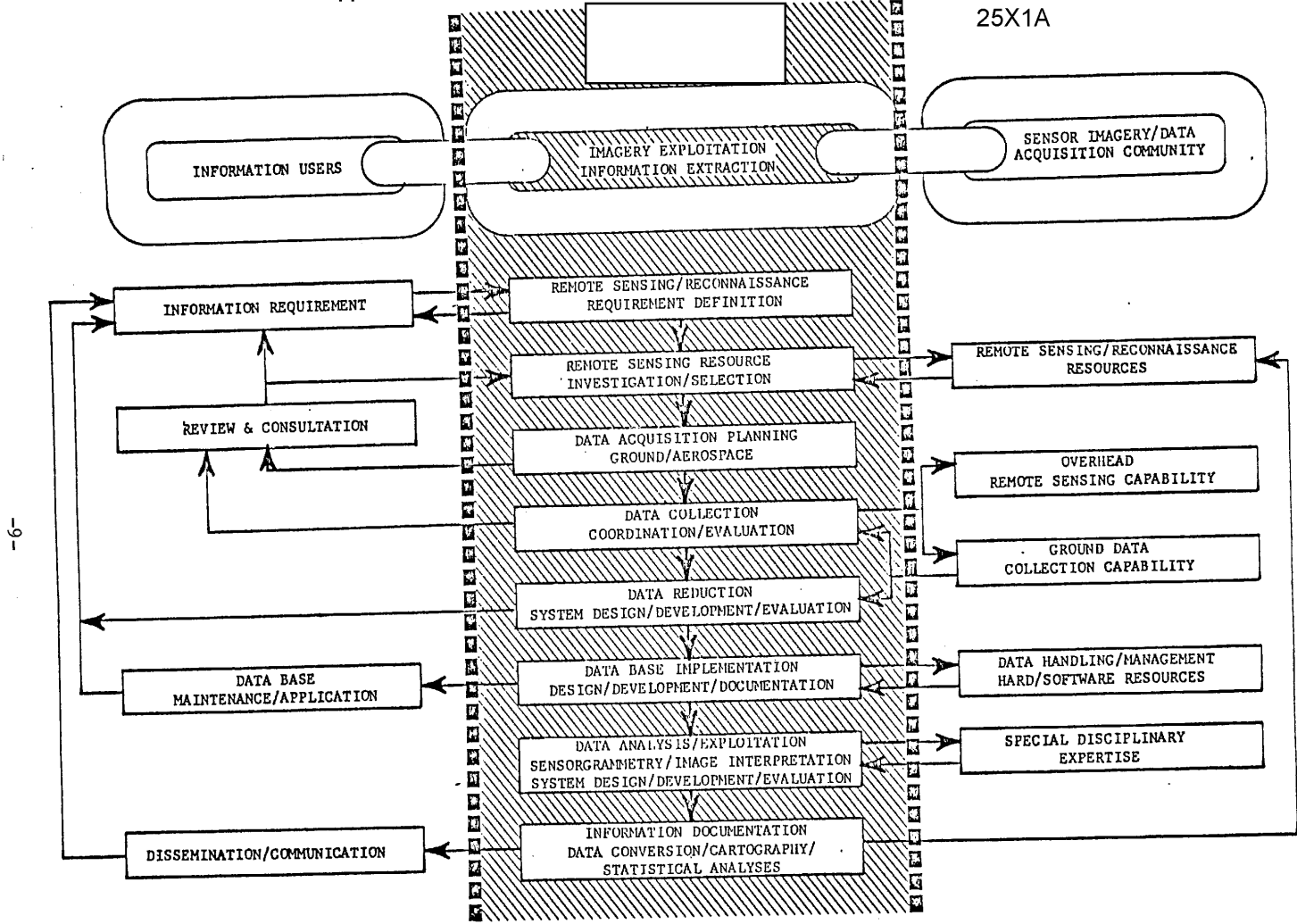


FIGURE 1 - THE REMOTE SENSING/RECONNAISSANCE CHAIN - AUTOMETRIC ROLE

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25X1A development for this Army system utilizing a variety of remote sensing/  
reconnaissance inputs. [ ] now has total responsibility  
for all APPS software, hardware, and map based information system developments.  
This currently includes complete APPS development for wetlands mapping of the  
U.S. for the Department of Interior/Fish & Wildlife Service as well as for  
other Army, Airforce, and Navy Military applications.

