

DATA ITEM DESCRIPTION			Form Approved OMB No. 0704-0188	
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1. TITLE INFORMATION PROCESSING EQUIPMENT (IPE) FUNCTIONAL CONFIGURATION AUDIT (FCA) PLAN			2. IDENTIFICATION NUMBER  DI-IPSC-81316	
3. DESCRIPTION/PURPOSE 3.1 This plan is to describe the actions required to validate the equipment performance. 3.2 This plan will be used by the government to determine if the hardware and associated system software configuration complies with the functional requirements of the system as contained in the Statement of Work.				
4. APPROVAL DATE (YYMMDD)  930204	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)  F/LMSC(I)-SN(1)	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE	
7. APPLICATION/INTERRELATIONSHIP 7.1 This Data Item Description (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. 7.2 This DID is applicable to Communications-Computer Systems (C-CS) Information Processing Equipment (IPE) acquisitions. The IPE FCA Plan may be prepared by the Government or may be contracted out.				
8. APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER  F6892		
10. PREPARATION INSTRUCTIONS 10.1 <u>Specific instructions for content and format.</u> The IPE FCA Plan shall contain five sections and conform to the following format: 10.2. <u>SECTION 1. - GENERAL:</u> 10.2.1 <u>Purpose.</u> This paragraph shall describe the purpose of the IPE FCA Plan in the following words:  The Information Processing Equipment Functional Configuration Audit Plan for (Program Title and Site) is written to fulfill the following objectives:  a. Provide guidance for the management and technical effort necessary throughout the hardware audit period.  b. Establish a comprehensive hardware audit plan.  (Continued on Page 2)				
11. DISTRIBUTION STATEMENT  Distribution Statement A: Approved for public release; distribution is unlimited.				

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## Block 10, Preparation Instructions (Continued)

c. Establish an orderly schedule of events, a specification of equipment and organizational requirements, the methodology of auditing, and a list of material requirements.

d. Provide a written record of the actual audit inputs to exercise system limits and critical capabilities, the process required to execute the audit by the audit team, and the procedures used to collect, reduce, and evaluate outputs.

10.2.2 Project references. This paragraph shall identify the Request For Proposal (RFP) Section C, Statement of Work (SOW) paragraphs that contain the requirements which are the basis for the development of the audits contained in this plan.

10.2.3 Terms and abbreviations. This paragraph shall list or include in an appendix all terms and abbreviations that are unique to this document and subject to the user's interpretation.

10.3. SECTION 2. - ENVIRONMENT:

10.3.1 Hardware. This paragraph shall describe and list the hardware configuration that will be audited at each site/phase.

10.3.2 System and utility software. This paragraph shall list the system and utility software that will be audited at each site/phase.

10.3.4 Security. This paragraph shall specify any security considerations associated with this audit in addition to any privacy restrictions associated with any application software that may be used to execute the audit.

10.4. SECTION 3. - AUDIT PLAN:

10.4.1 Audit schedule.

10.4.1.1 Program schedule. This paragraph shall list or include a chart depicting the site/phase at which the audit will be scheduled and the time frame during which the audit will be conducted.

10.4.1.2 Daily scheduling. This paragraph shall identify the daily processing time requirements to be scheduled to perform the audit.

10.4.2 First site/phase (identify) audit. This paragraph shall identify the first site/phase at which the audit will be conducted and the participating organizations. This paragraph shall also include a list of the audit(s) to be performed at this site/phase and reference the appropriate section(s) that describe the audit(s).

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10.4.2.1 Milestone chart. This paragraph shall include a chart to depict the activities and events. An example of this type of chart is shown in Figure 1. When preparing this chart, consider all audits scheduled for this site/phase. The chart shall be in chronological order with supporting narrative as necessary and shall describe the following:

MONTH DAY EVENTS	MAR 01	MAR 02	MAR 03	MAR 04	MAR 05	MAR 06	MAR 07	MAR 08	MAR 09	MAR 10	MAR 11
A						X	X	X	X	X	
B	X	X	X	X	X	X	X				
C					X	X	X				
D	X	X	X	X							
E			X	X	X				X		
F										X	X

FIGURE 1. Example of milestone chart

- a. Overall on-site audit period by calendar date and portions of the period assigned to major portions of audit.
- b. Period assigned for the collection of input values and other operation dates required for the audit.
- c. Period assigned for audit team orientation and familiarization with system documentation.
- d. Period assigned for compliance with any special audit requirements of a particular site/phase.

10.4.3 Subsequent site/phase (identify) audit. This paragraph shall identify the subsequent sites/phases at which the audit will be conducted and the participating organizations. This paragraph shall also include a list of the audit(s) to be performed at this subsequent site/phase and reference the appropriate section(s) that describe the audit(s).

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10.4.4 Equipment required. This paragraph shall list the equipment associated with conducting the audit (e.g., hardware monitors).

10.4.5 Site-supplied materials. This paragraph shall list the materials required to conduct the audit (e.g., number of scratch tapes, disk packs) and if any of the materials require specific labeling.

10.4.6 Vendor-supplied information. This paragraph shall list the information required from the vendor (e.g., probe points, voltage levels, means of access to probe point, micro code patches).

10.4.7 Duties and responsibilities. This paragraph shall list each responsible organization and outline the duties assigned to that office.

10.4.8 Personnel. This paragraph shall depict by chart or list the number and period of use of personnel with indicated skill types required during the entire audit period(s). It shall indicate special requirements (multi-shift operations and assignment or the retention of key skills to ensure continuity and consistency in extensive audit programs). This chart or listing shall relate to the milestone chart.

