

DG



UNIVERSAL DOCUMENTATION SYSTEM
HANDBOOK

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VOLUME 1

SYSTEM DESCRIPTION

RANGE COMMANDERS COUNCIL

WHITE SANDS MISSILE RANGE
KWAJALEIN ATOLL
YUMA PROVING GROUND
ELECTRONIC PROVING GROUND

PACIFIC MISSILE TEST CENTER
NAVAL WEAPONS CENTER
ATLANTIC FLEET WEAPONS TRAINING FACILITY
NAVAL AIR TEST CENTER

EASTERN SPACE AND MISSILE CENTER
ARMAMENT DIVISION
WESTERN SPACE AND MISSILE CENTER
CONSOLIDATED SPACE TEST CENTER
AIR FORCE FLIGHT TEST CENTER
AIR FORCE TACTICAL FIGHTER WEAPONS CENTER

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VOLUME 1 - System Description

Documentation Group
Range Commanders Council

Document 501-89
Volume 1

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White Sands Missile Range, NM 88002

same as block 8

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Handbook - Volume 1

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This handbook describes the Universal Documentation System (UDS). The UDS is used to formally document requesting agency program support requirements and support agency capabilities and commitments to support those requirements.

Universal Documentation System, UDS

47

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DOE - See authorities

NASA - See Handbook NHB 2200.2.

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DOCUMENT 501-89

UNIVERSAL DOCUMENTATION SYSTEM
HANDBOOK

VOLUME 1

SYSTEM DESCRIPTION

AUGUST 1989

Prepared by
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Range Commanders Council

Published by
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PREFACE

The Range Commanders Council (RCC), recognizing the need for rapid turnaround support of range user requirements and the efficiencies to be derived from electronic word and data processing systems, has in this edition of the handbook, developed a Universal Documentation System (UDS) format adaptable to electronic processing while continuing to meet the needs of the manual (typewritten) subscriber to the system.

This handbook supersedes all previous issues of RCC document 501-79, volumes 1, 2, 3, and supplement 2, document 501-84. Existing programs may use the previous procedures and forms as agreed between the user and the support agency. All new programs developing documentation will use the procedures and formats contained in these volumes.

Additional copies of this handbook may be obtained from any agency listed in paragraph 1.6 or from the

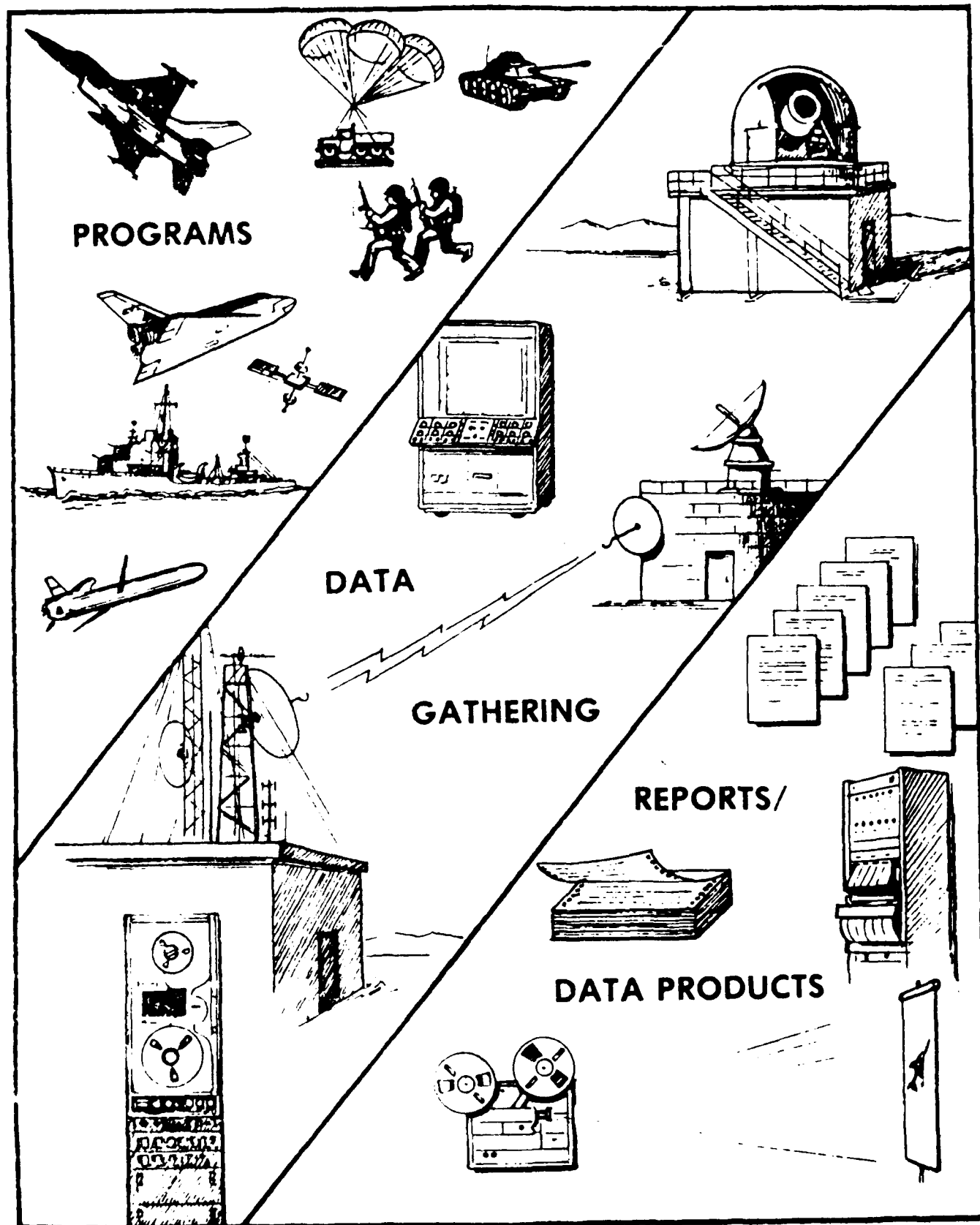
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RANGE COMMANDERS COUNCIL
ATTN: STEWS-SA-R
WHITE SANDS MISSILE RANGE, NEW MEXICO 88002

TABLE OF CONTENTS

	<u>Page</u>
CHAPTER 1 - INTRODUCTION.....	1
1.1 General.....	1
1.2 Applicability.....	1
1.3 Authority.....	1
1.4 Handbook Revision.....	1
1.5 Definitions.....	2
1.6 Information and Assistance Sources.....	2
CHAPTER 2 - ORGANIZATION AND STRUCTURE.....	4
2.1 Purpose.....	4
2.2 Objectives.....	4
2.3 Concept.....	4
2.4 System Criteria.....	4
2.5 Document Organization.....	5
2.5.1 Level 1 Documents.....	5
2.5.2 Level 2 Documents.....	6
2.5.3 Level 3 Documents.....	6
2.6 Supplemental Documentation.....	6
2.6.1 Document Extracts.....	6
2.6.2 Section Supplements.....	7
2.7 Other Documentation.....	7
2.8 Draft Conferences.....	7
2.9 Document Structure.....	7
2.9.1 General.....	7
2.9.2 Document Outline.....	8
2.10 Document Implementation.....	8
2.10.1 Standard Formats.....	9
2.10.2 Format Identification.....	9
2.11 Security Classification.....	10
2.12 Document Revision.....	10
2.13 Document Reproduction.....	11
2.14 Document Distribution.....	11
2.15 Document Cancellation.....	11
2.16 Document Disposition.....	11
CHAPTER 3 - USER AGENCY REQUIREMENTS DOCUMENTATION	12
3.1 General.....	12
3.2 Support Agency Review.....	12
3.3 Objectives Categories and Requirements Classes.....	13
3.3.1 Objectives Categories.....	13
3.3.2 Requirements Classes.....	13
3.3.3 Requirement Priority Classification.....	14
3.4 Requirements Documentation Lead Time.....	14
3.5 Requirements Documentation (PI, PRD, OR)....	15
3.5.1 Program Introduction (PI).....	15
3.5.2 Program Requirements Document (PRD).....	15

	<u>Page</u>
3.5.3 Operation Requirements (OR) Document.....	15
3.6 Requirements for Support Agencies.....	16
CHAPTER 4 - SUPPORT AGENCY RESPONSE DOCUMENTATION.....	17
4.1 General.....	17
4.2 Support Documentation (SC, PSP, OD).....	17
4.2.1 Statement of Capability (SC).....	17
4.2.2 Program Support Plan (PSP).....	17
4.2.3 Operations Directive (OD).....	18
CHAPTER 5 - DOCUMENT PREPARATION PROCEDURES.....	20
5.1 Implementation Methods.....	20
5.1.1 Manual Method.....	20
5.1.2 Automated Method.....	20
5.2 Page Format.....	21
5.2.1 Classification Markings.....	21
5.2.2 Format Structure.....	21
5.2.2.1 Header Standards.....	22
5.2.2.2 Body Standards.....	22
5.2.2.3 Footer Standards.....	24
APPENDIXES	
A UDS Outline.....	A-1
B Designations for UDS Subscriber Agencies....	B-1
LIST OF FIGURES	
1 Example of a manual/word processing format (unclassified).....	26
2 Example of a manual/word processing format (classified).....	27
3 Example of an automated system format (structured).....	28

ALL PROGRAMS, MISSIONS OR TASKS HAVE SUPPORT REQUIREMENTS



CHAPTER 1

INTRODUCTION

1.1 General

This handbook describes the Universal Documentation System (UDS). The UDS is used to formally document requesting agency program support requirements and support agency capabilities and commitments to support those requirements. The UDS handbook is published in three basic volumes and a supplement.

