STAR GATE

~~SECRET~~

DT-S-1035-SL

HISTORICAL

DEFENSE INTELLIGENCE AGENCY

LONG-RANGE COMPREHENSIVE PLAN (U)

BASIC APPROACH

28 JUNE 1991

STAR GATE

NOFORN

~~SECRET~~

LIMDIS

~~SECRET~~

LONG-RANGE COMPREHENSIVE PLAN   (U)

BASIC APPROACH

SHORT TITLE: DT-S-1035-SL

Date of Publication
28 June 1991

This is a Department of Defense Intelligence Document
prepared by the Technology Assessment and Support Office,
Directorate for Scientific and Technical Intelligence
Defense Intelligence Agency.

Technology Assessment and Support Office (DT-S)

NOT RELEASABLE TO FOREIGN NATIONALS

LIMITED DISSEMINATION

REPRODUCTION REQUIRES
APPROVAL OF ORIGINATOR
OR HIGHER DOD AUTHORITY

FURTHER DISSEMINATION
ONLY AS DIRECTED BY DT
OR HIGHER DOD AUTHORITY

CLASSIFIED BY: DIA/DT
DECLASSIFY ON: OADR

~~SECRET~~/NOFORN/LIMDIS
STAR GATE

UNCLASSIFIED

(U) PREFACE:

(U) The following are detailed reports that supplement this plan and can be made available upon request:

SG1A

o Operational Activity and Near-Term Plans;
DT-S-1038-SL, 20 Jun 1991.

o Proficiency Enhancement Projects - Basic Approach;
DT-S-1039-SL, 21 June 1991.

o Select Technical Research Papers, DT-S-1040-U,
28 June, 1991.

(U) The 30 Technical papers compiled in DT-S-1040-U were selected from scientific journals. They address various aspects of parapsychological research and illustrate new physical science investigations that may add insight to this phenomenological area.

i

UNCLASSIFIED

UNCLASSIFIED

OUTLINE

APPENDICES

ii

UNCLASSIFIED

UNCLASSIFIED

iii

UNCLASSIFIED

~~SECRET~~

LONG-RANGE COMPREHENSIVE PLAN

BASIC APPROACH

I.   (U)   INTRODUCTION

    (S/NF/SG/LIMDIS)   One of the tasks levied on DIA by the FY 1991 Defense Authorization Act was to develop a long-range comprehensive plan for investigating parapsychological phenomena. This task was one of several objectives included in a new program for this phenomenological area that identified DIA as executive agent.

    (S/NF/SG/LIMDIS)   A funding level of $2 million was authorized for DIA in order to begin this new program. This funding has permitted new research to be initiated in support of overall program objectives. A new DIA limited dissemination (LIMDIS) program, STAR GATE, was also established in order to initiate and accomplish all of the Congressional directions for this topic.

    (S/NF/SG/LIMDIS)   This report presents DIA's viewpoints and recommendations on how best to proceed with both in-house activities and external research support for this area over the next 5 year time frame. Research fundings, both domestic and foreign, and results from in-house investigations may lead to updates to this report in order to reflect improved phenomena understanding and to pursue new research and/or application directions.

    (U)   Terminology and definitions unique for this area are briefly discussed in Appendix A.

    (U)   Additional background material on this phenomenological area is included as Appendix B. Details on STAR GATE objectives as delineated in the FY 1991 Defense Authorization Act are in Appendix C. Current status of major FY 1991 STAR GATE objectives are in Appendix D.

1

~~SECRET~~/NOFORN/LIMDIS
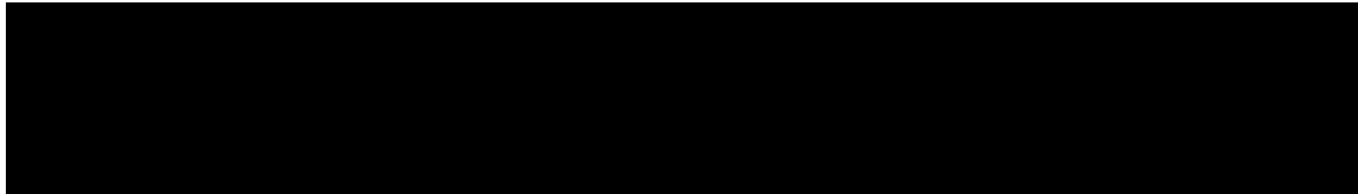STAR GATE

~~SECRET~~

II. (U) PLAN OBJECTIVES

(S/NF/SG/LIMDIS) The objective of this plan is to develop a long-range systematic and comprehensive approach to the investigation of anomalous mental phenomena (AMP). This includes identifying key in-house activities along with an appropriately integrated basic and applied external research support effort. This plan was based on the general guidance provided by the Congressional language that initiated this new program in FY 1991.

(S/NF/SG/LIMDIS) Accomplishment of the various activities identified in this plan will greatly enhance threat assessment of foreign achievements in this area, and will help achieve the potential for US military/intelligence applications on select tasks as a supplement to HUMINT operations.

(U) It is anticipated that this plan will assist decision makers in their review and consideration of future directions for this field, and that this plan can begin formal implementation starting in FY 1992.

III. (U) SIGNIFICANCE OF EFFORT

(S/NF/SG/LIMDIS/WN) STAR GATE is a new dynamic approach for pursuing this largely unexplored area of human consciousness and subconsciousness interaction. Its scope is comprehensive; a wide range of phenomenological issues are examined that include psychological, physiological/neurophysiological, advanced physics (new wave concepts) and other leading-edge scientific areas. Although broad in scope, STAR GATE is well grounded due to its solid independent scientific review base. STAR GATE is based on dynamic style in all its endeavors, especially in its pursuit of foreign work in this area.

SG1A

2

~~SECRET~~
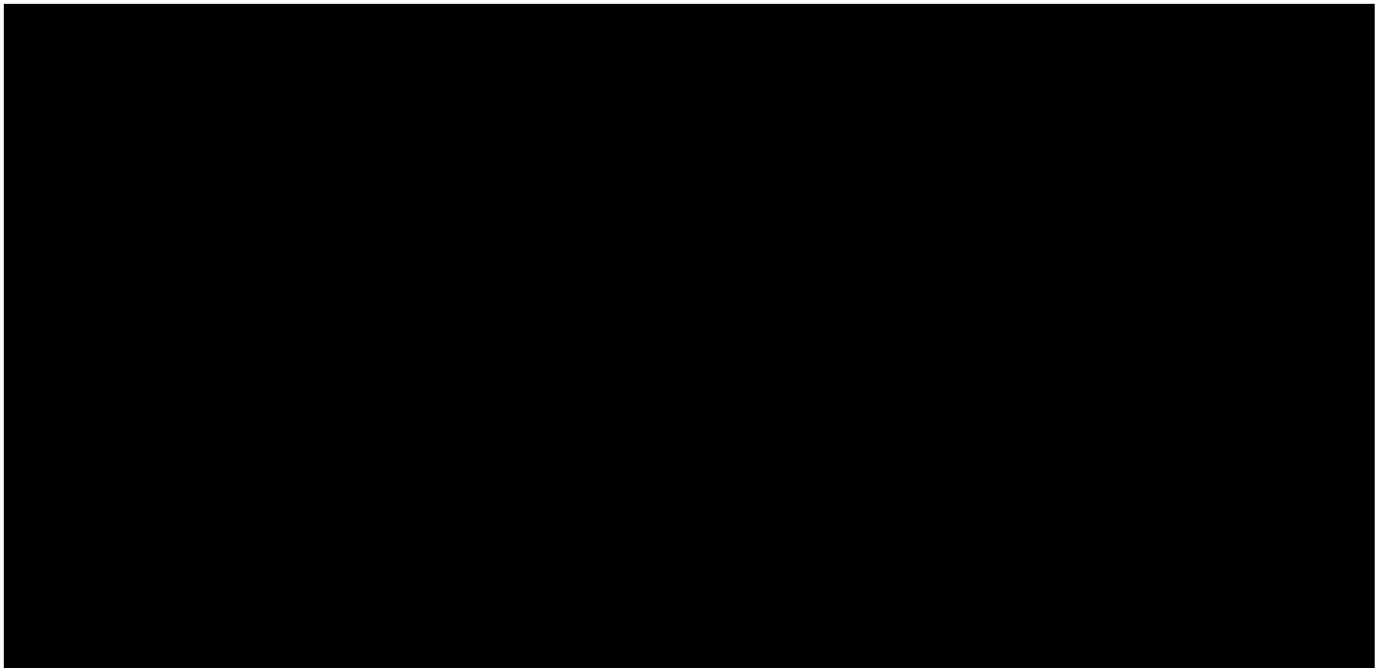
SG1A

(S/NF/SG/LIMDIS) It is the intention of STAR GATE to pursue all aspects of this area with high intensity, drawing on an experienced and well-qualified staff along with appropriate external assistance, in order to quantify and evaluate all available classified and unclassified research. By so doing, discoveries into how these phenomena work may be achievable. How to identify people with such talent (or potential for it) and how to develop/train selected individuals should also be a natural end-result. STAR GATE also draw heavily from lessons learned in all previous research and application investigations on a worldwide basis.

(S/NF/SG/LIMDIS) The in-house and external research pursuits identified in this plan have the potential for achieving highly significant results, such as:

    - Improving overall quality (and reliability) of AC data. A wide variety of applications would then be possible, including specific location of hostages, communication (to submarines, space platforms) or prediction of hostile plans or intentions.

3

~~SECRET~~/NOFORN/LIMDIS
STAR GATE

~~SECRET~~

     - Isolating aspects of the phenomenon that are testable and detectable:

        o A unique wave phenomenon (vector/scalar wave) is a leading candidate.

        o Certain information/entropy theories are promising.

     - Isolating specific brain processes involved in the phenomenon. Such findings would have very high payoff for other areas (e.g., parallel processing, brain neurophysiology).

     - Identifying unique application involving "energetics" phenomenon (e.g., remote switching).

(S/NF/SG/LIMDIS) Thus, STAR GATE program provides the opportunity for not only evaluating undeveloped human abilities, but also for finding way to improve phenomena repeatability. STAR GATE is a unique activity; it could identify break-through achievements in foreign countries in this area, and could lead to reliable use of this capability for a variety of applications. STAR GATE could also point the way to new discoveries in other areas due to its interdisciplinary and exploratory nature.

IV. (U) SUMMARY

    A. (U) GENERAL

(S/NF/SG/LIMDIS) A fundamental premise of this plan is that a well-integrated interdisciplinary approach is the most appropriate strategy for making progress in this diverse field. Consequently, this plan includes a wide variety of research topics. Many of these topics are based on recent findings from leading-edge pursuits in other disciplines that are suspected to have relevance for this area. Other topics are derived from a review of worldwide research, consultations with leading experts, and on insight gained from previous investigations involving both research and application activities. Application investigations examined include intelligence, police, FBI, and various medical-related activities such as diagnostics.

4

~~SECRET~~

(S/NF/SG/LIMDIS) Previous research results in this area
have demonstrated that:

- Anomalous cognition (AC) phenomenon is not degraded
by distance or shielding.

- AC phenomenon is effective (though limited) in a
predictive or precognition mode.

- Goal orientation/motivation correlates with success.

- A potential correlate exists between AC capability
and certain brain neurons as detected by magneto- encephoalograph
(MEG) measurements.

- Application potential in select areas is possible,
although further development is needed to improve data quality
and reliability.

B. (U) PLAN OVERVIEW

(S/NF/SG/LIMDIS) Both in-house government activities and
external basic/applied research effort necessary for
understanding, advancing, and applying this phenomenological area
are identified in this plan. The in-house activities focus on
following and assessing relevant foreign research, on performing
systematic reviews/investigations of an applied research nature,
conducting a variety of operational projects, and on linking with
the research activities where appropriate. The external research
focusses on investigations that can directly assist in the in-
house pursuits and includes those that have potential for
phenomena understanding. Some of these basic research topics,
however, may also impact on other fields due to their
interdisciplinary and exploratory nature.

(S/NF/SG/LIMDIS) The application areas that will be
systematically investigated are shown on Figure 1. Specific
types of desired information, such as tip-off or predictive data,
are relevant for several application areas. Initial work will
explore counternarcotics and counterterrorism applications; other
areas will be scheduled for later phases of the program.

(U) The overall in-house activities are summarized on
Figure 2. Supporting material is in Section V, and in-depth
details on key activities and milestones are in Appendix E.

5

UNCLASSIFIED

DATA TYPES	ACTIVITY

◆ TIP-OFF
◆ CONCEALMENT
◆ SEARCH/TRACK
◆ RESOURCE LOCATION
◆ FACILITY DATA
◆ SECURITY SYSTEMS
◆ FOREIGN PERSONALITY
   – STATE OF HEALTH
   – DEBRIEF
◆ PREDICTIVE
◆ EQUIPMENT INFLUENCE
◆ PERFORMANCE ENHANCEMENT
◆ MEDICAL RECOVERY
	◆ COUNTERTERRORISM
	◆ COUNTERNARCOTICS
	◆ COUNTERINTELLIGENCE
	◆ COMMUNICATION
	◆ S & T ANALYSIS
	◆ AREA CONFLICTS
	◆ COUNTERMEASURES
	◆ HUMINT ACTIVITY SUPPORT
	◆ MEDICAL SUPPORT

FIG. 1. (U) POTENTIAL APPLICATIONS

6

UNCLASSIFIED

ACTIVITY	TIME FRAME				
	1992	1993	1994	1995	1996
FOREIGN ASSESSMENT	SG6A	European Countries	South American, Other ⋯⋯⋯⋯		
RESEARCH SUPPORT		Evaluate, Integrate Foreign Findings ⋯⋯ Application Simulations ⋯⋯⋯⋯ Link to Research Projects ⋯⋯⋯⋯⋯ Review Needs ⋯⋯⋯⋯⋯⋯⋯ Interface, Protocol			
SYSTEMATIC REVIEW OF POTENTIAL APPLICATIONS		Energetics ⋯⋯⋯⋯⋯ Pilot Studies, Research Link Training/Proficiency Reviews (New Methods, Research Findings) Systematic Operational Projects (Counternarcotics, Prediction, etc.) Consumer, Data Base, Equipment (Continual Reviews)			
PROJECT SUPPORT		Data Fusion, Consumer Training ⋯ Data Base Equipment (Updates) Personnel Development (Continuous) Protocol Procedures (Updates)			

FIG. 2. (U) IN-HOUSE ACTIVITIES

7

~~SECRET~~

(S/NF/SG/LIMDIS) The key in-house effort will center on performing foreign assessments, providing research support, reviewing potential applications (to include operational projects), and on performing a variety of STAR GATE support functions.

SG1A

published. Follow on to this report, along with new reports for a variety of other countries, are anticipated on approximately an annual basis. Figure 2 also identifies other specific in-house activities such as linking with research projects, investigating new areas (e.g., energetics), and developing data integration/ fusion methods. Many of the key in-house activities, such as data base reviews/updates and personnel development, will be performed on a continuing basis.

(S/NF/SG/LIMDIS) The main basic research topics and milestones for anomalous cognition (AC) phenomenon are summarized on Figure 3 for several research categories and the important integration activity. A variety of controlled projects will be developed to determine how target/source characteristics affect data quality (e.g., information content, form), to identify phenomenon principles or variables (e.g., gravitational, vector/ scalar waves, shielding), and to identify how the phenomenon is detected or processed in the central nervous system (e.g., brain neuromagnetic/memory models). Time phasing shown is based on anticipated progress from the initial investigations and details on basic research activities are in Section VI.

(S/NF/SG/LIMDIS) Figure 4 summarizes key activities and milestones for the anomalous perturbation (AP) research area. This will be the most difficult research topic since talented individuals must first be located. Extensive effort must also be devoted to insuring that observed results are not due to environmental artifacts. Various preliminary analysis and evaluation criteria are required before actual investigations with a variety of laboratory sensors or devices can begin. Results from the early phases will lead to more complex system projects, and will include investigations that examine effects of distance on the phenomenon. Details on this topic are in Section VI.

