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DATA ITEM DESCRIPTION

Form Approved
OMB No. 0704-0188

1. TITLE	2. IDENTIFICATION NUMBER
TEST PLANS/PROCEDURES	DI-NDTI-80808

3. DESCRIPTION/PURPOSE
Provide a roadmap of the System test program. Includes general planning factors, objectives, and scope and detail of the Contract portions of the test program. This document provides a direct relationship between the Program Office Test and Evaluation Master Plan (TEMP) and individual test activities. In defining specific test objectives, data priorities, support, resource and configuration requirements, it is used to evaluate the proposed test program/procedures.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
890511	F/AFSC-TE		

7. APPLICATION/INTERRELATIONSHIP

7.1 This DID contains the format and content preparation instructions for the data product generated by the specific and discrete task requirement as delineated in the contract.

7.3 This DID supersedes DI-T-3701A, DI-T-3702A, DI-T-3707A, DI-T-3713 and DI-T-3737.

8. APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER
		F4691

10. PREPARATION INSTRUCTIONS

10.1 Reference documents. The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendments, notices, and revisions, shall be as specified in the contract.

10.2 System Level Test Planing. The Test and Evaluation Master Plan (TEMP) shall be the managing System Level Test Planning document. System Test plans, as may be tasked to a Prime or Integrating contractor, shall be IAW section 10.3 and reflect the overall test program as described in the most current TPWG approved TEMP.

10.3 System and Other Test Plans (Contractor).

10.3.1 Scope. The Test Plan shall include detailed planning information on each test specified in each of the specifications on the contract - i.e., System Specification, CI Specifications, Critical Component Specifications, Military Specifications, and other contractual documents that include test methods and success requirements. Section 10.3.3 data and section 10.3.4 Test Information Sheets shall be in separate volumes. Contractor format is acceptable.

10.3.2 Applicable Tests. Test to be covered shall include the following functional test categories:

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a. Engineering test (developmental test).
b. Preliminary qualification tests.
c. Formal qualification tests.
d. Human Factors.
e. Acceptance tests

The contractor shall assign each test to the appropriate functional category above.

10.3.3 Test Plan. The Contractor shall prepare a test plan that contains the following elements:

a. Test objectives, description and criteria, to include pacing activities or problems and the order of priority of objectives for each activity or flight.

b. Test item configuration identification for each system, subsystem, component, aircraft or missile, to include quantities.

c. Flight (or test sequence) profiles, including flight (or test sequence) performance and data presentation predictions. Also including:
(1) Anticipated restrictions with justification for each,
(2) Anticipated parameters (velocity, altitude, maneuvers, etc.),
(3) Specific high risk details if test involves high risk to personnel or material, or if the test requires performance outside of normal parameters.

d. Test schedules, including a test requirements matrix, notations on GFE and other resource availability constraints, and the location, number, duration and frequency of tests. Information shall be traceable to the TEMP as applicable.

e. instrumentation requirements and calibration instructions (measurement, accuracies and criteria).

f. Data processing and reporting procedures to include data priorities, observable data requirements, data documentation, reduction, and analysis criteria and procedures.

g. Interface identifications: airborne, ground, site-to-site, internode, intersystem or other.

h. Safety considerations.

i. Flow Diagram. The plan, should include, by attachment or reference, an overall flow diagram of the entire test and deployment program. Appropriate notations and references shall be included for traceability to the TEMP. This flow shall be sequentially arranged to include all significant test milestones and efforts in the development phase, associated with each class of test; identification of specific CIs which will undergo development testing and deployment; identification of all test documentation associated with each test phase or activity; test locations; contractor/agency responsible for each activity and event; and any additional information which clarifies the description of the test program (such as attachments to the flow diagram for site location maps, block diagrams, interconnection link diagrams, etc.

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j. Test Support Requirements. This section shall identify and describe all significant technical and logistical support required to implement each class of test described in paragraph 1. These requirements should be expressed in sufficient detail to permit a determination of whether the agency has the capability to support the test or needs to take action to acquire a capability. In general, consideration should be given to the following major requirements for each test phase as applicable. This section shall be traceable to section 5 of the TEMP, as applicable.

(1) Test logistics, including supply, maintenance, facilities, resources and transportation available/required.

(2) Personnel Planning Information. For each contractor or agency involved, summarize personnel test support requirements including an assessment of the kind of skills, number of personnel, skill level of each. A recommended program for training Air Force operator and maintenance personnel for active participation in the test program shall be included along with a description of the extent of proposed prime, associate, and subcontractor participation and the extent of proposed government participation.