Volume 1 describes the total UDS structure, the individual documents within the system, and the use and control of the system.

Volume 2 includes sample formats and describes procedures for preparation of the Program Introduction (PI), Program Requirements Document (PRD), and the Operations Requirements (OR).

Volume 3 includes sample formats and describes procedures for preparation of the Statement of Capability (SC), Program Support Plan (PSP), and Operations Directive (OD).

A complete list of RCC documents pertaining to the UDS and to other documents can be found in the List of Available Documents available through the RCC Secretariat, White Sands Missile Range. *Refer to doc.*

1.2 Applicability

The UDS shall be used by all agencies desiring support from agencies that have adopted the UDS. Requesting agency requirements documents and support agency response documents will be prepared in accordance with the format and procedures in this handbook and with any supplemental instructions prepared by the support agencies.

1.3 Authority

The Documentation Group (DG) of the Range Commanders Council (RCC) has the responsibility for design and control of the UDS. The UDS and the procedures contained in this handbook have been approved by the RCC.

1.4 Handbook Revision

Recommendations for revision of this handbook may be made to the DG members at the agencies listed in Paragraph 1.6. Recommendations for revision must include the reason for the change, deletion, or addition and a sample of the change with its instructions. The DG is responsible for reviewing the recommendation and, on approval, for its incorporation and implementation. Normal changes do not require RCC approval; however, unusual or controversial changes may require RCC approval at the discretion of the DG.

1.5 Definitions

Some of the terms that are frequently used in this handbook are defined next. For a more complete listing, refer to RCC documents

501-79, UDS Uniform Test Data and Data Product Nomenclature, Supplement 1 and 502-81, A Glossary of Range Terminology.

Range/Support Agency: A range/support agency is an operational facility that provides support services to qualified users as determined by current directives. The words "range," "center," and "support agency" are used interchangeably.

User/Requesting Agency: Any United States or foreign government agency, industrial organization, or other institution with authority to use range or support agency resources.

Sponsor: Any element of a government, military, or civilian agency with authority to use range or support agency resources.

User Requirement: Any item of support requested by a requesting agency through the UDS.

Derivative Requirement: Any item of support required by one agency from another to meet the first agency's responsibility as levied by a user requirement.

Interagency Program: A program requiring the participation of more than one range or support agency.

Lead Range/Lead Support Agency: The range/support agency that is responsible for coordinating total support planning and operations for a particular program, mission, or test. The lead range/lead support agency identifies the support required from other agencies and coordinates the total support effort.

1.6 Information and Assistance Sources

Prospective users of the UDS may obtain assistance in the preparation of requirements from the agencies listed below:

Commanding General
White Sands Missile Range
Attn: Range Programs Division (NR-P)
White Sands Missile Range, New Mexico 88002-5113

Commander, U.S. Army Kwajalein Atoll
Attn: CSSD-KT
Post Office Box 26
APO San Francisco, California 96555

Commander, Pacific Missile Test Center
Attn: Range Programs Management Division (Code 3210)
Point Mugu, California 93042-5000

Eastern Space and Missile Center
Attn: Directorate of Plans, Programs and Requirements (XR)
Patrick Air Force Base, Florida 32925-5572

Western Space and Missile Center
Attn: 6595th TEG/XR
Vandenberg Air Force Base, California 93437-6021

Air Force Flight Test Center
Attn: Programs and Requirements (XR)
Edwards Air Force Base, California 93523-5000

National Aeronautics and Space Administration
John F. Kennedy Space Center
Attn: NASA-Air Force Management Office (EX-NAM)
Kennedy Space Center, Florida 32899-5000

CHAPTER 2

ORGANIZATION AND STRUCTURE

2.1 Purpose

The UDS provides a common language and format for stating requirements and for preparing support responses. The UDS encompasses documentation generated by user agencies which states program, mission, or test requirements and those response documents generated by the support agencies to define the support to be provided.

2.2 Objectives

The UDS objectives

1. establish a common language and format to provide more effective communication between the user and support agency,
2. standardize requirement and support methodology between the user and the support agency to achieve an effective planning/performance interface,
3. provide a standard yet flexible and dynamic system that meets the requirement and support needs of both simple and complex programs, and
4. provide a format for automation and manual handling of requirements and support information.

2.3 Concept

The UDS is intended to establish standardization, yet be flexible enough to be used by a number of different agencies and to apply to both small and large programs without disturbing the basic system concept. Flexibility permits separate instructions to be prepared by each support agency for implementation of the UDS at that agency. These supplemental instructions may contain procedures and policies for the applicability and scope, submission, and revision of documentation.

2.4 System Criteria

The UDS is based on a common structure to enable users to employ one basic format when presenting requirements to support agencies. This structure is defined in a document outline that combines related subjects of the various program, mission, or test phases into a minimum number of broad categories for simplicity and ease of understanding. The UDS structure relates support plans to requirements with a minimum of repetition.

The system provides all the necessary information that should pass between the user and all contributing agencies to support the program, mission, or test. The system is sufficiently flexible to be used by support agencies without affecting the internal management of the individual agencies.

2.5 Document Organization

The UDS provides for the following three levels of user and support agency documentation:

<u>LEVEL</u>	<u>USER REQUIREMENTS DOCUMENTS</u>	<u>SUPPORT AGENCY RESPONSE DOCUMENTS</u>
1	Program Introduction (PI)	Statement of Capability (SC)
2	Program Requirements Document (PRD)	Program Support Plan (PSP)
3	Operations Requirements (OR)	Operations Directive (OD)

Level 1. The Level 1 documents (the PI and SC) are used to initiate program support planning between users and support agencies.

Level 2. The Level 2 documents (the PRD and PSP) may be required to provide additional or more detailed program information, especially for the more complex programs.

Level 3. The Level 3 documents (the OR and OD) are used to plan individual operations within a program.

2.5.1 Level 1 Documents

Program Introduction (PI). The PI document is the initial planning document submitted by a potential user to the support agency immediately upon identification of the scope and duration of program activity. The potential user should submit the PI using best available information, enabling the support agency to initiate resource and technical planning. This information, while sometimes fragmentary and incomplete, is of substantial value to the support agency in determining the scope of the program. For many programs, the PI is designed to eliminate further documentation except for conduct of specific operations.

Statement of Capability (SC). The SC document is the support agency's response to the PI. When properly signed, the SC is evidence that a program has been accepted for support by the support agency, subject to approval by higher headquarters when applicable. Support conditions, qualifications and resources, or other considerations are initially identified by this document and serve as a baseline reference to subsequent acceptance and commitment by the support agency. The PI and the SC complement each other in establishing the scope of the program support activity.

2.5.2 Level 2 Documents

Program Requirements Document (PRD). The PRD is prepared by the range user and is a detailed full program planning document normally required for complex or long lead-time programs.

Program Support Plan (PSP). The PSP is a response to the requirements presented in the PRD and is prepared by the responsible support agency.

2.5.3 Level 3 Documents

Operations Requirements (OR). The OR document describes in detail the program's requirements for each program, mission, specific test, or series of tests. It is prepared by the user.

Operations Directive (OD). The OD is the support agency's response to the OR and is the detailed plan for implementation of support functions for a program, mission, specific test, or series of tests.

2.6 Supplemental Documentation

The UDS includes provisions for supplemental documentation. This supplemental documentation includes extracts of selective portions of the basic documents and supplements that are actually parts of the basic documents but do not exist under the same basic cover nor follow the same management or distribution pattern. The required supplemental documentation is determined by joint user-support agency agreement at the time of program initiation.

2.6.1 Document Extracts

Document extracts relate to derivative requirements where requirements placed on a given support agency result in the generation of additional (derivative) requirements that must be placed on other agencies. Derivative requirements relate to the lead support agency concept where one agency is given overall support responsibility when the total support involves a number of agencies.

Examples of document extracts are

Program Requirements Document Extract (PRDE). The PRDE becomes necessary when requirements which are placed on an agency in turn create additional (derivative) requirements that must be levied on other agencies. These requirements occur when it is not appropriate to levy the original PRD on these other agencies. The derivative requirements are prepared using PRD formats in accordance with the standard UDS outline in appendix A.

Operations Requirements Extract (ORE). The ORE is identical to the PRDE except that it applies to the OR and relates to the lead support agency concept where the lead agency must levy derivative requirements on other agencies. In general, the basic requirements will be extracted from the user's original OR and expanded upon by the lead agency.