8

ACTIVITY	TIME FRAME				
	1992	1993	1994	1995	1996
SOURCE RESEARCH (TARGET)	Information/Entropy Analysis ◄····························· ► Various Target Attributes (Size, Form, Content) ◄········· ►				
TRANSMISSION RESEARCH (MECHANISMS)	Four-Dimension Calculations (Relativity Extensions) ◄········◄ Vector and Scalar Waves (Laboratory) ◄········· ► (Long Range Tests) Variables (Distance, Shielding, Energy) ◄·········· ►				
DETECTOR RESEARCH (BRAIN)	Neuroscience (MEG, Memory, etc.) ◄··········· ► Environmental Factors Other Physiology (Electrical, Infrared) ◄········· ► Implications from Medical/Animal Research				
INTEGRATION	Physical Sciences (Physics, Statistics, Parallel Processing, etc.) ◄······· ► Psychological Sciences (Psychology, Anthropology, Cognitive, Mental, Subliminal Perception, etc.) ◄········ ► Medical Genetics, etc.) ◄···· ►				

FIG. 3. (U) BASIC RESEARCH MILESTONES — ANOMALOUS COGNITION

~~SECRET~~

ACTIVITY	TIME FRAME				
	1992	1993	1994	1995	1996
DEVELOP EVALUATION CRITERIA	⊢━━┥				
PERFORM ANALYSIS		HISTORICAL DATA BASE ⊢━━━━┥			
EXAMINE TARGET SYSTEMS		VARIOUS TECHNICAL TARGETS ⊢━━━━━━━┥ LABORATORY SETTING			
CONDUCT VALIDATION EXPERIMENTS		ADVANCED SENSORS ⊢━━━━┥ /	COMPLEX COMPONENTS ⊢━━━━━┥		
PURSUE APPLICATIONS				FAR-FIELD EFFECTS ⊢━━━━━━━━━━┥ (COUNTERMEASURES)	
PERSONNEL SELECTION	SOLICIT ⊢━━━⋯⋯⋯ (KNOWN TALENT)	SCREENING/TRAINING ━━━━━━━━━━━━━━┥ (DEVELOP)			
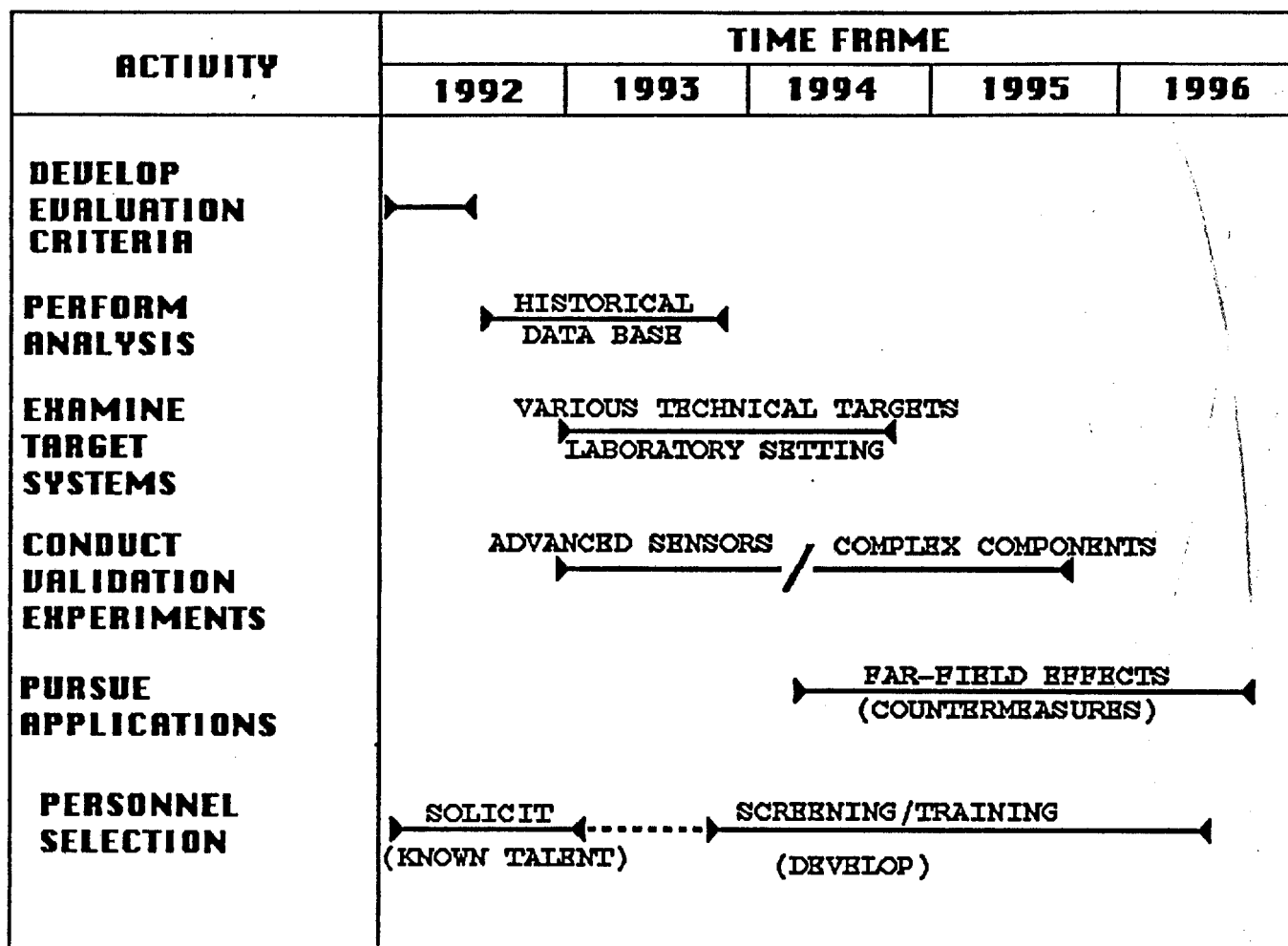
FIG. 4. (U) ANOMALOUS PERTURBATION RESEARCH MILESTONES

10

~~SECRET~~

SECRET

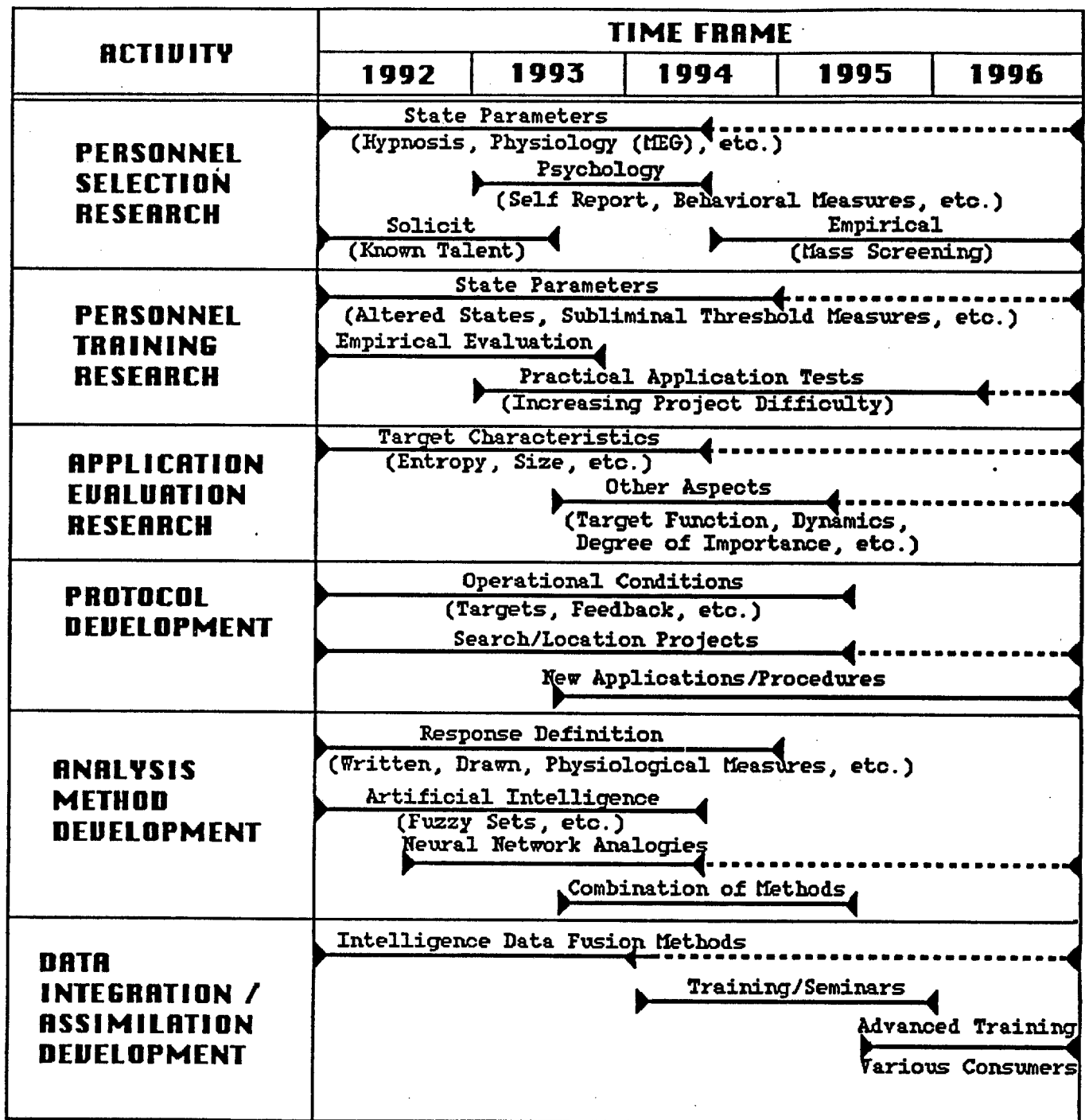| ACTIVITY	TIME FRAME				
	1992	1993	1994	1995	1996
PERSONNEL SELECTION RESEARCH	State Parameters (Hypnosis, Physiology (MEG), etc.) Psychology (Self Report, Behavioral Measures, etc.) Solicit (Known Talent)			Empirical (Mass Screening)	
PERSONNEL TRAINING RESEARCH	State Parameters (Altered States, Subliminal Threshold Measures, etc.) Empirical Evaluation Practical Application Tests (Increasing Project Difficulty)				
APPLICATION EVALUATION RESEARCH	Target Characteristics (Entropy, Size, etc.) Other Aspects (Target Function, Dynamics, Degree of Importance, etc.)				
PROTOCOL DEVELOPMENT	Operational Conditions (Targets, Feedback, etc.) Search/Location Projects New Applications/Procedures				
ANALYSIS METHOD DEVELOPMENT	Response Definition (Written, Drawn, Physiological Measures, etc.) Artificial Intelligence (Fuzzy Sets, etc.) Neural Network Analogies Combination of Methods				
DATA INTEGRATION / ASSIMILATION DEVELOPMENT	Intelligence Data Fusion Methods Training/Seminars Advanced Training Various Consumers				

FIG. 5. (U) APPLIED RESEARCH MILESTONES — ANOMALOUS COGNITION

11

SECRET

~~SECRET~~

(S/NF/SG/LIMDIS) The comprehensive applied research approach for anomalous cognition is summarized on Figure 5. This research effort focusses on personnel selection, training, application evaluation, protocol development, and analysis methodology improvement. Data integration, including possible future advanced training for potential consumers, is also shown. These and other topics for this research category are discussed in detail in Section VI and Appendix F.

(S/NF/SG/LIMDIS) Highlights of the applied research include: (1) the search for physiological correlates useful for personnel selection; (2) the identity of mental states that facilitate phenomenon occurrence and improve data quality; (3) the identity of application parameters that may influence data quality; (4) the development of appropriate protocols; and (5) improvement of analysis methodologies for both research and operational pursuits. This activity is time-phased as shown to build upon earlier results and to progress into more comprehensive research and more demanding application areas.

V. (U) <u>KEY ACTIONS/MILESTONES -- IN-HOUSE EFFORT</u>

(S/NF/SG/LIMDIS) The initial FY 1991 STAR GATE effort set the stage and formed the basis for moving on into the long-range activities identified in this plan. This section identifies key in-house activities for achieving STAR GATE objectives. These key actions are organized according to the following main functional areas: (1) assessment of foreign efforts; (2) research support; (3) systematic review of potential intelligence applications; and (4) in-house project support.

(U) Part A of this section discusses the basic approach; Part B contains additional details.

A. (U) <u>BASIC APPROACH</u>

(S/NF/SG/LIMDIS) The STAR GATE program has already initiated and/or accomplished a variety of actions that directly build toward and support potential long-range activities. External research activity now underway includes several new research areas. The in-house work has focussed on identifying support equipment and automatic data processing equipment (ADP)

12

SECRET

that would be compatible with external activities (contractor, available data bases), on integrated data bases applicable for long-range efforts, and on developing long-term collection requirements and plans. The in-house effort has also initiated activities related to systematic review and assessment of a wide variety of potential applications. Key support activities, such as preparing appropriate documentation, procedures, and scientific evaluation methodologies, have been essentially completed for this initial program phase. Scientific review/oversight has also been established.

(S/NF/SG/LIMDIS) STAR GATE personnel have also been involved in direct support of DESERT SHIELD/STORM. Eleven special project reports were published between October 1990 and February 1991 in response to six major tasking categories. Operational activities have generated additional lessons-learned that will be factored into future activities identified in this plan.

1. (U) ASSESSMENT OF FOREIGN EFFORTS

SG1A

(S/NF) In order to develop and maintain updates of an appropriate data base, various collection requirements need to be identified, collection plans need to be prepared and implemented, and appropriate data base storage and retrieval is required. In addition, data base analysis, assessment, and report preparation activities are required.

(S/NF) It is anticipated that at least 2-3 years are required before a comprehensive worldwide data base can be developed, and appropriate personnel can be trained or obtained.

(S/NF) A major step for improving foreign data base collection has already been taken. Recent contacts with

13

SECRET/NOFORN/LIMDIS
STAR GATE

~~SECRET~~

allied S&T counterparts has led to new interest in this area along with offers for frequent data exchanges on this topic.

(S/NF)   It is also anticipated that foreign activity in this area will expand and that more countries will become involved.   Consequently, this aspect of the in-house activity is expected to grow over the years.

2.   (U)   RESEARCH SUPPORT

(S/NF/SG/LIMDIS)   This in-house activity will be an on-going effort in support of external research projects. Some of the activities include:

- Identifying details/procedures on how in-house personnel can directly support external projects.   This includes both informational and the energetics aspects.

- Identifying specific research needs; link to foreign assessment and specific application investigations.

- Identifying specifics of how project personnel link to external basic and applied research projects.

- Identifying/conducting limited in-house research to supplement external projects that evaluate operational parameters.

- Providing contract interface/management support.

3.   (U)   SYSTEMATIC REVIEW OF POTENTIAL INTELLIGENCE APPLICATIONS

(S/NF/SG/LIMDIS)   A wide variety of in-house activities are envisioned over the next 3-5 years that will permit achievement of this objective.   These actions encompass applied research, proficiency enhancement/training, and operational investigations.   Specific long-range actions include:

- Canvassing/contacting potential users to identify and prioritize potential needs.

- Conducting detailed historical/worldwide research reviews to identify possible variables.

14

~~SECRET~~

- Initiating and conducting a systematic evaluation of various types of applications with different operational parameters. This includes joint research with contractor projects, various DOD elements and possibly allied country counterparts.

  o Applications could involve shielded rooms, silo location, submarines, or other unique areas.

  o NSA, NASA, USN, USAF, or others might participate.

- Performing a variety of operational tasks in support of select consumers. Plans are now underway to initiate select operational investigations. Many, if not most, of application areas shown in Figure 1 will be systematically pursued.

- Examining previous applications to identify possible trends, patterns, and operational variables.

- Evaluating feasibility of establishing a school/training program for others in the Intelligence Community.

- Reviewing worldwide literature to identify possible proficiency aids or training procedures.

- Developing a variety of proficiency enhancement/ training support activities.

- Evaluating/identifying appropriate external research support.

- Providing real-time interface with external research.

- Incorporating latest research findings into applications investigations.

4. (U) <u>IN-HOUSE PROJECT SUPPORT</u>

  (S/NF) This action area forms the backbone of all project activity. Initial documentation in key areas has already been accomplished (Item E, Appendix D). However, this is

15

essentially an on-going action area due to the dynamic nature of this program. Key activities include:

- Developing and improving proper program documentation, evaluation procedures, and activity protocols for research support, proficiency training, and all operational activity.

- Identifying/updating project data base procedures and equipment needs.

- Developing project operational data fusion procedures and methods.

- Preparing project publications.

- Monitoring/establishing personnel training needs.

B. (U) <u>IN-HOUSE ACTIVITY DETAILS</u>

(S/NF) Appendix E identifies additional details for achieving in-house objectives and provides an estimate of approximate milestones for their accomplishment.

VI (U) <u>KEY ACTIONS/MILESTONES - EXTERNAL SUPPORT</u>

(S/NF) The funding allocation for external research received in FY 1991 for STAR GATE permitted several important research areas to be continued, and allowed for several new areas to be initiated. It is anticipated that results of this research will assist in clarifying some of the possible future research directions; consequently, not all long-range research possibilities can identified in this plan. However, most all of the major investigation areas can be addressed, and many of the specifics can be identified with reasonable confidence.

