

National Aeronautics and
Space Administration

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SUPPORT REQUIREMENT SYSTEM

AND

AUTOMATED SUPPORT REQUIREMENTS SYSTEM MANAGEMENT PLAN

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PURPOSE

To create and manage support documentation for the National Aeronautics and Space Administration (NASA) spaceflight missions and programs (i.e., Exploration Missions (EM), International Space Station (ISS) Program, and Launch Services Program (LSP) or other Agency programs, as required).

RATIONALE

This document supersedes the previous “Automated Support Requirements System (ASRS) Handbook” (KSC-PLN-GP60-3), Revision B, dated May 8, 2015 and the “Space Shuttle Program and International Space Station Program Support Requirements System Management Plan” (JSC-27379), dated May 2005.

All documentation reflected in the ASRS Handbook (KSC-PLN-GP60-3) is in full compliance with the Universal Documentation System (UDS) 501-12, including: Titles, Sections and Descriptions.

DISCLAIMER

This document establishes a standardized business practice between all applicable NASA Centers and other organizations that utilize the ASRS. The internal program business practices are addressed in the appendices.

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1	02/02/2021	Updated signatories and roles, update to flow chart labels for Appendix H, added Appendix E and Appendices J-L, Appendix B2.0 change support contract and document numbers

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1.0 SUPPORT REQUIREMENT SYSTEM CONCEPT OF OPERATIONS

In order to plan and execute a spacefaring mission, many system processes are put into place to assist in the coordination of support of multiple NASA centers, Department of Defense (DoD) entities, and Civilian Contractor partnerships. The Support Requirement System (SRS), which includes the ASRS database, is integral to that process and is utilized to maintain communication and documentation of support requirements that contribute to mission success.

This SRS and ASRS Management Plan defines operational and working interfaces among Human Space Flight (HSF) and, in certain cases, non-HSF entities. Essentially, this management plan brings together the information to help the user better understand how the SRS and the ASRS systems work together. This management plan will also provide necessary information to assist in understanding the history and purpose of the system, identify key personnel, and provide short descriptions of required ASRS fields to inform the user about how to best utilize the SRS and ASRS applications.

The SRS and ASRS do not dictate or give reference to any HSF program on which support requirements to request and/or to utilize. Instead, the SRS and ASRS help facilitate the communication that must occur between the program requestor(s) and the NASA supplier(s), sub-supplier(s), contractors, and/or applicable agencies (e.g. DoD, National Oceanic and Atmospheric Administration (NOAA), Air Force's 45th Space Wing (45th SW).) The HSF programs themselves must determine what support requirements they consider necessary for mission success. Then they must navigate through the ASRS tool to request those specific support requirements and obtain supplier commitment to support.

2.0 SRS AND SRS MANAGEMENT PLAN

The SRS is managed by the SRS manager in the Flight Operations Directorate located at Johnson Space Center (JSC). This section describes interfaces among the HSF Program Requirements Managers (PRM), the SRS Systems Manager, the Database Managers (DBMs), Requirements and Response (R&R) Managers, the Communication Services Office (CSO), and other NASA and DoD representatives involved with the operational support requirements for all HSF missions. This management plan is primarily intended to serve as a guide for these interfaces and provides a working description of the structure of SRS documents and their interrelationships.

2.1 BACKGROUND

The formal documentation system for requesting launch, on-orbit, recovery, and contingency support for NASA space programs has evolved over the years. The initial support documentation for HSF programs (Mercury and Gemini) followed guidelines established by the DoD. For the Apollo, Skylab, and Apollo-Soyuz Test Project (ASTP) programs, a Manned Space Flight Support Requirements Documentation (MSFSRD) system was developed by NASA using DoD guidelines. The complexity of NASA's

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programs, an increase in the number of inter-range programs, and the fact that many users were dealing with more than one range, suggested the need for a common support documentation system.

In January 1966, the DoD Range Commanders Council (RCC) chartered the Inter-Range Documentation Group (IRDG) in order to establish a standardized system to be used at DoD National Ranges for documenting user programs, test support requirements, and range support capabilities and commitments. NASA was invited as an associate member of the IRDG since, as a major user, NASA would use the resulting documentation system. NASA was also interested in standardizing documentation within its own organizations, so it provided substantial assistance to the IRDG in developing a common documentation system. The resulting system, UDS, was approved by the RCC in November 1967.

The UDS has been used for HSF and Expendable Launch Vehicle (ELV) range support since early development. HSF programs used MSFSRD system until NASA agreed to use the DoD UDS at the start of the Space Shuttle Program (SSP).

2.2 UDS

The DoD RCC has responsibility for UDS management, and is comprised of representatives from DoD member ranges and an associate member from the NASA Kennedy Space Center (KSC). The RCC developed and published the UDS Handbook (RCC Document 501). The handbook consists of three volumes. The volumes describe the UDS, provides guidelines for use and control of the UDS, and provides sample formats and procedures for document preparation. Guidelines for the development of subscriber agency documentation systems to meet program documentation needs are included in the UDS Handbook.

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

The UDS has three levels of documentation:

a. UDS Level 1 Documents:

1. Program Introduction (PI) Document: The PI is the initial planning document submitted by an organization or agency to identify the scope and duration of a program activity and types of support required. This document is prepared and approved by the agency's lead Center officer prior to formal transmittal to the support organizations/agencies. It is used as a control document and is updated as required to reflect changes in program scope and responsibilities or support requirements.
2. Statement of Capability (SC) Document: The SC is the support agency's response to the PI document. This document is evidence that a program

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has been accepted for support by the support organization and/or agency, and defines the installation's capabilities for supporting the requirements stated in the PI. The support conditions, qualifications, and resources are identified in this document and serve as a baseline reference to subsequent commitment by support installations. The PI and SC complement each other in establishing the scope of the program support activity.

The SRS/ASRS starts once the SC is received by NASA. The ASRS Office of Primary Responsibility (OPR), currently in Exploration Ground Systems (EGS), together with the customer program/mission coordinate with the 45th SW to determine Program Number assignment. The Program Number is used to identify UDS Level 2 and Level 3 documentation. The SRS/ASRS operates at UDS Level 2 and Level 3.

b. UDS Level 2 Documents-Support Requirements:

1. Program Requirements Document (PRD): The PRD is prepared by an organization to describe the detailed technical and administrative operating requirements for support required from the support organizations. The PRD will document specific support requirements. It will not document procedures or implementation actions. Individual PRD volumes will be developed and maintained by centers contributing to the HSF programs.
2. Program Support Plan (PSP): The PSP is a response and commitment document to operational support requirements presented in the PRDs. This document is provided by support organizations for all sets of PRDs. Its purpose is to commit resources, identify items that cannot be supported, or request additional information, justification, funding, coordination, etc.

c. UDS Level 3 Documents-Support Requirement Detail:

1. Operations Requirements (OR): The OR is a mission oriented document prepared by requesting organizations as required to further refine support requirements for each mission, test, activity, etc. It contains requirements which are substantiated by the official PRDs and provides the support installations with specific requirements for issuing the ORs and PSPs.
2. Operations Directive (OD): The OD is the support response to an OR and provides the commitment for support by the organization or agency. It is a detailed plan for implementation of the support functions for a program, mission, specific test, or series of tests.

Refer to Appendix G for a pictorial representation of the UDS system.

2.3 EASTERN RANGE

In order to launch a vehicle into orbit and/or into deep space, it takes coordination between NASA at KSC and the United States Air Force at Cape Canaveral Air Force

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Station (CCAFS). That coordination of teamwork centralizes at the Eastern Range located on CCAFS.

The Eastern Range extends more than 10,000 miles from the Florida mainland through the South Atlantic and into the Indian Ocean. Air surveillance to make sure commercial aircraft are clear of restricted areas during launch countdowns, as well as weather forecasts, is coordinated by the Air Force's 45th Space Wing (45th SW), when required. Coordination for Western Range support is done through the 45th SW.

2.4 DOD LEAD RANGE CONCEPT

The 45th SW, acting as the DoD Lead Range, coordinates range support of the other DoD ranges, including Tracking and Data Acquisition (T&DA), network support, and range ground support activities. In this capacity, the 45th SW is responsible for receiving all HSF formal UDS requirements for DoD range support, obtaining commitments from the individual ranges, and preparing a total DoD range response. The Lead Range responsibility spans all mission phases (pre-launch, launch, on-orbit, landing, and post landing). The 45th SW will also act as DoD Lead Range during the landing phase, irrespective of landing location. Requirements for landings at sites will be documented in the KSC Launch and Recovery PRD with DoD range requirements coordinated through the 45th SW.

2.5 DOD LEAD RANGE/MANNED SPACE FLIGHT SUPPORT OFFICE - NASA INTERFACE

KSC is the lead NASA center for coordinating the 45th SW Lead Range support. KSC and JSC coordinate support with the 45th Operations Group, Detachment 3 within the PRD. KSC serves as the agency point of contact with the 45th SW for range-related matters, planning and scheduling capabilities, resources, and overall support including reimbursement. Lead Range network support will be coordinated with Goddard Space Flight Center (GSFC) as the lead NASA center for network matters and with KSC as the lead NASA interface with the 45th SW. In either case, responses from the 45th SW will be through KSC as NASA interface.

2.6 SRS MANAGER

The SRS manager will develop policies regarding management of existing requirements documents and will coordinate with each of the HSF programs to ensure appropriate funding to permit a verifiable and validated SRS. The SRS Manager will resolve issues raised from each of the HSF Program organizations regarding implementation of this management plan at the NASA centers and the DoD installations.

The SRS Manager is responsible for ensuring that the SRS operates within the provisions of the management plan, the SRS management team is properly staffed and responsive to the SRS community, and the support requirements of each of the programs and participants are properly addressed. This individual shall ensure proper coordination to

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resolve issues among DBMs and R&R Managers. The SRS manager will ensure that interests of the program users of the SRS PRD/PSP are well served, documents are properly designed for their use, and the KSC host provides adequate ASRS support for the HSF program. This individual shall ensure proper coordination to resolve issues among DBMs and R&R Managers.

2.7 ASRS - SYSTEM MANAGER

The ASRS System Manager is responsible for the implementation and overall coordination of the ASRS. In the performance of this responsibility, the ASRS System Manager interfaces with SRS/ASRS DBMs, R&R Managers, and managers at other NASA centers/agencies as required to coordinate activities associated with assuring the successful request and commitment to each support requirement from the supplier. This document assigns the ASRS System Manager responsibilities to KSC as the lead center.

The EGS Systems Engineering and Integration Division is the OPR for the ASRS. The support requirements team located at KSC work both the Launch and Recovery PRD and the Kennedy-on-Kennedy support requirements. Their objective is to capture, document, coordinate, and conduct configuration management of the support requirements in the HSF PRD and KSC Specific HSF PRD (titled the Kennedy Program Requirements Document (KPRD)) using the ASRS.

The ASRS System Manager is charged with leading the OPR and serving as the focal point within the ASRS community. Responsibilities include:

- a. Coordination with SRS Program Manager for ASRS out-of-scope issues.
- b. Functional Specification - Prepares, coordinates, and maintains the ASRS database functional specifications.
- c. Review and approval of specifications for new capabilities.
- d. Coordination of all phases of the software development, validation, and enhancements. Represents ASRS at various levels of review/approval such as:
 - ASRS Control Board
 - ASRS Community Teleconference Review
 - ASRS Development Team including User Acceptance
 - Production Readiness Review (PRR)
 - Release to Production
- e. System Documentation - Ensures that all system level documentation is prepared, published and maintained (i.e.; Operating Instructions, User's Guides, Training Manuals, and other system documentation).
- f. Training - Coordinates and ensures that user training is provided within the ASRS community.

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- g. Information Bulletin - Utilizes e-mail to publish and maintain ASRS information bulletins (i.e.; software releases, status reports, etc.).
- h. Access Control - Ensures the implementation of access control by assigning appropriate level of permissions and database partition(s) access utilizing the NASA Account Management System (NAMS)/Identity Management and Account Exchange (IdMAX) for ASRS account management.
- i. Data Element Values (DEV) - Ensures all DEVs for Data Element Codes (DEC) in the ASRS database are established and maintained.
- j. Formats - Ensures all ASRS approved formats in the ASRS database are established and maintained.
- k. Manage and approve release of major ASRS Software Change Requests (SCRs) with R&R and DBM consensus.
- l. Interfaces and coordinates with NASA, contractors, and DoD Eastern Range.
- m. Chairs the ASRS community of R&R Managers and DBMs.
- n. Chairs the annual ASRS Management Meeting, ASRS OPR telecons, and other ASRS efforts as required.