2.6.2 Section Supplements

Section supplements break out detailed information of a particular section for separate distribution and in general, will be restricted to the larger programs. On the larger programs, certain requirements such as data formatting, processing, and display are quite voluminous and apply to only a minority of people concerned with the program. It is appropriate that these requirements be prepared and distributed under separate cover. These supplements may be sections of either a PRD, PSP, OR, or OD. They are stand-alone documents and are not bound with the basic document. They are, however, identified as a section of the appropriate document and retain the same format and numbering system as described for Level 2 and 3 UDS documents.

2.7 Other Documentation

Program, mission, or test requirements documents in all instances must be understandable and stand on their own; however, there is much supporting information that must be documented and related to the requirements so that support may be provided. Examples of such information are antenna patterns, trajectory data, pyrotechnics, explosive forces range safety procedures, schedules, test operation procedures, security guides, and mission rules and assignments. If this information is documented separately, it should be referenced in the UDS program documentation which is being developed.

2.8 Draft Conferences

When PI, PRD, and OR drafts are prepared, conferences may be held for new programs to discuss the complexity of the support and to consider foreseeable difficulties. The conferences provide the opportunity to begin coordination early, to discuss security classifications, and to assess support questions. The support agency distributes the draft and advises all interested user and support agency personnel when and if they are required to attend a draft conference.

2.9 Document Structure

The UDS provides for a building block concept of developing and presenting requirements.

2.9.1 General

Requirements documents, the Program Introduction (PI), Program Requirements Document (PRD), and the Operations Requirements (OR) are literally extensions of each other and are used exclusively or in tandem with each other depending on the size and complexity of the program. For example, the PI is the document that officially introduces a program, mission, or test to a support agency. The support agency, because of the size or complexity of the program, may require that the PI be followed by the PRD and OR to more definitively state requirements.

2.9.2 Document Outline

The UDS document outline is a common numbering system which provides for the standard presentation of information by UDS subscriber agencies and serves as the framework for all documents within the UDS. Section numbers, (first four digits, for example, 1405) and associated titles are controlled and assigned by the RCC DG.

The UDS outline is composed of the following major section groups:

Sections 1000 - 1999 contain Program Administrative and Technical Information

Sections 2000 - 6999 contain Test/Mission Operational Requirements

The UDS Document Outline and applicable UDS Requirements/Response documents are outlined in appendix A.

The sections are structured to provide a definitive area in which to include requirements and respective support agency responses. The outline, coupled with pre-defined formats and instructions, contained in volumes 2 and 3 of the UDS serve as a checklist to prevent pertinent data from being overlooked. Only those UDS sections that best suit the needs of the particular program, mission, or test being documented need be used. The UDS documents need not be limited to the statement of pure requirements or responses. Informational data may be provided as deemed necessary to clarify stated requirements and responses. If, however, the information or background material is voluminous, reference to a supplemental document should be considered. Pictures, sketches, or graphics may also be provided under separate cover. Supplemental documentation should be cross referenced in the UDS document.

In some cases such as composite systems, the UDS outline provides for a requirement to be stated as a composite system or as independent systems. Coordination between the requesting agency and the support agency will determine the best approach for documenting such requirements. Complex requirements should be further broken down within the appropriate UDS section to allow for simple interpretation and response by the support agency.

Where requirements are minimal, as in the case of small programs, or when the requirements are only generally defined at the program planning stage, user agency requirements may be stated in the general section of each UDS section or subsection.

2.10 Document Implementation

The UDS is designed to accommodate as many conditions as practical. While it is most desirable to have single Level 1 documents (for example, a PI and SC that contain total program information), it is also acceptable to have several PIs and SCs. This latter approach is used when different support agencies provide support for unique and

unrelated phases of program, mission, or test. For example, one agency supports engine tests for Program "X," another agency provides on-orbit support for Program "X."

The same philosophy applies to Level 2 documents. A single PRD and PSP will, wherever practical, contain all program level information. However, it is acceptable to have multiple PRDs and PSPs as explained above.

The most detailed level of requirements and support is contained in Level 3 documents which describe specific requirements and support. The OR/OD documents will be prepared as single or multiple documents as required for effective management at the user and support agencies.

The UDS documents may be provided by use of electronic word and data processing systems or manual (typewritten) methods. The method of implementation and the type and schedule of documents will be negotiated by the lead support agency and the user.

2.10.1 Standard Formats

Standard UDS formats are provided for entering requirements and support responses. These formats provide for all the necessary information that should pass between the user and all contributing support agencies to support the program, mission, or test. Standard formats also provide for standardization of requirements presentation and ensure proper interpretation and response. Only those standard formats that best suit the requirements of the particular program or test/mission need be used.

2.10.2 Format Identification

Approved UDS formats are identified for each UDS section. Format numbers are assigned by the RCC DG for each UDS section format and are identified by using the corresponding section number for each format. The UDS Sections 1000 through 6999 are used. Exception is made for a general purpose format as explained below.

Format numbers are assigned for the PI and SC for each section and are individually identified in the lower right portion of the format adjacent to the classification line in the following manner:

UDS 1010 PI
(Date of Approval)

UDS 1010 SC
(Date of Approval)

A multi purpose general format is provided for the PI and SC and may be used to supplement or extend information or requirements. The general format is identified in the lower right portion of the format adjacent to the classification line in the following manner:

UDS GEN PI
(Date of Approval)

UDS GEN SC
(Date of Approval)

The format numbers for PRD/OR formats (R=REQUIREMENTS) and PSP/OD formats (S=SUPPORT) are assigned for each section and are individually identified in the lower right portion of the format adjacent to the classification line in the following manner:

UDS 1010 R
(Date of Approval)

UDS 1010 S
(Date of Approval)

A multipurpose general format is provided for the PRD/OR and PSP/OD and may be used to supplement or extend information or requirements. The general format is identified in the lower right portion of the format adjacent to the classification line in the following manner:

UDS GEN R
(Date of Approval)

UDS GEN S
(Date of Approval)

The month and year of format approval by the RCC DG is printed below the format number.

Approved UDS formats for PSP/OD use shall be numbered to correspond to the PRD/OR format to which it responds. For example, when format 1040 R is used in PRD Section 1040, the format for PSP Section 1040 shall bear the number 1040 S. The PRD/OR and PSP/OD formats need not be identical, but may be the same depending on the type of response data to be entered. Exception is made for the multipurpose general format previously explained.

2.11 Security Classification

The safeguarding of classified information is the mutual responsibility of all personnel. Adherence to the related and established security procedures is mandatory. Details for the proper handling of classified documents are found in the applicable agency security guides, manuals, and regulations.

The originating agency of a UDS document is responsible for identifying the information to be protected including application of the proper security classification designators and any other special security markings required. When the classified sections of large documents are few in number, it may be expedient to provide unclassified basic documents with the classified portions provided in a separate classified document extract. Classified extracts will have limited distribution and be subject to the control imposed by their classification. Classified extracts should be cross referenced in the basic unclassified document.

2.12 Document Revision

A revision is considered to be any information added, deleted, or revised in any section of a UDS document. Revisions may be made either by preparing a completely new document or by submitting the revised information. In any case, users are requested to discuss all proposed revision with the lead support agency. Pen and ink revisions submitted by letter are permissible for small changes; however, the

changes should be incorporated into the next revision to the document. The UDS documents will reflect the revision number and date of the revision. Revisions shall be numbered consecutively beginning at 01. It is recommended that the basic document be reissued, incorporating all revisions when the number of revisions cause the document to be unmanageable. The Revision Control Section 1031 will be used to identify the scope of the revision and shall be transmitted with any revised pages. Section 1030 also provides a historical record of revisions made to the document. In some automated systems, the date of the revision may be used in lieu of the revision number.

The use of the symbol "R" in column 72 to identify revised lines in a format is encouraged and should be used whenever practical. In subsequent revisions of a section, delete all Rs applicable to the preceding revision.

2.13 Document Reproduction

The documents prepared by the user must be of reproducible quality.

2.14 Document Distribution

Each document should contain its own document distribution (UDS 1020) section. This section lists the agencies or activities to receive the document and the number of copies each should receive. The user will identify distribution for requirements documents; support activities will normally cover the distribution in the requirements document plus any distribution peculiar to operating elements for the required support. Internal organization sub levels not appropriate for inclusion in the 1020 section may be included elsewhere with the document as referenced in the 1020 section.

2.15 Document Cancellation

The user or originator notifies the lead support agency by letter when a PI, PRD, or OR is to be canceled. The notice includes the title, number, and date of the document. Cancellation of the requirements document automatically cancels the corresponding support document. The lead support agency is responsible for notifying recipients of the cancellations.

2.16 Document Disposition

The official file copy will be maintained and retired by the responsible agency in accordance with applicable records disposition directives. All other copies may be destroyed upon completion or cancellation of the program. Computerized copy, disks, diskettes, or tapes will be handled as prescribed by local regulations for storage or processing.

