



ACQUISITION,  
TECHNOLOGY  
AND LOGISTICS

## THE UNDER SECRETARY OF DEFENSE

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October 18, 2010

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS  
CHAIRMAN OF THE JOINT CHIEFS OF STAFF  
UNDER SECRETARIES OF DEFENSE  
DEPUTY CHIEF MANAGEMENT OFFICER  
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DIRECTOR, ADMINISTRATION AND MANAGEMENT  
DIRECTOR, COST ASSESSMENT AND PROGRAM  
EVALUATION  
DIRECTOR, NET ASSESSMENT  
DIRECTORS OF THE DEFENSE AGENCIES  
DIRECTORS OF THE DoD FIELD ACTIVITIES

**SUBJECT:** Directive-Type Memorandum (DTM) 09-025 – Space Systems Acquisition Policy (SSAP)

**References:** (a) DoD Directive 5134.01, “Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)),” December 9, 2005  
(b) Under Secretary of Defense for Acquisition, Technology, and Logistics Memorandum, “Transition of the Defense Space Acquisition Board (DSAB) into the Defense Acquisition Board (DAB),” March 23, 2009  
(c) DoD Instruction 5000.02, “Operation of the Defense Acquisition System,” December 8, 2008  
(d) NASA Orbital Debris Program Office, “U.S. Government Orbital Debris Mitigation Standard Practices”<sup>1</sup>  
(e) Defense Acquisition University, “Defense Acquisition Guidebook”<sup>2</sup>

**Purpose.** In accordance with the authority in Reference (a), this DTM:

- Cancels Reference (b) and amends Reference (c) to establish SSAP and outline procedures for the acquisition of military space systems.

<sup>1</sup> Available at [www.orbitaldebris.jsc.nasa.gov](http://www.orbitaldebris.jsc.nasa.gov)

<sup>2</sup> Available at <http://akss.dau.mil/dag/>

- Is effective immediately; it shall be incorporated into DoD Instruction 5000.02 (Reference (c)) within 180 days.

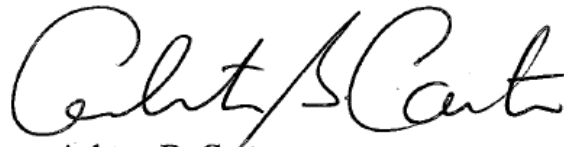
Applicability. This DTM applies to OSD, the Military Departments, the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within the Department of Defense (hereafter referred to collectively as the “DoD Components”).

Definition. An “independent program assessment (IPA)” is an independent, comprehensive, and systematic review of major space system managerial and technical progress. IPAs are designed to identify program cost, schedule, and performance risks; formulate risk mitigation plans; and provide feedback both to the program manager and the Milestone Decision Authority (MDA).

Policy. It is DoD policy that the review, approval, and oversight of the planning, design, acquisition, deployment, operations, maintenance, and modernization of military space systems shall be conducted in accordance with Reference (c) as amended by this DTM.

Procedures. See Attachment.

Releasability. UNLIMITED. This DTM is approved for public release and is available on the DoD Issuances Website at <http://www.dtic.mil/whs/directives>.



Ashton B. Carter  
Under Secretary of Defense for  
Acquisition, Technology, and Logistics

Attachment:  
As stated

ATTACHMENT

SPACE SYSTEMS ACQUISITION PROCEDURES

1. TECHNOLOGY DEVELOPMENT PHASE

a. Technology Development Strategy (TDS) - Additional Considerations. In addition to the requirements in subparagraph 5.c.(7) of Enclosure 2 of Reference (c), the TDS for space systems shall detail the acquisition strategy and contracting approach to be employed for the development of pertinent technologies for each phase of the program lifecycle.

b. Systems Engineering Plan (SEP) - Additional Considerations. In addition to the requirements in subparagraph 5.d.(5) of Enclosure 2 of Reference (c), the SEP for space systems shall:

(1) Emphasize the space system's integration with other existing and approved future architectures and capabilities.