2.8 SUPPORT REQUIREMENTS SYSTEM - DATABASE MANAGER

Each ASRS database is managed by an appropriate DBM. Responsibilities include:

- a. Total responsibility for management of their assigned database.
- b. Create new documents the Document Maintenance section of the system and add in legal values needed. New documents are created in coordination with the R&R Manager.
- c. Incorporate the requirements into the appropriate ASRS volume upon receipt and coordination of validated requirements from the R&R Managers.
- d. Initiate a Customer Support Requirement Request (CSRR) for new, changed, or deleted requirements that need to be added into the appropriate volume. The DBM will get program approval for the changes submitted on the CSRR and will ensure funding and suppliers have been identified. After incorporating the changes in the respective volume, the ASRS tool will send an e-mail to the Inter-center agency user community notifying them of new, changed, or deleted requirements for review and requesting appropriate action.
- e. Review all CSRRs submitted to the ASRS by users and input all additional information not provided on the initial submittal. After reviewing the CSRR, the CSRR will be routed to the appropriate Program Approver for review and acceptance.

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- f. Identify the correct supplier of each requirement and ensure the supplier's responses have been input into the system by the appropriate response time, as identified on the Document Release (DR) or Routine Support Requirement (RSR).
- g. Make changes to the ASRS item (Database Record (DBR)) and issue an RSR or response. The DBM will give an easily understood description with reason and rationale of changes for each requirement changed.
- h. Assist R&R Managers in the negotiation of any unresolved requirements and/or responses.
- i. Provide the status of the applicable OR/ODs for selected tests that are presented at the Launch Readiness Reviews (LRR), Flight Readiness Reviews (FRR), and other management reviews.
- j. Approve requests in NAMS/IdMAX for access into the ASRS system. Once approval has been granted, the OPR DBM will add the user into the ASRS tool with the appropriate owner group(s) and notify them via e-mail that they have been granted access to the tool and provide them with login instructions to and where to find training guides.
- k. Conduct annual reviews of their database and coordinate the review with all impacted R&R Managers and DBMs. The DBMs will take a "snapshot" of the ASRS data, generate report(s), and will provide copies to the ASRS community for review and comment. Status of the review will be provided at the ASRS Annual Management Meeting.
- l. Provide electronic copy via e-mail or hardcopy ASRS report, if requested.

2.9 SUPPORT REQUIREMENTS SYSTEM - R&R MANAGER

Each NASA program/center and DoD agency is represented by an R&R Manager. Responsibilities include:

- a. Processing requests for support requirements or support commitment/responses to requirements.
- b. Validating the technical need, coordinating Inter-center interfaces, resolving funding issues, and obtaining approval of the support requested.
- c. Submit the requirements and/or commitments/responses to the appropriate DBM upon certification of internal validation and approval of requirements and/or commitments/responses. The submittal should include sub-requester/sub-supplier codes when applicable.
- d. Acknowledge, reach out to the technical discipline for assessment, integrate, and provide support responses within five (5) working days for requirements levied on their center/agency by R&R Managers from other NASA and DoD

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centers/agencies. Support responses not received within five (5) working days will be escalated to the NASA/KSC ASRS System Manager for resolution.

- e. Review, on a mission-by-mission basis, all support commitments to their requirements to ensure that the requested support capability will be provided. They are to accept or reject any response that is not a Will Commit (WILCO). Responses other than WILCO should have a See Response (SEERSP) where the supplier explains status and reason for the response. It is suggested that R&R Managers assess the response and, when needed, rework requirements that have a SEERSP comment with the requestor in an attempt to make the requirement such that it can be supported with a WILCO. It is understood that some SEERSPs/Support Responses are unavoidable and cannot be incorporated into the requirement. Responses that are not acceptable should be worked at a higher management level until agreement can be reached.
- f. Maintain their respective center/agency requirements and commitments traceability and archive appropriately.
- g. Transmit requirements and responses from the R&R Manager to the DBM via e-mail or ASRS.

2.10 SUPPORT RESPONSE ESCALATION POLICY

This policy is in effect when normal coordination processes between the R&R Manager and DBM breaks down, or the supplier does not provide the response commitment within the established timelines after proper notification.

- a. The R&R Manager submits, through the appropriate DBM, all unresolved requirement support issues to the ASRS System Manager.
- b. If no agreement is reached on the unresolved issue, it is elevated to the PRM, in the appropriate program office, and the Program Requirements Control Board (PRCB) for final disposition prior to the LRR, FRR, and Stage Operations Readiness Review (SORR) period.

2.11 MILESTONES

The Milestones are titles of a significant event or stage in the life, progress, development, or the like of a mission. Support requested may be needed for several Milestones. Milestones, if applicable, are recommended together with the first Operational Need Date (OND) for the item to provide the support organization best timeframe of when support is required. Mission progress to schedule may vary, as such, the specific OND may be delayed/slip, and the Milestone allows the supplier to check if the mission has progressed to where the support needs to be provisioned.

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2.12 FUNDING PROVISION

Support requirements must be funded prior to support implementation. Responsibility for support requirements funding may vary based on the type of requirement, scope of support, and organization requesting or providing the support.

Where a requested service falls within the charter of a specific organization or agency, that organization must agree to provide or obtain funding/reimbursement, as appropriate, for the service before committing to the requirement.

The supporting agency is responsible for verifying that funds are available prior to support implementation.

The Requesting Agency (RA) is responsible for funding requirements it levies that are beyond the scope of the supporting agency's charter or existing capability, or when the requirements are identified too late for routine budgeting.

3.0 ASRS

The ASRS System Management falls under the responsibility of multiple members with varying degrees of hierarchical accessibility. The members of the managerial team consist of the PRM, ASRS Systems Manager, DBMs, R&Rs, and any other member of the ASRS Management Committee not previously mentioned throughout this document.

The ASRS is an independent standalone application that serves multiple spaceflight programs by allowing a user to electronically initiate a CSRR through the proper avenues of allowance. The system is also necessary for coordination of support and for the timely processing of the high volume of support requirements by the multiple HSF programs.

The ASRS is an Inter-center/agency electronic processing and transmission system derived from the UDS and the application resides on the network servers located at KSC. The system utilizes the UDS process as a basic form of communication between NASA Headquarters, NASA Centers and the DoD. The ASRS database conforms to the UDS process agreed to by NASA and the DoD, per the RCC, and includes the PRD, PSP, OR, and the OD. The electronic transmission of these documents permits immediate dissemination of requirements and support information to all users.

The ASRS contains support requirements and responses for pre-launch, launch, flight, on-orbit, contingency, and landing/recovery operations, which include turnaround for payload and spacecraft. These support requirements and responses are entered into the database and are available to the organizations responsible for requesting and/or providing the support.

Support requirements include, but are not limited to:

- a. Command and Telemetry Communications
- b. Tracking

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- c. Data Acquisition
- d. Measurements
- e. Medical
- f. Meteorological
- g. Contingency Landing Site Support
- h. Non-Technical Support

The ASRS ensures support is properly requested and responded to in time to meet operational objectives.

Programs may use the CSRR to submit support requirements. SRS personnel process the request and assist in coordinating support.

It is important to note, the ASRS is a tool that provides an active communication pipeline between requestors of support requirements and suppliers. That communication must successfully pass between the user and providing agencies in order to support the lifecycle of a vehicle.

4.0 ASRS- SYSTEM MANAGEMENT

As previously stated, KSC is the NASA lead center for the development, implementation, and follow-up support for the ASRS. Overall integration of the ASRS is the responsibility of the KSC ASRS System Manager.

4.1 DATABASE

The database consists of entities grouped by owner codes. These owner codes are unique for each database and are managed by the KSC ASRS System Manager. Each group of entities contains only the support requirements and support responses associated with that owner code. For the purposes of the remainder of this document, a group of entities will be called a "database."

The ASRS database is comprised with the following features:

- a. Various On-line Transactions to Manipulate Data in the Database
- b. Various Management reports
- c. Requirement and Response Documents
- d. On-line User's Guide
- e. On-line Help

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4.2 OWNER CODES AND DESCRIPTIONS

Owner Codes are a way to distinguish between programs/missions to serve multiple customers and still provide data security/permissions. Owner Codes are assigned by the ASRS OPR in concurrence with R&R/DBM/customer.

The presently active user owner codes and their descriptions are:

- a. **AA - Kennedy Space Center:** MPCV Ascent Abort-2 Flight Test
- b. **CP - Kennedy Space Center:** Commercial Crew Program (CCP) DoD
- c. **DC - Kennedy Space Center:** Sierra Nevada Corporation Dream Chaser
- d. **EB - Kennedy Space Center:** KPRD/KPSP VOL. 1 EGS/EM-1 Booster
- e. **EM - Kennedy Space Center:** Exploration Missions KPRD-1
- f. **ES - Kennedy Space Center:** KPRD/KPSP VOL. II-Space Launch System (SLS)-ATK/EM-1 Booster
- g. **H - Marshall Space Flight Center:** ISS Orbital Volume II – Payloads
- h. **KC - Kennedy Space Center:** Payloads (including Space Station) KPRD Volume III
- i. **KE - Kennedy Space Center:** LSP – Payloads
- j. **KV - Kennedy Space Center:** EGS V&V KPRD
- k. **LR - Kennedy Space Center:** EM-1 & 2 Launch and Recovery
- l. **NC - Kennedy Space Center:** NASA Commercial Crew Program-KSC Office
- m. **R1- Launch and Recovery Restricted:** EGS for restricted content for range support that has been deemed sensitive or limited rights
- n. **T - Johnson Space Center:** ISS Orbital Volume I - Core Systems; Exploration Missions; Commercial Crew

4.3 DATABASE AND R&R MANAGERS POINTS OF CONTACT

R&R Managers and DBMs from across the agencies (DoD, NASA, etc.) are Point of contacts (POCs) for their respective programs and can be found on the ASRS Dashboard Homepage. All appointed R&R Managers from each center can be found on the signatory page of this document.

4.4 ASRS SOFTWARE ENHANCEMENT REQUESTS & SCRS PROCEDURES

If a user would like to request a software enhancement, the user will need to submit a Software Enhancement Request (SER) to the ASRS OPR, via e-mail. Once the request

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has been submitted to the ASRS OPR, each member of the SER process will assume the following responsibilities:

ASRS Functional Team Members:

- a. Request Submitted to ASRS Manager: Submit requests to ASRS OPR for the attention of the ASRS Manager for preliminary screening.
- b. ASRS Manager Review: ASRS OPR/ASRS Manager reviews submission, determines whether to accept or decline the proposed SER and adds notes, if needed.
- c. Proposed Solution to Requestor(s): ASRS OPR/ASRS Manager meets with the requestor and discusses suggested solution/disposition with the requester and the priority. If requester agrees, then OPR:
 1. Sends proposed enhancement to R&R/DBMs for concurrence.
 2. Adds change request (CR) item to ASRS OPR Weekly Meeting agenda to present.
- d. Obtain R&R/DBM Concurrence: Obtain R&R/DBMs concurrence at ASRS OPR Weekly Meeting and added to record.
- e. Disposition: Record final disposition on Task List spreadsheet.

ASRS Software Development Team:

- a. Communicate request to Development Team either at OPR Weekly Meeting or via e-mail.
- b. Create SCR: If determined to be new work, team assigns an SCR # and updates Priority List.
- c. Software Development Team Assessment: Software Development Team performs an assessment including identifying what exactly is being requested and the impacts:
 1. Software Development Team and ASRS OPR/ASRS Manager discusses suggested solution/disposition, if there are any concerns.
 2. Software Development Team and ASRS OPR/ASRS Manager Discussion: Software Development Team and the ASRS OPR/ASRS Manager discusses to determine what to propose as a suggest solution, if solution differs significantly from original request/intent.
- d. Software Development Team proposes solution
- e. Proposed solution presented at ASRS OPR Meeting for concurrence by OPR, R&Rs and Development

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Software Development:

- a. Team develops the software.
- b. Software uploaded to Validation/test environment
- c. Team tests software for validation
- d. Obtain team approval/concurrence via e-mail
- e. Development Team schedules an ASRS application outage to allow for software to be moved into production.