CHAPTER 3

USER AGENCY REQUIREMENTS DOCUMENTATION

3.1 General

Requirements documents (Program Introduction (PI), Program Requirements document (PRD), and Operations Requirements (OR)) are prepared by the user agency according to a schedule negotiated by the lead agency and user. The support agency normally takes the lead in schedule establishment because it is the most knowledgeable with respect to support acquisition and implementation. The requirements for a program, mission, or test are included in a PI, PRD or OR, or in combinations as the program, mission, or test size dictate. The initial issue of each document includes the information needed to present the requirements which are known at the time of issue. Emphasis should initially be placed on identifying requirements which call for long-range planning action even though detailed use or implementation details may not be known. As more information becomes available, revisions are made to incorporate the additional data. The prime consideration is to ensure the earliest possible receipt of requirement information at the support agency.

The user should make every effort to ensure that the requirements documentation is sufficient in scope to include all known and anticipated program requirements. For this reason, an accepted PI, PRD, or OR should be revised when there is a significant change in the user's program. For example, changes in such items as program scope, milestone dates, test vehicle characteristics, operating or launch locations, and support requirements require document revision.

The user is responsible for ensuring that requirements are promptly submitted at the request of the support agency and in accordance with scheduled lead times to allow for planning, funding, software development, and construction; that requirements documents reflect all major requirements; that all requirements are necessary to meet the program, mission/test objectives; and that all requirements have been officially approved and signed. The user is also responsible for ensuring that each requirements document contains a Section 1020 - Distribution List, and that the list identifies the number of copies needed to fulfill the user organization distribution requirements. Following initial distribution, the user is responsible for all additional copies.

3.2 Support Agency Review

Support agencies will review requirements documents received from the user. Acceptance by the support agency is dependent upon adequacy of information and format. Acceptance by a support agency also directs the staff and operating elements of the support organization to prepare the response documents and necessary plans for support.

Support agencies shall assign a document number, establish a suspense date for the publication of the resulting support documentation, notify the various support organizations of the suspense date, and publish requirements document extracts and support documentation. The support agency will also supplement user documentation distribution lists. If further documentation is required, the support agency may provide the user with a block of numbers to identify these documents.

3.3 Objectives Categories and Requirements Classes

Support agency resources and support agency development are planned and based on valid support requirements submitted by the user. The requirements are those needed to meet user program, mission, or test objectives. To ensure that requirements will be met, the user must determine the objectives category and the requirements class (accuracy) and relate these to basic user needs. Because these objectives and accuracy requirements are vital to support agency planning and development, it is necessary to precisely define categories of objectives and classes of accuracies as well as to establish discrete levels of priorities that relate to these objectives and accuracies.

3.3.1 Objectives Categories

The three objectives categories, I, II, and III, are defined next.

Category I. Category I objectives are mandatory to the program, mission, or test. These objectives are those items which if not accomplished would significantly impact program schedules, costs, and verification of system performance.

Category II. Category II objectives are required to make the program, mission, or test a complete success but are not mandatory. In other words, they are objectives that could be sacrificed for performance, cost, time, or other constraints.

Category III. Category III objectives are desirable for such items as design research, environmental research, associated projects, and supporting engineering effort. Generally, they are objectives that would be beneficial to meet if support can be provided with existing support agency capability.

3.3.2 Requirements Classes

Requirements classes relate to accuracy and reflect degrees of instrumentation accuracy that are used for implementing, planning, and developing support agency capability. The three classes are described next.

Class I. Class I accuracy represents the minimum acceptable accuracy values or integral of coverage that is acceptable to the user. Class I needs, coupled with objective priority, are generally used for budget justification planning, engineering planning, and operational support planning.

Class II. Class II accuracy represents more stringent values that would achieve program, mission, or test objectives to a greater degree of accuracy. Class II needs are generally used by the support agency in short-range improvement/optimization planning and implementation to meet the more stringent future requirements.

Class III. Class III accuracy generally represents the ultimate in desired capability as well as the state-of-the-art requirement used by the support agency in long-range improvement and development planning.

3.3.3 Requirement Priority Classification

A priority must be defined to evaluate requirements on an overall program, mission, or test basis. The three classifications, defined next, are mandatory, required, and desired.

Mandatory. A mandatory classification is the minimum requirement that is essential to achieve program, mission, or test objectives.

Required. A required priority is support that would materially aid in achieving all objectives and is necessary for detailed analysis of system performance.

Desired. A desired requirement is any support which can be obtained in addition to the mandatory or required classification.

3.4 Requirements Documentation Lead Time

Lead times vary considerably from program to program depending on the scope of support needed. Requirements documentation lead times are established by the user agency and support agency. Nominal lead times, based on past experience, are presented below:

INITIAL DOCUMENTATION SUBMISSION

(Lead Time in Years)

SCOPE OF AUGMENTATION NEEDED	DESIRED	REQUIRED
Major additions requiring new facility construction.	4 1/2	3 1/2
Extensive software development or additions to instrumentation not requiring major facility construction.	3 1/2	2 1/2
Moderate software development or instrumentation additions funded by the user.	2	1
Minor software development or instrumentation improvements.	1	1/2

Requirements documentation is submitted well in advance of the first requested support or test date. This time is needed for the support agency to provide the required software, facilities or instrumentation and to review, accept, approve, publish, and distribute the necessary support documentation.

3.5 Requirements Documentation (PI, PRD, OR)

Requirements documentation is compiled in accordance with the general instructions contained in chapter 2, the UDS outline in appendix A, the standard formats and instructions in volume 2, and the specific instructions described next.

3.5.1 Program Introduction (PI)

The PI is the document that officially introduces a program, mission, or test to a support agency and establishes the scope of program activity. Within the defined scope, the user has freedom in planning specified operations in detail. The support agency, however, will decide if further detail should be included in the PI or if more detailed documentation is required.

New program requirements may impose a need for additional tracking coverage, additional data products, different frequencies, or other accommodations not available at the support range. The criteria and qualifications of such requirements should be stressed in the PI. Users with programs involving orbital operations or large weapon systems should consider the program in phases. Phase examples are prelaunch, orbital, recovery, test location, development, and system components. In these cases, the user should identify in the PI those requirements that differ and those that are unique to a particular phase. If a particular requirement is program-wide and does not differ, then such a distinction is not necessary.

3.5.2 Program Requirements Document (PRD)

The PRD, as a detailed program planning document, contains the user's desired support requirements from the support agency and may contain supplemental information needed for clarity. The need for a PRD is determined during the analysis of the PI or during early planning meetings and will be stated in the SC. A PRD is submitted immediately when identified. The user should not delay submittal of the PRD because of incomplete knowledge of support requirements. If required by the support agency, the PRD is submitted by the user agency according to a schedule negotiated by the lead agency and the user.

3.5.3 Operations Requirements (OR) Document

The OR document is a mission-oriented document that describes in detail the program's requirements for each program, mission, specific test, or series of tests and is prepared by the user. The PRD and OR must be complete documents capable of standing alone. The OR must not reflect new requirements that were not previously stated in the PI and PRD. The OR format must be consistent with the UDS outline in

appendix A and the formats in volume 2. If the OR is required by the support agency, it is submitted by the user agency according to a schedule negotiated by the lead agency and user.

3.6 Requirements for Support Agencies

Section 6020 of the UDS is used for imposing support requirements on other agencies in interranging operations and is mainly used by a lead support agency. When prepared by a lead support agency, section 6020 is added to the requirements document before distribution. If the lead support agency requires support from more than one agency, a separate section 6020 will be prepared for each. When prepared by a support agency other than the lead agency, the additional information will be added to the lead support agency attachment. Pages added by a supporting agency will continue the numbering sequence initiated by the lead agency.

Extracts of the PRD/OR are prepared by the support agency when requirements are such that planning support must be accomplished before authorization to acquire a capability is given. The extract documents relate to derivative requirements where requirements placed on a lead support agency result in additional (derivative) requirements that must be placed on other agencies. Derivative requirements relate to the lead support agency concept where one agency is given overall support responsibility when the total support involves a number of agencies (refer to chapter 4).

CHAPTER 4

SUPPORT AGENCY RESPONSE DOCUMENTATION

4.1 General

This chapter pertains specifically to support agency documentation and supplements the information contained in chapter 2. Support agency response documents (Statement of Capability (SC), Program Support Plan (PSP), and the Operations Directive (OD)) are prepared by the support agency in response to the approved requirements prepared and submitted by the user agency. Response documents are revised by the support agency when requirements are changed or support is revised.

4.2 Support Documentation (SC, PSP, OD)

The following subparagraphs describe the Statement of Capability, Program Support Plan, and Operations Directive.

4.2.1 Statement of Capability (SC)

The SC provides a response to the user's PI. The PI, in combination with the approved SC, forms a basic agreement between the user and the support agency and guides the more detailed planning directives to support organizations.

Wherever possible, the SC responds to the PI on an item-for-item basis. Responses may be presented in the general section of each UDS section or subsection when further breakdown is not warranted. In some cases, the support agency may respond to the PI on an exception basis rather than with a definitive support plan. Also at the discretion of the support agency, commonly supplied items and requirements that can be satisfied with existing capability may be answered in a general all-inclusive statement. The approach taken depends generally on the nature and the purpose of the program.