(2) Include mission assurance (MA) planning. MA is a description of those activities undertaken to ensure that space systems operate properly once launched into orbit, since retrieval for repair is impractical.

c. System Design Review (SDR). During the technology development phase, space system Program Managers shall conduct an SDR to ensure that the system's functional baseline is established and that the system has a reasonable expectation of satisfying the requirement of the initial capabilities document (ICD) within the currently allocated budget and schedule. It completes the process of defining the items or elements below system level. This review accesses the decomposition of the system specification to system functional specifications. The SDR determines whether the system's functional definition is fully decomposed and that the program is prepared to begin preliminary design.

d. Post-System Design Review Assessment (P-SDRA). The MDA shall conduct a formal program assessment following the SDR for space systems. The SDR provides an opportunity to assess satisfaction of user needs through functional decomposition and traceability of requirements from the ICD to the contractor's functional baseline and system specification. An IPA shall be provided to support the P-SDRA.

(1) Space system program managers shall provide a post-SDR report to the MDA reflecting an overall assessment of design maturity and a summary of the system-

level SDR results. The post-SDR report shall include an independent vulnerability assessment and an orbital debris mitigation risk report. The orbital debris mitigation risk report will include an assessment of debris generation risk during launch, on-orbit operations, and end-of-life disposal, and shall assess compliance with the U.S. Government Orbital Debris Mitigation Standard Practices (Reference (d)).

(2) The MDA shall review the post-SDR report and the program manager's resolution and/or mitigation plans, and determine whether additional action is necessary to achieve technology development phase objectives and satisfy the capability need specified in the ICD. The results of the MDA's post-SDR assessment shall be documented in an Acquisition Decision Memorandum and include the MDA's determination to proceed with technology development.

(3) Additional guidance and expectations will be provided in the Defense Acquisition Guidebook (Reference (e)).

2. ENGINEERING, MANUFACTURING, AND DEVELOPMENT (EMD) PHASE. In addition to the requirements in paragraph 6.d. of Enclosure 2 of Reference (c), the EMD phase for space programs, Milestone B shall normally include authorization for procurement of the long-lead items necessary for the authorized number of initial production articles.

### 3. PRODUCTION AND DEPLOYMENT PHASE

a. Entrance Criteria. In lieu of the requirements stated in paragraph 7.b. of Enclosure 2 of Reference (c) to have acceptable performance in developmental test and evaluation and operational assessment; and no significant manufacturing risks, space systems shall be required to have acceptable performance in developmental test activities and acceptable manufacturing risks.

b. Phase Description. Milestone C for space systems shall be described as the initial production review and shall be conducted as soon as feasible after the program critical design review (CDR). Milestone C for space systems authorizes those acquisition-related activities associated with fabrication, integrated test and evaluation, to include both developmental and operational test and evaluation, deployment (e.g., launch), and support of a new space system. At Milestone C the MDA shall review the post-CDR report, determine whether additional action is necessary to satisfy EMD phase exit criteria, address and resolve compliance issues with Reference (d), and approve entry into the production and deployment phase for the initial number of production articles. Approval of subsequent article production will be authorized by the MDA following a

space system follow-on production decision. The MDA may direct an in-progress review (IPR), after Milestone C but prior to the follow-on production decision review, to assess progress and determine whether any additional actions are necessary to support a follow-on production decision.

c. Follow-on Production Decision for Space Systems. The MDA shall conduct a follow-on production decision review in lieu of a full-rate production and deployment decision to authorize procurement of additional space system articles beyond those authorized at Milestone C. Statutory and regulatory information requirements outlined in Reference (c) for full-rate production and deployment reviews shall also apply to the follow-on decision review for space systems. An OSD independent cost estimate is required for a follow-on production decision.

4. OPERATIONS AND SUPPORT PHASE. In addition to the entrance criteria requirements in paragraph 8.b. of Enclosure 2 of Reference (c), with the exception of replacement of the full-rate production decision with a follow-on production decision, space systems shall be required to have acceptable performance in integrated test and evaluation, to include both developmental and operational test and evaluation and user acceptance of the system. A follow-on production decision review may not be required as an entrance criteria if, for example, only one space system article is being acquired.

5. INCREMENTALLY EVOLVING EXISTING SPACE SYSTEMS. All follow-on increments for space systems shall be preceded by a materiel development decision (MDD). The MDD for space systems shall assess the prior increment's progress, consider additional requirements to that increment, and determine the proper phase of entry into the acquisition model.

6. IPA

a. An IPA will be conducted before each milestone, prior to the post-SDR assessment, and whenever directed by the MDA.

b. Additional guidance, best practices, lessons learned, and expectations will be provided in Reference (e).