(S/NF) The FY 1991 research activity is a balanced basic and applied research effort. Some of the funding is allocated for methodology development, scientific review support, equipment procurement, and for supporting DIA's foreign assessment and data base development activity. The primary basic research activities initiated in FY 1991 concentrated as the following; (1) validating

16

~~SECRET~~

findings from previous magnetoencephalograph (MEG) research and initiating new work with a variety of conditions and individuals; (2) performing a variety of anomalous cognition (AC) experiments to determine potential correlations (e.g., target type, environmental factors); (3) developing various theoretical constructs that might be testable and that could help explain the phenomena; (4) examining effects of altered states on data quality; (5) initiating review of and research into the energetics area; and (6) examining various application possibilities (e.g., communication, search).

(S/NF/SG/LIMDIS) The applied research initiated in FY 1991 included: (1) examining of strengths/weaknesses of existing training methods; (2) exploring alternative training methods; (3) examining methods for AC data enhancement; (4) improving data analysis techniques; (5) exploring potential variables that might be significant in an application environment (e.g., beacon/no beacon condition), (6) identifying ways to translate MEG findings as an aid in personnel screening, selection, and possibly training; and, where possible, (7) replicating significant foreign work once specifics are identified.

(U) Results from the FY 1991 basic and applied research activity will be factored into this long-range plan as soon as they become available.

(S/NF/SG/LIMDIS) The primary basis of this research support is to help in phenomena understanding and/or validation, in applications understanding, and in operational feasibility evaluation. This work has a direct bearing on DIA's ability to assess significance of foreign research and on DIA's ability to perform a systematic review of potential applications in this area.

(S/NF/SG/LIMDIS) A main focus of this portion of the research will address some of the key phenomena enigmas, such as:

- How is the target located (i.e., targeting); how is the information accessed?

- What is the distinction between target "form" (i.e., configuration), and target "content" (i.e., interpretation)?

17

~~SECRET~~

- What are the various "noise" sources that distort data content?

- What are the phenomena limitations?

- How are the "informational" and "energetics" aspects related?

- What are the main operational constraints?

(U) Part A of this section discusses the basic approach to external research support; part B contains additional details.

A. (U) <u>BASIC APPROACH</u>

(S/NF) The link of basic and applied research with either applications investigations or with research activities is shown on Figure 6. The top of the chart shows that for any research or application task, certain conditions must be met (e.g., a reliable calibrated individual is required; proper scientific procedures need to be developed, etc.). Once these basic foundations are laid, then basic/applied research can be initiated with a reasonable expectation of success and with assurance that results will not be ambiguous or fail scientific scrutiny.

(S/NF) This chart also illustrates the difference between basic and applied research; applied research relates to various methods for collecting, recording, improving and analyzing data output, while basic research is aimed at phenomena understanding. In this chart, the "detector" is the human brain/mind, the "source" is the target or an aspect of the target, and "transmission" refers to notions of how information and/or energy are actually transmitted between source and detector.

(U) Figure 7 illustrates the interdisciplinary scope that will be brought to bear on this research problem. Leading-edge researchers in their various fields can provide clues, if not make direct contributions, that will assist in phenomena and applications understanding.

(U) Appendix G lists candidate research support facilities that could be involved in this long-range effort. Final
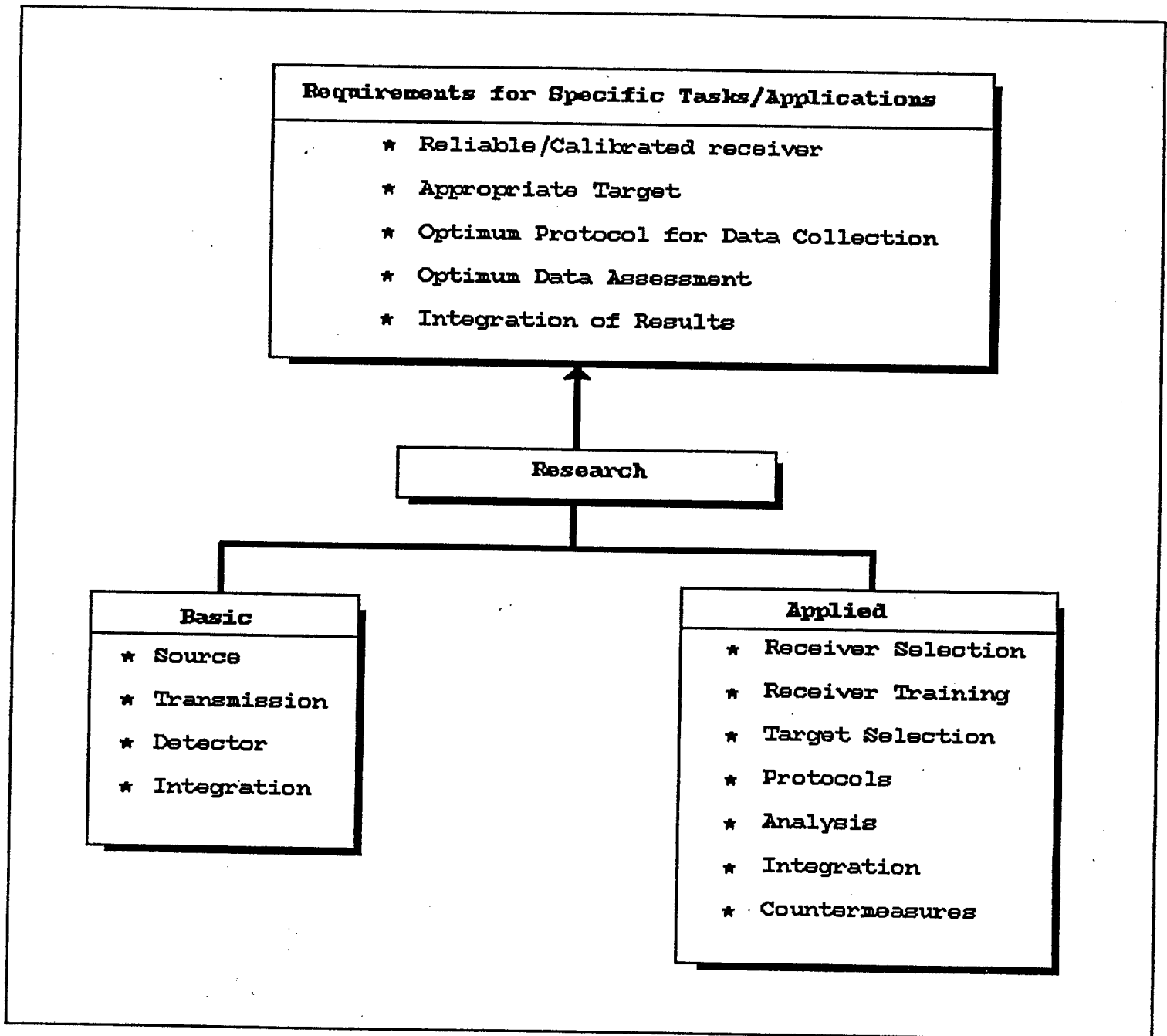
18

UNCLASSIFIED

Requirements for Specific Tasks/Applications

* Reliable/Calibrated receiver

* Appropriate Target

* Optimum Protocol for Data Collection

* Optimum Data Assessment

* Integration of Results

Research

Basic

* Source

* Transmission

* Detector

* Integration

Applied

* Receiver Selection

* Receiver Training

* Target Selection

* Protocols

* Analysis

* Integration

* Countermeasures

FIG. 6. (U) Research Objectives

19

UNCLASSIFIED

UNCLASSIFIED

selection will be based on how well their activity will fit into specific time-lines and priorities that will be established in Nov 1991.

B.   (U)   <u>RESEARCH DETAILS</u>

1.   (U)   <u>BASIC RESEARCH</u>

(U)   Figure 3 in the summary highlights key basic activities for "source", "transmission" and "detector" research categories. Only a few of the leading activities are shown on these charts for simplicity. These however, represent the most important research areas.   Anticipated activity time-phasing is as shown in order to maintain a uniform level of effort spanning several years, and to permit assimilation of research findings from the earlier phases.

(U)   The time-frames shown on Figure 3 indicate periods of main research activity. Pilot or exploratory work is intended for earlier or later periods for most of the categories.

(U)   A central aspect of this overall basic research effort is that a variety of on-going interactions, along with select multidisciplinary research, will be an on-going activity. Appendix G identifies some of candidate facilities.

(U)   Appendix H contains a listing of reference and technical journals that will be routinely reviewed in the search for clues that might help in phenomena understanding.

a.   <u>ANOMALOUS COGNITION (AC)</u>

(1)   (U)   <u>SOURCE</u>

(U)   Source research will address those topics that show promise for understanding the characteristics of the target or target area that may play a role in anomalous cognition (AC) occurrence and data quality. Aspects of the target that can be defined by conventional information theory (involving entropy/information content) will be explored in-depth. A wide variety of targets with a wide range of information content,

20

UNCLASSIFIED

~~SECRET~~

dynamics, or other parameters will be examined to explore this possible link. If not successful, other approaches to investigate the targets' innate nature and its possible link to phenomenon occurrence will be initiated.

(2) (U) <u>TRANSMISSION</u>

(U) The pursuit of possible transmission mechanisms for AC phenomena is essentially the most significant basic research task and also the most difficult to formulate. In this effort, a theoretical bases will be developed from extensions of current theory in light of recent advanced physics formulations. Some of these formulations permit unusual "information flows" that may, in fact, have relevance for this phenomenon. Testable models/constructs will be developed and evaluated. A variety of other possible explanations involving extensions of gravitation theory, quantum physics or other areas will be constructed and tested where possible. Some of these tests may require close cooperation of leading-edge researchers using equipment in their facility.

(U) Effort in this area will also focus on integrating diverse aspects of the source, transmission, and detector categories. For example, it will examine how "targeting" occurs. Insight will be drawn from in-depth reviews of various unusual physical effects identified by physical sciences researches. These include distant particle coupling (Bell's theorem), ideas from quantum gravity, possible electrostatic/gravity interactions, unusual quantum physics, observational theories, vacuum "energy" potential, and a variety of other concepts.

(S/NF) Perhaps the most promising exploratory model of all is one based on little-understood aspects of the fundamental equations for electromagnetic wave propagation (Maxwell's equations). These equations indicate that forms of "wave propagation" could also exist that do not have the conventional electric or magnetic field components (i.e., vector and scalar waves). These waves would not be blocked by matter and therefore could be leading candidates for AC propagation or for certain aspects of AC phenomenon. Investigations in this area will be given priority and pilot studies will be initiated

21
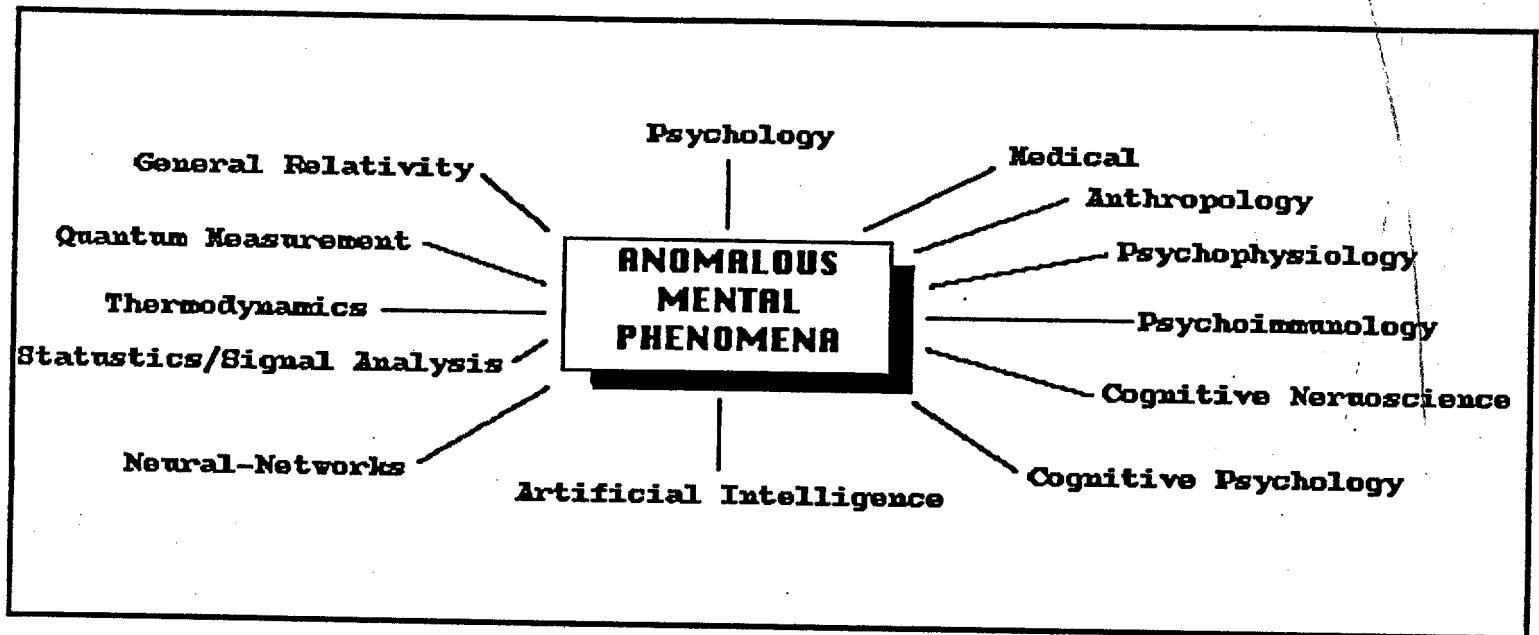
FIG 7. (U) Integration of Scientific Disciplines

22

SECRET

as soon as possible in FY 1992. Appropriate physical instruments may already exist from an earlier DIA exploratory R&D effort that is currently being evaluated.

(S/NF/SG/LIMDIS) Research on this topic will be closely integrated with research involving the anomalous phenomena (AP) aspect, since findings in the AP area would have direct implications for phenomena transmission mechanisms in general. Findings from the target (or target source) research area would also provide insight into possible transmission mechanisms. For example, different forms of the same target (e.g., target size, 2D vs 3D, holographic representations) may show patterns in the AC data that might provide clues regarding phenomena mechanisms.

(3)   (U)   DETECTOR

(U)   The most important and promising aspect of understanding the nature of the AC detection system in humans is through modern advances of the neuroscience. Beginning in FY 1992, the earlier neurophysiological results obtained from magnetoencephalograph (MEG) measurements will be validated and expanded. This earlier work indicated MEG correlations between visual evoked responses areas of the brain may exist, and that remote stimuli might also be detectable in MEG data. Some of the specific investigations will examine a variety of near and far-field situations, other sensory modes and different types of individuals in order to search for potential variables. It might be possible, with advanced MEG instrumentation, to actually locate the exact brain areas involved in AC phenomena occurrence.

(U)   Other physical/psychophysical aspects of the central nervous system (CNS) will also be explored to look for possible correlates. This would include galvanic skin responses (GSR) or other parameters.

(U)   Related to this overall area are several investigations that relate to possible environmental interactions with the brain that could affect AC data. This would include possible geomagnetic or electromagnetic influences.

(S/NF)   A spin-off from findings in this basic research area could be for unique communication applications. MEG correlates might exist between remotely located people. If

23

SECRET

so, the possibility of transmission of remote messages (via a type of code) might be possible. Since AC phenomenon is not degraded by distance or shielding, the potential of transmitting basic "messages" to individuals in submarines would exist.

(S/NF) Another potential spin-off benefit from detector research in this program is that new insights into brain memory or parallel processing might be achieved. This could lead to new directions in advanced computer developments involving neural networks. For example, recent Soviet work indicates that "wave-like" brain activity occurs in addition to usual neuronal processes. This wave-like phenomenon may have some link to the "phase shift" observed in MEG data from the previous MEG project. Further MEG work involving remote stimuli may help clarify such issues.

(4) (U) __INTEGRATION__

(U) The basic research activities will liberally avail itself of the existing research communities that specialize in neuroscience, physics and statistics and the broader psychological/social sciences. Beginning in FY 1992 and continuing through FY 1994, direct support with a variety of university departments, national and international, would occur. Frequent conferences and data exchanges are anticipated. These data exchanges will insure that a proper interdisciplinary approach is maintained, and that findings from other disciplines will be incorporated in this program where appropriate. This peer group dialogue will greatly benefit research sponsored through this plan, new ideas will be generated, and possibly clues regarding phenomena operation will be easier to identify.