When the support agency capability will not meet the requirements stated in the PI, the SC specifies such restraints and limitations. The SC may also serve to support funding policy directives, and assign existing facilities such as launch complexes, office space, assembly, and storage areas available to meet requirements stated in the PI. If the user requires new construction, the SC may provide site approval by the support agency.

4.2.2 Program Support Plan (PSP)

The PSP is the support agency's response to the PRD. The initial PSP issue includes an item-for-item response to the program requirements which are known at the time of issue and stated in the PRD. The PSP formats and instructions provided in this handbook are designed similarly, to the PRD to provide parallel association between the requirements and the support responses.

The PSP document, when designed by the support agency using the UDS formats, may be short or long in content. Short document content includes only those sections essential for conveying the requirements and for confirming the support. Short documents may contain only a few sections related to administration and document control followed by Section 2030 - Support Commitment and Section 2060 - Support Requirements Which Cannot Be Met. Section 2080 - Requester's Responsibilities, and any others such as Section 2070 - Engineering Plans and Schedules may also be included. Routine boiler plate material which may be program common knowledge is usually reflected in a well-developed PRD.

Long document content includes all necessary document responses and is not simply limited to a statement of the support to be provided. Enough background material will be included so the manner in which the requirements are going to be met can be clearly conveyed in a single document. Sections 1000 through 1999 are used to provide information only, and as such do not respond to the PRD requirements. Sections 2000 through 6999 are responses to specific PRD requirements unless designated support agency information items. The UDS sections used for information items in a PSP are identified in section 1040, which will serve as a table of contents for the document.

4.2.3 Operations Directive (OD)

The OD is the support agency's response to the OR and details each support function role, the support equipment, the technical configuration, and the personnel duties involved in supporting the test or operation. The OD may provide management information or technical requirements and guidelines. It is a listing of expected coverage detailing the support posture of the support agency for the test covered by the particular OD. Requirements that cannot be met must be identified. The OD is normally prepared in sufficient detail to furnish instructions for a specific test or test series.

The OD is organized according to the UDS outline in appendix A and formats in volume 3. The outline may be further structured by the support agency to provide ready-access to information at operating locations. The support agency defines section structure as needed. The major UDS section numbers and titles may not be altered and should, where possible, provide association between a requirement and the support response.

The OD may be supplemented with standard operating procedures (SOPs), extracts, or similar documentation. The appropriate section in the OD will contain a reference to the applicable SOP and a short statement (one or two sentences) outlining the type of equipment and procedures used. Examples of such standard procedures are radar and telemetry set-ups.

The OD must be written in clear, concise technical language that is subject to one interpretation only. All abbreviations must be consistent with the abbreviations used in the OR. A common understanding of such terms is essential. Other terms and abbreviations must not be used unless completely defined when first used in each document. Not more than one abbreviation will be used to indicate the same subject, nor must any one abbreviation be used with more than one meaning.

CHAPTER 5

DOCUMENT PREPARATION PROCEDURES

5.1 Implementation Methods

The UDS can be implemented using either automated or manual methods. While there are some features that are unique to each method, generally the documents and the structures are the same for both. The difference is primarily the method (automated or manual) of completing the standard formats and preparing the documents.

5.1.1 Manual Method

The manual techniques and format follow the automated method very closely. The format is the same, using 8 1/2 by 11 inch paper, and is shown in figures 1 and 2. The document content is organized according to the outline given in appendix A. The nature of the information should be that typically shown in the formats contained in volumes 2 and 3 of this handbook. Only those formats applicable need to be used. The document then would be typewritten and reproduced according to local capability and regulations. Close coordination between the range and range user is essential during the draft stages of the documents. Documents at levels 1, 2, and 3 should follow the guidance provided in this handbook. Unique to the manual method is the retention and use of the standard formats as blank forms. The formats in volumes 2 and 3 of this handbook are examples of the formats to be used for the manual preparation of UDS documents and are displayed in 12 pitch.

5.1.2 Automated Method

The requirement for electronic transmission and processing of UDS information has increased yearly. As a result, the automated UDS system must have flexibility to quickly adapt to changing user requirements. An 8 1/2 by 11 inch format was selected for universal compatibility. Primary considerations are to allow use of electronic processing and communications equipment to expedite processing of UDS documents, thus reducing reproduction and distribution time for document transactions between users, and also to allow easy access to master record storage. Other features of automation allow information coding, electronic sorting, and automatic data entry expansion capability. The information content is the same as described in appendix A and the formats shown in volumes 2 and 3. Graphs, charts, and photographs which are not readily adaptable to existing electronic storage and transmission equipment may be handled separately as provided in paragraph 2.7, Other Documentation.

The basic form for automated documentation is for requirements and support commitments to be recorded in separate documents, for example, a PRD and a PSP. An optional method provides for combined support requirements and commitments. This method generally is used where

support commitments are only a short or abbreviated response. However, either the basic or the optional method of providing support commitments may be expanded by the support agency as necessary to provide greater detail. If deemed necessary, a fully-worded reply may be provided separately and can contain an engineering plan, an engineering implementation timetable, a funding plan, and a cost summary in any degree of detail desired.

5.2 Page Format

The RCC Documentation Group recognizes that documentation preparation resources vary at support ranges and within the user community. The format described here was developed to provide for minimum structure and maximum flexibility among UDS subscribers. Within the framework of this basic format, support ranges and users may develop UDS documentation to maximize preparation, publication, and dissemination. A degree of freedom may be used in the preparation of documentation; however, the support range will identify the minimal UDS documentation required to process user requirements.

5.2.1 Classification Markings

Space has been provided at the top and bottom of each format page to accommodate classification markings. The highest security classification of information appearing on a page will be centrally placed at the top and bottom of the page. Computer-generated classification markings will be made conspicuous with a space between each character in the word and with a series of three asterisks before and after the classification. Unclassified pages will also be marked; however, no spaces will appear between each character in the word unclassified. For example

* * * U N C L A S S I F I E D * * *

* * * C O N F I D E N T I A L * * *

* * * S E C R E T * * *

Additional security markings will be appropriately placed by the cognizant security authority. The documenting agency is responsible for adjusting the formats to accommodate necessary security classification markings.

5.2.2 Format Structure

The UDS page format is 72 (10 or 12 pitch) horizontal characters and 66 vertical lines on a 8 1/2- by 11-inch page (see figures 1, 2, and 3). The format is subdivided into three elements: header, body, and footer. The body of the format page is separated from the header and footer by a series of 72 equal signs (=), called break lines. Break lines permit easy access to the information while ignoring the header and the footer. No line within the body may exceed 70 columns of text. The 71st column is always blank. Revised lines are identified by placing an R in the 72nd column (see figures 1 through 3).

To maximize full page print, the format provides for the sequential listing of UDS sections and data descriptions. The UDS section titles act as separators between UDS sections, while a series of 70 dashes (-) act as separators between individual items within the section. To accommodate the electronic exchange and processing, the standards, described next, have been applied to each of the format elements.

5.2.2.1 Header Standards

Each UDS document page shall contain a standard header consisting of five elements described below: classification, program title, document type/number, revision number, and date.

CLASSIFICATION: See paragraph 5.2.1.

PROGRAM TITLE: Identifies the title/name of the program document, for example, WIDGET.

DOCUMENT TYPE/NUMBER: Identifies the UDS document type (PI, SC, PRD, PSP, OR, OD) followed by the assigned program, operation, or other identification number, for example, PRD/11111.

REVISION: Identifies the revision number of the document. Original (unrevised) documents carry the revision number "00." This number shall be incremented by 1 with each published revision, for example, 01, 02, 03.

Note: In some automated systems, the date of the revision may be used in lieu of the revision number. Revision may also be made to the requirement level by dating the last change to the individual requirement (see figure 3).

DATE: Identifies the publication date of the original document or revision.

5.2.2.2 Body Standards

The body of each UDS section shall contain the appropriate information to define program requirements or responses. In many cases, formats and instructions have been devised to prompt the author for required information. In those cases, all applicable questions shall be answered either with the appropriate information or other appropriate statement to define the status of the information, for example, unknown, to be determined, to be furnished later, or an appropriate cross-reference. Nonapplicable prompts should be answered N/A or, if the capability exists, the prompt itself may be removed. The body of every section is divided into two elements: section number and title, and structured (SORT) labels for formatted or free-form text.

The section numbers and titles identified in the UDS Outline in appendix A will be used to identify the major sections of UDS documents. Section numbers and titles shall start in column 1 of the printed format. The use of subsections and titles is left to the discretion of the documenting agency. The section number and title, for example, 1000 - Administrative, must be entered as a major

heading. The section number and title precede the subsection numbers and titles whether or not general information is included. Structured (SORT) labels and text provide for the electronic sorting and retrieval of data from an electronic data base. Disciplined compliance to data structure is mandatory in automated systems to facilitate the transfer of documents between data bases and for the retrieval of data base information.

Additional structured (NON-SORT) labels are specifically identified on applicable formats. When used, structured labels for all documents shall start in column 1 of the printed format. When necessary to continue the data following a structured label, that data will begin in column 2. Free-form text data will begin in column 2. Some electronic UDS systems may require that text start in other than column 2. In those cases, the local system data base manager will provide the necessary supplemental information to users of those systems (see figure 3).