10.5. SECTION 4. - AUDIT METHODS AND CONSTRAINTS:

10.5.1 Extent of system audit. This paragraph shall indicate the extent of the audit to be employed. Where total auditing is not to be employed, the audit requirements shall be presented either as a percentage of a defined total quantity or as a number of samples of discrete operating conditions or values. If total auditing is not employed, explain the rationale for adopting limited auditing.

10.5.2 Audit constraints. This paragraph shall indicate the anticipated limitations imposed on the audit due to system or audit conditions (e.g. limitations on timing, interfaces, equipment, and personnel).

10.5.3 Identification. Identify the application system, Data System Designator (DSD) or system code authorized for the audit.

10.6 SECTION 5. - IPE FCA DESCRIPTION:

This section shall describe major logical groups of audits to be performed. If appropriate, additional logical groups shall be described in subsequent sections following the same format as that used in this section.

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10.6.1 Audit description. This paragraph shall provide a general description of the audit to be performed.

10.6.2 Audit procedures. This paragraph shall contain the step-by-step procedures to accomplish each audit of the system.

10.6.2.1 System audit means of control. This paragraph shall indicate whether the audit is to be controlled by which of the following:

a. Manual means (e.g., manual inspection of necessary inputs and manual control of audit sequence).

b. Semiautomatic means (e.g., manual insertion of necessary inputs and automatic (audit program) control of audit sequence).

c. Automatic means (e.g., preparation and use of a special audit program to provide necessary input, conduct audits, monitor and record audit results).

10.6.2.2 Input data. This paragraph shall describe the manner in which input data is controlled in order to exercise the system with a range of bona fide data types and values which test for overload, saturation, and other "worst case" effects.

10.6.2.3 Output notification. This paragraph shall describe the manner in which output notifications (e.g., message output by the system concerning status or limitations on internal performance) are controlled in order to:

a. Indicate readiness for audit (e.g., normal operation condition).

b. Provide indications of irregularities in input audit data due to normal or erroneous audit procedures.

c. Provide indications of irregularities in internal operations on audit data due to normal or erroneous test procedures.

d. Provide indications on the control, status, and results of the audit as available from auxiliary test supervisor program, if used.

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10.6.2.4 Audit setup. If not stated elsewhere or by standard operating procedure, this paragraph shall itemize the activities associated with setup of the computer facilities to conduct the audit, including all routine machine activities. Included shall be the distribution of audit documents, worksheets, and other forms. This paragraph shall identify any other requirements (e.g., assuring the tape drivers are cleaned before audit period, assuring that end-of-day processing is complete and assuring initialization is complete). This paragraph shall list the functional software modules that must be in the software library to execute the audit.

10.6.2.5 Audit initialization. This paragraph shall itemize, in audit sequence order, the activities associated with establishing the conditions of the first audit starting with the equipment in the setup condition. Initialization includes the following:

- a. Printout of control function locations and critical data from indicators and storage locations for reference purposes.
- b. Queuing of audit support programs, if used.
- c. Coordination of personnel actions associated with audit.

10.6.2.6 Audit steps. This paragraph shall itemize the audit(s) into audit steps in audit sequence order. It shall also include special operations as follows:

- a. Visual inspection of audit conditions.
- b. Data dumps.
- c. Instructions for data recording.
- d. Interim evaluation of audit results.

10.6.2.7 Audit data reduction. This paragraph shall describe the technique to be used for manipulation of the raw audit data into a form suitable for evaluation, if applicable. The techniques available are as follows:

- a. Manual (e.g., manual collection and collation of system audit outputs into audit sequence order followed by visual inspection of the results).
- b. Semiautomatic (e.g., automatic inspection of audit results as obtained by data recording means using an audit data reduction program followed by manual (visual) inspection of select audit results which do

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not lend themselves to complete reduction by automatic means).

c. Automatic (e.g., automatic inspection of audit results specifically recorded for manipulation by the test data reduction program). Audit results, as recorded, include all items of audit significance. The audit data reduction program contains an image of correct data output for an item-by-item comparison of data and provides a summary of an evaluated audit as output.

10.6.2.8 Output data. This paragraph shall describe the standard against which the output data is analyzed in order to perform the following:

- a. Detect nonoccurrence of an event (output data).
- b. Record or identify media and location of all output data for indication of audit performance.
- c. Evaluate output as a basis for continuation of audit sequence.
- d. Evaluate audit output against required output to assess the performance of the audit.

10.6.2.9 Audit data criteria. This paragraph shall describe the rules by which the audit results will be evaluated and includes the following:

- a. Tolerances - range over which output by a system performance parameter can vary and still be considered acceptable.
- b. Samples - the minimum number of combinations or alternatives of input conditions and output conditions that can be exercised to constitute an acceptable audit of the parameters involved.
- c. Counts - the maximum number of interrupts, halts, or other system breaks which may occur due to non-audit conditions.

10.6.2.10 Audit results. This paragraph shall itemize, in audit sequence order, the steps associated with the recording and interpretation of output data and includes the following:

- a. A listing of critical data from indicators and location for reference purposes.
- b. A sample format for a test result summary of the audit results and whether each set passed or failed.

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c. Office/position of government and contractor personnel to be designated signature authority for the recorded test results and the test result summary.

10.6.2.11 Audit termination. This paragraph shall itemize in audit sequence order, the activities associated with termination of the audit, as follows:

a. Termination of operations of time sensitive audit support programs and audit apparatus.

b. Collection of system and operator records of audit results.