The SER process is depicted in the following figure:

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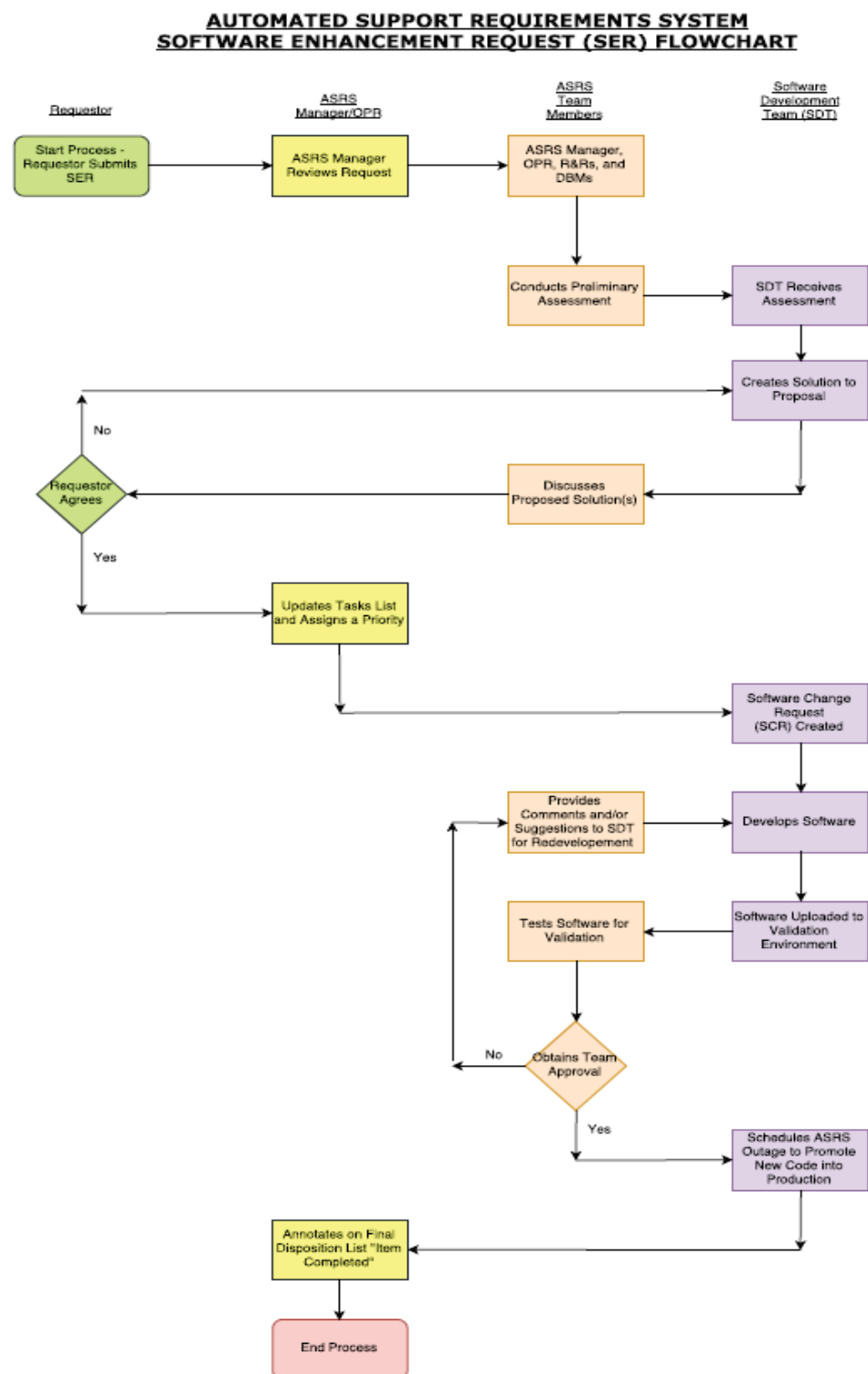


FIGURE 4.4.1 ASRS SER FLOWCHART

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4.5 ASRS PROBLEM REPORT PROCEDURES

When users experience problems with the system during normal business hours, they should contact the TOSC Help Desk at (321) 867-0899. When users have critical work that needs to be performed during off-shift/weekend hours, or when users are working scheduled critical work that may conflict with the normal workday, they should contact (321) 720-2958.

4.6 USER ACCESS

The ASRS database has data that is considered by NASA and its contractors as sensitive. Security and access control to the system application and database are essential.

The NAMS/IdMAX systems provide the NASA common infrastructure required to support the federal E-Authentication and Homeland Security Presidential Directive (HSPD) 12 requirements. For help desk support, you can contact the NASA Information Support Center (NISC) by phone at (866) 419-6297.

Access control to the ASRS is managed using NAMS/IdMAX. The IdMAX ASRS access request should be submitted by the user for access to the needed ASRS user group, approved by the appropriate program/mission/customer sponsor, and approved by the NASA's ASRS OPR Manager. IdMAX/NAMS permissions are organized by user groups (program/mission/customer) and the user group access needed should be identified in the IdMAX request.

To request access to ASRS, please log into the IdMAX system at:

<https://idmax.nasa.gov>

For additional information on how to complete these requirements, please contact Ellen Hill, KSC R&R/DBM at 321-861-0268 or e-mail: ellen.g.hill-1@nasa.gov.

4.7 TRAINING

Once given access to the ASRS application, users may also follow along with the User Productivity Kit (UPK) training link provided below. R&R Managers and DBMs that attend the annual ASRS Management Meeting may receive/request additional training from the OPR.

<https://upk-dev-tosc.ksc.nasa.gov/upk/content/Publishing Content/PlayerPackage/data/toc.html>

5.0 ASRS - SYSTEM CAPABILITIES

The ASRS application is capable of performing numerous tasks to assist any level of user in accomplishing tasks, however broad or specific, with ease. The ASRS capabilities include:

- a. Administration: Access to the Administration tab allows the user to select and navigate the User Configuration, Lookup Values, UDS Section/Label

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Maintenance, Security Roles, Menu Configuration, Workflow Configuration, Milestone Dates, and Major/Minor Milestones sub-selections.

- b. Document Maintenance: Access to the Document Maintenance tab allows the user to select and navigate through the Document Maintenance and Distribution List sub- selections.
- c. Customer Support Requirement Request: Access to the Customer Support Requirement Request tab allows the user to select and navigate through the Initiate CSRR, CSRR List (CSRR Form) CSRR Requirement List, and the Complete CSRRs sub-selections.
- d. Special Processing: Access to the Special Processing tab allows the user to select and navigate through the Update CSRR Sequence Numbers, Copy Requirements, Move Requirements, Find/Replace Text, and Global Requirement Updates sub-selections.
- e. DR-RSR: Access to the DR-RSR tab allows the user to select and navigate through the Initiate DR-RSR and DR-RSR listing sub-selections.
- f. Approved Requirements: Access to the Approved Requirements tab allows the user to select and navigate through the Approved DBRs sub-selection.
- g. Reports: Access to the Reports tab allows the user to select and navigate through the UDS Formatted Report, ADHOC Reporting, Management Report, DBR Report, Supplier Responses, List of Suppliers, User Report, Metric, UDS Selections/Labels, DBR/Test Code Report, and the Supplier/Sub-supplier POC Report sub-selections.
- h. Supplier Response: Access to the Reports tab allows the user to select and navigate through the Supplier Response sub-selection.

5.1 CSRR

The CSRR is a function within the ASRS that allows the customer to:

- a. Request a New Support Requirement - New requirements are entered into the ASRS by initiating a CSRR. The capability to initiate a new requirement is available to all ASRS users. While in CSRR, the user is the only person that can modify the initial input (cover sheet.) Users should coordinate with their corresponding R&R Manager for planned content of the CSRR. Upon submitting the CSRR, only the R&R and DBMs may modify the request in any way.
- b. Modify/Change an existing DBR
- c. Delete a DBR

These requests are then processed by the ASRS DBM.

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5.2 CSRR REQUIRED FIELDS

When initiating a CSRR, the following information is required to be completed by the Customer/Requestor in collaboration with the R&R Manager:

- a. Submitter: Customer/Users submitting the request
- b. Document (PRD Volume, OR): Must select one from the predetermined drop down menu from which the CSRR will be created
- c. Requestor: May or may not be the same as the submitter but must be an individual who has knowledge of the request and may be able to answer any questions that may arise
- d. Agency: Agency from which the requesting individual is attached to
- e. Mailcode: Designated agency Mailcode of requestor
- f. Phone: Telephone extension of requestor
- g. Support Tech POC: The Supplier Support Technical POC shall provide customer input of technical contractor satisfying the requirement. In some instances, the Support Tech POC may not be a NASA civil servant or affiliate and therefore, their names will not be found in the drop down menu provided. In the case where the Support Tech's name cannot be found in the drop down menu, their POC information should be placed in the "Rationale for this Request" box.
- h. Rationale for this Request: Must give justification for support; include operational relationship to mission objective, milestone and/or design decision behind the requested (required) support
- i. CSRR Title: Customer/User decides title of request
- j. CSRR Context: High-level summary that can help management understand what is included in the request; any acronyms that are not well known must be spelled out to prevent ambiguity.
- k. Approving Program Manager: Must select the individual who is the program manager for the selected PRD

5.3 CSRR VALIDATION

After the customer/user, in collaboration with the R&R Manager, submits a completed CSRR, the DBMs must validate the request. The following fields are required and/or encouraged to be completed in order to validate the users CSRR:

- a. Sequence Number: Determines level of significance
- b. Rationale: Must justify requirement

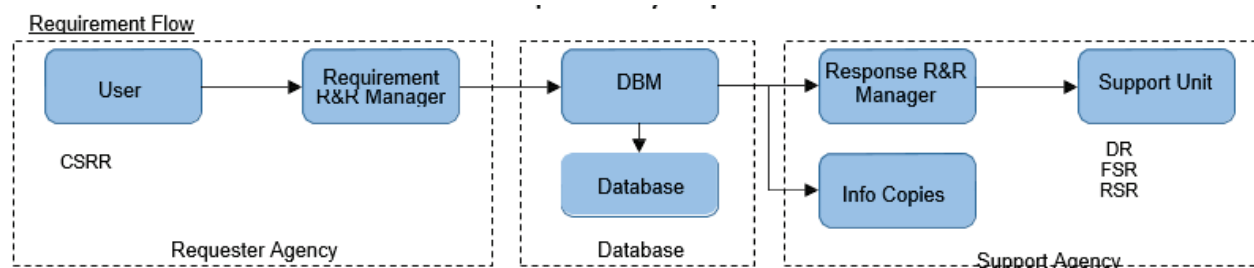
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- c. Operational Need Date: Date the support requirement is first needed
- d. Requirement Tech Point of Contact: POC of requirement originator or technical owner with knowledge to answer questions regarding the requirement
- e. Requirement Description: Should include essential information and key technical data that allows the supplier to clearly understand and response to request
- f. Codes and Associated Documents: If applicable, include Test Codes, Associated Work Plans, Source Document References, and Milestones

5.4 SUPPORT REQUIREMENT/SUPPORT RESPONSE DOCUMENTATION INTER-CENTER/INTERAGENCY FLOW

The following Inter-center/Interagency R&R flow diagram illustrates the normal flow of R&R documentation. Each center and agency will have its own internal coordination and approval process defined in the appendices. Each center and agency will have the discretion to independently provide updates to their appendices and must coordinate with the OPR to update their center specific appendix in the SRS-ASRS Document.

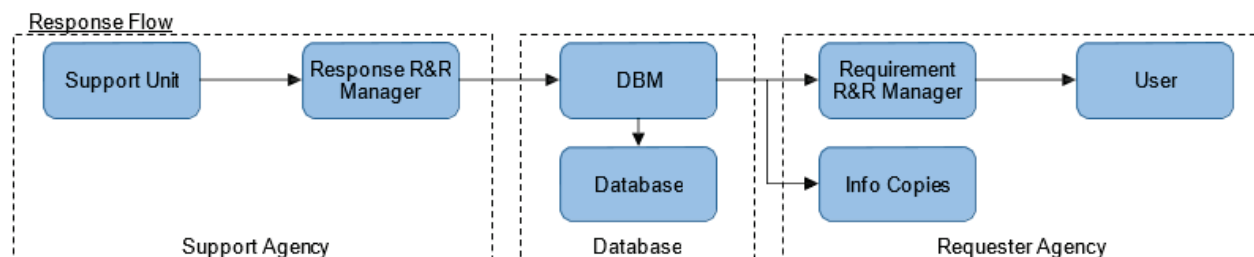
The types of requests/communications used in the requirements process flow are:



LEGEND

CSRR = Customer Support Requirement Request
DR = Document Release
RSR = Routine Support Requirement
LSR = Expedite Launch Support Requirement

FSR = Flight Support Requirement
SRR = Routine International Space Station Requirement Request
SRE = Expedite International Space Station Requirement Request
SN = Supplier Notification



Last Updated: 4/24/2019

FIGURE 5.4.1 ASRS REQUIREMENT / RESPONSE FLOW

EAR99 – No License Required

Reference EDR #8079: NASA KSC Export Control Office, 321-867-9209

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5.5 ROUTINE AND EXPEDITE SUPPORT REQUIREMENTS

The PRDs and ORs are provided by JSC, KSC, and Marshall Space Flight Center (MSFC). Each of these centers also identify requirements documented during concept and long-range planning stages of a mission. Requirement changes identified after final approval of PRDs and ORs will be validated and distributed electronically by the R&R Manager to the respective DBM. The DBM's formal method for coordinating and distributing these support requirements is via RSR, Space Station Requirement (SSR), or Supplier Notification (SN).