Note: The labels need only be used if applicable. To be determined (TBD) will be entered following the label when data is applicable but not available. Nonapplicable labels will be followed by N/A for manual systems only.

The following labeled standards and descriptions are shown next:

ITEM NO.:
REQUESTER:
SUPPLIER:
TEST CODE:
LOCATION: (Support Formats Only)
INFORMATION:
REQUIREMENTS() INFORMATION():
REQUIREMENTS:
RESPONSE() INFORMATION():
RESPONSE:

ITEM NO.: A sequential number, beginning at 01, identifying the item listed under each UDS section. This label is used for each requirement, response, or informational item documented. The item number used for responses to requirements is the same as that of the corresponding item number appearing in the document. The corresponding document section number is listed for clarification. In addition, if there are supplemental support agency generated information items, explain the items on UDS Format 1063 - Special Code Definition. Other item-related information may be entered under this label as shown in figure 3.

REQUESTER: A code, identified on UDS Format 1063 - Special Code Definition, assigned to the requester of a requirement. Sub-requesters, similarly identified, will be indicated by the use of a slash (/) immediately following the requester code; for example, T/DE22 might indicate a requirement established by the NASA Johnson Space Center/Flight Requirements Office. Each requester/subrequester shall be separated by a space. It is recommended that, when possible,

either the assigned agency alphabetical code or the agency acronym as shown in appendix B be used as standard requester codes.

SUPPLIER: A code, identified on UDS Format 1063 - Special Code Definition, assigned to the organization providing support. Sub-suppliers are similarly identified by the use of a slash (/) immediately following the supplier code. For example, W/SAC might indicate a response provided by the Western Test Range concerning a commitment by the host SAC base. It is recommended that, when possible, either the assigned agency alphabetical code or the agency acronym as shown in appendix B be used as standard supplier/subsupplier codes.

TEST CODE: A code, identified on UDS Format 1062 - Test Code Definition, assigned to a specific test requirement, response, or information item which identifies the various test activities. These test codes are used as a method of correlating support requirements. Any support requirement referenced to a test code indicates that this support will be required during particular test program activity.

LOCATION: The location where the support is to be provided.

REQUIREMENT: A description of the user agency support requirement.

RESPONSE: A description of the support agency response to a user requirement.

Note: Some electronic UDS systems may require that additional commitment/response information be developed (see figure 3).

INFORMATION: A description of user or support agency data submitted for informational purposes only. Information shall not be construed as a requirement nor as a response to a requirement.

Additional structured data may be required to satisfy the requirements of electronic UDS systems. Data base managers of these systems are responsible for providing any specialized formatting instructions to their subscribers (see figures 1, 2, and 3).

5.2.2.3 Footer Standards

Each UDS document page shall contain a standard footer consisting of the following elements:

Page Number. Identifies the sequential page number within a document starting with 1 at the first page of the document. Where a document contains a series of tests, each test may be numbered using the test number followed by a sequential number starting with 1 on the first page of the test. Pages added to the beginning of a manually prepared document or imbedded text, as the result of a revision, will be identified by the page number 0 followed by a sequential series of decimal numbers beginning at .1 for each page added. For example, two pages added at the beginning of a document will be numbered 0.1 and 0.2. Pages added between two sequentially numbered pages, as the

result of a revision, will be identified by the addition of a decimal following the page number of the preceding page, followed by a sequential series of numbers beginning at 1 for each page added. For example, three pages added by revision and situated between pages 25 and 26 will be numbered 25.1, 25.2, and 25.3. Pages added at the end of a document, as the result of a revision, will take on the next sequential page number following the last page.

Classification. (See paragraph 5.2.1.)

Format Number and Format Approval Date. Used for UDS document control purposes only, and not required to be shown (see paragraph 2.10.2).

H2

H4

H5 PROGRAM TITLE: WIDGET

H6 DOC TYPE/NO.: PRD/111111

H6 DOC TYPE/NO.: PRD/111111 REVISION: 03/12/86 DATE: 03 MAR 86

H7 =====
B1 2805 - OTHER COMMUNICATIONS - TELEVISION

ITEM NO.: AAAA BBBB CCCC DDDD EEEE FFFFFFFF G

04 REQUESTER: HHHHHHHHHHHHHH HHHHHHHHHHHHHH HHHHHHHHHHHHHH

85 SUPPLIER: IIIIIIIIIIIII IIIIIIIIIIIII IIIIIIIIIIIII

06 TEST CODE: JJJJJJ JJJJJJ JJJJJJ JJJJJJ JJJJJJ JJJJJJ JJJJJJ

7 TYPE EQUIPMENT: KKK

[illegible][illegible][illegible][illegible][illegible][illegible]

NOTE 1: This example represents an automated UDS system format where each requirement and its response reside together in the database. While the system maintains the basic UDS integrity data structure is strictly defined for electronic processing.

The following codes are used in the example above:

```

21
22     A - SEQUENTIAL ITEM NUMBER
23     B - UDS FORMAT NUMBER *
24     C - DATA BASE IDENTIFICATION CODE *
25     D - UDS SECTION NUMBER *
26     E - REQUIREMENT APPROVAL STATUS *
27     F - REQUIREMENT APPROVAL DATE *
28     G - REQUIREMENT SECURITY CLASSIFICATION *
29     H - REQUESTER/SUB-REQUESTER CODES
30     I - SUPPLIER/SUB-SUPPLIER CODES
31     J - TEST CODES
32     K - REQUIREMENT/TEXT
33     L - SUPPORT AGENCY
34     M - COMMITMENT DATE
35     N - RESPONSE TEXT
36     R - REVISION SYMBOL

```

NOTE 2: This format is a structured automated version corresponding to UDS Section 2805.

NOTE 3: Data structures on automated systems vary due to hardware/software limitations, therefore, a universal format for all systems is not yet defined. For this reason, format usage is left flexible for the developer of the system. Any special codes developed will be explained in UDS Section 1603 - Special Code Definition.

47
48 NOTE 4: THIS EXAMPLE FORMAT IS NOT TO SCALE.

* Examples of Item No. supplemental information.

51
52
53
54

F2
F3
F4 CLASSIFICATION: * * * UNCLASSIFIED * * *

F4 CLASSIFICATION: * * * UNCLASSIFIED * * * UDS GEN B
F5 JAN 8

F5
F6 Figure 3. Example - an automated system format (structured).

APPENDIX A
UDS OUTLINE

APPENDIX A

UDS OUTLINE

DOCUMENT CODE: PI = PROGRAM INTRODUCTION
SC = STATEMENT OF CAPABILITY
R = PROGRAM REQUIREMENTS DOCUMENT/OPERATION
REQUIREMENTS
S = PROGRAM SUPPORT PLAN/OPERATIONS DIRECTIVE

DOCUMENT SECTION AND TITLE

PROGRAM ADMINISTRATIVE AND TECHNICAL INFORMATION - SECTION 1000
TO 1999

ADMINISTRATIVE

PI	SC	R	S	1000	-	Administrative
		R	S	1010	-	Approval Authority
		R	S	1020	-	Distribution List
		R	S	1030	-	Revision Approval
		R	S	1031	-	Revision Control and Classification
		R	S	1040	-	Index of UDS Sections Used
		R	S	1050	-	Program/Mission Security Information
		R	S	1052	-	System Security Classification
		R	S	1054	-	System Security Classification Matrix
		R	S	1056	-	Security Authorization
		R	S	1060	-	Preface
		R	S	1061	-	Special Abbreviations and Nomenclature
		R	S	1062	-	Test Code Definition
		R	S	1063	-	Special Code Definition
		R	S	1064	-	Key Technical Personnel
		R	S	1065	-	Technical References

PROGRAM/MISSION INFORMATION

PI	SC	R	S	1100	-	Program/Mission Information - Program Description
		R	S	1110	-	Experiments Description
		R		1120	-	System Mission Capabilities
		R		1125	-	System Functional Description
		R		1130	-	Mission/Test Description
		R		1131	-	Mission/Test Objectives
		R	S	1140	-	Test Program Operations Schedule

SYSTEM INFORMATION - VEHICLE/TEST ITEM/SPACECRAFT/PAYLOAD

PI SC R 1300 - System Information
R 1310 - Vehicle/Test Item Description
R 1311 - Vehicle/Test Item Characteristics
R 1312 - Vehicle/Test Item Drawings
R 1313 - Vehicle/Test Item Ordnance Items Description
R 1314 - Vehicle/Test Item Ordnance Items Drawing
R 1315 - Vehicle/Test Item Flame Plasma Model of the Exhaust
Plume
R 1320 - Spacecraft/Payload Description
R 1321 - Spacecraft/Payload Characteristics
R 1322 - Spacecraft/Payload Drawings
R 1323 - Spacecraft/Payload Ordnance Items Description
R 1324 - Spacecraft/Payload Ordnance Items Drawing
R 1325 - Spacecraft/Payload Flame Plasma Model of the Exhaust
Plume

