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**NASA MANAGEMENT INSTRUCTION**

**Directive:** NMI 8610.10B
**Effective Date:** December 19, 1991
**Expiration Date:** March 31, 1998

## Responsible Office: M / Office of Space Flight

# Subject: MANAGEMENT OF OPERATIONAL SUPPORT REQUIREMENTS FOR MANNED FLIGHT MISSIONS

*1. PURPOSE

This Instruction establishes responsibilities for managing the system whereby operational support requirements are levied for support of manned flight missions including associated payloads. This management system will ensure that support requirements are properly requested and responses are properly obtained to meet operational objectives.

*2. APPLICABILITY

This Instruction applies to NASA Headquarters and NASA Field Installations involved in support of current and planned manned programs and associated payloads; and to Department of Defense (DOD) installations in accordance with the NASA/DOD Memorandum of Understanding on Management and Operation of the Space Transportation System and its subagreements.

*3. SCOPE

This Instruction covers operational support requirements for all manned flight mission phases. This includes prelaunch checkout and testing to launch processing through flight and postlanding operations where that support must be obtained from various NASA and DOD elements. Support requirements for payloads not governed by this Instruction, i.e., free flyers, using NASA resources after deployment from the Orbiter and not dependent on the Space Shuttle or Space Station Freedom for relay of telemetry data, command data, etc., will be documented and managed in accordance with NMI 8430.1, "Tracking and Data Systems Support for Unmanned Space Projects and for Suborbital and Aeronautical Flight Projects."

*4. FUNCTIONAL OPERATIONS

This is an overview of the support requirements system, the documents that comprise the system and the interfaces into the DOD and NASA's Office of Space Communications (OSC).

a. Documentation. The support requirements system defined in this Instruction comprises a family of requirements documents and support commitment documents. The overall documentation system uses a Universal Documentation System (UDS) that is based on paragraph 7a and implemented as described in paragraphs 7b thru 7d. This system provides a common format for stating requirements and for providing support responses. This

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UDS format will also be used within NASA for levying requirements between NASA Headquarters Program Offices and among NASA Centers. The documentation system encompasses requirements generated by user organizations, which state program, mission, or test requirements, and the commitments or responses generated by the support organizations to define the support to the user.

(1) Program Introduction Document (PID) and Statement of Capability Document (SCD). The PID and SCD are the long-lead-time Level I Program requirements and response documents initiated at the start of a new program and signed by the cognizant Program Associate Administrators. These documents will be generated and maintained for the Space Shuttle Program (SSP) and the Space Station Freedom Program (SSFP). These documents will be revised as required according to approved program Level I and Level II change procedures to reflect changes in requirements and commitments. For the Space Shuttle Program, the Level I Program Requirements Document, NSTS 7000, shall satisfy the requirements of the PID.

(2) Program Requirements Document (PRD) and Program Support Plan (PSP). Within the scope of the requirements and responses developed in the PID and SCD, these program Level II documents define requirements and responses for prelaunch, launch, flight, landing, and postlanding operations. These documents are used for direct support requests among NASA and DOD elements.

(3) Operations Requirements (OR) and Operations Directives (OD). Within the scope of the requirements and responses developed in the PRD and PSP, these program Level III documents define requirements and responses in sufficient detail to be used for developing operational documentation for mission support.

b. NASA/DOD Requirements for Manned Flight Mission Support. NASA has agreed to levy support requirements on the DOD in the Universal Documentation System (UDS) format. The PRD/PSP/OR/OD documentation in this UDS format constitutes the only official means for NASA to task the DOD for formal manned flight mission support.

c. NASA OSC Operational Support for Manned Flight Missions. OSC is responsible for overall management and commitment for support of NASA's tracking and data acquisition, and communications and data systems. OSC will respond to Level I Program support requirements for manned flight missions through the Associate Administrator for Space Communications. OSC will respond to Level II and III program support requirements through the Goddard Space Flight Center (GSFC).

d. Funding of Support Requirements.

(1) 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.

(2) 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.

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

(4) The requesting agency 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.

(5) Requestors for payload support services will comply with all requirements specified in the Payload Integration Plan (PIP) documentation. Where applicable, all charges will comply with the approved, existing NASA policies governing reimbursables.

e. Implementation System. The formats of the UDS have been entered into application software resident on a host computer at the Kennedy Space Center (KSC). This application software is termed Automated Support Requirements System (ASRS). ASRS will be used by each Center and agency supporting OSF manned programs for entering requirements and responses into the PRD/PSP/OR/OD data bases. The Space Shuttle Program (SSP) currently has the following Level II program data bases/documents in the ASRS system. Space Station Freedom Program (SSFP) elements will be added as shown.