(U) Some specific interdisciplinary examples that will benefit this program are as follows:

− In 1990 The American Anthropological Association (AAA) formed a new division, the Society for the Anthropology of Consciousness (SAC). This division has established a technical journal to support interdisciplinary, cross-cultural, experimental, and theoretical approaches to the study of consciousness. This group may be able to contribute this program by providing cross-cultural examples. These members might also assist in the assessment of foreign data in this area.

24

SECRET/NOFORN

UNCLASSIFIED

- The psychophysiology of vision has already contributed to the earlier program. This plan calls for a collaborative effort with researcher in an attempt to understand how the central nervous system process subliminal stimuli. This should assist in understanding how MEG correlates occur.

- The relationship between mind and body is currently discussed in the research literature as well as in the popular press. Researcher at the California Institute for Transpersonal Psychology (CITP) have been active in investigating the role of mental attitudes and body chemistry. While there may not be a direct link with AC, and exchange of techniques and experimental designs would be helpful.

- The Journal of Cognitive Neuroscience contains at least one article of interest in each issue. This discipline is where most of the cognitive work with the neuromagnetism is conducted There is the possibility of joint investigations with researchers performing MEG investigations at the National Institutes of Health (NIH).

- Stanford University has been conducting research on internal mental imagery. The manipulation and control of this imagery is extremely important in understanding the source of internal noise during an AC session. A collaborative effort with Stanford should lead to methods for noise reduction.

- Neural networks are particularly good at recognizing subtle patterns in complex data, and are being applied in the subjective arena of decision making in business. In order to improve AC analysis, the program will conduct a collaborative effort with scientists who are active in neural network research and with selected individuals who have had success with interpreting highly subjective data.

- Statistics is the heart of AC research in that most of the results are usually quoted in statistical terms. Hypothesis testing has traditionally been the primary focus, but there are other possible approaches that should be explored. Statistics researchers at Harvard have already expressed interest in contributing to the research effort.

25

UNCLASSIFIED

~~SECRET~~

- A major portion of the effort will be a search for a AC evoked response in the brain. Sophisticated processing is required in that magnetic signals from the brain can not be easily characterized by standard statistical practices. Several research facilities can contribute.

- Classical statistical thermodynamics may be the heart of understanding the nature of an AC source of information. A physical property called entropy may be related to what is sensed by AC. The program intends to collaborate with a variety of university physics departments to calculate the appropriate parameters.

b. (U) <u>ANOMALOUS PERTURBATION (AP)</u>

(S/NF) Figure 4 in the summary illustrates the basic approach for investigations "energetics", or anomalous perturbation (AP) phenomenon. Beginning in FY 1992, acceptance criteria will be establish with which to judge the historical literature for potential AP effects. Using those criteria, a detailed review of the literature will begin in mid FY 1992 and considering the size of that data base will continue through FY 1993. Knowledge gained from this review may provide insights for the development of new AP target systems or provide data so that particular experiments can be replicated. Given the complexity of most AP experiments, considerable time is needed to plan and conduct them properly. If the results warrant, then application development may begin as early as FY 1994; however the primary task of basic research of AP is to attempt to validate its existence. Findings from foreign research will be examined and factored into this activity as appropriate.

(S/NF) The keys to investigating this area will be in appropriate personnel selection and, very likely, in proper selection of the AP test device. Thus, the initial phase of this effort will involve identification and solicitation of individuals known or claimed to have such talents. For example, certain expert martial arts or yoga practitioners might do well in such experiments due to their strong mental conditioning and ability for intense mental focus. After locating such individuals, various instruments, such as microcomputer devices, sensitive electronic/sensor devices, or other unique or sensitive equipment would be used as targets in AP experiments.

26

~~SECRET~~/NOFORN

SECRET

(S/NF)   Some of the unique sensor candidates include devices that are highly sensitive to very weak gravitational effects (such as Mossbauer devices or atomic clocks). Perhaps the most promising device is one that involves detection of an unusual non-electromagnetic wave (A vector/scalar wave). If experiments with such sensors are successful, then significant understanding of AP or AC phenomenon would occur. Experiments with such a device is a distinct near-term possibility; consequently this will be given high priority in the early part of this long-range program.

(S/NF)   Should these pilot experiments prove successful, then a near and distant experiments would be developed for a wide variety of devices to evaluate application aspects. Potential applications could include, for example, remote switching (in a communication role) or possibly as a countermeasure to minimize effectiveness of threat systems such as sensitive computer components or sensors. Similarly, if these results are successful, they would provide insight regarding potential threats to US systems or security.

2.   (U)   APPLIED RESEARCH

(U)   Figure 5 in the summary illustrates the overall plan for the applied research portion for several main functional categories.

a.   (U)   SELECTION

(C)   The most promising potential for selecting individuals is to identify ancillary activity that correlates with AC ability. If such a procedure can be identified, then receiver selection can be incorporated as part of other screening tests (e.g., fighter pilot candidacy), and thus large populations can be used. Among the items that will be examined are physiology (e.g., responses of the brain to external stimuli) and hypnotic susceptibility (i.e., an individuals predisposition for being hypnotized). The results of this effort will be examined continuously; however, a decision to end the investigation will occur in mid FY 1994. Should the results at that time warrant, then refining of the techniques will continue to the end of FY 1996. The reason the initial research spans several years is that to validate even one psychological finding requires long-term testing of candidate individuals. Current statistical

27

SECRET/NOFORN

~~SECRET~~

methods require many AC sessions, and experience has shown that only a few sessions can be conducted per week for any single individual.

(C)   The previous program was able to estimate that approximately one percent of the general population possessed a high-quality, natural AC ability. Because the empirical method (i.e., asking large groups to attempt AC) is labor intensive and very inefficient, it is included in the research plan only as an alternate approach.

(U)   Additional details on individual selection research are in Appendix F.

b.   (U)   <u>TRAINING</u>

(S/NF)   Training has been a major part of the previous program; however, results of training approaches have been difficult to evaluate and have not been examined systematically. Systematic review of this issue will begin in FY 1992. One of the methods that will be examined involves lowering an individual's visual subliminal threshold (i.e., the level below which an individual is not consciously aware of visual material). This could enhance the individual's sensitivity to AC data. Other forms of altered states, such as dreaming and hypnosis, will also be evaluated to see if such states can enhance AC data quality.

(U)   Results on these issues should be available at the close of FY 1993. If no progress has been observed and if there have been no positive results from the basic research, the task ends. However, should any of the variables examined appear promising then the task will be continued.

(S/NF)   It is anticipated that all laboratory successes must be validated by simulating operational tasks. These experiments involve identifying the specialty to be tested, the acceptance criteria, and conducting sessions in which the complete target systems are know. This 3-year activity runs concurrently with the other tasks but with a 1-year offset to allow for planning.

(U)   Appendix H contains additional details on training research plans.

28

~~SECRET~~/NOFORN

~~SECRET~~

c. (U) <u>TARGET/APPLICATION/SELECTION</u>

(C) Based on earlier research, the most promising approach to target selection appears to be a single physical characteristic called entropy (i.e., a measure of inherent target information). Beginning in FY 1992, two and one half years have been allocated for the detailed study of this aspect of target properties. Initially, little experimentation is required; rather, a retrospective examination of previous target systems should indicate if this approach is valid. Included in this examination are detailed calculations of the information content of natural target scenes.

(S/NF) Beginning in mid FY 1993, other potential intrinsic target properties will be examined. For example, a target may be more readily sensed by AC if the collection of elements at the site (e.g., landmark, buildings, roads) constitute a conceptually coherent unit as opposed to a collage of unrelated items. Quantitative definition of targets will also be developed that include non-physical target parameters such as function, meaning, or relationships. These aspects are highly important in most operational projects and need to be quantified.

(S/NF) Part of this effort will involve investigations that serve two purposes: (1) add insight into the phenomenon; and (2) help evaluate the feasibility of certain potential applications. For example, long distance experiments could be conducted to or from deep caves or submarines in deep water to test communication potential and transmission theories. Experiments could also be conducted to targets on board space platforms to test distance and gravitational effects. Experiments to or from magnetically shielded rooms or certain earth locations (e.g., the magnetic pole) might indicate if magnetic fields influence the phenomenon. Experiments to opposite sides of the earth might also indicate if a mass or gravity effect can be noted.

(S/NF/SG/LIMDIS) This area of investigation will be integrated with a variety of applications in coordination with findings/investigations pursued by the in-house effort. Figure 1 in the summary identified the main application or operational areas. Along with types of data desired. This activity will be

29

~~SECRET~~

integrated, where possible, into in-house pursuits that will explore these areas in a systematic fashion. Initial emphasis will be in counternarctoics and counterterrorism areas.

(S/NF/SG/LIMDIS) Specific types of applications that will be explored in-depth include the search problem. Search tasks are expected to remain as high priority operational tasks (e.g., hostage location, lost equipment or system location). Search tasks are complicated by timing issues, especially if the missing target is being moved frequently. Related to this will be examination of predictive capability in order to evaluate feasibility of detecting hostile plans and intentions in advance. Pilot studies of other areas (e.g., code breaking, medical diagnostics, low intensity conflict support) will also be initiated.

(S/NF/SG/LIMDIS) Another application area that will be examined is "communications". Previous research indicates that with proper protocols, basic or coded messages can be sent and received via AC procedures. Redundant coding methods can readily enhance probability of success, and new statistical methods can also improve success rates. Communication applications may have significant value for search problems by providing additional information on location of kidnapped or hostage victims. Such techniques might also help in determining hostage or POW state-of-health or other significant issues.

d.   (U) PROTOCOLS

(U)   Given the laboratory success of AC experimentation, the protocol task can build upon a substantial literature. Determining optimal, specialty-dependent protocols only require extending current concepts. Several years are required due to the statistical nature of analysis that is required to determine the effects of environment, receiver, target and feedback conditions. Several high-interest application areas (such as search/location) will be examined in detail. A variety of session procedures will be evaluated to determine those that are beneficial to improving data quality.

(S/NF)   Protocol effectiveness may be measured by quality, quantity, and/or usefulness of the AC information elicited by its use. The requirements for protocols that are designed for laboratory settings are considerably more

30

UNCLASSIFIED

PROTOCOL DOMAINS

Environmental Conditions

Receiver Conditions

Target Designations

Historical Protocol → Session Dialog → Task-Specific Protocol
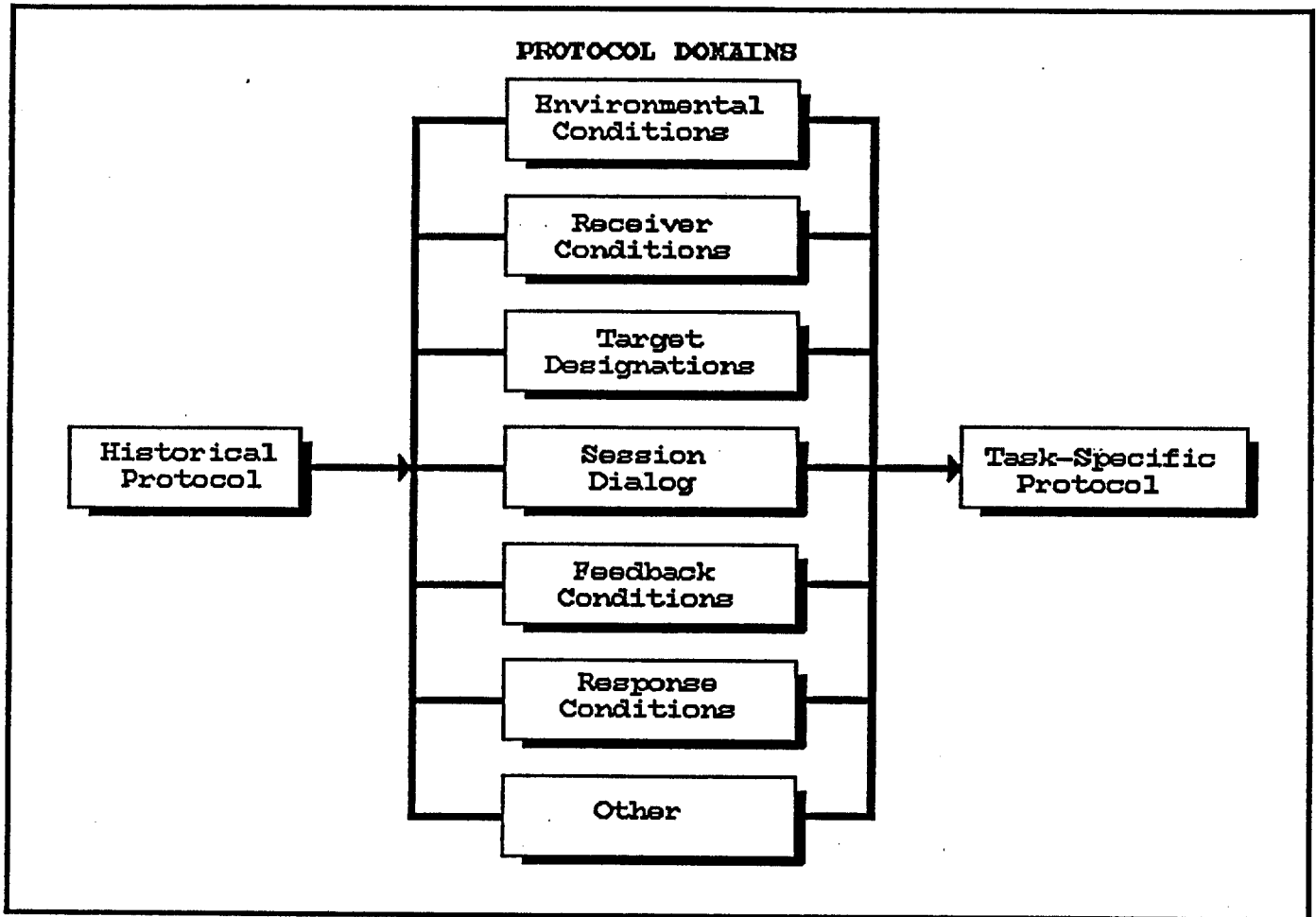
Feedback Conditions

Response Conditions

Other

FIG. 8. (U) Protocol Development

UNCLASSIFIED

SECRET

restrictive than those required for operational settings. For example, providing limited information to a receiver while an operational session is in progress (i.e., intermediate feedback) might facilitate the acquisition of the desired data. This kind of feedback is strictly prohibited, however, in most protocols designed for laboratory experiments. Protocols may also vary depending on nature of the data required. For example, for some search projects, only general data may be adequate. For such cases would not require development of highly specific details and protocols the sessions would not be as complex.

(U) Figure 8 illustrates the basic protocol development steps. A detailed protocol will need to consider a variety of potential session variables such as the individuals' physical environment, mental state and attitude, and how the target or task is designated (e.g., coordinates, abstract terms). Other data includes specifics of the session (monitor present or not), type of feedback, type of response data (e.g., predictive), and mode and method of response (e.g., drawings, verbal).

(S/NF) Concurrently, the only known way to resolve the above issues is to conduct a large number of trials for a given individual with as many of the potential variables as possible held constant. Standard statistical methods can then be used to identify trends, patterns, and operational constraints.

e. (U) ANALYSIS

(U) This area requires extensive review of leading analysis tools, such as those required for describing imprecise concepts or data (i.e., artificial intelligence techniques, fuzzy sets). This work will be combined with findings from neural network analysis and research, or possibly combinations of other emerging advanced analysis methods.

(S/NF) Various approaches that are anticipated to directly benefit operational evaluations. One promising technique involves procedures based on an adaptive (frequent data base update) approach. This will permit an individual's progression, and possibly time dependent data variables in an individual's track record, to be identified.

(S/NF) In addition to the search for new analysis methods, the current methods will also be reexamined. Laboratory

32

~~SECRET~~

requirements differ from those for operational activities in that the target can be controlled and well defined. For operational activities, uncertainties in tasking may arise, especially if operational requirements are changing or if some of the initial "known" data are incorrect. Such uncertainties complicate later analyses.

(S/NF) Analysis methods will also be developed that can make predictions on data quality for any given task. This will require development of an extensive track record for each individual based on both controlled and operational projects.

(S/NF) These analysis methods will also address certain practical issues. For example, a detailed, high-quality example of AC data may have little value to an intelligence analyst if that information was known from other sources. Likewise, a poor example of AC data might provide a single element as a tip-off for other assets, or provide the missing piece in a complex analysis, and thus be quite valuable. The intelligence utility of AC data may in some cases be only weakly connected to the AC quality. Therefore a data fusion analysis procedure is needed for AC-derived operational data. Methods that permit appropriate data analysis from an accuracy and utility viewpoint will be developed.

f. (U) INTEGRATION

(U) This activity would be an on-going review/ integration effort in order to identify patterns or clues useful for understanding practical aspects of this phenomenological area.