5.6 REAL-TIME SUPPORT REQUIREMENTS

Requirements submitted through the ASRS will require a minimum lead-time of 72 hours between the time of submission by the requestor and the commitment response from the supplier.

For this reason, any requirement that is submitted for a support or operation that is within the 72- hour window is considered a Real-Time support requirement and must be worked directly, on a best-effort basis, between the operations/test personnel at the requestor facility and the supplier facility.

If a particular Real-Time support requirement is relevant to future tests, operations, or missions, it shall be identified as such and submitted through the ASRS.

5.7 SUPPORT REQUIREMENT TIMELINE

Requirements documentation should be submitted well in advance of the first requested support or test date. The lead-time affords the support agency time to provide software, facilities, and/or instrumentation and allows the supporter(s) of the request time to deliberate on the support documentation.

For CSO Support Requirements, refer to CSO Services Document (CSO 001-001), latest revision, Appendix B CSO Service Planning Timeframes, for established targets in the provision of NISN services.

NON-CSO Support Requirements requests for services at any particular center or agency not covered by Appendix B will have to be directed to the appropriate R&R/DBM of that center. This information will be provided back to the requester after a case-by-case analysis has been performed at that center.

Support Requirements have two timeline categories:

- a. RSR is used until T-30 days prior to the start of an affected test or support need date, whichever is earlier. Responses should be provided to the DBM within 5 working days of receipt of the RSR.
- b. Expedite Support Requirements are used from T-30 days until T-72 hours prior to the start of an affected test or support need date, whichever is earlier.

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Responses should be provided to the DBM within 48 hours of receipt of the expedite requirement (e.g. support for ongoing operations).

5.8 REPORTS

Report outputs can be generated in the following formats:

- a. Format 00: Reports that provides a one-line summary for each DBR in the requested report.
- b. Format 01: Reports contain the PRD support requirements for Level 2 documents.
- c. Format 02: Reports contain PSP support responses for Level 2.
- d. Format 03: Reports contain the PRD/PSP support requirements and responses for Level 2 documents.
- e. Format 04: Reports contain the PRD/OR support requirement for Level 2 and Level 3 documents.
- f. Format 05: Reports contain the PSP/OD support responses for Level 2 and Level 3 documents.
- g. Format 06: Reports contain the PRD/PSP/OR/OD support requirements and responses for Level 2 and Level 3 documents.
- h. Format 07: Reports contain the OR support requirements and responses for Level 3 documents.
- i. Format 08: Reports contain the OD support responses for Level 3 documents.
- j. Format 09: Reports contain the OR/OD support requirements and responses for Level 3 documents.

Formats 00, 02, 04, 05, and 08 are currently under development.

{NOTE 1: Default values for the approval code are Approval (APP) and Delete (DEL)}

{NOTE 2: The ASRS requires a double-digit entry for the Format to be entered (e.g., Format 00, Format 01, etc.)}

5.9 REQUIREMENTS REPORTS RETRIEVAL

Retrieval capabilities is one of the most useful features of the ASRS database. For instance, rather than looking at the entire PRD, you may elect to look at only those requirements where you are requested to provide support, only a particular UDS/ASRS section, or only those requirements carrying a particular date. Reports may be generated from custom database queries. Specific report formats may also be added to the system.

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5.10 SENDING REPORTS VIA AMRDEC'S SAFE ACCESS FILE EXCHANGE SYSTEM

Some DBMs and R&Rs may be required to share reports with their counterparts from different programs or partners within the programs they may be working. However, some reports may be so large that easily creating a zip file to e-mail that information may be necessary. Unfortunately, the internal network firewalls within various agency computer networks may prevent any sort of transmission of zip files from the original sender.

As such, DBMs and R&Rs may utilize the U.S. Army Aviation and Missile Research, Development, and Engineering Center's (AMRDEC) Safe Access File Exchange (SAFE) application to send large reports. The link to the AMRDEC SAFE website may be found below denoted as NOTE 1. In addition, a user of the ASRS application may find the link on the top right-hand corner of the ASRS Dashboard. For assistance on how to send/receive information using the AMRDEC SAFE application, click on the SAFE Guide link below, denoted as NOTE 2.

As a recommendation from the ASRS Management team, the DBM and/or R&R sending reports should verify (via e-mail or telephone) the receipt and understanding of the AMRDEC SAFE system. If the recipient has never utilized the AMRDEC SAFE system, encourage them to follow the instructions contained within the pre-generated AMRDEC SAFE system e-mail.

{NOTE 1: <https://safe.amrdec.army.mil/safe/Welcome.aspx>}

{NOTE 2: <https://safe.amrdec.army.mil/safe/Guide.aspx>}

5.11 DATABASE SOFTWARE GENERATED FEATURES

An operator cannot change the software that controls the ASRS database to suit individual users. It generates the following items:

- a. On any requirement's Data Management Report (with the exception of Format 00), Section 1031 (Document Outline) is software generated. The report lists only those sections found within that particular report.
- b. Section 1030 (Revision Control) is software generated when selected from the "Requirement Report Request" screen in conjunction with Document Format and Document Identification (ID) (with the exception of Format 00). This section outlines the document DBRs, items numbers, and in which section of the document they are located. In addition, the revision (of the document) and revision date of each DBR is identified.
- c. Headers and footers of all requirements reports are software generated and cannot be modified on a page-by-page basis (i.e., 5300.001 may not have a title different from the rest of the 5300 section).
- d. Page numbers within a section are software generated.

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- e. Fixed UDS/ASRS formats are maintained in the database for each UDS/ASRS section. If a particular requirement is not compatible with the fixed UDS/ASRS format, a Requirement General Applicability (R G/A) General Form is available for data entry. To use this option, the R G/A override button must be selected as part of the initial requirement transaction.

5.12 DATA ELEMENT DIRECTORY (LEGAL VALUE REPORT)

To obtain a copy of the Legal Value report, the user requires a minimum of a read-only permission to access the ASRS database. A more detailed description of a legal value is as follows:

When the user is presented with fields in the ASRS where they can select from the drop down menu, the list of choices stored is a Legal Value List. An administrator, depending on which field, can add more values, inactivate, or delete values. This is also true for owner codes where the user has a list that they select from and move to the right to apply to a user. Legal values allow for a quick update of the system without the need for a developer to write code.

6.0 DATABASE MANAGEMENT BY R&R MANAGERS AND DBM

This section contains general information and specific instructions for the R&R Managers and DBMs regarding the operational use of the ASRS application.

6.1 ITEM NUMBER

The item number is a unique identity code that provides a means of identifying and locating a requirement within a specific section of the document. Requirements are to be entered in logical order. The item number which follows the heading of each page, include letters and numbers to provide a means of identifying the RA and Supporting Agency (SA). Therefore, "K1K": "K" (Requesting Agency) is Kennedy; "1" (Sequence Number); "K" (Supporting Agency), meaning this is a Kennedy-on-Kennedy requirement. Statements containing background or information items which do not require support consist of two elements only, identifying the Requesting Agency and an enumeration of the statement, e.g., K4. All agencies are to review this item to determine their own need of this information in light of requirements elsewhere in the document requesting their support.

6.2 ADMINISTRATIVE CHANGES

Administrative changes are requirement or response changes that do not require prior support commitments to be changed.

Existing commitment responses from the supplier(s) for a particular DBR will remain unchanged by the DBM for any of the following administrative changes that are made to the DBR:

- a. Changes to coordination contacts including names/mail codes found in the text.

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- b. Changes to prime requester. This primarily affects photography requirements where a name, telephone number and mail code are listed in the description block as the "prime requester." This item does not affect the requester codes that are entered as part of the item number.
- c. Technical contacts
- d. Cross-references
- e. Sub-requester and sub-supplier codes
- f. Corrections to typographical errors and omitted words that do not change the intent of the requirement
- g. Acronyms in Section 1050

6.3 MULTIPLE SUPPLIERS/SUB-SUPPLIERS

A support requirement can sometimes be levied on multiple agencies to provide that needed support. Within those agencies, there may be more than one sub-supplier. All sub-suppliers must respond to the support request with the appropriate commitment response in the designated timeframe required.

6.4 DELETE A DATABASE RECORD

To delete a DBR, DBMs will select "Deleted" in the approval field and change the approval date. An RSR will be generated and sent out to suppliers/sub-suppliers. The DBM will notify the suppliers/sub-suppliers and the suppliers/-sub-suppliers will acknowledge the deletion with a WILCO.

A "Deleted" requirement is not removed from the database, only from the certain printouts. Deleted items can easily be reactivated by a requester sending an appropriate message to the DBM.

6.5 REACTIVATING A DELETED DATABASE RECORD

Upon request to the DBM by the R&R Manager, a previously deleted DBR can be easily reactivated using the existing item number and DBR number of the "Deleted" item. The user would have to initiate a new CSRR, to bring the requirement from Deleted to an Approved status.

6.6 MOVING REQUIREMENTS WITHIN THE SYSTEM

There may be several types of requirements that you may be interested in moving within the ASRS.

Currently, the capability does not exist to move requirements to/from Sections and to/from CSRRs.

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6.7 TEST CODE

Test Codes identify administrative/informal codes used for grouping/sorting similar requirements. Test codes can be used to identify facilities or special testing.

6.8 REQUESTER/SUPPORT CODE DEFINITION

The definition of Lead Support Agency or Lead Range is the agency or organization that is the prime POCs for requesting, receiving, and responding to support requirements for an agency or organization.

The following lead support agency and Lead Range assignments are valid:

<u>SUPPORT CODE</u>	<u>AGENCY CODE</u>	<u>ASSIGNMENTS</u>
D	DoD	All DoD requirements/non-range type support.
E	45 ^h SW	All worldwide DoD range requirements/support.
G	GSFC	All operational ground and space network communication and tracking requirements/support.
H	MFSC	Marshall Space Flight Center requirements/support.
I	LaRC	Langley Research Center requirements/support.
J	JPL	Jet Propulsion Laboratory.
K	KSC	Kennedy Space Center requirements/support.
M	ARC	Ames Research Center.
S	21 SOPS	21 Space Operations Squadron (SOPS) { NOTE: Anytime the "S" support code is used, "G" must also be added, as GSFC is responsible for obtaining 21 SOPS responses}
T	JSC	Johnson Space Center requirements/support.
W	30 ^h SW	Western Range.
X	DFRC	Dryden Flight Research Center.
Y	NASA HQ	NASA Headquarters requirements/support.
Z	WSTF	JSC White Sands Test Facility.

The following clarifies the requester/supplier responsibilities at White Sands Space Harbor (WSSH), White Sands Missile Range (WSMR), and White Sands Test Facility (WSTF):

Definitions:

- WSSH - White Sands Space Harbor is located on WSMR, operated by WSTF with support provided by others (WSTF, Holloman Air Force Base, and WSMR).
- WSMR - White Sands Missile Range falls under the command of the U.S. Army. WSMR provides support through E assignments. D works with WSMR and through E for requirements. There is no test code or specific/special provider/requester code for WSMR or WR.

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- c. WSTF - White Sands Test Facility, WSTF is a satellite organization of NASA JSC (T). The "ITEM NO." Z is used to identify the WSSH location with WSTF as the responsible organization.
- d. WSMR (E) will provide/supply all main feeder hardline Comm. to WSSH. WSMR ("E") and WSTF/WSSH ("Z") will distribute Comm. to fixed and temporary trailers, vans, and facilities at WSSH as requirements dictate.

R&R Managers (requesters) should give the DBM the suggested supplier codes.

All "G" supplier codes that have various Wallops Island sub-supplier codes (i.e., Wallops Island Orbiter Tracking Station [WPS], Wallops Island Station at Wallops Flight Facility [WLP], Wallops Island, Virginia S-Band 9-Meter Antenna, JSC Designated [WLPS], Wallops Island, Virginia S-Band 9-Meter Antenna, GSFC Designated [WPSA], etc.) shall also show a sub-supplier code Wallops Flight Facility (WFF), Virginia (GSFC).

6.9 NEW REQUIREMENTS (DRAFTS)

When new requirements are initiated within the ASRS, the DBM will:

1. Assign the section number and perform a preliminary review to ensure the requirement has been properly formatted, according to the CSRR required fields.
2. Will submit the CSRR for approval to the designated Program Approver.
3. Upon program approval, the CSRR will transfer to the NASA DBM for review and approval.
4. The CSRR will then be submitted to the identified contractor DBM to review and complete the record. Upon record review, the CSRR will then be incorporated into the database (in its entirety or by selected DBR).
5. Will release an RSR to notify the suppliers/sub-suppliers of the support being requested.

