

DATA ITEM DESCRIPTION

Title: MAINTAINABILITY AND BUILT IN TEST DEMONSTRATION PROCEDURE

Number: DI-SESS-81604A

AMSC Number: N9586

DTIC Applicable: Yes

Defense Technical Information Center

ATTN: DTIC-

8725 John J. Kingman Road, Suite 0944

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Preparing Activity: AS

Applicable Forms: N/A

Approval Date: 20151001

Limitation: No

GIDEP Applicable: Yes

GIDEP Operations Center

Naval Warfare Assessment Center

P. O. Box 8000

Corona, CA 91718-8000

Project Number: SESS-2015-071

Use/relationship:

The Maintainability and Built In Test (BIT) Demonstration Procedure provides detailed technical directions for implementing a maintainability or BIT demonstration at the equipment, subsystem, or system levels, during the integrated test program. The procedure contains step-by-step instructions of how the equipment, including software, involved will be utilized during the test or demonstration. This document will be used by the procuring activity for review and approval of the contractor's procedure for conducting the maintainability or BIT demonstration.

This Data Item Description (DID) contains the format, intended use information, and content preparation instructions for the data product generated by the specific and discrete task described in the solicitation, and should be tailored appropriately.

Requirements:

1. Format. The Maintainability and BIT Demonstration Procedure shall be in contractor's format.
2. Content. The Maintainability and BIT Demonstration Procedure shall contain:
 - a. Test objectives and quantitative goals or requirements to be demonstrated, including specific references to the applicable sections of the specification.
 - b. Description of the test team makeup and responsibilities.
 - c. A list and brief description of all units comprising the equipment and a specific listing of those units which will be placed on test and the up-to-date configuration (drawing list including approved changes, waivers, and deviations), including software configuration.
 - d. Test and monitoring equipment and software, including manufacturer, model number, calibration records where applicable, software configuration information, and facility descriptions and requirements.
 - e. Allowable adjustments and normal checkout procedures for the equipment under test.

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- f. Preventive maintenance measures to be performed during the test, if such maintenance is permitted by the detailed equipment specification.
- g. Interconnecting cable diagrams and interface conditions of complete test setup including equipment under test and test monitoring equipment.
- h. Performance parameters to be measured, frequency of measurement and the method used.
- i. Test methods and mode(s) of operation of the items under test, including configuration and mission requirements
- j. Procedure for selection of maintenance tasks when faults are simulated
- k. Identification of special maintenance tasks
- l. The statistical maintainability or BIT test design criteria, as appropriate, including decision criteria (fail and accept criteria) if applicable.
- m. Test duration and conditions, including the duty cycle, environmental, operational, and performance profiles during performance parameter measurement.
- n. Data elements to be recorded during tests and acquisition methods.
- o. Attach preliminary applicable data collection sheets and scoring and evaluation criteria (i.e., Failure Definition and Scoring Criteria), including the data analysis methods, analytical procedures, and evaluation methodology that will be used to compute maintainability or BIT performance based on the data collected during testing.
- p. The maintenance tasks to be verified, demonstrated, and evaluated.
- q. Description of anticipated system faults and mapping of fault detection by BIT
- r. Description of BIT fault insertion technique, including how and where faults are inserted.
- s. Maintenance concept and level(s) of maintenance.
- t. Description of and adequacy of the item support elements, and an estimate of their effect on the item maintainability:
 - i. Maintenance planning
 - ii. Support equipment, tools and test equipment
 - iii. Supply support, including both spares and consumables
 - iv. Transportation, handling, and storage
 - v. Technical data, including technical manuals to be used
 - vi. Any applicable safety and calibration equipment.
- u. The Government furnished property requirements and impact
- v. Failure Reporting, Analysis and Corrective Action (FRACAS) system to be used
- w. Detailed reason for each proposed deviation
- x. The test conduct ground rules and system interface boundaries
- y. Action to be taken if a reject decision is reached, including corrective action plan and retest provisions.

End of DI-SESS-81604A