(S/NF) Identifying approaches and procedures that permit assimilation of AC data from operational support projects into all-source intelligence analysis procedures will also be part of this support activity. Depending on results of applied research findings and operational pursuits, a basic seminar/ training program for other applications-oriented elements might be established. Such a training/seminar program would focus on basic techniques and would augment possible operational training activity that might become part of the in-house effort. This would require several years to develop and establish.

33

~~SECRET~~/NOFORN

SECRET

SG1B
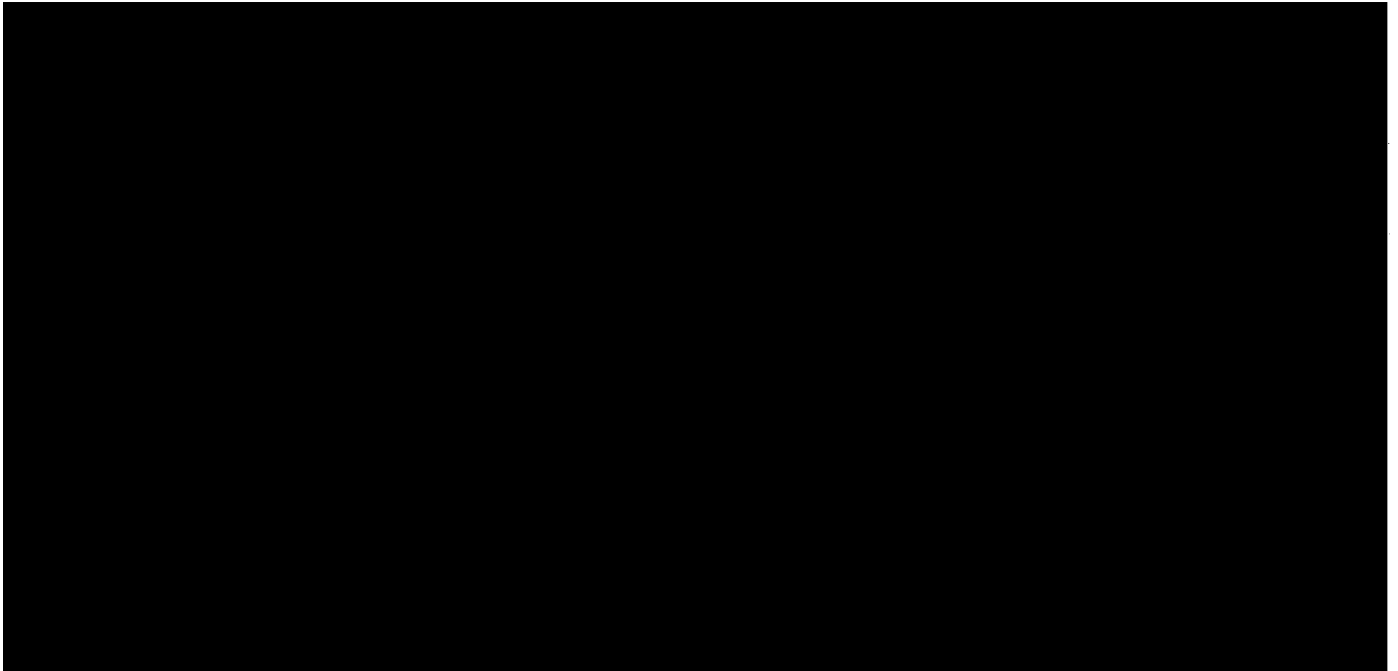
C.   (U) ADDITIONAL CONSIDERATIONS

(C) This section has presented the overall basic and applied research aspects of this long-range plan. Additional details on select applied research topic areas can be found in Appendix F.

(C) Review and refinement of research identified in this plan will continue. Adjustments can be expected as a result of continued interdisciplinary review, new research findings, or as a result of specific application needs.

VII.   (U)   PROGRAM MANAGEMENT/OVERSIGHT

(S/NF) DIA, as executive agent, has implemented a management structure that fosters a proactive, responsive, and creative environment for this activity. Both external research and in-house activities are centered in one unit (DT-S) under the direct supervision of the Assistant Deputy Director for Scientific and Technical Intelligence (DIA/DT). The DT-S unit manager also receives technical and management guidance from DIA's Research and Technology Division (DT-5).

34

SECRET/NOFORN

SECRET

(S/NF)   Project oversight is provided by a Project Review Board (PRB) that is composed of five senior management individuals selected from areas of DIA outside of DT.   In addition, a 6-member Project Oversight Panel has been established to provide program and technical guidance on all STAR GATE activities. The 28 member DIA Advisory Board has been appraised of the STAR GATE program and their recommendations have been incorporated into project activities.   Review/guidance is available from DIA's Executive Director and from the Deputy Director.   The General Defense Intelligence Program (GDIP) staff director conducts periodic project reviews and provides guidance. Links with the IC Staff help provide a broader management and program review base for this activity.

(S/NF)   Oversight for external contract activity is provided by a 6-member expert Scientific Oversight Committee (SOC).   These members are identified in Table a.   A Human Use Review Board has also been established to provide expert guidance/advice regarding contractor adherence to appropriate DOD human use regulation.

(U)   The extensive nature and scope of these various program management and oversight activities will insure that all activities identified in this long-range plan can be appropriately monitored and evaluated on an on-going basis.

35

SECRET/NOFORN

UNCLASSIFIED

TABLE a.

SCIENTIFIC OVERSIGHT COMMITTEE

Steven A. Hillyard
- Professor of Neurosciences, Department of Neurosciences, University of California, San Diego.
- Author or coauthor of 118 technical neuroscience publications.
- Eighty-two invited presentations at technical conferences.
- Ph.D., Yale University, 1968 (Psychology).

S. James Press
- Professor of Statistics, Department of Statistics, University of California, Riverside.
- Author or coauthor of 132 statistics publications.
- Author of 12 books and/or monographs.
- Ph.D., Stanford University, 1964 (Statistics).

Garrison Rapmund
- Responsible for facilitating transfer of Strategic Defense Initiative technologies to health care industries.
- Major General, USA retired in 1986 as Assistant Surgeon General (R&D) and Commander, Army Medical R & D Command.
- M.D., Columbia University, 1953 (Pediatrics).

Melvin Schwartz
- Associate Director for High Energy and Nuclear Physics, Brookhaven National Laboratory.
- Author or coauthor of 40 technical publications in high energy physics, author of "Principles of Electrodynamics."
- Nobel Prize, Physics (1988).
- Ph.D., Columbia University, 1958 (Physics).

Yervant Terzian
- Professor of Physical Sciences, Chairman of the Department of Astronomy, Cornell University.
- Author/coauthor of numerous technical publications and books.
- Ph.D., Indiana University, 1965 (Astronomy).

Phillip G. Zimbardo
- Professor of Psychology, Department of Psychology, Stanford University.
- Author/coauthor of numerous experimental psychology publications.
- Ph.D., Yale University, 1959 (Psychology).

36

UNCLASSIFIED

~~SECRET~~

VIII.   (U)   <u>ESTIMATED RESOURCE NEEDS</u>

(S/NF/SG/LIMDIS)   Due to the diversity of the STAR GATE
mission/objectives, both external resources and in-house
expertise are (and will be) required. A balance will be sought
between external and internal activities, and every effort will
be made to integrate and link these activities where appropriate.
The external aspect permits a wide range of expertise covering
many disciplines to be focused on this area; this also has the
benefit of ensuring peer group review and of facilitating a
variety of scientific interactions. In-house personnel will also
require a wide-range of expertise, and will necessarily require
retention of those with an already-demonstrated track record in
this phenomenology.

(S/NF)   For the near term (1992-1993), anticipated that at
least 10 billets, and possibly 12, be dedicated for the overall
in-house activity as outlined in this plan. Later (1994-1996),
additional personnel would be required due to anticipated growth
in world-wide research and increases in operational demands. At
least 4-8 additional specialists would be required.

(U)   Details on in-house staffing requirements are in
Appendix I.

(C)   External research levels would require at least $2-3
million for FY 1992 with approximately $5-6 million per year for
the next 4-5 years. The bulk of this funding will be for R&D;
however, a small portion of O&M is required to maintain in-house
research support, equipment maintenance, and for direct
operational support activity. For FY 1992, at least $200K would
be required for anticipated in-house operational activity and to
support the various external research projects.

37

~~SECRET~~

APPENDIX A

TERMINOLOGY AND DEFINITIONS (U)

CLASSIFIED BY: DIA/DT
DECLASSIFY ON: OADR

~~SECRET~~/NOFORN

UNCLASSIFIED

APPENDIX A

TERMINOLOGY AND DEFINITIONS

(U) **PHENOMENA TERMINOLOGY**

(U.) This phenomenological area has had a variety of descriptive terms over the years, such as paranormal, parapsychological, or as psychical research. Foreign researchers use other terms: "psychoenergetics" in the USSR; "extraordinary human function" in the People's Republic of China (PRC). In general, this field is concerned with a largely unexplored area of human consciousness/subconsciousness interactions associated with unusual or underdeveloped human capabilities.

(U) Recently, researchers have shown a preference for terms that are neutral and that emphasizes the anomalous or enigmatic nature of this phenomena. The term anomalous mental phenomena (AMP), is generally preferred.

(U) This area has two aspects; information access and energetics influence. Information access refers to a mental ability to describe remote areas or to access concealed data that are otherwise shielded from all known sensory channels. A recent term for this ability is anomalous cognition (AC). This term places emphasis on potential understanding that might be available from advances in sensory/brain functioning research or other related research. Older terms for this aspect have included extra-sensory perception (ESP), remote viewing (RV), and in some cases, precognition.

(U) The energetics aspect refers to the ability to influence, via mental volition, physical or biological systems by an as yet unknown physical mechanism. An example of physical system influence would include affecting the output of sensors or electronic devices; biological systems influence would include affecting physiological parameters of an individual. A recent descriptive term for this ability is anomalous perturbation (AP). Older terms for this phenomenon included psychokinesis (PK) or telekinesis.

A-1

UNCLASSIFIED

~~SECRET~~

(U) GENERAL DEFINITIONS

(S/NF) For this program, basic research is defined to mean any investigation or experiment for determining fundamental processes or for uncovering underlying parameters that are involved in this phenomenon. Basic research is primarily oriented toward understanding the physical, physiological , and psychological mechanisms of anomalous mental phenomena (AMP).

(S/NF) Applied research refers to any investigation directed toward developing particular applications or for improving data quality and reliability. For anomalous cognition (AC) phenomenon, research is primarily directed toward improving the output quality of AC data. This would include ways to develop/improve utility of AC data for variety of potential application. For example, examination of spatial and temporal relationships of AC data could assist in developing a reliable search capability useful for locating missing people or equipment.

A-2

~~SECRET~~/NOFORN

~~SECRET~~

APPENDIX B

BRIEF HISTORY OF PHENOMENOLOGICAL AREA (U)

NOT RELEASABLE TO FOREIGN NATIONALS

LIMITED DISSEMINATION

REPRODUCTION REQUIRES
APPROVAL OF ORIGINATOR
OR HIGHER DOD AUTHORITY

FURTHER DISSEMINATION
ONLY AS DIRECTED BY DT
OR HIGHER DOD AUTHORITY

CLASSIFIED BY: DIA/DT
DECLASSIFY ON: OADR

~~SECRET~~/NOFORN/LIMDIS
STAR GATE

~~SECRET~~

APPENDIX B

BRIEF HISTORY OF PHENOMENOLOGICAL AREA

(U) In the mid-late 1800's, investigations into anomalous mental phenomena (AMP) were initiated by a very limited number of researches working essentially independent of one another in various countries. The early investigators were motivated to examine this area due to evidence suggested by a wide variety of anecdotal accounts of spontaneous occurrences. Many of these early investigations focused on case study collection and analysis; some were aimed at proof-of-principle and were based on the psychological perspectives of that time-period.

(U) The most well known early US researcher was J. B. Rhine at Duke University, NC; he explored proof-of-principle by use of simple experimental targets (5 symbols) and well-established statistical methods. In the 1960's, new US work began that examined psychological variables and psychological states; this new work incorporated a wide variety of target material in the experimental set-up. However, none of this early research examined application potential of this area, and very little of it examined distance effects of the phenomena.

(S/NF) Initial evidence of interest of applying this phenomena emerged from USSR research in the mid-late 1960's. The Soviet researchers were interested in the use of "ESP" in a long-distance communication mode, and had conducted several successful long-distance communication experiments. The Soviet were also heavily into the energetics aspect of AMP, and reported success involving mental influence on material objects as well as influence of the psychological/physiological states of target individuals. Soviet work was aimed both at phenomena understanding and at application pursuits.

(S/NF) In the early 1970's, US researchers at SRI-International, Menlo Park, CA, also initiated research into phenomena understanding and application pursuits. This work, centering on "remote viewing (RV)" came to the attention of the CIA. Subsequently, CIA provided funding to SRI for continuing RV research. CIA funding was discontinued in 1975; subsequent funding for RV investigation at SRI was provided by DIA and some of DIA's

~~SECRET~~/NOFORN

~~SECRET~~

service support elements with occasional support from various R&D organizations. DIA's interest in funding this area was primarily from a threat assessment point-of-view in order to help understand the Soviet work.

(S/NF) Since most of the SRI funding was based on a variety of private and government sources, it was very difficult to establish a coherent integrated research/development program. Funding was limited and subject to extreme cyclic and sporadic activity that prevented systematic research. However, several important research findings were nevertheless realized. Among these were: (1) distance/shielding do not effect results; (2) some people have an innate capability to perform well; (3) goal orientation is more important then psychological factors/states or the nature of the target; and (4) a potential correlation between remote viewing capability and certain brain neurons (via Magnetoencephalograph measurements) may exist. These findings were based on research procedures and techniques that received critical review by an expert 9-person Scientific Oversight Committee. The research approach and procedures were judged scientifically sound.

(U) Research findings in this area are sometimes not readily accepted, regardless of adequacy of experimental controls or integrity of the investigators. Consequently, a variety of negative views can be found concerning the same data. Such views have had a retarding effect on the field and on funding. Part of the controversy lies in the difficulty of agreement between "proof-of-principle" and "reasonable demonstration" demands. A listing of recent publications that illustrate both negative as well as balanced perspectives is shown on Table b.

(U) However, attempts to apply anomalous mental phenomena do not depend on the need for formal proof. Although formal scientific acceptance could be helpful, the history of application investigations in this field demonstrates that at least some level of application reliability can be achieved for some types of projects. The issue is how to improve overall data quality/ reliability (the main thrust of this research and investigation plan) so that wider use can be made of this potential capability.

(S/NF/SG/LIMDIS) The successful long distance SRI remote viewing experiments from the 1970's generated interest in operational pursuits with in-house government personnel. In the late 1970's,

B-2

~~SECRET~~

HQDA/INSCOM established a small unit for "development of a community capability" in RV. This unit was transferred to DIA in 1986 when 12 billets were authorized in the GDIP budget for this activity. A Special Access Program (SAP), SUN STREAK, was established in order to protect identity of the individuals and due to the nature of some of the projects examined.

(S/NF/SG/LIMDIS) A variety of potential operational projects were investigated over the next few years; in 1989 the Military Intelligence Board (MIB) agreed to examine the utility of the project under field conditions involving counternarcotics projects. The MIB reviewed results of this test period in September, 1990. Subsequently, the SUN STREAK operational development and SAP aspect of this activity was cancelled. STAR GATE was established to overcome the deficiencies of earlier efforts and to permit a more systematic and scientifically sound approach to the research and to application potential investigations. All STAR GATE activities are conducted in accordance with appropriate scientific procedures and methodologies.

UNCLASSIFIED

TABLE b.

RECENT REVIEWS OF PHENOMENOLOGICAL AREA

<u>Critical</u>: "Enhancing Human Performance; Issues, Theories and Techniques"; National Research Council (NRC), 1988, Washington, D.C.

- This report states that over 130 years of parapsychological research have not proven the phenomena and that many methodological flaws exist. However, it recommends that foreign work (especially USSR) be monitored.

<u>Response to Above</u>: "Reply to the National Research Council Study on Parapsychology"; a special report prepared for Board of Directors of the Parapsychological Association, Inc., 1988; Research Triangle Park, N.C.

- Points out several evaluation procedural flaws in the NRC report (e.g., data selection, not visiting leading researchers, unbalanced approach). This response states that strong cases have been established for phenomena existence.

<u>Balanced</u>: "Report on a Workshop on Experimental Parapsychology"; International Security and Commerce Program, Office of Technology Assessment (OTA), 22 February 1989.

- Discusses experimental reproducibility, methodological and other problems; points out that experimental results   in this field are as robust as in other areas of the social/psychological sciences; and calls for improved open dialogue along with pursuit of applications as part of an overall acceptance strategy.