6.10 CHANGING R&R MANAGERS REQUIREMENTS

A requirement submitted to a DBM represents the culmination of efforts by the R&R Manager, the requesting organization, and the supplier. The wording of such requirements has significance to these organizations. The DBM will not change the wording of a requirement that has been submitted unless the proposed changes to the requirement coordinated and approved by the requesting R&R Manager. A wording change can change the meaning of the requirement and can change the response. Since requests can trigger cost estimates and other work, special care must be exercised in the handling of such support requirements.

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6.11 CHANGING COMMITMENTS

Due to a change in a support environment, funding concerns or other factors, suppliers always have the option of changing their commitments by coordinating with the R&R Manager to change the commitment.

6.12 OWNER CODE

During the add process, this field is automatically filled with the appropriate Owner Code.

6.13 INFORMATION ONLY RESPONSES

In the ASRS, when a supplier/sub-supplier is involved in the fulfillment of a requirement in some way, but is not responsible for providing a WILCO response, the DBM will select the "Information Only" check box in the requirement. By selecting this check box, the non-WILCO responding party will receive a system generated e-mail from the ASRS informing them of a requirement that needs their attention for their review.

6.14 GUIDELINES FOR MODIFYING AN EXISTING UDS LEVEL II (PRD) AND/OR III (OR) DOCUMENT

Once a PRD/OR has been baselined (DR), requests to update the document will be made by the R&R Manager using the CSRR process. Approved updates will be distributed for responses by the DBM using the RSR format, respectively.

6.15 CSRR REQUIREMENTS MODIFICATIONS

The CSRR is used to modify requirements. Modifications may include changes to any of the fields and/or requestor suppliers/sub-suppliers. Details of the CSRR capabilities may be found in Section 5.1

6.16 REQUIREMENTS NOT NEEDING PROGRAM APPROVAL

Administrative changes to administrative sections (Sections 1000-1070):

- a. In order to make any administrative changes to a requirement that is already approved, the user would be required to recall the approved requirement by initiating a new CSRR and select the "Administrative Only" check box found on the page. If the requirement is not yet approved and is still in the draft mode, any user with permission to the document may make any administrative change.

6.17 DOCUMENT RELEASE

The DR is the first issuance of a level II (PRD) and/or level III (OR). The ASRS creates the DR. DBMs may add a distribution list in addition to the suppliers/sub-suppliers listed.

6.18 ROUTINE SUPPORT REQUIREMENTS

The RSRs are notifications sent to requestors and suppliers/sub-suppliers on changes to the document once a document has been released. Changes include new or added items,

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modifications to existing items, and deletions. RSRs are predetermined templates within the ASRS, providing essential information for the notification and response by the suppliers/sub-suppliers.

6.19 RSR FORMS FOR CHANGING PRD/PSP/OR/OD DOCUMENTS

An R&R Manager having a need to add, change or delete a requirement, will initiate an CSRR, using the appropriate system generated format, and will forward the CSRR to the appropriate DBM for acceptance into the requirements system.

The following RSR Format should be used for changing ASRS documentation:

ROUTINE

RSR GSDO V&V KPRD - 102 [OTV Camera Support]

A/C/D	DBR #	Section	Item	Change Description	Remarks
				DESCRIPTION:	

Responses should be entered via the ASRS Application if you have an NDC Authorized account, and should follow the ASRS guidelines as described below. Otherwise, responses should be submitted on the form provided, and should follow the ASRS guidelines as described below.

<u>Response</u>	<u>Definition</u>
INWORK	In Work - Used when further coordination and documentation is required before a commit can be given. An INWORK requires a SEERSP for explanation.
NOACK	No Acknowledgement - Used to indicate that the supplier must review the requirement and provide the requester, via the Database Manager (DBM), a new or updated commitment. NOACK is automatically generated by the computer any time the approval date is changed.
NOCMT	No Commit - Used when the supplier cannot commit to a requirement because of insufficient information. A NOCMT requires a SEERSP for explanation.
NOWLCO	No Wilco - Used when the supplier cannot support a requirement because of budget, schedule, or manpower constraints. A NOWLCO requires a SEERSP for explanation.
SEERSP	See Response - Used by the supplier to fully explain the response given in conjunction with a INWORK, NOCMT, or NOWLCO.
WILCO	Will Commit - Used when the supplier can commit to a requirement within budget, schedule, and manpower.

Please direct any questions concerning this document to the following Technical POC:

Name	Dept No.	Phone No.	Mailcode
Please direct any questions about the ASRS process to the following Database Manager:			
Hill, Ellen, G	2110	321.861.0268	P.O. Box 21046
Name	Dept No.	Phone No.	Mailcode

FIGURE 6.19.1 RSR FORMAT

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7.0 REQUIREMENTS/RESPONSE PREPARATION INSTRUCTIONS

In preparing the “TEXT/REQUIREMENTS” inputs for each ASRS section, provide the required information for that section as specified in the UDS 501-12 Document.

The data entered will vary in accordance with requirements for a particular program, and the manner in which the data is entered must remain flexible. The important consideration is to follow the instructions provided and to present the requirements in a clear, concise manner.

Numbered sections provide for a common document outline and standard presentation of information, which serves as the framework for all documents within the ASRS. In preparing the text/requirements or response inputs for each section, use data elements that apply to your program.

7.1 ASRS INDEX

This section lists the various ASRS sections, the prime format to be used with each section, the section title and a brief description of the use for each section. Many data entry personnel prefer to use the R G/A format almost exclusively. If the R G/A form is used, the requesters are to make sure that all the required information is addressed.

The main differences between R G/A forms and specific section forms are:

- a. R G/A forms have no label numbers while section specific UDS forms have one or more numbered labels. Label numbers are specific data related to that specific UDS section that would need to be completed in the ASRS application.
- b. The R G/A forms may be filled out in paragraph format rather than in a paragraph “vertical” format. Until additional capability is provided, R G/A forms are sometimes required since some of the sections require some labels that are not provided by the computer generated specific section forms (e.g. the 3110 section requires a “PRIME REQUESTER” and a “TECHNICAL CONTACT” label - the specific section form does not presently have those two labels and they cannot be inserted correctly on the form). Unless otherwise noted, the optional forms shown in the remainder of this chapter show the R G/A (vertical) format.

The suggested use of R G/A forms is indicated in this index by listing “(R G/A)” immediately below the specific section forms. The suggested use of the R G/A form is shown by the words “USE OF THE UDS/ASRS R G/A FORM IS OPTIONAL.” These words are located between the two rows of asterisks that separate the form from the directions. In addition, labels that must be manually typed are shown in italics.

{**NOTE:** The ASRS does not include all section numbers available within the UDS. If additional ASRS sections are needed, notify the ASRS manager for consideration of other UDS/ASRS sections}

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7.2 ASRS PAGE FORMAT

Each ASRS page is divided into four parts. The top part of the page consists of the Page Header. The second part is the Text/Requirements (PRD/OR) portion that describes the requirement. The third part is the PSP/OD section that contains the responses to the requirement. The last part on the page is the Page Footer.

7.2.1 PAGE HEADER INSTRUCTIONS

- a. **GENERAL:** A pre-defined header is automatically printed on each page. The necessary data entry information is entered only on specific direction of the DBM. The computer will automatically print the header information on each page of the document.
- b. **CLASSIFICATION:** The ASRS is a non-secure system. All data entered must be unclassified. The computer automatically generates the word "UNCLASSIFIED" on each page.
- c. **SECTION TITLE:** A pre-defined section title is printed immediately below the document "CLASSIFICATION".
{NOTE: The words "Section Title" are not printed}
- d. **REPLACES PAGE (S):** N/A (Automatically generated by the computer on all pages.)
- e. **SECTION:** The section number is comprised of a prefix (DEC = PRFX) an appropriate section number and a three place decimal number to represent the page sequence within that section. Example: LLS2606.003. The Analyst enters the appropriate document number and section number when generating a new DBR. The computer then generates and prints the appropriate PRFX and section number.
- f. **PUB DATE:** Document Publication date. The Pub Date reflects the latest "publication" date provided by the DBM.
- g. **RUN DATE:** Date that the document was printed. The computer automatically generates this date.
- h. **PROGRAM TITLE:** A pre-defined program or document title of the document.
- i. **DOC TYPE/NO.:** The number that has been assigned to the program. The computer automatically generates this number.
- j. **REVISION NO.:** N/A (Automatically generated by the computer on all pages.)

7.2.2 PAGE FOOTER INSTRUCTIONS

- a. **GENERAL:** The pre-defined footer contains the following information:

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1. Sub-database abbreviation immediately followed by the same section number found in the header.
2. Page sequence number, which is a sequential number going through the entire document.
3. REF, which indicates the appropriate form number.
4. Classification, which is a duplicate of the header.

8.0 TEXT/REQUIREMENTS (PRD/OR) & SUPPORT COMMITMENT (PSP/OD) INSTRUCTIONS:

The applicable prime form contained in a box followed by the directions for filling out the form.

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APPENDIX A

KENNEDY SPACE CENTER EXPLORATION GROUND SYSTEMS

This appendix provides instructions that are applicable for the support requirements documents of Exploration Missions and developing programs and missions managed by EGS. It also provides supplementary guidance on how EGS R&Rs and DBMs will work within the framework of the SRS and work with NASA suppliers/sub-suppliers, which include DoD, TOSC, and other organizations/contractors.

These instructions shall supersede or amplify associated information found in the basis document.

A1.0 ADMINISTRATION

- a. Quality control responsibility for the assigned PRDs:

The KSC TOSC ASRS DBM will review all work packages for typos, context errors, or any other areas of concerns.

- b. The DBM will:

Coordinate all changes with the appropriate suppliers and ensure that all new requirements have a priority (in regard to DoD/ER requirements) and that all support requirements contain rationale. The DBM will also make changes to the database and issue an RSR, or response, and give an easily understood description with reason and rationale of changes to each requirement changed.

A2.0 REFERENCE NUMBERS

If K and another center(s) are requesters and there are reference numbers in the 'DESCRIPTION,' make sure that each center's code (e.g., K) is added to each applicable reference number as a prefix and postscript.

If a reference is to be deleted, do a quick review to verify that the item is not required by another center and get concurrence from the NASA DBM.

A3.0 RESPONSES

- a. Response Data Entry Shortcut:

The commitment status may be accepted as a direct response (WILCO, INWORK, NOWILCO, NOCMT) providing the SEERSP is short, simple, and uncontroversial. Any response that has a long complicated or controversial SEERSP will go to the NASA DBM for review. At this point, the DBM will exchange correspondence with the supplier/sub-supplier to gain information as to where the supplier/sub-supplier and requestor are having difficulty fulfilling their requirement. Once both parties agree on the details of the discussion, the TOSC DBM will reassign the request with the newly acquired information so that a WILCO response may be obtained.

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b. KSC Support Agency:

KSC responses for developing programs/missions/tests may be coordinated by the NASA/KSC ASRS System Manager (LX-S2).

A4.0 KSC DATABASE MANAGER AND R&R MANAGER BACKUP

In the absence of the assigned TOSC DBM or R&R Manager, the following NASA/TOSC members will have signature/approval authority. In case of policy or ground rule discussions, the appropriate backup person should be included in any such discussions.

NASA (Primary): Eric Barcon, LX-S2
TOSC (Alternate): Ellen Hill, TOSC-2100

The backup capability should be used only when it is necessary to release a document or have policy/guideline discussions prior to the return of the Prime Manager. Except in definite emergencies, the backup should not be used if the prime person is due back within 8 working hours after the document is ready for signature.

At the NASA DBM's request, TOSC will make the complete released package available to LX-S2. All questions or changes to the PRD should be directed to Ellen Hill, TOSC contract employee.

A5.0 COORDINATION WITH COMMUNITIES OF PRACTICE/DISCIPLINES

Coordination with communities of practice/disciplines will take place to ensure proper capturing of technical requirements and proper coordination of funding responsibilities. Typically, communities of practice/disciplines will have an integrator or central POC that will be a focal point to the coordination with the R&R and/or DBM.

{**NOTE:** KSC TOSC ASRS personnel are encouraged to verbally pre-coordinate with MSFC requirements personnel, but the official action requests must be made by electronic e-mail.}

A6.0 FLIGHT CONTROL REQUIREMENTS

Flight control requirements will be found in the Flight Ops PRD.

For example, all meteorological requirements shall be documented in the appropriate Launch and Recovery (L&R) PRD, except for the Emergency Mission Control Center (EMCC) weather requirements that are in the Flight PRD.

A7.0 RANGE SUPPORT

All range support, including range safety requirements, shall be documented in the appropriate Launch and Recovery (L&R) PRD (not in the Flight PRDs).