INSTRUMENTATION SYSTEMS - VEHICLE/TEST ITEM/SPACECRAFT/PAYLOAD

PI SC R 1400 - Instrumentation Systems
R S 1405 - Frequency Utilization Summary

METRIC TRACKING SYSTEMS - VEHICLE/TEST ITEM/SPACECRAFT/PAYLOAD

R 1410 - Metric Tracking Systems Operating Description
R 1411 - Metric Tracking Systems Transponder Characteristics
R 1412 - Metric Tracking Systems Antenna Systems
R 1413 - Metric Tracking Systems Diagrams

TELEMETRY SYSTEMS - VEHICLE/TEST ITEM/SPACECRAFT/PAYLOAD

R 1420 - Telemetry Systems Operating Description
R 1421 - Telemetry Systems Characteristics
R 1422 - Telemetry Systems Antenna Systems
R 1423 - Telemetry Systems Diagrams
R 1424 - Telemetry Systems Analog Channel Description
R 1425 - Telemetry Systems Digital Format
R 1426 - Telemetry Systems Data Recorder Characteristics

COMMAND SYSTEMS - VEHICLE/TEST ITEM/SPACECRAFT/PAYLOAD

R 1430 - Command Systems Operating Description
R 1431 - Command Systems Characteristics
R 1432 - Command Systems Antenna Systems
R 1433 - Command Systems Diagrams

VOICE COMMUNICATIONS SYSTEMS - VEHICLE/TEST ITEM/
SPACECRAFT/PAYLOAD

R 1440 - Voice Communications Systems Operating Description
R 1441 - Voice Communications Systems Characteristics

- R 1442 - Voice Communications Systems Antenna Systems
- R 1443 - Voice Communications Systems Diagrams

COMPOSITE SYSTEMS - VEHICLE/TEST ITEM/SPACECRAFT/PAYLOAD

- R 1450 - Composite Systems Operating Description
- R 1451 - Composite Systems Characteristics
- R 1452 - Composite Systems Received Data Characteristics
- R 1453 - Composite Systems Transmitted Data Characteristics
- R 1454 - Composite Systems Antenna Systems
- R 1455 - Composite Systems Diagrams
- R 1456 - Composite Systems Operating Modes
- R 1457 - Composite Systems Data Recorder Characteristics

TELEVISION SYSTEMS - VEHICLE/TEST ITEM/SPACECRAFT/PAYLOAD

- R 1460 - Vehicle/Test Item Television Systems Operating Description
- R 1461 - Vehicle/Test Item Television Systems Characteristics
- R 1462 - Vehicle/Test Item Television Systems Antenna Systems
- R 1463 - Vehicle/Test Item Television Systems Format Description
- R 1465 - Spacecraft/Payload Television Systems Operating Description
- R 1466 - Spacecraft/Payload Television Systems Characteristics
- R 1467 - Spacecraft/Payload Television Systems Antenna Systems
- R 1468 - Spacecraft/Payload Television Systems Format Description

OTHER SYSTEMS - VEHICLE/TEST ITEM/SPACECRAFT/PAYLOAD

- R 1470 - Recovery Location Aids
- R 1480 - Other Systems

REQUESTING AGENCY'S SUPPORT INSTRUMENTATION/EQUIPMENT

- PI SC R 1500 - Requesting Agency's Support Instrumentation/Equipment
- R 1510 - Characteristics

SYSTEMS READINESS/PRELAUNCH TESTS

- PI SC R 1600 - Systems Readiness/Prelaunch Tests
- R 1610 - Readiness/Prelaunch Tests Identification
- R 1620 - Readiness/Prelaunch Tests Sequence
- R 1630 - Readiness/Prelaunch Tests Terminal Countdown

TEST ENVELOPE INFORMATION

- PI SC R 1700 - Test Envelope Information
- R 1710 - Major Mission Events - Launch Phase
- R 1711 - Major Mission Events - Flight
- R 1712 - Space Maneuver - Application of Thrust

TRAJECTORY INFORMATION

R 1720 - Trajectory Plan Views
R 1721 - Trajectory Profile Views
R 1722 - Launch Trajectory
R 1723 - Orbital and Space Trajectory
R 1724 - Terminal Trajectory

OPERATIONAL HAZARDS

PI SC R S 1800 - Operational Hazards
R 1810 - Operational Hazards Reports

TEST/MISSION OPERATIONAL REQUIREMENTS - SECTIONS 2000 TO 6999

TEST OPERATIONAL CONCEPTS/SUMMARIES

PI SC R S 2000 - Test Operational Concepts/Summaries
R S 2010 - Ground Support Instrumentation Summary
S 2020 - Support Plan Summary
S 2030 - Support Commitments
S 2040 - Funding Information
S 2050 - Implementation Schedule
S 2051 - Personnel Assignment Schedule
S 2060 - Support Requirements Which Cannot Be Met
S 2070 - Engineering Plan
S 2071 - Engineering Plan - Alternate
S 2080 - Requester's Responsibilities
S 2098 - Flight Safety Operational Concepts
S 2099 - Range Derived Requirements

METRIC MEASUREMENT AND DATA

PI SC R S 2100 - Metric Data
R S 2110 - Metric Data - Launch
R S 2111 - Metric Data - Midcourse
R S 2112 - Metric Data - Orbital and Space
R S 2114 - Metric Data - Terminal
R S 2115 - Metric Data - Signature
R S 2116 - Metric Data - Other
S 2117 - Metric Data Accuracies
R S 2120 - Metric Data Parameter Recordings
R S 2130 - Metric Data Network Coverage
R S 2160 - Metric Data Coverage
R S 2170 - Metric Data - Engineering Sequential

TELEMETRY MEASUREMENT AND DATA

PI SC R S 2200 - Telemetry Data
R S 2210 - Telemetry Recording Interval
R S 2220 - Telemetry Analog Strip Chart Recording Format
R S 2230 - Telemetry Event Recording Format
R S 2240 - Telemetry Decommutation Processing Specifications
R S 2260 - Telemetry Coverage

COMMAND CONTROL/DESTRUCT

PI SC R S 2300 - Command Control/Destruct
R S 2310 - Command Control
R S 2320 - Command Destruct
R S 2330 - Command Up-Data Link
R S 2340 - Command Up-Data Link Recordings
R S 2360 - Command Up-Data Link Stations Coverage

AIR/GROUND VOICE COMMUNICATIONS

PI SC R S 2400 - Air/Ground Voice Communications
R S 2410 - Air/Ground Voice Communications Recordings
R S 2460 - Air/Ground Voice Communications Coverage

COMPOSITE SYSTEMS

PI SC R S 2500 - Composite Systems
R S 2510 - Composite Systems - Detail
R S 2520 - Composite Systems - Parameter Recordings
R S 2530 - Composite Systems - Event Recording Format
R S 2540 - Composite Systems - Analog Strip Chart Recording
Format
R S 2560 - Composite Systems Coverage

OTHER SYSTEMS

PI SC R S 2600 - Other Systems
R S 2601 - Other Systems - Directed Energy
R S 2605 - Other Systems - Support Instrumentation
R S 2606 - Other Systems - Environmental
R S 2610 - Other Systems - Data
R S 2660 - Other Systems Coverage

GROUND COMMUNICATIONS

PI SC R S 2700 - Ground Communications
R S 2710 - Ground Communications Detail
R S 2720 - Ground Communications Network Drawings
R S 2730 - Ground Communications Network Transmission - Voice
R S 2731 - Ground Communications Network Transmission - Secure
Voice
R S 2733 - Ground Communications Network Transmission - Teletype
R S 2735 - Ground Communications Network Transmission - Secure
Data

R S 2736 - Ground Communications Network Transmission -
 Television/Data
 R S 2737 - Ground Communications Network Transmission -
 Facsimile
 R S 2740 - Ground Communications - Intercommunications Systems
 R S 2760 - Ground Communications Terminations - Voice
 R S 2761 - Ground Communications Terminations - Secure Voice
 R S 2762 - Ground Communications Terminations - Point-to-Point
 R S 2763 - Ground Communications Terminations - Teletype
 R S 2765 - Ground Communications Terminations - Secure Data
 R S 2766 - Ground Communications Terminations - Television/Data
 R S 2768 - Ground Communications Terminations - Voice Radio
 R S 2769 - Ground Communications Terminations - Miscellaneous
 R S 2770 - Ground Communications Recordings
 R S 2780 - Ground Communications - Telephone

OTHER COMMUNICATIONS

PI SC R S 2800 - Other Communications
 R S 2805 - Other Communications - Television
 R S 2810 - Other Communications - Timing
 R S 2820 - Other Communications - Sequencer
 R S 2830 - Other Communications - Visual Countdown and Status
 Indicators