<u>Balanced</u>: "The Anomaly Called Psi: Recent Research and Criticism"; Behavioral and Brain Sciences (1987) 10, 539-643; Cambridge University Press.

- Points out that over 100 years of research can lay claim to phenomena demonstration, even though the signal is weak. Urges for practical applications of psi, regardless of the small effects noted in the laboratory environment.

B-4

UNCLASSIFIED

~~SECRET~~

APPENDIX C

STAR GATE BACKGROUND (U)

NOT RELEASABLE TO FOREIGN NATIONALS

LIMITED DISSEMINATION

REPRODUCTION REQUIRES
APPROVAL OF ORIGINATOR
OR HIGHER DOD AUTHORITY

FURTHER DISSEMINATION
ONLY AS DIRECTED BY DT
OR HIGHER DOD AUTHORITY

CLASSIFIED BY: DIA/DT
DECLASSIFY ON: OADR

~~SECRET~~/NOFORN/LIMDIS
STAR GATE

~~SECRET~~

APPENDIX C

STAR GATE BACKGROUND

(S/NF/SG/LIMDIS) STAR GATE was initiated by DIA in FY 1991 in order to carry out Congressional committee recommendations. The Congressional action established a new program "intended to provide a more systematic and scientifically sound approach to research in this area," and a "wider and more systematic review of potential intelligence applications" involving anomalous mental phenomena (AMP). The Congressional conferees designated DIA as the executive agent for this new program, and agreed that DIA should:

-   "Formulate and provide to Congress a long-range comprehensive plan for research and applied research for the program."

-   "Develop an integrated data base on foreign efforts on these phenomena, particularly those of the Soviets and the Chinese."

-   "Levy and prioritize requirements for the program as appropriate."

-   "Provide for systematic and independent assessment of program results."

-   "Assure proper documentation of all activities and plans based on scientific methodology and evaluation."

-   "Arrange for an appropriate level of external assistance to the program."

(S/NF) A funding level of $2 million was authorized in FY 1991 to initiate this program and to develop a comprehensive long-range plan. All of the key objectives for FY 1991 have been initiated and many have been accomplished (see Appendix D; STAR GATE Status). A limited access (LIMDIS) program, STAR GATE, was established for this overall effort in October 1990.

C-1

~~SECRET/NO~~FORN/LIMDIS
STAR GATE

SECRET

APPENDIX D

STAR GATE STATUS - JUNE 1991 (U)

NOT RELEASABLE TO FOREIGN NATIONALS

LIMITED DISSEMINATION

REPRODUCTION REQUIRES
APPROVAL OF ORIGINATOR
OR HIGHER DOD AUTHORITY

FURTHER DISSEMINATION
ONLY AS DIRECTED BY DT
OR HIGHER DOD AUTHORITY

CLASSIFIED BY: DIA/DT
DECLASSIFY ON: OADR

SECRET/NOFORN/LIMDIS
STAR GATE

~~SECRET~~

APPENDIX D

STAR GATE STATUS - JUNE 1991

A. (S/NF) <u>Long-Range Comprehensive Plan</u>:

   - A basic and applied research general plan was developed on 15 November 1990.

   - A long-range comprehensive plan was completed on 28 June 1991.

B. (S/NF) <u>Integrated Foreign Data Base</u>:

   - Collection requirements were identified on 9 November 1990.

   - All-source collection plans were documented on 15 January 1991.

   - Specific collection plans were implemented starting on 27 March 1991.

   - An initial bibliographic data base was developed and entered into the project system on 16 November 1990.

   - Automatic Data Processing (ADP) requirements for all anticipated data bases and support activities were identified on 20 December 1990:

   -- Some basic equipment has been obtained.

   -- ADP system procurement is underway.

SG1A

   - A detailed report on USSR and PRC work was published on 28 June 1991.

C. (S/NF) <u>Program Requirements</u>:

   - Research requirements were identified on 15 November 1990.

D-1

~~SECRET~~/ΠOFORΠ

~~SECRET~~

- Foreign collection requirements were levied and prioritized as of 27 March 1991.

D. (S/NF) <u>Independent Assessment</u>:

- An independent review/assessment mechanism was implemented on 20 December 1990.

- A Project Review Board was established on 17 January 1991.

- A Project Oversight Panel was established on 9 April 1991.

- A Scientific Oversight Committee was established on 28 June 1991.

E. (S/NF/SG/LIMDIS) <u>Proper Documentation</u>:

- A limited access project was established for this activity on 23 October 1991.

- General project protocols were documented on 21 November 1990.

- Protocols for beacon person targeting were published on 13 December 1990.

- Potential tasking mechanisms were published on 10 January 1991.

- Security procedures were developed and published on 15 January 1991.

- Procedures for special proficiency targets were published on 5 April 1991.

- Project procedures were reviewed and modified; findings were published on 5 April 1991.

- A symposium summary and an off-site review summary were published on 15 March 1991 and 29 April 1991.

~~SECRET~~/NOFORN/LIMDIS
STAR GATE

~~SECRET~~

- Over ten documents on various project investigations were published between 30 October 1990 and 5 April 1991.

- A detailed proficiency enhancement project report was published on 21 June 1991.

- A detailed operational plan for the remainder of FY 1991 was published on 24 June 1991.

- External research will adhere to sound scientific methodology under the auspices of an expert Scientific Oversight Committee established at contract start.

- Human use aspects of the external research will be reviewed and appraised by an expert Human Use Review Board established at contract start.

F.   (S/NF)   External Assistance:

- A basic and applied research general plan was developed on 15 November 1990.

- Basic and applied research requirements for the initial contract were documented on 29 November 1990.

- An external contract package was prepared on 7 December 1990. This contract was signed on 28 June 1991. Research identified will extend into FY 1992.

D-3

~~SECRET~~/NOFORN/LIMDIS
STAR GATE

~~SECRET~~

APPENDIX E

IN-HOUSE ACTIVITY DETAILS (U)

NOT RELEASABLE TO FOREIGN NATIONALS

LIMITED DISSEMINATION

REPRODUCTION REQUIRES
APPROVAL OF ORIGINATOR
OR HIGHER DOD AUTHORITY

FURTHER DISSEMINATION
ONLY AS DIRECTED BY DT
OR HIGHER DOD AUTHORITY

CLASSIFIED BY: DIA/DT
DECLASSIFY ON: OADR

~~SECRET~~/NOFORN/LIMDIS
STAR GATE

UNCLASSIFIED

APPENDIX E

IN-HOUSE ACTIVITY DETAILS

(U) Specific milestones and activity details for STAR GATE in-house activities are shown on the tables in this appendix. There are four tables for the main in-house activities: (1) Assessment of Foreign Effort; (2) Research Support; (3) Systematic Review of Potential Intelligence Applications; and (4) In-House Project Support.

E-1

UNCLASSIFIED

Next 1 Page(s) In Document Exempt

~~CONFIDENTIAL~~

TABLE 1

ASSESSMENT OF FOREIGN EFFORTS, ctd

KEY ACTIVITY	COMMENTS
6. EXTERNAL SUPPORT:	
o Foreign data base review	o Contractor to assist in-house activity on an as-needed basis.
o Simulate/replicate significant foreign research	o Anticipate at least one or two major foreign simulations per year to begin FY 1992.

E-4

~~CONFIDENTIAL~~/NOFORN

~~CONFIDENTIAL~~

TABLE 2

RESEARCH SUPPORT

KEY ACTIVITY	COMMENTS
1. RESEARCH NEEDS:	
o Identify near and far-term requirements	o Baseline needs are identified in this plan. o Specific needs, and appropriate time-phasing, will be identified by Nov 91 and will depend on funding levels, results of FY 1991 research, and on priorities established at the end of this fiscal year.
o Conduct frequent research requirement reviews	o These requirements will be updated by Jun 92 after operational need surveys are complete (see TABLE 3) and additional contacts are made with potential contributors. o These updates will include consideration of a variety of laboratory and government assets. For example, possible operational parameters might be identified if project personnel perform from shielded rooms, submarines, silos, or other unique areas. NASA personnel, or possibly astronauts, might become involved.

E-5

~~CONFIDENTIAL~~/NOFORN

~~CONFIDENTIAL~~

TABLE 2

RESEARCH SUPPORT, ctd.

KEY ACTIVITY	COMMENTS
	o Some of the on-going research at facilities identified in Appendix G would also be involved in joint investigation projects.
2. PROCEDURES:	
o Identify basic procedures/ protocols for anticipated involvement of in-house personnel with external research projects.	o Baseline document to be completed by Sep 91 with detail updates to follow as needed.
3. EXTERNAL RESEARCH SUPPORT:	
o Identify how in-house personnel link to specific external research support activity:	o Basic approach to be developed by Dec 91, with an update by Jun 92.
- Includes both infor- mational and energetics aspects	o Annual updates are anticipated.
- Includes a variety of project types that are designed to look for phenomena variables.	

E-6

~~CONFIDENTIAL~~/NOFORN

~~CONFIDENTIAL~~

TABLE 2

RESEARCH SUPPORT, ctd.

KEY ACTIVITY	COMMENTS

4. IN-HOUSE APPLICATIONS RESEARCH:

o Identify/conduct limited in-house research to supplement external research projects.

o Baseline approach to be developed by Nov 91; detailed supplements will be developed as appropriate depending on operational survey results and data base reviews.

  - In-house research to be compatible with proficiency projects, customer needs, operational constraints, and resource/personnel constraints.

~~CONFIDENTIAL/~~NOFORN

~~SECRET~~

TABLE 3

SYSTEMATIC REVIEW OF POTENTIAL
INTELLIGENCE APPLICATIONS

KEY ACTIVITY	COMMENTS
1. CONSUMER REVIEW:	
o Formally canvass all potential users for needs, collection priorities (INTEL, FBI, Secret Service, Customs, other)	o Will be initiated Nov 91. <u>NOTE</u>: Fig 1 illustrates potential data type and generic application areas that will be considered.
	o Review/assess/publish results by Feb 92.
2. DATA BASE REVIEWS:	
o Review all available contemporary data bases to look for clues, patterns, limitations, both in research and in application areas (e.g., police cases, medical diagnostics, FBI files, archaeology, intelligence). Bring in contractor/ consultant to assist in statistical aspects.	o Plan/approach to be developed by Dec 91.
	o Initiate contacts, data base reviews by Jan 92.
	o Review various data bases; consult as required (Feb-Jul 92).
	o Perform analysis where possible; assess significance by mid 92.
	o Publish findings (late 92-early 93).
o Perform extensive review od historical data/ literature that could assist or add insight. Requires extensive library/archives research.	o Develop plan/approach by Dec 91; complete by mid 92.

E-8

~~SECRET~~/NOFORN/LIMDIS
STAR GATE

~~SECRET~~

TABLE 3

SYSTEMATIC REVIEW OF POTENTIAL
INTELLIGENCE APPLICATIONS, ctd.

KEY ACTIVITY	COMMENTS
3. SYSTEMATIC PROJECTS: o Based on results of need/ priority survey, construct a series of controlled projects for each application area or type in order to assess potential capability and utility.	o Initiate pilot projects by mid 92; set up a comprehensive schedule for performing in-depth investigations using in-house and contractor/ consultant resources. These will be extensive projects involving distant locations and possibly intelligence counterparts in other countries. (Groundwork for this was established in May 91). This pilot series of projects would extend through 1992 and 1993. The specific data type (e.g., tip-off, search) for a variety of application areas (e.g., counter-narcotics as illustrated on Fig 1 will form the basis of this assessment. A comprehensive review of all possible application types may extend through 1994 or 1995.

E-9

~~SECRET~~

TABLE 3

SYSTEMATIC REVIEW OF POTENTIAL
INTELLIGENCE APPLICATIONS, ctd.

KEY ACTIVITY	COMMENTS
3. SYSTEMATIC PROJECTS, ctd.	
o Related to this task is a parallel function of personnel selection/ training;development. Contractor support will be required.	o In-house personnel will be provided various types of training/practice in order to maintain proficiency. Some project procedures have been published (beacon, special proficiency). Others will be developed and published on a frequent basis.
o Review existing training and development methods. This requires broadbased review of relevant worldwide literature (e.g., yoga practices, marital arts).	o Literature review initiated Mar 91. Anticipate comprehensive review completed by Jan 92.
o As part of this function, the energetics aspect will also be investigated and pilot studies initiated. The external contract will conduct appropriate exploratory research.	o This requires use of select consultants and/or location of appropriate personnel who have demonstrated abilities in this area. Special equipment may also be required. An extensive research and investigative protocol will be developed by mid 1992.

E-10

~~SECRET~~

TABLE 3

SYSTEMATIC REVIEW OF POTENTIAL
INTELLIGENCE APPLICATIONS, ctd.

KEY ACTIVITY	COMMENTS
3. SYSTEMATIC PROJECTS, ctd.	
o It is anticipated that special operational projects will arise on a quick reaction task (QRT) basis or via scheduled activity. These may not always be systematic in nature; however, results from these operational activities will greatly assist in this overall applications assessment effort.	o These operational projects will have priority over the systematic review activities. They are anticipated to occur at frequent intervals beginning by mid-late July, 1991. QRT support had previously been provided for DESERT SHIELD/STORM activities.
	o A detailed plan has already been developed for initiating these projects. This plan is documented in DT-S-1038-SL, Operational Activity and Near-Term Plans, 24 June 1991.
o Summarize findings	o A series of reports will be published for each application area reviewed. These reports will identify feasibility, limitations, conditions for use/success, and other issues relevant to operational pursuits.

E-11

~~SECRET~~/NOFORN/LIMDIS
STAR GATE

~~SECRET~~

TABLE 3

SYSTEMATIC REVIEW OF POTENTIAL
INTELLIGENCE APPLICATIONS, ctd.

KEY ACTIVITY	COMMENTS
4. DATA IMPROVEMENT: o Develop techniques/ strategies that help improve probability of success. This may involve Data base reviews to identify trends/patterns and to see if person/task type matching (or some other strategy) may help in selecting the proper data or in reducing erroneous aspects. External assistance will be required.	o Data bases will be reviewed and specific projects initiated to evaluate this issue. Preliminary results are anticipated by early 1992. Follow-on efforts are anticipated for 1993 and 1994 to investigate new ideas or results from research findings.

~~SECRET~~/NOFORN/LIMDIS
STAR GATE

~~CONFIDENTIAL~~

TABLE 4

IN-HOUSE PROJECT SUPPORT

KEY ACTIVITY	COMMENTS
1. DOCUMENTATION:	
o Develop/unique proper program documentation, evaluation procedures, activity protocols for research support, proficiency training and operational projects.	o Basic project baseline documents have been completed (Nov 90, Dec 90, Jan 91, Apr 91, Jun 91). o Others will be prepared as needed for new research, proficiency, and operational projects or activity. o Additional details are in items D and E of Appendix D. These include project oversight and review procedures.
2. DATA BASE REQUIREMENT:	
o Identify project data base needs	o Basic requirements identified Dec 90.
o Provide for maintenance and training	o Final procurement expected by Sept 91. o Four project personnel will complete detailed equipment training by Sep 91. o Needs will be reviewed/ updated annually.

~~CONFIDENTIAL~~/NOFORN

~~CONFIDENTIAL~~

TABLE 4

IN-HOUSE PROJECT SUPPORT, ctd.

KEY ACTIVITY ·	COMMENTS
3. PROFICIENCY/OPERATIONAL SIMULATION TARGETS: o Develop appropriate proficiency/skill maintenance methods. This includes development of a variety of homogeneous target pools along with automated methods of data recording and data base analysis.	o Target pool development was initiated in Mar 91 and comprehensive material is now being assembled. Basic target pool approach was documented in Jun 91. Details to be completed by Dec 91.
4. PROJECT OPERATIONAL TASKING: o Develop procedures for reviewing/accepting/ levying operational tasks or project personnel.	o Basic approach published Jan 91. o Update to specific aspects published Jun 91. o Additional review/updates as needed.
5. DATA FUSION: o Develop methods for incorporating project operational data into intelligence assessment activity.	o A preliminary approach will be identified by Jun 92 following consumer need and data base reviews. o This is a difficult task. Some relevant work has been documented; however, a comprehensive utility analysis method, data fusion and data base procedure needs developing.

E-14

~~CONFIDENTIAL~~/NOFORN

~~CONFIDENTIAL~~

TABLE 4

IN-HOUSE PROJECT SUPPORT, ctd.