(3) Personnel Support Requirements. For each contractor or agency involved, summarize personnel test support requirements. This shall include an assessment of the kind of skills, number of personnel, and skill level and authority of each. Include training requirements.

10.3.4 Test Information Sheets. Detailed test procedure information shall be documented on a test information sheet (TIS), or equivalent, to satisfy the individual section 4 requirements of the specifications. Each TIS shall reflect the section 10.3.3 test planning, shall be bound in separate volumes from the section 10.3.3 plan, and may be delivered separate from the section 10.3.3 plans volume. Each TIS shall include (1) title and number of applicable specification, (2) paragraph number(s) of applicable specification, (3) title of test, (4) functional category of test, and (5) the identification whether ground test or flight test, where applicable. Each TIS shall include the following information to the extent applicable on the particular test:

a. Planning Information. Each TIS shall include to the depth needed to show the adequacy of the test method and test limits:

(1) Objectives. Describe the objectives of the test, including both primary and secondary purposes. Define the success criteria relating to the specific test.

(2) Description of test item. Describe the test item as it relates to the specification and to the particular test. Include, where applicable, a description of all subsystems having a direct bearing on the purpose of the test.

(3) Approach. Describe the test approach to the depth necessary to establish baseline for support needed (e.g., wind tunnel hours, flight test hours, etc.) for each test.

(4) Location, schedule, and number of tests.

(5) Support Equipment. Description of support equipment required from other sources (i.e. GFE or associate contractor).

(6) Extent of prime and associate contractor participation.

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(7) Extent of government participation.

(8) Instrumentation. Indicate type and recording devices to be used and number of parameters to be recorded.

(9) Data reduction and analysis. Indicate data to be recorded and describe the data reduction and analysis techniques.

(10) Government test facilities. For tests to be conducted at a Government facility, indicate the applicable facility, and provide a reference to the appropriate Facility Requirements Document and other governing document.

b. Phase Procedural Information. For submittal in the verification/validation or qualification phase, each TIS shall be expanded and updated and shall include:

(1) Objectives. Describe the objectives of the test, both primary and secondary. Define the success criteria relating to the specific test.

(2) Description of test item. Describe the test item as it relates to the specification and to the particular test. Examples of information to be included, as appropriate, are:

(a) Weight changes and center of gravity travel during flight (due to fuel consumption).

(b) Description of all subsystems having a direct bearing on the purpose of the test.

(c) Description of design features such as boattail, fins, external stores, etc.

(d) Anticipated flight/system restrictions or component/subsystem limitations (redlines), with justification for each restriction.

(e) Identification and location of all nonproduction equipment - e.g., data pickups, console controls, recording equipment, etc.

(f) Test apparatus and method of installation.

(3) Approach

(4) Location, schedule, and number of tests.

(5) Extent of prime and associate contractor participation.

(6) Extent of anticipated government participation.

(7) Instrumentation. Describe, including:

(a) Sensing and recording devices. Include FSN, model number and part number, or their equivalent in design criteria.

(b) Interface wiring diagrams between sensing and recording devices.

(c) Calibration constants and methods of calibration.

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(d) Accuracy required.

(e) Check-out procedure.

(f) Operating instructions.

(8) Test phasing, scheduling, and duration. Indicate test scheduling and duration of test.

(9) Test objectives. Describe the step-by-step procedures to be followed. Include the number of items to be tested and the number of times each item is to be tested. Data logs and forms for recording data shall be presented. For TISs on flight tests, include parameters such as velocity, altitude, flight maneuvers, power settings, etc.

(10) Data reduction and analysis. Indicate data to be recorded and describe the data reduction and analysis techniques. It is necessary that all test results be presented in terms which can be correlated with specific CI specification requirements.

(11) Government test facility. For tests to be conducted at a Government facility, indicate the applicable facility and provide reference to the appropriate Facility Requirements Document and other governing document.

c. Summary. A summary shall be submitted for the qualification phase only. The summary shall include a complete index of TISs, with cross-reference to the applicable specification paragraph number for each TIS.

d. Organization of Plan. When the qualification phase test plan is specified as a single submittal, the plan shall be prepared in separate volumes. Volume I shall consist of the summary and index, and subsequent volumes shall consist of TISs, grouped according to the functional test categories - i.e., a volume for engineering test and evaluation, a volume for prequalification test, etc. Where both flight and ground tests are included in a single function test category, the TISs shall be in separate section of that volume.

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