REALTIME DATA DISPLAY/CONTROL

PI SC R S 3000 - Realtime Data Display/Control
 R S 3010 - Realtime Flight Control/Support Centers
 R S 3020 - Realtime Flight Control Data Acquisition
 R S 3030 - Realtime Displays and Consoles
 R S 3031 - Realtime Displays
 R S 3032 - Realtime Console Command Panels
 R S 3033 - Realtime Console Analog Recorders
 R S 3034 - Realtime Console Drawings
 S 3035 - Realtime Console Module Description
 S 3036 - Realtime - Summary of Console Locations
 S 3037 - Realtime - Summary of Console Module Locations
 S 3038 - Realtime Data Displays and Consoles - Functional
 Block Diagram
 S 3039 - Realtime - Other Group Displays and Controls
 R S 3040 - Realtime Data Formats
 R S 3041 - Realtime Tracking Data Format Control
 R S 3042 - Realtime Telemetry Data Format Control
 R S 3043 - Realtime Telemetry Data Formats
 R S 3044 - Realtime Command Data Format Control
 R S 3045 - Realtime Remote Site Data Processing
 R S 3050 - Realtime Data Testing
 R S 3060 - Realtime Data Interfaces
 R S 3061 - Realtime Data Interface Criteria
 R S 3062 - Realtime Data Interface Criteria Drawings
 R S 3070 - Realtime Data Computer
 R S 3080 - Realtime Data Distribution

PHOTOGRAPHIC

PI SC R S 3100 - Photographic
R S 3110 - Photographic - Documentary
R S 3120 - Photographic - Engineering

METEOROLOGICAL

PI SC R S 3200 - Meteorological
R S 3210 - Meteorological - Minima
R S 3220 - Meteorological - Forecasts
R S 3230 - Meteorological - Observations
R S 3240 - Meteorological - Instrumentation Location Diagram
R S 3250 - Meteorological - Space Environment
R S 3260 - Meteorological - Consultant Services

RECOVERY

PI SC R S 3300 - Recovery
R S 3310 - Recovery - Ships and Aircraft Coverage
R S 3320 - Recovery - Items To Be Recovered
R S 3330 - Recovery - Salvage and Disposition
R S 3340 - Recovery - Planned Areas
R S 3350 - Recovery - Contingency Areas
R S 3360 - Recovery - Abort Areas

OTHER TECHNICAL SUPPORT

PI SC R S 3400 - Other Technical Support
R S 3410 - Other Technical Support - Aircraft
R S 3411 - Other Technical Support - Seacraft
R S 3420 - Other Technical Support - Targets
R S 3430 - Summary of Frequency Protection
R S 3431 - Emitting Systems Protection
R S 3440 - Geodetic and Gravitational Data
R S 3450 - Other Technical Support - Training

MEDICAL

PI SC R S 3500 - Medical
R S 3505 - Medical - Bio-Science
R S 3510 - Medical - Personnel - Active
R S 3520 - Medical - Personnel - Standby
R S 3530 - Medical - Facility, Equipment, Services

PUBLIC AFFAIRS SERVICES

PI SC R S 3600 - Public Affairs Services
R S 3610 - Public Affairs Services - Personnel Assignments
R S 3620 - Public Affairs Services - News Media Personnel Positions

DATA COORDINATE SYSTEMS

PI SC R S 4000 - Data Coordinate Systems Description

DATA PROCESSING

PI SC R S 4100 - Data Computer Processing Specifications
R S 4110 - Data Computer Processing Specifications - Detail
R S 4160 - Data Processing - Other

DATA DISPOSITION

PI SC R S 4200 - Data Disposition
S 4201 - Data Disposition - Data Availability
R S 4205 - Data Disposition - Reports
R S 4210 - Data Disposition - Detail - Metric Tracking
R S 4211 - Data Disposition - Detail - Telemetry
R S 4214 - Data Disposition - Environmental
R S 4215 - Data Disposition - Detail - Voice/TV Recording
R S 4216 - Data Disposition - Detail - Photographic
R S 4217 - Data Disposition - Detail - Meteorological
R S 4218 - Data Disposition - Detail - Computer Processing
R S 4219 - Data Disposition - Detail - Miscellaneous

BASE FACILITIES/LOGISTICS

PI SC R S 5000 - Base Facilities/Logistics

PERSONNEL ASSIGNMENT SCHEDULES

PI SC R S 5100 - Personnel Assignment Schedules
R S 5110 - Personnel Assignment Schedules - Detail
R S 5120 - Personnel Assignment Schedules - Housing

TRANSPORTATION

PI SC R S 5200 - Transportation
R S 5210 - Transportation - Surface Logistics Schedule
R S 5220 - Transportation - Air Logistics Schedule

SERVICES

PI SC R S 5300 - Services
R S 5301 - Services - Administrative, Personnel, and Office
R S 5302 - Services - Fire and Rescue
R S 5303 - Services - Security and Safety
R S 5304 - Services - Community, Education and Food Service
R S 5305 - Services - Utilities (Electrical, Water, and Sanitation)
R S 5306 - Services - Procurement, Shipping, Receiving, and Stock Control
R S 5307 - Services - Handling, Storage, and Disposal
R S 5308 - Services - Air Conditioning and Environmental Observations

R S 5309 - Services - Physical and/or Life Science Experiments
 R S 5310 - Services - Propellants, Gases, and Chemicals
 R S 5320 - Services - Fuels and Lubricants
 R S 5330 - Services - Miscellaneous Lubricants, Hydraulic
 Fluids, Preservatives, Etc.
 R S 5340 - Services - Vehicles and Land Transportation
 R S 5341 - Services - Ground Handling Equipment
 R S 5350 - Services - Requesting Agency Aircraft
 R S 5351 - Services - Air Operations
 R S 5360 - Services - Seacraft
 R S 5361 - Services - Marine Operations
 R S 5370 - Services - Chemical Cleaning
 R S 5380 - Services - Purchase of Equipment or Supplies

LABORATORY

PI SC R S 5400 - Laboratory
 R S 5405 - Laboratory - Technical Shops and Labs
 R S 5410 - Laboratory - Chemical and Physical Analysis
 R S 5420 - Laboratory - Special Environment

MAINTENANCE

PI SC R S 5500 - Maintenance
 R S 5510 - Maintenance - Buildings and Grounds

FACILITIES

PI SC R S 5600 - Facilities
 R S 5610 - Facilities - Drawings
 R S 5620 - Facilities - Launcher and Platform Characteristics

OTHER SUPPORT

PI SC R S 6000 - Other Support
 R S 6010 - Other Support - Test Instrument Maintenance and
 Calibration
 PI R 6020 - Other Support - Requirements for Support Agencies

APPENDIX B
DESIGNATIONS FOR UDS SUBSCRIBER AGENCIES

APPENDIX B

DESIGNATIONS FOR UDS SUBSCRIBER AGENCIES

AGENCY ACRONYM	ALPHABETICAL CODE	AGENCY
WSMR	A	White Sands Missile Range, NM
LeRC	B	Lewis Research Center, Cleveland, OH
NWS	C	National Weather Service, Washington, DC
DOD	D	Department of Defense, The Pentagon
ESMC	E	Eastern Space and Missile Center, Patrick AFB, FL
AFFTC	F	Air Force Flight Test Center, Edwards AFB, CA
GSFC	G	Goddard Space Flight Center, Greenbelt, MD
MSFC	H	Marshall Space Flight Center, Redstone Arsenal, AL
LaRC	I	Langley Research Center, Hampton, VA
JPL	J	Jet Propulsion Laboratory, Pasadena, CA
KSC	K	Kennedy Space Center, Cape Canaveral, FL
NWC	L	Naval Weapons Center, China Lake, CA
ARC	M	Ames Research Center, Moffett Field, CA
PMTC	N	Pacific Missile Test Center, Point Mugu, CA
NOMTS	O	Naval Ordnance Missile Test Station, WSMR, NM
MSD	P	Munitions Systems Division, Eglin AFB, FL
WFF	Q	Wallops Flight Facility, Wallops Island, VA
ERDC	R	Electronics Research and Development Command, Fort Monmouth, NJ
CSTC	S	Consolidated Space Test Center, Onizuka AFB, CA
JSC	T	Johnson Space Center, Houston, TX
ASDC	U	U.S. Army Strategic Defense Command, Washington, DC
USAKA	V	U.S. Army Kwajalein Atoll, Marshall Islands
WSMC	W	Western Space and Missile Center, Vandenberg AFB, CA
DFRF	X	Dryden Flight Research Facility, Edwards AFB, CA
NASA	Y	National Aeronautics Space Administration Headquarters, Washington, DC
WSTF	Z	JSC White Sands Test Facility, WSMR, NM
AFWL	AA	Air Force Weapons Laboratory, Albuquerque, NM
ARMTE	AB	Army Materiel Test and Evaluation Command, WSMR, NM
UTTR	AC	Utah Test and Training Range, Hill AFB, UT
YPG	AD	Yuma Proving Ground, Yuma, AZ
AFWTF	AE	Atlantic Fleet Weapons Training Facility, Roosevelt Roads, Puerto Rico
TFWC	AF	Tactical Fighter Weapons Center, Nellis AFB, NV
NATC	AG	Naval Air Test Center, Patuxent River, MD
AFOTEC	AH	Air Force Operational Test and Evaluation Center, Vandenberg AFB, CA
PMRF	AJ	Pacific Missile Range Facility, Barking Sands, Kauai, HI
CSOC	AS	Consolidated Space Operations Center, Falcon AFS, CO

NOTE: For additions or deletions to this list, contact the RCC Secretariat at (505) 678-1107/1108, Autovon 258-1107/1108.