KEY ACTIVITY	COMMENTS
6. <u>PERSONNEL TRAINING</u>: o Identify appropriate training methods; personnel proficiency; and identify other professional needs.	o A detailed review of proficiency and professional development needs will be completed by Mar 92. Results of data base reviews (Item 3, Table 3) will be considered.
7. <u>CONSUMER TRAINING/SEMINARS</u>: o Develop procedures for possible customer training/development in select areas. This may be a joint project in certain cases (e.g., FBI activities) due to their previous seminars on this topic.	o Initially, this activity could take the form of informational seminars. This could lead into joint training/proficiency projects and could eventually form the basis of a training program for other government users such as HUMINT case officers. Such an activity would be integrated with research projects and would be an extension of research laboratory techniques modified for operational situations. o It is anticipated that the existing DIA assets would form the basis of this potential training/ seminar activity.

E-15

~~CONFIDENTIAL/~~NOFORN

~~SECRET~~

APPENDIX F

SELECT APPLIED RESEARCH DETAILS (U)

CLASSIFIED BY: DIA/DT
DECLASSIFY ON: OADR

~~SECRET~~/NOFORN

UNCLASSIFIED

APPENDIX F

SELECT APPLIED RESEARCH DETAILS (U)

A. (U) GENERAL

(U) This appendix provides additional details on two of the applied research areas. These are Personnel Selection and Personnel Training.

B. (U) PERSONNEL SELECTION

(U) Selecting personnel who are potentially capable of demonstrating high-quality AC is an important issue. Traditional psychological screening methods have not been particularly successful in the past, and general random behavioral screening is inefficient. Figure 9 outlines the approach for developing a personnel selection procedure.

    1. (U) **Populations:** The first step of selecting a candidate individual (receiver) is to identify those who might possess natural AC ability. Such individuals might be chosen from the general population at large, chosen on the basis of special characteristics (e.g., neurophysiology), or drawn from specialized groups such as photointerpreters. Past research has indicated that careful selection of populations can significantly enhance the likelihood of finding good receivers.

    2. (U) **Hypnotic Susceptibility:** A selected individual enters into a complete screening program that explores a variety of physiological and psychological techniques. As part of a general exploration of the effects of hypnosis on improving AC reception, earlier results showed that the best receivers also scored high on the standard Stanford Hypnotic Susceptibility Scale. Whatever internal structures that allow some individuals to be hypnotized more easily than others might also potentially influence an individual's capacity as a receiver. Because of the simplicity of implementation and the standard nature of this susceptibility measure, the research plan includes determining its efficacy as a receiver-selection procedure.

    3. (U) **Micro-Physiology:** As part of a previous neurophysiological investigation, the best receivers produced exceptional central nervous system responses to direct light

F-1

UNCLASSIFIED

UNCLASSIFIED

SELECTION PROCEDURES

```
                    ┌─────────────────────┐
                    │     Hypnotic        │
                    │  Susceptibility     │
                    └─────────────────────┘
                    ┌─────────────────────┐
                    │    μ-Physiology     │
                    └─────────────────────┘
                    ┌─────────────────────┐      ┌──────────────┐
                    │    Self report      │      │  Candidate   │
                    └─────────────────────┘      │  Receiver    │
┌──────────────┐    ┌─────────────────────┐      └──────────────┘
│  Selected    │    │      Q-Sort         │      ┌──────────────┐
│ Populations  │───▶│                     │─────▶│ Procedure-   │
└──────────────┘    └─────────────────────┘      │ Specific     │
┌──────────────┐    ┌─────────────────────┐      │ Criteria for │
│ Unselected   │    │       PAS           │      │ Acceptance   │
│ Populations  │    └─────────────────────┘      └──────────────┘
└──────────────┘    ┌─────────────────────┐      ┌──────────────┐
                    │    Behavioral       │      │  Candidate   │
                    └─────────────────────┘      │  Exits       │
                    ┌─────────────────────┐      │  Program     │
                    │     Others          │      └──────────────┘
                    └─────────────────────┘
```
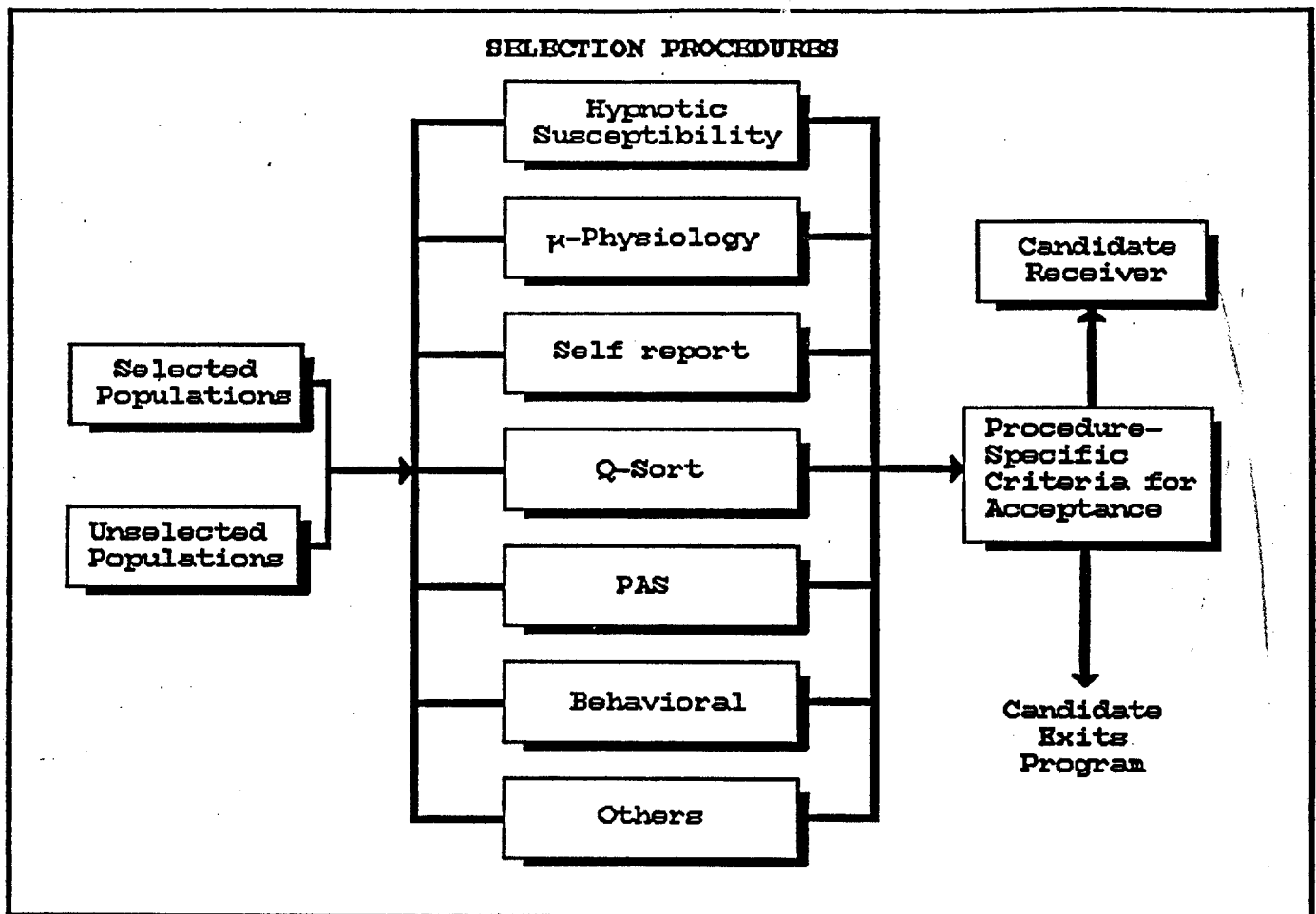
FIG. 9. (U) Personnel

UNCLASSIFIED

UNCLASSIFIED

stimuli. Perhaps the internal hard-wiring of the visual cortex bears on the question of AC reception as well. The techniques used to measure visual evoked responses are standard and relatively easy to implement, so this, along with an investigation of a variety of other physiological variables, will be a major part of the effort to identify good receivers.

4. (U) **Self Report:** As the name implies, this field of parapsychology has traditionally focussed on the psychology of receivers. Part of that effort has been devoted to the selection process; however, it has not been particularly successful. Small, but statistically significant personality effects have been observed in several studies. The Meyers-Briggs Type Inventory (i.e., one self-report personality test) indicates that good receivers in this procedure tend toward extroversion. This is the very type of individual who would most likely feel comfortable in many experimental circumstances. Whereas, good AC receivers tend toward introversion, which is inconsistent with the techniques used in many procedures. The research plan includes examining various personality types to clarify this issue.

5. (U) **Q-Sort:** The Q-Sort is an empirically-based, self-report personality instrument. It differs from other instruments in that individuals are not forced to describe themselves along pre-specified dimensions. A preliminary investigation of the Q-Sort to identify good receivers was promising, and thus, exploration of it is included in the overall research plan.

6. (U) **Personality Assessment System (PAS):** The personality assessment system is a behavioral measure of personality. One of the major criticisms of self-report instruments as measures of personality is that the output is filtered by the very personality that is under investigation. The PAS assumes, in a sophisticated model of personality, that performance in specific tasks is affected by personality variables. While the PAS procedure is quite elaborate to administer, nonetheless it is included as part of the research plan, because of its initial success.

7. (U) **Behavioral:** In an earlier pilot study, a trained behavioral psychologist was able to select the best AC sessions from a single series consisting of good and bad examples of AC responses. In that experiment, a set of subjective, large-scale

F-3

UNCLASSIFIED

behavioral measures were developed from a number of previously video-taped AC sessions of the same receiver. The preliminary results were encouraging, and thus, this technique is included in the research plan.

8. (U) **Empirical**: Because the PAS and self-report methods have previously not been particularly successful at screening individuals for natural, high-quality AC ability, the empirical approach was favored by the earlier program. This approach assumes that the best way to identify individuals is to ask large numbers of them to participate in AC experiments and select those that score well. While this procedure appears to work, it is very inefficient and labor-intensive. Only approximately one percent of individuals from unselected populations demonstrate high-quality, natural AC ability. The empirical approach is included in the research plan as an alternate approach.

9. (U) **Criteria for Acceptance**: The next step is to establish criteria for accepting a given screening procedure. It is likely that a specific procedure may not provide candidates for all types of AC tasks; therefore, the criteria must be sensitive to potential receiver specialties.

(S/NF) A successful conclusion of this topic will include a series of specialty-dependent selection manuals that can be used to optimize the staff of an operations unit, and provide additional receivers for research.

C. (U) <u>PERSONNEL TRAINING</u>

(S/NF) Once an individual has been selected, that individual must be trained for the laboratory environment, an operational unit, or both. Regardless of the end use, the initial stages of the training are similar. Figure 10 outlines the approach for developing efficient training methodologies.

1. (U) **Baseline Calibration**: In order to assess the effectiveness of training, a first step is to establish baseline measures of the receiver's innate abilities. This involves a variety of standardized, specialty-dependent AC tasks, and considerable research is required to identify them. For example, suppose that Specialty A involves an individual who, by using an AC skill, is proficient at describing personalities. Baseline calibration measures must measure a trainee's innate skill in this and all other specialties, so that the efficacy of the

Training Procedures

```
                    ┌──────────────┐
                    │ Subliminal   │
                    │ Threshold    │
                    └──────────────┘
                    ┌──────────────┐
                    │ Altered      │
                    │ States       │
                    └──────────────┘                      ┌─────────────┐
                    ┌──────────────┐      ┌──────────┐     │ Specialist  │
                    │ Biofeedback  │      │ Practical│     │ A           │
┌────────────┐      └──────────────┘      │ Application   └─────────────┘
│ Baseline   │      ┌──────────────┐      │ Test-Bed │     ┌─────────────┐
│ Calibration│      │ Feedback     │      └──────────┘     │ Specialist  │
└────────────┘      │ Conditioning │           │          │ B           │
                    └──────────────┘      ┌──────────┐     └─────────────┘
      ┌──────────┐  ┌──────────────┐      │ Specialist│    ┌─────────────┐
      │ Response │  │ Empirical    │      │ Dependent │    │ Specialist  │
      │Calibration│ └──────────────┘      │ Criteria  │    │ C           │
      └──────────┘  ┌──────────────┐      └──────────┘     └─────────────┘
                    │ Others       │                       ┌─────────────┐
                    └──────────────┘                       │ Specialist  │
                                                           │ D           │
                                                           └─────────────┘
                                                           ┌─────────────┐
                                                           │ Specialist  │
                                                           │ E           │
                                                           └─────────────┘
```

Baseline Calibration → [Subliminal Threshold, Altered States, Biofeedback, Feedback Conditioning, Empirical, Others] → Response Calibration → Specialist Dependent Criteria → [Specialist A, Specialist B, Specialist C, Specialist D, Specialist E]

Response Calibration ↓
Failed Minimum Criteria for Acceptance. Procedure is Abandoned

Practical Application Test-Bed ↓ Specialist Dependent Criteria

Specialist Dependent Criteria ↓
Failed Minimum Criteria. Receiver Exits Program
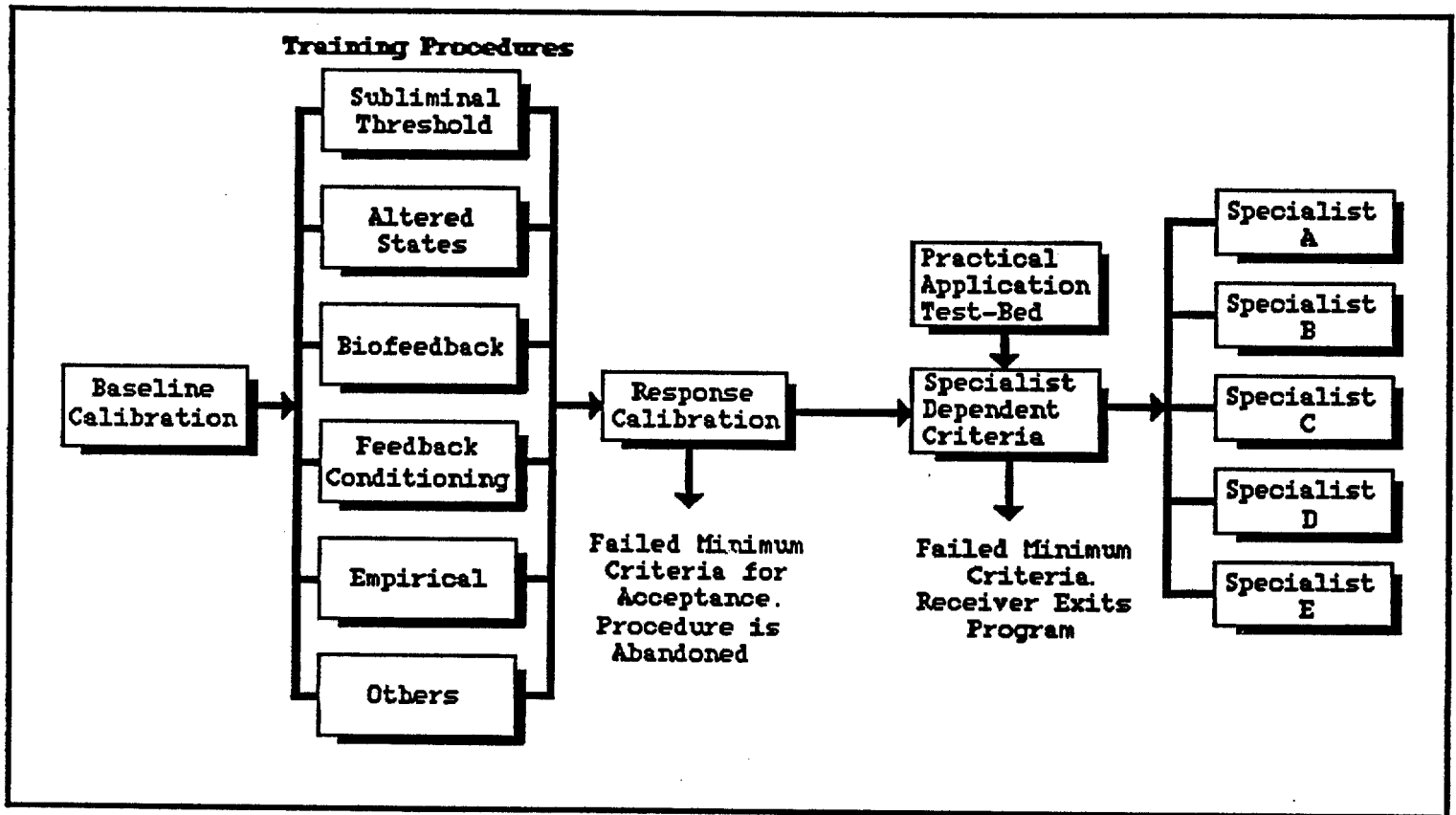
FIG. 10. (U) Personnel Training

F-5

training can be determined. At present, the only known statistically valid way to measure AC ability is to conduct many trials over an extended period of time. As more is learned about AC mechanisms, it is likely that increased statistical power will allow us to reduce the number of trials, and thus the time period and the resource commitment that is required.