A8.0 CUSTOMER INTERFACE

KSC's main interface will be using the CSRR in the ASRS. Customers needing assistance with a CSRR may contact the R&R for further CSRR refinement and/or coordination.

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A9.0 PROGRAM APPROVERS

PRD/PRD items are configuration managed using the ASRS CSRR. All items Added to, Mod/Changed from/to, and Deleted from the PRD go in via CSRR. The KSC EM PRD Volumes are reviewed and electronically signed “Approved” (Technical and Funding) by the EGS Operations and Test Management (O&TM) Workflow Managers. The “Funding Org” and “Funding Source” are required fields for Approval. The CSRR is coordinated with and submitted to the program/center R&R Manager.

A10.0 COMMUNICATIONS, COMMAND, & CONTROL RELATED SUPPORT

Approvals will be managed differently, depending on their Programs and/or missions/tests.

Items in KSC EGS Managed PRDs are “Program Approved” (ASRS e-signature) by NASA Workflow Managers in EGS Operations & Test Management. Items related to Command, Control & Comm (voice, video, and data) are first approved for technical need by NASA Workflow Managers in EGS Operations & Test Management and then forwarded to Command, Control & Comm (C3) Office for assessment against baseline and funding of C3 related content, reference Appendix L for C3 PRD management and Implementation Policy.

- O&TM Workflow Manager owns the requirement and reviews CSRR/PRD items first (support needed/required)
- O&TM Workflow Manager assigns CSRR with Command, Control & Comm (voice, video, data) items to C3 (if C3 is already listed as “Additional Approver” the workflow will automatically route to C3 for approval)
- C3 reviews and assesses assigned CSRR to verify in baseline, with item(s) above/beyond baseline identified and communicated to KSC EM R&R Manager (EGS LX-S2/Eric Barcon)
- KSC R&R Manager notifies O&TM Workflow Manager on items identified by C3 as above/beyond baseline
- C3 electronically signs “Approves” CSRR with C3 verified items including required data for “**Funding Org**” & “**Funding Source**” fields

Note: EGS C3 will also be listed as a supplier for these items upon request.

A11.0 SUPPLIER RESPONSES

Each supplier/sub-supplier will have to give a response to the requirement. Each center may differ on how they manage the responses.

Suppliers for all KSC Command, Control & Comm (voice, video, and data) items Comm related PRD items will include EGS C3 as a Supplier/Sub-Supplier. Sub-Supplier

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contractors also respond to PRD (e.g. IT support contract). The C3 responder will provide rollup commitment for implementation of KSC Comm related items (WILCO).

{Note: For example, KSC will have the suppliers/sub-suppliers respond directly to the requirement using the ASRS. This may differ from other centers.}

A12.0 ASSOCIATED WORK PLANS

This field found in the ASRS contains a Work Plan Number used for tracking to the integrated work tools in place by TOSC. The CSRR has to be assigned to the R&R/DBM before adding/selecting a work plan. Currently the Associated Work Plans can only be associated to PDR DBR when they have been approved. Once approved, those work plans will be made available under the ASRS dropdown menu titled “Associated Work Plans.”

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APPENDIX B PAYLOADS KENNEDY SPACE CENTER

B1.0 KSC L&R VOLUME II (PAYLOADS)

This appendix provides instructions that are applicable for KSC Payloads - Payloads (Volume II), and International Space Station Payloads (Volume III) support requirements documents.

B2.0 GENERAL

This document is provided for the guidance of the Test and Operations Support Contract (TOSC) with respect to the ASRS. Under the TOSC Contract, the contractor shall comply with this plan, SRS/ASRS Management Plan, KSC-PLN-6445, by utilizing the ASRS to document the requirements for each mission and payload. The contractor shall update and maintain the applicable payload databases in the ASRS per the guidelines documented in with this plan, SRS/ASRS Management Plan, KSC-PLN-6445 and publish the support requirements documentation (DR-26). Boeing's operating instructions on how TOSC utilizes ASRS is referenced in Standard Practices and Procedures (SPP) 0-14.

The PRD/PSP publication is required prior to Launch Site Support Plan (LSSP) Baseline publication. OR/OD is required 30 days prior to first test.

B3.0 KPRD, VOLUMES II & III - STATION (KPRD II/III)

The Kennedy PRD is a document for identifying KSC's internal "Payload" support requirements levied on themselves for the processing of a nominal International Space Station Program (ISSP) mission at KSC. The Kennedy PSP contains a commitment to provide the capability for meeting the nominal support requirements documented in the KPRD II/III.

Kennedy Payloads is in the process of merging the KPRD II and KPRD-III into one document, which will become KPRD II/III. The requirement type will be identifiable in the test codes as to whether it is a Volume II (Payloads) or Volume III (Station) requirement.

B4.0 PRDS

The PRD, Volumes II and III are documents that identify KSC's "Payload" support requirements on other NASA Centers/Contractor Organizations and for those same Centers/Organizations to levy support requirements on KSC. The PSP contains a commitment source for meeting the approved requirements and documents those requirements and their sources that cannot be provided.

Payloads - Volume II

Payloads - Station, Volume III

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B5.0 SUPPORT COMMITMENTS/RESPONSES

When commitments/responses are received, the Analyst enters the data in the database. If the commitment is anything other than WILCO, the Analyst will then notify the Launch Site Support Engineer (LSSE) that an action is required. The LSSE will then coordinate with the applicable customer on the response received from the Supplier or Sub-supplier.

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APPENDIX C JOHNSON SPACE CENTER

C1.0 JSC FLIGHT VOLUME II, III AND SPACE STATION ORBITAL VOLUME 1

This appendix provides instructions that applicable for the Exploratory Mission 1 Volume 2, International Space Station Orbital Volume 1, and the associated Commercial Resupply (CRS) and CCP annex support documents.

These instructions shall supersede or amplify associated information found in the basic document.

C2.0 INTERNATIONAL SPACE STATION VOLUME I, CRS AND CCP ANNEXES, AND EM-1 VOLUME 2

The International Space Station Volume I, CRS and CCP Annexes, and EM-1 Volume 2 document the core requirements that a center or agency (national or international) levies upon another.

C3.0 INTERNAL CHANGES, ADDITIONS & DELETIONS:

When requirements are to be levied upon other centers/agencies by JSC, they may be developed in a number of different formats. However, the Analyst must, at some point in time, convert the requirement into a JSC CSRR PRD Change Request. If the requirement involves another center as requester, the Analyst must complete appropriate coordination with cognizant personnel before submitting to the R&R/DBM for approval/signature. The CSRR must be signed by the R&R/DBM prior to entry in the database and transmittal of the RSR.

C4.0 SUPPORT COMMITMENTS/RESPONSES

The JSC PRD Requirement Response Manager will enter the JSC response to all support requests.

C5.0 GENERAL

JSC does not use the Operational Need Date, Milestones, or Test Code fields.

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APPENDIX D

MARSHALL SPACE FLIGHT CENTER

D1.0 VOLUME II: ISS PAYLOADS

This PRD documents all ISS Payloads requirements and may be found in the ASRS database under Document ID: ISS II.

At Marshall Space Flight Center, the Ground Support Requirements Team (GSRT) is responsible for collecting, processing, integrating, and coordinating the ground data and communications services requirements for payloads that are managed by the Payload Operations Integration Center.

The HOSC POIC Integration Engineers (PIE) provides a single POC for ground data service (GDS) needs for the full life cycle of the Payload's operations. The PIE assists the payload customer with documenting their GDS needs in the Payload Integration Agreement (PIA) and the GDS Blank Book (BB). The PIEs review the requirements and submit new identified requirements for approval and inclusion into one of the NASA ISS PRD volumes. If the requirement is contained within a PIA or the GDS BB, funding has already been provided.

For additional information, contact the R&R Manager or DBM.

MSFC R&R Manager
HP27/G. Patrick Molloy
pat.molloy@nasa.gov
256-544-2069

MSFC DBM
HOSC/Frances Rigsby
frances.a.rigsby@nasa.gov
256.544.2908

D2.0 EM REQUIREMENT APPROVAL

When new requirements are identified, the R&R Manager will:

- Work with the requestor finalize the wording of the requirement
- Obtain approvals from the impacted organizations
- Obtain funding, if required, for implementing the requirement
- Identify the appropriate PRD volume The MSFC DBM will
- Coordinate with the Book Owner the submittal of the requirements
- Submit CSRR to the Book Owner with funding code

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APPENDIX E

JET PROPULSION LABORATORY

E1.0 INTRODUCTION

This appendix provides guidance for managing Deep Space Network (DSN) support requirements for Artemis missions as captured in PRDs.

E2.0 GENERAL

JPL will provide a prime and backup R&R manager to handle the DSN-related PRD requirements. The DSN Mission Interface Manager (MIM) can provide the current POCs for this function.

E3.0 PRDS WITH JPL REQUIREMENTS

The following PRDs involve services provided by the DSN:

1. Artemis I Volume I, Launch and Recovery PRD
2. Artemis I Volume II, Flight Operations PRD

E4.0 PROCESS

The DSN utilizes a service agreement (e.g., DSA, or DSN Service Agreement) and interface document (Operational Interface Control Document [OICD]) to capture requirements-related information from Artemis. These are DSN-controlled documents and used within the DSN to define the committed services that DSN will provide to Artemis. In conjunction with the DSA and OICD, the DSN works with Artemis personnel to capture the appropriate requirements-related information in the Artemis-controlled PRD(s). The DSN is a supplier on requirements in ASRS and responds to each request as follows: upon receipt of a request from ASRS, the DSN MIM (or designee) will review the request, alert the relevant DSN teams to analyze it and provide a response within a short time period, nominally a week. The DSN MIM (or designee) will then provide feedback on the ASRS request, according to the guidance in this document.

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APPENDIX F ABBREVIATIONS & ACRONYMS

List of Abbreviations and Acronyms

The following abbreviations and acronyms are used in this document.

30 th SW	30 th Space Wing
45 th SW	45 th Space Wing
ABM	Anti-Ballistic Missile
ACCESS	Advanced Communications Capabilities for Exploration and Science Systems
ADD	Add
ADS	Advanced Distributed Simulation
AFRC	Armstrong Flight Research Center
AFSCN	Air Force Satellite Control Network
AGCL	Automatic Ground Control Landing
ALS	Abort Landing Site
AMRDEC	Aviation and Missile Research, Development, and Engineering Center
AOS	Acquisition of Signal
APP	Approval
ARC	Ames Research Center
ASRS	Automated Support Requirements System
ASTP	Apollo-Soyuz Test Project
AUID	Agency Unique ID
BO	Burnout
CAC	Common Access Card
CAPPS	Checkout, Assembly and Payload Processing Services
CATEX	Categorical Exclusion
CCAFS	Cape Canaveral Air Force Station
CCP	Commercial Crew Program
CEP	Circular Error Probable
CFD	Computational Fluid Dynamics
COB	Close of Business
CRT	Cathode Ray Tube
CSRR	Customer Support Requirement Request
CWC	Chemical Weapons Convention
CY	Calendar Year
DBM	Database Manager
DBR	Database Record

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DDMS	DoD Manned Space Flight Support
DEC	Data Element Codes
DEL	Delete
DEV	Data Element Values
DFT	Draft
DoD	Department of Defense
DSA	DSN Service Agreement
DSN	Deep Space Network
DR	Document Release
EA	Environmental Assessment
EAFB	Edward's Air Force Base
ECD	Estimated Completion Date
EFT	Exploration Flight Test
EIA	EXPRESS Integration Agreement Electronics Industry Association
EIS	Environmental Impact Statement
ELS	Emergency Landing Site
ELV	Expendable Launch Vehicle
EMCC	Emergency Mission Control Center
ER	Eastern Range
EXPRESS	Experiments to Space Station
FLT	Flight
FRR	Flight Readiness Review
GET	Ground Elapsed Time
GRC	Glenn Research Center
EGS	Exploration Ground Systems
GOR	Ground Operations Review
GSFC	Goddard Space Flight Center
GSRT	Ground Support Requirements Team
HMF	Hypergolic Maintenance Facility
HQ	Headquarters
HSF	Human Space Flight
HSPD	Homeland Security Presidential Directive
HWIL	Hardware in the Loop
ICD	Interface Control Document
ID	Identification
IdMAX	Identity Management and Account Exchange
INF	Intermediate-Range Nuclear Forces
INWORK	In-Work

