DATA ITEM DESCRIPTION

Title: System/Software Integration Laboratory (SIL) Development & Management Plan

Number: DI-SESS-81770 **Approval Date:** 20090518

AMSC Number: F9069 **Limitation:** N/A

DTIC Applicable: N/A **GIDEP Applicable:** N/A

Preparing Activity: 11 (ASC/836 AESG/SYE)

Applicable Forms:

Use/relationship: The System/Software Integration Laboratory (SIL) Development & Management Plan describes the contractor's proposed processes for developing, implementing, and maintaining a SIL that will be used to support integration of aircraft subsystems, to conduct laboratory development testing that leads to aircraft ground testing, and to aid accident investigations. This plan will provide critical insight into the contractor's ability to develop, implement, and sustain such a system/software integration laboratory during the life-cycle of the aircraft. The SIL Development & Management Plan also supports military aircraft system development, aircraft testing requirements, and quick-reaction mishap investigations.

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.

Requirements:

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 cited in the contract.

DoDI 8510.01, *DoD Information Assurance Certification and Accreditation Process (DIACAP)* is viewable online at: http://www.dtic.mil/whs/directives/corres/pdf/851001p.pdf or can be ordered from DTIC Northwestern Regional Office at Boston, ATTN: DTIC_BRNB, Building1103, 5 Wright Street, Hanscom AFB, MA 01731-3012.

2. Format. Contractor-specified format is acceptable.

3. Content. The SIL Development & Management Plan shall describe the contractor's process for developing and implementing a SIL by outlining its overall laboratory structure and organization, company lab-related processes & procedures, security infrastructure, scheduling, and resource support. The SIL Development & Management

Plan shall also include the description of SIL use, and the description of the plan for SIL maintenance.

3.1. The SIL development and implementation description shall include:

a) Processes used to plan, develop, and implement a high-fidelity SIL.

b) Management concepts related to systems development and integration laboratories.

c) Processes for integrating contractor's system/software development laboratory operations with the SIL.

d) Processes for integrating subcontractor/supplier software development laboratory operations into the SIL.

e) Processes to maintain configuration control within the SIL.

f) Processes/procedures used to ensure availability of qualified staff for the SIL that ensure minimal disruption of SIL operations. Include education, experience, and security clearance requirements for personnel assigned to the SIL.

g) Standard security procedures proposed to protect government-furnished and contractor-developed classified materials that will be used in the SIL. Include processes used to ensure the SIL complies with applicable information assurance requirements (i.e., IA controls) as tailored from DoDI 8510.01.

h) Processes for scheduling the SIL that maximize utilization of this laboratory asset.

3.2. The SIL use description shall include the following:

a) Planned uses of the SIL in areas of aircraft system/subsystem development, integration, and testing.

b) Procedures for evaluating software product reuse or commercial off-the-shelf software packages that are candidates for inclusion in the aircraft system.

c) Proposed procedures to support quick-reaction mishap investigations.

d) Procedures to provide Level 1 training, as required.

3.3. The SIL maintenance plan description shall include:

a) Planned SIL-specific component maintenance and support processes/procedures that ensure high levels of availability for the SIL.

b) Processes for maintaining SIL concurrency with all aircraft version configurations within the Air Force (AF) inventory to include capability for handling aircraft software block updates and ensuring backwards compatibility.

c) Processes/procedures proposed for the SIL that will be used to maintain the software components making up the laboratory. Describe how routine software updates (operating system upgrades, virus definitions and algorithms, etc.) will be installed and tested to ensure minimal SIL operations disruptions.

d) Processes/procedures proposed for the SIL that will be used to maintain the hardware components making up the laboratory. Describe how preventive maintenance will be performed, and if there is a hardware failure, procedures to repair the defective part(s) to minimize SIL operations disruptions.

4. End of DI-SESS-81770.