(1) SSP Launch and Landing PRD/PSP.
- Volume 1: SSP.
- Volume 2: Payload, with payload annexes.
- Volume 3: SSFP, with annexes for each Space Shuttle flight.

(2) SSP Flight PRD/PSP.
- Volume 1: SSP.
- Volume 2: Payload, with payload annexes.
- Volume 3: SSFP, with annexes for each Space Shuttle flight.

(3) SSFP Orbital PRD/PSP.
- Volume 1: SSFP.
- Volume 2: Payload, with payload annexes.

f. Voice and Telecommunications. Documentation of operational voice communications circuits/terminations must abide by the provisions of NMI 8610.11, "Control of Access to Operational Voice Communications Circuits - Space Shuttle Operations." Policies, responsibilities, and procedures for acquisition, control, and management of the NASA telecommunications systems, are governed by NMI 2520.1, "Communications System Management."

*5. RESPONSIBILITIES

Management and administrative functions and responsibilities for the OSF support requirements system are defined as follows:

a. Headquarters Responsibility. The Office of Space Flight (OSF) and the Office of Space Systems Development (OSSD) are responsible for the timely forwarding of operational support requirements and any applicable subsequent revisions for manned flight missions including associated payloads.

b. Program Office Responsibility. The Director/SSP, the Director/SSFP, and each NASA Program Office involved in manned flight support are responsible for implementing the provisions of this Instruction and assuring management of the support requirements system. This will include support and training for use of UDS formats and the ASRS computer equipment, and appropriate review, control, and approval of requirements and responses entered into the support requirements system.

c. Support Requirements System (SRS) Management. OSF and OSSD will each designate an SRS manager who will be responsible for the timely review, coordination, concurrence, and oversight of policy and requirements-related matters affecting the SRS. This will include review, management coordination and approvals of program Level I Requirements documents and related support documents. For program Level II documents, functional implementation of OSF and OSSD SRS responsibilities will be exercised through appropriate Level II Program organizations. Issues will be resolved in committee which will be cochaired by the SRS Managers and which will include appropriate program representation from each office.

d. Level II and Level III Program Requirements Management. Each NASA Center and DOD agency will be represented by a Requirements and Response (R/R) manager. The R/R manager will be responsible for coordination of the Center or DOD agency requirements and responses.

e. Data Base Management. For the SSP and the SSFP, KSC will manage the Space Shuttle and Space Station Launch and Landing documents. Johnson Space Center (JSC) will manage the Space Shuttle and Space Station Flight documents, and the Space Station Orbital documents. Marshall Space Flight Center (MSFC) will manage the Space Station Payload documents.

f. ASRS Systems Management. KSC is responsible for management, budgeting, implementation, and maintenance of the ASRS computer system used for the PRD/PSP and OR/OD documents in coordination and agreement with all system users. KSC will chair the ASRS management meeting and will provide NASA coordination with the DOD Range Commanders Council Documentation Group on UDS matters.

*6. CLASSIFIED PAYLOADS

In support of classified DOD payloads, classified support requirements and responses will be documented in a manual

system using the UDS formats. The resulting documents will be controlled in accordance with the STS Security Classification Guide issued by the USAF Space Division. Because there are no provisions to process classified data in the ASRS, no classified data will reside in the ASRS data base.

*7. REFERENCES

a. Range Commanders Council, UDS Handbook - Document 501 and UDS Handbook Supplement 2, Procedures for the Electronic Transmission and Processing of Level 1, 2, and 3 Test Requirements and Support Information (DOD Document 501-84).

b. ASRS User's Guide (KSC Document LSO 000125 1833 and SPDMS-721-3070-00).

c. ASRS User's Guide for Non-Data Entry Personnel (KSC Document KSC GP60-1).

d. ASRS Handbook (KSC Document KSC GP60-2).

e. NASA/DOD Memorandum of Understanding on Management and Operation of the Space Transportation System.

8.CANCELLATION

NMI 8610.10A, dated October 22, 1986.

/s/Richard H. Truly
Administrator

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*Changed by this revision.