25X1A Through years of national and international experience, [ ] 25X1A  
[ ] has also developed a network of professional industrial and aca-  
demic associations in the disciplines which immediately support or utilize  
our technology, such as ground data collection and surveying, aerial and space  
photography, remote sensor imagery and data collection, instrumentation, geo-  
logy, geomorphology, and digital and electro-optical equipment manufacture, to  
name a few. When programs require it, we also provide products and services  
drawn from such disciplines on the basis of rigorously specified sub-contracts  
with firms and individuals pf proven capability and integrity.

25X1A [ ] as a "high technology" entity, is also organized for, and  
committed, to the orderly transfer of technology for the benefit of all elements  
of society. Thus, we have been active in making state-of-the-art military re-  
mote sensing reconnaissance technology, imagery, and extracted information  
economically and technically useful for civilian purposes. For instance,

25X1A [ ] has pioneered in the declassification of side-looking radar, infrared,  
and photographic sensor systems and imagery; and their transfer to civil uses  
in programs of mapping, resource and environmental management, arms control,  
and disaster assessment.

4. FACILITIES AND EQUIPMENT

[ ]

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25X1A [redacted] In support of its programs in remote sensing research, photogrammetric engineering, and geographic information system design and development, the [redacted] facility contains appropriate imagery and data exploitation equipment. Included are stereo and monoscopic imagery viewers, a Mann comparator with digital readout, a micro-densitometer/isodensitracer, stereoscopic point transfer devices, layout tables, and secure working areas, storage vaults and files. The working laboratory is arranged to accommodate multiple projects at any level of security, and to provide appropriate spaces for interpretation and photogrammetric evaluation tasks; experimentation, and production tasks such as plotting, indexing, mosaicking and screening. Computers utilized, both at commercial and government agencies, include, among other, the CDC-6700 6600, and 6400 ; UNIVAC-1108 and 494; IBM-360 and 370; NOVA 1200; SEL 32/55; and HP 9810, 9830, and 21MX. These have been used for analytical photogrammetry, digital image processing, system simulation, and other reconnaissance, intelligence, and remote sensor exploitation purposes.

25X1A [redacted] facility has been granted a TOP SECRET clearance by action of DCASR, Philadelphia, PA.

5. SUMMARY

25X1A [redacted] has been organized, staffed and equipped to offer remote sensing services in photogrammetric engineering; image analysis; development of computer software; image processing; and information systems at the highest levels of efficiency and economy consistent with technical excellence.

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[redacted]



6. EXPERIENCE

25X1A

contract experience is summarized in the following pages. Section 6.1 covers experience in general functional areas, citing selected projects by name, customer, period of performance and work synopsis. Section 6.2 contains a listing of classified and special security work which is applicable to the proposed OIA contract.

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SECTION 6.2

GENERAL

This portion of the Statement of Qualifications is presented to OIA in order to indicate the range of special security work and other contract efforts which are directly applicable to the proposed OIA support center.

These programs/studies primarily have been performed in connection with the National Reconnaissance Program (NRP) and, as such, relate to strategic high altitude (satellite and aircraft) operational and R&D reconnaissance programs.

PROGRAMS

25X1A

[redacted] over the past 15 years, has performed supporting RDT&E in the exploitation area with the various Talent and Talent-Keyhole image-forming systems. This research has included both photogrammetric and photointerpretation areas and has been performed primarily for the National Photographic Interpretation Center and the U.S. Army. Some indication of the work conducted through 1973 is shown in Table 2.

25X1A

More recently [redacted] has been working under contracts for the Navy Space Project Office (PM-16, now PME-106) and Naval Intelligence Support Center (NISC) in the exploitation of current and future KH systems from both an interpretation and photogrammetric standpoint. Additional contracts have been performed for other aerospace companies. Feedbacks have resulted, related to Naval collection system needs for ocean surveillance as well as the actual design and implementation of data handling systems. Current involvement includes a Photogrammetric/

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[redacted] Other similar special access evaluations and systems work is being, or expected to be, conducted in the radar, E-0, and infrared imagery exploitation areas.

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In addition to DOD and Intelligence Community, separate studies have been performed for the Arms Control and Disarmament Agency where [redacted] acted as expert consultants in the reconnaissance area for both SALT and MBFR potential applications.

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7. PERSONNEL

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[redacted] has over ten long term employees whose background and major duties have been photographic interpretation. Their detailed resumes as those of key management and support personnel follow. Eight of these photo interpreters currently hold TOP SECRET, SI/TK security clearances. Most of these eight hold additional clearances for work on special sensor imagery. Additional clearances currently held may be verified through your security office.

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25X1D

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25X1D

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