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IRD	Interface Requirements Document
IRDG	Inter-Range Documentation Group
ISS	International Space Station
ISSP	International Space Station Program
ISTF	Installed System Test Facility
JPL	Jet Propulsion Laboratory
JSC	Johnson Space Center
KIAC	Kennedy Infrastructure, Applications and Communications
KICS	Kennedy Integrated Control Schedule
KPRD	Kennedy Payload Requirements Document Kennedy Program Requirements Document
KSC	Kennedy Space Center
L&R	Launch & Recovery
LaRC	Langley Research Center
LETf	Launch Equipment Test Facility
LOS	Loss of Signal
LRR	Launch Readiness Reviews
LSP	Launch Services Program
LSSE	Launch Site Support Engineer
LSSP	Launch Site Support Plan
MAF	Michoud Assembly Facility
MCC	Mission Control Center
MOD	Modify
MIP	Mission Integration Plan
MOU	Memorandum of Understanding
MPCV	Multi-Purpose Crew Vehicle
MSFC	Marshall Space Flight Center
MSFSRD	Marshall Space Flight Support Requirement Documentation Manned Space Flight Support Requirement Documentation
NAF	NASA Agency Forest
NAMO	KSC NASA Air Force Management Office
NAMS	NASA Account Management System
NASA	National Aeronautics and Space Administration
ND	Network Director
NE	Network Elements
NEPA	National Environmental Policy Act
NISC	NASA Information Support Center
NISN	NASA Integrated Services Network

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NOACK	No Acknowledgement
NOCMT	No Commit
NOWLCO	No WILCO
NSN	Near Space Network
NSP	NASA Special Projects
NSRD	Network Services Requirement Document
OD	Operations Directive
OICD	Operational Interface Control Document
OIS	Operational Intercommunications System
OND	Operational Need Date
OPR	Office of Primary Responsibility
OPSEC	Operational Security
OR	Operations Requirements
OSMU	Orion Service Module Umbilical
OST	Open Skies Treaty
OTV	Operational Television
PADD	Photography Acquisition Disposition Document
PCM	Pulse Code Modulation
PI	Program Introduction Document
PIA	Payload Integration Agreement
PID	Personal Identification
PII	Privacy Act Data PIP Payload Integration Plan
PKI	Public Key Infrastructure
POC	Point of Contact
POCC	Payload Operations Control Center
POL	Petroleum, Oil, and Lubricant
PRCB	Program Requirements Control Board
PRD	Program Requirements Document
PRF	Pulse Repetition Frequency
PRM	Program Requirement Manager
PRR	Production Readiness Review
PSP	Program Support Plan
R G/A	Requirement General Applicability
R&R	Requirements and Response
RA	Requesting Agency
RCC	Range Commanders Council
REQRSP	Requester Responsibility
RFICD	Radio Frequency Interface Control Document
RSR	Routine Support Requirement

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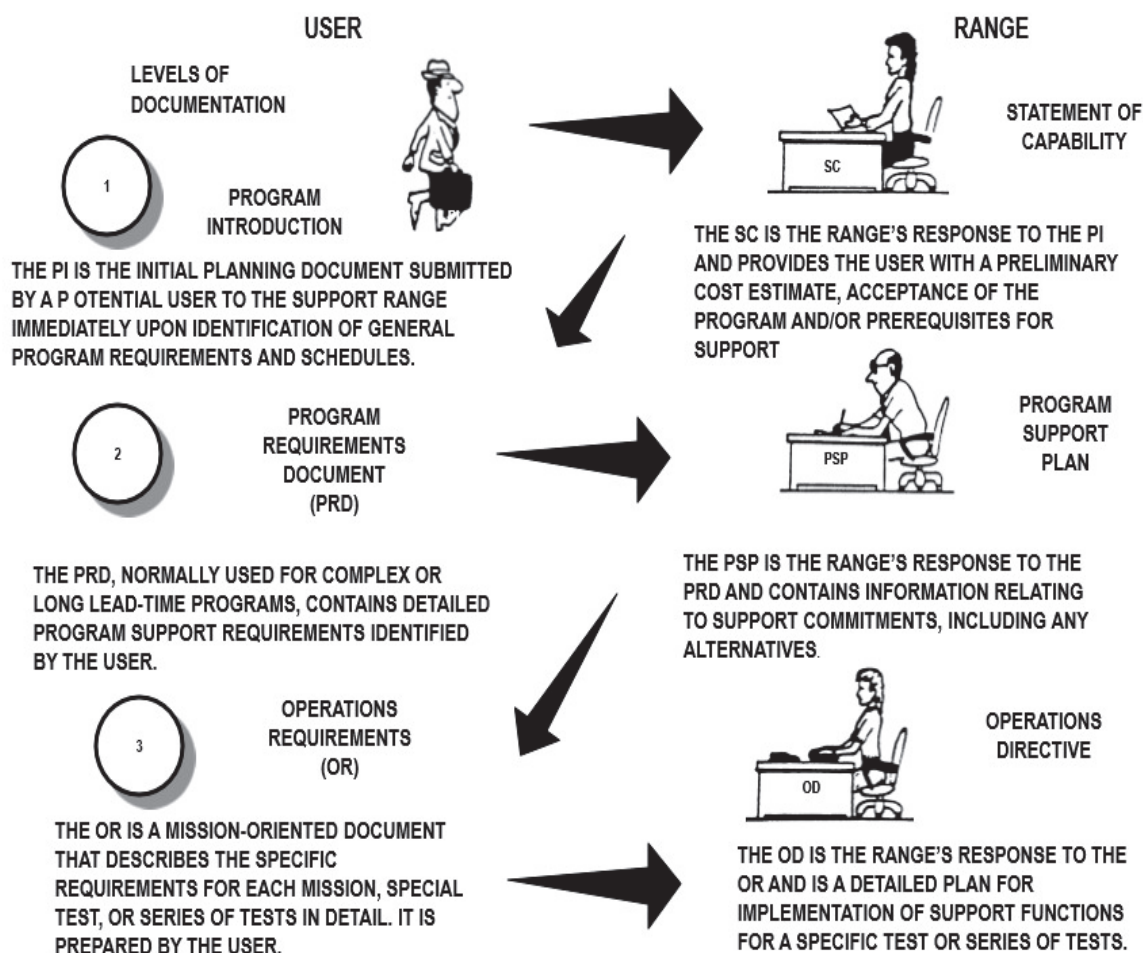
RSRR	Routine Support Requirement Request
RTDS	Real-Time Data System
SA	Supporting Agency
SAFE	Safe Access File Exchange
SBU	Sensitive but Unclassified
SC	Statement of Capability Document
SCO	Sub Carrier Oscillator
SCR	Software Change Request
	System Change Request
SEERSP	See Response
SEP	Separation
SER	Software Enhancement Request
SILL	System Integration Laboratory
	Software Integration Laboratory
SL	Sea Level
SLS	Space Launch System
SN	Supplier Notification
SOPS	21 Space Operations Squadron
SORR	Stage Operations Readiness Review
SRS	Support Requirement System
SSP	Space Shuttle Program
SSR	Space Station Requirement
SSRR	Space Station Requirement Request
START	Strategic Arms Reduction Treaty
SWIL	Software in the Loop
T&DA	Tracking and Data Acquisition
TAL	Transoceanic Abort Landing
TMATS	Telemetry Attributes Transfer Standards
TOSC	Test and Operations Support Contract
TBD	To Be Determined
TVC	Thrust Vector Control
UDS	Universal Documentation System
UPK	User Productivity Kit
URD	User Requirements Document
UTC	Universal Coordinated Time
VV&A	Verification, Validation, and Accreditation
WFF	Wallops Flight Facility
WIA	WORF Integration Agreement
WILCO	Will Commit

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WLP	Wallops Island Station at Wallops Flight Facility
WLPS	Wallops Island, Virginia S-Band 9 Meter Antenna, JSC Designated
WORF	Window Observational Research Facility
WPS	Wallops Island Orbiter Tracking Station
WPSA	Wallops Island, Virginia S-Band 9 Meter Antenna, GSFC Designated
WSMR	White Sands Missile Range
WSSH	White Sands Space Harbor
WSTF	White Sands Test Facility

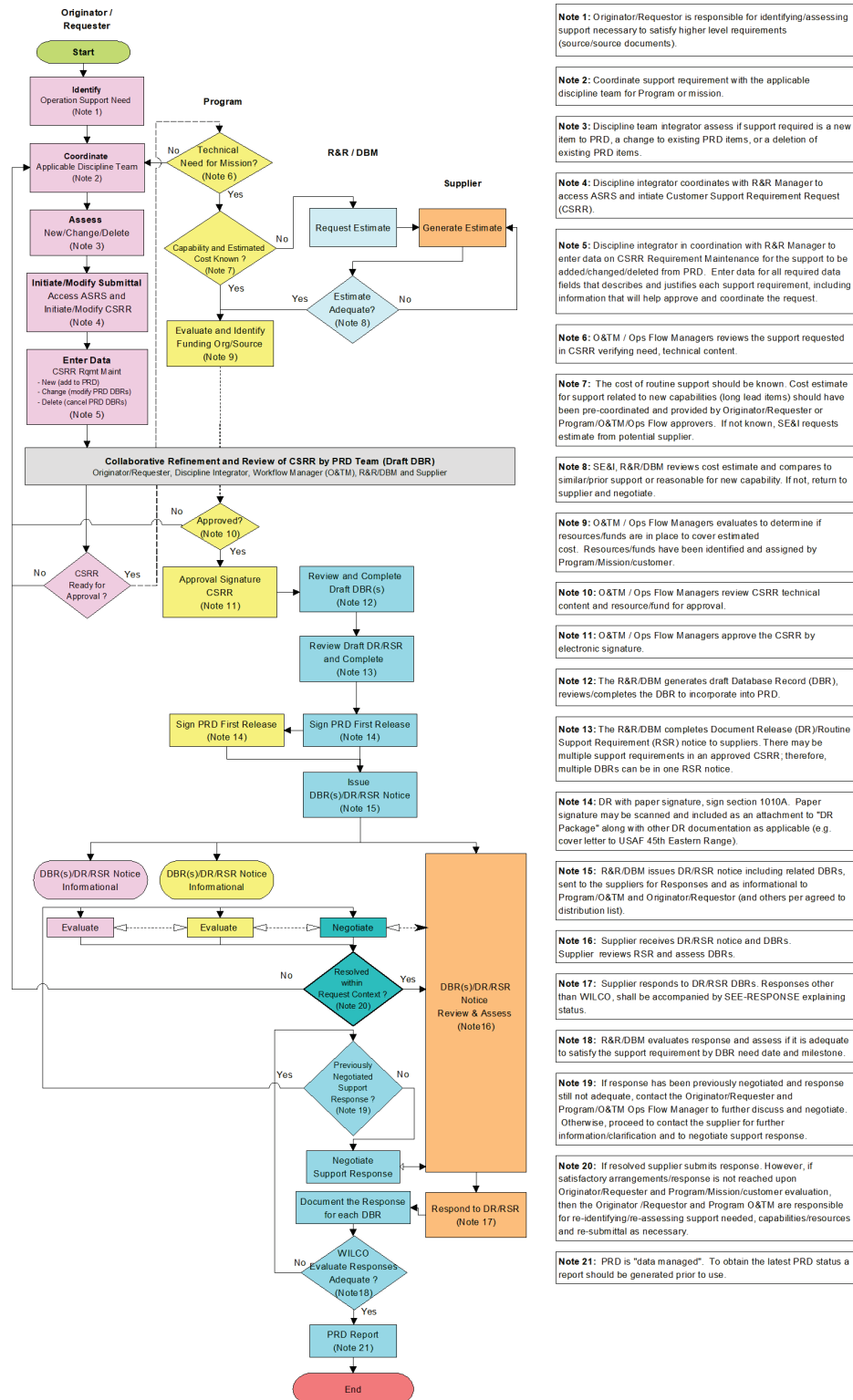
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APPENDIX G UDS COMMUNICATION FLOWCHART DIAGRAM