(U) Once the baselines have been determined, the receiver will be trained by a number of specific techniques. Those shown in Figure 10 have been chosen because there is supporting evidence that suggest that each may contribute to AC training.

2.   (U) **Subliminal Threshold:** A preliminary investigation showed that individuals who possessed a low internal threshold of environmental awareness ultimately performed well in AC tasks. Because of the potential distraction of the lower threshold, the initial performance is likely to be substandard; however, if the receiver can be disciplined to recognize distractions, the final performance will be markedly improved. The literature suggests that the visual subminimal threshold can be lowered by training. Using a device that displays visual material for very brief intervals, individuals learn to increase their sensitivity to brief visual displays. The hypothesis, then, for potential AC training is that a lower visual subliminal threshold will enhance an individual's AC detection capability.

3.   (U) **Altered States:** Research has shown that various altered states (i.e., various degrees of relaxing) can reduce "noise" that interferes with AC functioning. Two candidate "states" are dreaming and hypnosis; these will be examined in this program.

a.   (U) <u>Dreaming</u>: This is a form of altered state that reduces somatic-sensory input and has been examined in detail as a procedure to elicit AC data. It has not been particularly successful at producing consistent high-quality responses. One possibility for the lack of success is that the dreamer is given little, or no detailed instructions prior to sleep. In the unstructured dreaming approach, receivers are asked to describe their internal experiences without regard to any particular instructions. Lucid dreaming, which is defined as a dream during which the dreamer becomes aware that his or her experience is a

~~SECRET~~

dream, can be structured to include complicated pre-sleep instructions that are later carried out during the lucid part of the dream. This type of altered state has potential as a training technique.

b. (U) Hypnosis: Hypnosis is another form of altered state that may reduce somatic-sensory noise and that also includes the possibility of structure. AC task instructions can be provided either in the hypnotic state or as post-hypnotic suggestions. Earlier work showed promising results in a preliminary investigation, but those techniques were not specifically applied in a training environment. By employing various hypnosis procedures, the hypothesis that structured hypnosis can assist in training receivers can be tested.

2. (U) Biofeedback: It is an established fact that certain aspects of the so-called autonomic responses (i.e., physiological functions such as blood pressure and brain activity) can be controlled by conscious activity. The techniques of biofeedback are mature and are easily adapted to new circumstances. By mechanisms of adaptive learning and operant conditioning, conscious control can be gained with a minimum of training. If, as a result of the neurophysiological research, neurons or other micro-physiological structures, can be identified as participating specifically in AC reception, then those micro-physiological structures can be monitored and the techniques of biofeedback are valid. Using biofeedback methodology, the hypothesis that training specific physiological structures to respond to AC stimuli will improve the total output of an AC session can be tested.

3. (S/NF) Feedback Conditioning: In a feedback conditioning technique, a receiver is asked to respond rapidly to specific AC targets. After the response, feedback is provided immediately. The hypothesis being tested by the feedback conditioning procedure is that a receiver will learn to recognize internal signatures that correspond to specific AC targets.

4. (S/NF) Empirical: The most common procedure that has been employed in training for operations and for laboratory experiments has been empirical. Certain receivers who have consistently performed well in AC tasks have described their internal personal experiences as a guide for training. These techniques are called empirical because they are exclusively based upon the experience of good receivers and are not

F-7

~~SECRET~~/NOFORN/LIMDIS
STAR GATE

SECRET

necessarily generalizable to a larger population. The research plan includes a detailed validation of existing empirical methods and the development of any new ones that might arise.

5. (U) **Response Calibration:** As each technique is added to the training regimen, resulting AC responses are compared to their respective baselines to determine the degree of improvement. Those techniques that fail predetermined statistical criteria are abandoned for a given receiver's training.

6. (S/NF) **Practical Application:** To assess the efficacy of the training for the operational environment, the receiver will participate in a simulated operational setting. The targets for this test-bed will be known in detail by the analysis team, and the target types will be similar to those in actual operations. Therefore, detailed analysis will be possible and a receiver's operational readiness can be determined. In the event that all techniques fail to demonstrate improvement, the receiver exits the program.

(S/NF) A successful conclusion of this topic will include a series of training manuals that will include acceptance criteria for individual operational AC-specialists.

F-8

SECRET/NOFORN

UNCLASSIFIED

APPENDIX G

POTENTIAL RESEARCH SUPPORT FACILITIES (U)

UNCLASSIFIED

APPENDIX G

POTENTIAL RESEARCH SUPPORT FACILITIES

ANOMALOUS MENTAL PHENOMENA

Science Applications International Corp.	Los Altos, CA
Mind Science Foundation	San Antonio, TX
Princeton Engineering Anomalies Laboratory	Princeton Univ, NJ
American Society for Psychical Research	New York, NY
St. John's University	Long Island, NY
Foundation for Research into the Nature of Man	Durham, NC
ARE/Atlantic University	Virginia Beach, VA
University of Virginia	Charlottesville, VA
Psychophysical Research Laboratories	Edinburgh, Scotland
Edinburgh University	Edinburgh, Scotland

OTHER RELATED DISCIPLINES

Psychology

Stanford University	Stanford, CA
Cornell University	Ithaca, NY

Anthropology

University of California	Berkeley, CA
University of Arizona	Tucson, AZ

Psychophysiology

SRI International	Menlo Park, CA
Langly-Portor Neuropsychiatric Institute	San Francisco, CA
Menninger Foundation	Topeka, KS

G-1

UNCLASSIFIED

UNCLASSIFIED

Psychoimmunology

California Institute for Transpersonal Psychology	Menlo Park, CA

Cognitive Neuroscience

Los Alamos National Laboratory	Los Alamos, NM
University of California	San Diego, CA

Cognitive Psychology

Psychology Department, Princeton Univ	Princeton, NJ
Psychology Department, City College of New York	New York, NY

Artificial Intelligence

Massachusetts Institute of Technology	Cambridge, MA
Stanford University	Stanford, CA

Neural Networks

Massachusetts Institute of Technology	Cambridge, MA
Science Applications International Corp	Los Altos, CA

Statistics/Signal Analysis

University of California	Davis, CA
Harvard University	Cambridge, MA

Thermodynamics

Rochester University	Rochester, NY
Physics Department, Stanford University	Stanford, CA

Quantum Measurement

International Business Machines, Research Laboratories	College Park, MD

General Relativity

California Institute of Technology	Pasadena, CA
University of Texas at Austin	Austin, TX

Electromagnetic/Basic Research

Electronetics Corp	Buffalo, NY
Battelle Corp	Columbus, OH
Institute for Advanced Study	Austin, TX

G-2

UNCLASSIFIED

UNCLASSIFIED

APPENDIX H

RESOURCE LITERATURE (U)

UNCLASSIFIED

APPENDIX H

RESOURCE LITERATURE

1. A.R.E. Journal
2. Abnormal hypnotic Phenomena
3. American Anthropologist
4. American Ethnologist
5. American Journal of Clinical Hypnosis
6. American Journal of Physiology
7. American Journal of Sociology
8. American Psychologist
9. American Society for Psychical Research
10. Annals of Eugenics
11. Annals of Mathematical Statistics
12. Annales de Sciences Psychiques
13. Archivo di Psicologica Neurologia e Psychiatra
14. Association for the Anthropological Study of Consciousness Newsletter
15. Behavioral and Brain Science
16. Behavioral Science
17. Bell System Technical Journal
18. Biological Psychiatry
19. Biological Review
20. British Journal for the Philosophy of Science
21. British Journal of Psychology
22. Bulletin of the American Physical Research
23. Bulletin of the Boston Society for Psychic Research
24. Bulletin of the Los Angeles Neurological Societies
25. Contributions to Asian Studies
26. Electroencephalography and Clinical Neurophysiology

H-1

UNCLASSIFIED

UNCLASSIFIED

27. Endeavour
28. Ethnology
29. Exceptional Human Experience
30. Experientia
31. Experimental Medicine and Surgery
32. Fate
33. Fields within Fields
34. Foundations of Physics
35. Hibbert Journal
36. Human Biology
37. International Journal of Clinical and Experimental Hypnosis
38. International Journal of Comparative Sociology
39. International Journal of Neuropsychiatry
40. International Journal of Parapsychology
41. International Journal of Psychoanalysis
42. Journal of Abnormal and Social Psychology
43. Journal of Altered States of Consciousness
44. Journal of Applied Physics
45. Journal of Applied Psychology
46. Journal of Asian and African Studies
47. Journal of Biophysical and Biochemical Cytology
48. Journal of Cell Biology
49. Journal of Communication
50. Journal of Comparative and Physiological Psychology
51. Journal of Consulting Psychology
52. Journal of Existential Psychiatry
53. Journal of Experimental Biology
54. Journal of Experimental Psychology
55. Journal of General Psychology
56. Journal of Genetic Psychology

H-2

UNCLASSIFIED

UNCLASSIFIED

57. Journal of Mind and Behavior
58. Journal of Nervous and Mental Diseases
59. Journal of Personality
60. Journal of Personality and Social Psychology
61. Journal of Research in PSI Phenomena
62. Journal of Scientific Exploration
63. Journal of the American Academy of Psychoanalysis
64. Journal of the London Mathematical Society
65. Journal of the Royal Anthropological Institute of Great Britain and Ireland
66. Metapsichica
67. Mind-Brain Bulletin
68. Motivation and Emotion
69. Nature
70. Naturwissenschaftliche Rundschau
71. New Horizons
72. New Scientist
73. New Sense bulletin
74. Newsletter of the Parapsychology Foundation
75. Parapsychology Bulletin
76. Parapsychology Abstracts International
77. Parapsychology Review
78. Perceptual and Motor Skills
79. Philosophy of Science
80. Physiology and Behavior
81. Proceedings of the Society for Psychical Research
82. Psychedelic Review
83. Psychic
84. Psychic Science
85. Psychoanalytic Quarterly

H-3

UNCLASSIFIED

UNCLASSIFIED

86. Psychoanalytic Review
87. Psychological Bulletin
88. Psychometrika
89. Psychophysiology
90. Physics Today
91. Renti Teyigongneng (EFHB Research) [PRC]
92. Revue Metapsychique
93. Revue Philosophique
94. Revue Philosophique de la France et de L'Etranger
95. Revue Philosophique Applique
96. Science
97. Skeptical Inquirer
98. Social Studies of Science
99. Subtle Energies
100. The Humanistic Psychology Institute
101. The Journal of Parapsychology
102. The Journal of the American Society for Psychical Research
103. Theta
104. Tijdschrif voor Parapsychologie
105. Tomorrow
106. Voprosy Filosofi (Questions of Philosophy) [USSR]
107. Western Canadian Journal of Anthropology
108. Zeitschrift fur die Gesamte Neurologie und Psychiatrie
109. Zietschrift fur Parapsychologie und Grenzgebeite der
     Psychologie
110. Zietschrift fur Tierpsychologie

UNCLASSIFIED

111. Zietschrift fur Vergleichende Physiologie
112. Zetetic Scholar
113. Zhongguo Shebui Kexue (China Social Sciences) [PRC]
114. Ziran Zazhi (Nature) [PRC]

UNCLASSIFIED

~~SECRET~~

APPENDIX I

DT-S PERSONNEL REQUIREMENTS (U)

NOT RELEASABLE TO FOREIGN NATIONALS

LIMITED DISSEMINATION

REPRODUCTION REQUIRES
APPROVAL OF ORIGINATOR
OR HIGHER DOD AUTHORITY

FURTHER DISSEMINATION
ONLY AS DIRECTED BY DT
OR HIGHER DOD AUTHORITY

CLASSIFIED BY: DIA/DT
DECLASSIFY ON: OADR

~~SECRET~~/NOFORN/LIMDIS
STAR GATE

SECRET

APPENDIX I

DT-S PERSONNEL REQUIREMENTS

(S/NF/SG/LIMDIS) An analysis of the DT-S functions necessary to support the achievement of the long-range goals indicate four major functional areas which must be supported. Within each functional area, personnel requirements can be identified. A complicating factor, however, is the fact that some of the functional areas (such as remote viewing (RV), Intelligence Analysis, and ADP support) are highly specialized and require full-time dedicated personnel.

1. (S/NF/SG/LIMDIS) **RV Activities:** RV activities can be grouped into the following major areas:

    a. Participate in R & D activities
    b. Viewer Training
    c. Operational Activities

(S/NF/SG/LIMDIS) It is difficult to project personnel requirements for this functional area, primarily because the projected level of operational activity is currently unknown. Based on the past level of operational tasking, it is anticipated that six personnel would be required. Five of the people would be involved in operational activities as well as participating in support of the R & D activities to be conducted by the external Contractor. One additional person would be designated to participate in operational and research support activities on a part-time basis but would devote most of his time to developing a training program and conducting training of new personnel and identification/selection of potential viewers. Due to the specialized nature of RV, this person needs to be a qualified viewer and not merely an administrative person. It should also be kept in mind that it takes approximately one year to train a viewer to operational status.

I-1

SECRET/NOFORN/LIMDIS
STAR GATE

~~SECRET~~

2.   (U) **Foreign Intelligence Assessment:**   (U) Support of this functional area may be grouped into the following activities:

      a.   Data source identification/collection
      b.   Construction of Foreign Activities database
      c.   Analysis
      d.   Production of finished intelligence assessments

(U) To adequately meet the requirements of this functional area, two full-time personnel will be required: an Intelligence Officer (IO) and an Intelligence Technician (IT). In order to maintain strict protocol requirements, these personnel should not function as operational viewers.

(U) The IT would identify potential sources of data, collect the data, support the construction of the Intelligence database and input the required data,and assist in the preparation of intelligence assessments. The IO should be an all-source Scientific and Technical Intelligence analyst and would be responsible for the identification of collection requirements, the analysis of intelligence data, and the production of finished intelligence assessments on a world-wide basis.

3.   (S/NF) **ADP Support:** Over the period of time covered by this Plan, the ADP support activities of DT-S are anticipated to rise dramatically, requiring one full-time person to function as an ADP system administrator. Several factors justify this position:

      a.   (S/NF) DT-S is currently in the process of upgrading its ADP system to include the acquisition of a Unix-based SUN workstation which will not only serve as the main system element, but will also be used to construct the Intelligence and the R & D databases, serve as the communications link to the external Contractor, and support the operation of special DT-S research equipment. Specific areas requiring specialized technical attention include:

        (1)   Operating system(s)
        (2)   LAN(s) administration
        (3)   Database construction/maintenance
        (4)   Language compiler(s)
        (5)   Peripherals

I-2

~~SECRET~~/NOFORN

SECRET

```
    (6)  Equipment interfaces
    (7)  Data communications
    (8)  System modifications/upgrades
    (9)  Development of special purpose
         software to support the DT-S mission
```

b.   (C) DT-S is located some distance from the main Agency computer support facilities. Should the DT-S system experience problems or failures, the system would be down until someone from the main facility could travel to the DT-S location to effect repairs, resulting in a loss of productivity during the wait period. Also, any system modification/upgrades would have to depend on the schedule of qualified personnel, again resulting in loss of productivity. Therefore; it is essential that a person will the necessary computer science skills be physically located at the DT-S facility.

4.   (S/NF/SG/LIMDIS) **Branch Administration:** Tasks in this functional area may be grouped as follows:

```
    a.  Word Processing
    b.  Electronic Filing
    c.  Management Support
    d.  Security Administration
    e.  Report Generation/Document Preparation
    f.  RV Tasking
    g.  Generation of RV Target Pools
    h.  Project/Contract Management
    i.  Collection Management
    j.  Ft. Meade Interface/Facilities
```

(S/NF/SG/LIMDIS) Tasks in this area will require three to four personnel--a Branch Chief, an Assistant Branch Chief, a Secretary/Administrative Assistant and, possibly, a Collection Manager. The Branch Chief and Assistant Branch Chief should have experience in project/contract management, primarily to deal with external research/support contracts, as well as the ability to interface with the academic community and professional organizations engaged in parapsychological activities in addition to overall management skills associated with managing a Branch-size organization.

(C) Based on this evaluation, a total of 11-12 personnel will be required to effectively achieve the near-term DT-S goals. No attempt has been made to identify the personnel as either

I-3

SECRET/NOFORN/LIMDIS
STAR GATE

military or civilian. This is an increase of 1-2 personnel over
the current loading. However; more may be required than just the
addition of personnel in that the existing skill mix at DT-S may
be insufficient to meet anticipated programmatic demands. For
the long-term aspects of this plan, at least 4-8 additional
specialists would be required.

I-4