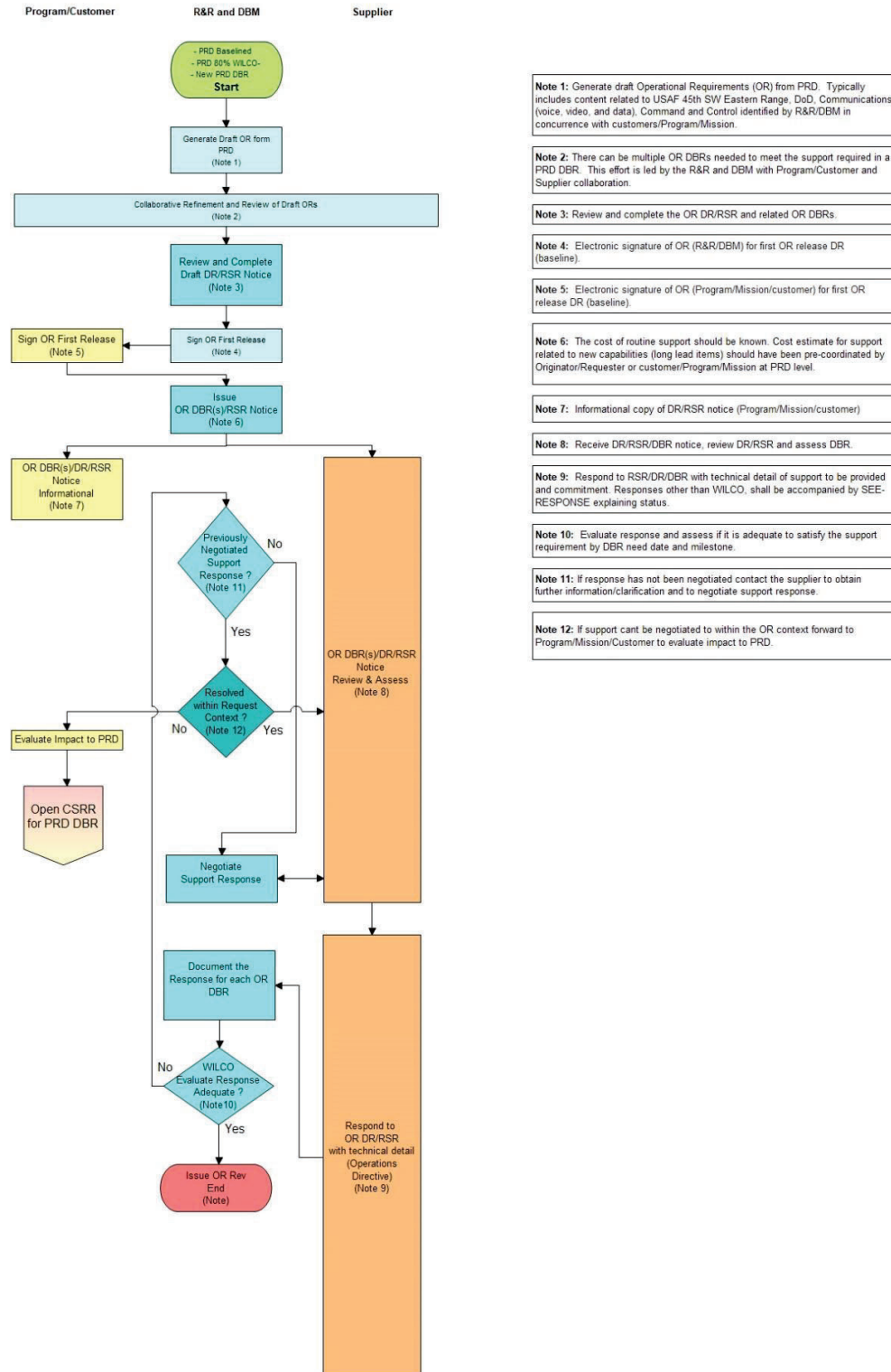


NOTE: IT IS NOT NECESSARY TO USE ALL THREE LEVELS OF DOCUMENTATION. WITH SIMPLE, SHORT-TERM TESTS, LEVELS ONE AND THREE MAY BE SUFFICIENT. HOWEVER, FOR COMPLEX, LONG LEAD-TIME PROGRAMS, ALL THREE LEVELS MAY BE REQUIRED. DISCUSS THIS WITH THE RANGE.

APPENDIX H PRD REQUEST PROCESSING WORKFLOW



APPENDIX I OR REQUEST PROCESSING WORKFLOW



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APPENDIX J GODDARD SPACE FLIGHT CENTER

J1.0 INTRODUCTION

GSFC support is managed by the Near Space Network (NSN). The HSF Network Director (ND) will operate on behalf of the NSN, providing services from the NSN and collaborative partners that provide communications, tracking, and network mission data services for all agency HSF missions.

J2.0 General

The HSF ND functions as the GSFC Supplier for all HSF related requirements and provides the definitive compliance commitment from the NSN. The services are provided by Network Elements (NE), which consist of NASA networks such as Advanced Communications Capabilities for Exploration and Science Systems (ACCESS), and collaborative partners such as the Eastern Range (ER). The NEs are key service providers that exist independently of the NSN and provide support to all missions across the Agency. Many requirements apply directly to specific Network Elements. For these requirements, the applicable NEs are included as 'Information Only' Sub-suppliers under GSFC.

J3.0 PRDS WITH NSN REQUIREMENTS

The following PRDs involve services provided by the NSN:

1. Artemis I Volume I, Launch and Recovery PRD
2. Artemis I Volume II, Flight Operations PRD

J4.0 PROCESS

The NSN utilizes a Network Services Requirement Document (NSRD) and a Radio Frequency Interface Control Document (RFICD) to capture HSF requirement information. These are NSN controlled documents and used within the NSN to define committed services that NSN will provide to HSF. In conjunction with the NSRD and RFICD, the NSN works with HSF personnel to capture the appropriate requirements-related information in the PRD. The HSF ND supplies a formal response – WILCO, NOWLCO, or WILCO-SEE RSP – or provides direction to bring requested redlines back to the requirement requester. The Requirements & Response (R&R) Manager carries out the HSF ND direction, ending the process and providing the HSF ND's concurrence of necessary funding, understanding of the requirements, and compliance plan to the requirements owner.

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APPENDIX K KSC LSP

KSC (ELV) PROCESSING

This appendix provides instructions that are applicable for the support requirements documents of ELVs and developing programs/missions.

General

This document is provided for the guidance of the LSP with respect to the Automated Support Requirements System (ASRS) maintained at KSC by the Jacobs contractor under the TOSC contract.

Administration

The KSC LSP ASRS Database Managers will review all work for typo's and context errors, and for content and policy or any other areas of concerns.

- a. The LSSEs will:

Develop the PRD and OR for each assigned mission from table 4.1 of the mission unique LSSP. LSSE also coordinate the support requirements with the appropriate suppliers to ensure that all requirements are complete and accurate.

- a. The (Acting) DBM will:

Develops the CSRRs and RSRs for the LSSE in the database and officially releases all RSRs to suppliers through ASRS for the LSSE. The DBM will give an easily understood description with reason of changes to each requirement changed.

KSC R&R Manager

NASA (Primary): Mark Shugg, VA-E2

(Backup): Jim Behling, VA-E2

KSC Database Manager's

Saalex (Acting): Marsha Causey, AIS-5

Jessica Russell, AIS-5

All questions or changes to the PRD or OR should be directed to the appropriate LSSE assigned to the mission.

Saalex : Rob Fischer, (Lead) AIS-5

Roy Fisher, AIS-5

NASA Launch Site Integration Branch

The Launch Site Integration Branch is responsible for ensuring that payload processing facilities and support services are available at both Vandenberg Air Force Base (AFB), California, and at KSC, Florida for processing all NASA payloads launched on expendable launch vehicles. The Launch Site Integration Branch is primarily comprised of Launch Site Integration Managers (LSIMs), Customer Processing Support Managers (CPSMs), LSSEs and Launch Site Support Coordinators (LSSCs).

NASA LSIM

The LSIM is the interface for launch site processing of the spacecraft and is responsible for advance planning for launch site processing, capturing and implementing spacecraft processing requirements, acting as the spacecraft's consultant and advocate at the launch site, and ensuring that spacecraft processing and preparations for launch proceed as smoothly as possible, and with minimum risk.

ELVIS 3 Contractor

Saalex Solutions, Inc.

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Under the Expendable Launch Vehicle Integrated Support (ELVIS 3) contract, Saalex Solutions, Inc. provides a broad range of ELV support services for NASA requirements at John F. Kennedy Space Center, Florida; Cape Canaveral Air Force Station, Florida; Vandenberg Air Force Base, California; and other launch site locations.

The Saalex Mission Integration Branch provides support to the NASA Launch Site Integration Branch and is comprised of LSSEs and LSSCs at KSC and Vandenberg Air Force Base (VAFB). The LSSEs/LSSCs are responsible for developing and publishing the mission specific Payload Requirements Document (PRD) and OR Documents.

Documentation Deliverables

The following documentation are customer deliverables required by the Launch Site Integration Branch for KSC/CCAFS missions

LSSP Preliminary is required 16 months prior to spacecraft arrival at the launch site.

Launch Site Support Plan Baseline is required 4 months prior to spacecraft arrival at the launch site.

Payload Requirements Document (PRD) is required 2 months prior to publishing the Baseline LSSP.

OR Document is required 30 days prior to Ground Support Equipment (GSE) or Spacecraft Arrival.

Program Requirements Document (PRD) - The PRD development typically begins no earlier than **after** the release of the LSSP Preliminary, with the development bar being 10 months long. At the LSSP Preliminary release, requirements typically have 80% accuracy in the development process. The PRD release needs to occur 8 weeks prior to the LSSP Baseline release, to allow time for the PRD requirements to be reviewed and responded to by KSC and Range support providers, LSSC database updates/inputs entered, and the LSSE inserts the PRD responses into the Commit Source column of the Baseline LSSP requirements tables. The PRD/PSP Final Baseline Update should occur 2 weeks prior to the start of the B/L LSSP review and 4 weeks prior to the Baseline LSSP release.

NOTE: PRD responses are due to be completed 1 week prior to GOR. The GOR is 30 day prior to SC Arrival.

Operations Requirements (OR) Document - The OR development typically begins after the PRD has been released and all requirements commitments are complete (WILCOd). The development bar 5 months long. The OR consists of a subset of the PRD and is usually all communications requirements. The OR release occurs so that final updates are made 6 weeks prior the SC arrival (and 2 weeks prior to the SC GOR) so that, at the SC GOR (30 days prior to SC arrival), the LSSE can say that all SC PRD and OR requirements are WILCOd and there are no risks from a support requirements perspective to SC arrival.

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APPENDIX L

C3 PRD MANAGEMENT AND IMPLEMENTATION POLICY

A PRD request to C3 Comm **will not be** needed when:

The baseline configuration of Comm services will automatically produce and deliver the necessary products or services

Voice

Keysets that are permanently installed and verified in support of Interface Control Document (ICD), Interface Requirements Document (IRD) and User Requirements Document (URD) specifications will be available regardless of whether a PRD is in place or not. Operational Intercommunications System (OIS) recording is specified on the Kennedy Integrated Control Schedule (KICS) Support Page and can be requested and implemented up to 24 hours before the customer need date/time.

Imagery

Baseline Operational Television (OTV) imagery that is specified in the baseline imagery requirements documents will be available to the customer regardless of whether a PRD is in place or not.

Camera recording requests are placed on the KICS as a matter of standard operating procedure and can be requested and implemented up to 24 hours before the customer need date/time. Additionally, recording requirements can and should be placed in the Launch Countdown WADs. Kennedy Infrastructure, Applications and Communications (KIAC) integrates Comm support services with the Integrated Procedures. The Camera Control Matrix (EGS-RPT-1305) also provides the planned utilization of cameras to deliver imagery views to each customer

A PRD request to C3 Comm **will be** needed when:

A “deliverable product” (such as a report, digitized film imagery, camera scanning sequence, special test setup, etc) is needed to support a test event or operation.

A “deliverable product” is not available as a part of the baseline in accordance with approved requirements (ICD, IRD, GS User Requirements Document)

If the requested product cannot be WILCOed due to a capabilities gap, the requester will be asked to submit a new requirement to the development organization for implementation

The “products” which are nominally available as a part of the configured baseline are to be delivered to a specific customer

A Camera Scanning Sequence request that is not included in the baseline requirements documents

For example: Request for scanning of the Orion Spacecraft during pre-launch Pad processing to provide a snapshot of the Launch Abort System (LAS), the Crew Module (CM) Hatch and the Orion Service Module Umbilical (OSMU) once per hour from the start of tanking to the T-10 minute final camera positioning milestone.

POCS film installation, retrieval, processing, digitization, upload to IMG

A PRD request to C3 is implemented as follows:

C3 as the top-level supplier evaluates whether the PRD is within the baseline capability of the element and approves the request to be evaluated by the sub-supplier

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The sub-supplier (KIAC) evaluates their ability to deliver what is requested and issues a WILCO or a WILCO See Response.

KIAC's "WILCO-See Response" is a statement of capability and intent but **NOT** commitment to deliver.

The C3 Comm WILCO represents the commitment to deliver the product/service to the requester

An acquisition method (Task Order or Catalog Order) is authorized and a schedule placeholder is added to the C3 Comm Ops schedule to assure fulfillment of the PRD request.

The C3 Comm Ops team initiates the required Task Order or Catalog Order to get the work on contract which then represents the KIAC WILCO ensures that the product/service is delivered by KIAC

The KIAC Work Order is carried on a KIAC Mission Support Schedule to ensure that implementation will occur as requested