

DATA ITEM DESCRIPTION			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, D.C. 20503.				
1. TITLE Electromagnetic Environmental Effects (E3) Integration and Analysis Report (E3IAR)			2. IDENTIFICATION NUMBER DI-EMCS-81540	
3. DESCRIPTION/PURPOSE 3.1 The E3IAR describes implementation of E3 interface and performance requirements into system hardware and software. 3.2 The E3IAR provides the means for the government to evaluate E3 compliance with requirements throughout the life cycle of the system.				
4. APPROVAL DATE (YYMMDD) 970318	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR) F-11	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE	
7. APPLICATION/INTERRELATIONSHIP 7.1 This Data Item Description (DID) contains the format and content preparation instructions for data resulting from the work task described by 4.1 of MIL-STD-464. 7.2 This DID is intended for airborne, sea, space, and ground systems, including associated ordnance. 7.3 This DID is normally applied to the engineering and manufacturing development phase of a program, but it can be used in any phase. 7.4 This DID is related to DI-EMCS-81541 and DI-EMCS-81542.				
8. APPROVAL LIMITATION		9a. APPLICABLE FORMS		9b. AMSC NUMBER A7253
10. PREPARATION INSTRUCTIONS 10.1 <u>Format</u> . Contractor format is acceptable. 10.2 <u>Content</u> . The report shall describe the application of the E3 requirements and translation of these requirements into the system software and hardware to achieve a cost-effective system. The report shall address the overall integration of the various requirements into a single system design which complies with the interface and performance requirements. 10.2.1 <u>Summary information</u> . The report shall summarize the following: <div style="text-align: right;">(Continued on page 2)</div>				
11. DISTRIBUTION STATEMENT DISTRIBUTION STATEMENT. Approved for public release; distribution is unlimited.				

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Block 10, Preparation Instructions (Continued)

10.2.1.1 Introduction, background.

- a. System description.
- b. Statement of the electromagnetic environments for the system and their impact on the item being developed.
- c. Statement of any assumptions used in developing the design.

10.2.1.2 Body. Synopsis of each of the elements contained in section 10.2.2 below.

10.2.2 Detailed information. The report shall provide specific technical descriptions of each of the following areas included in contractually imposed requirements. The report shall address the applicability of each requirement to the system, the system design features associated with meeting each imposed requirement, the derivation of requirements flowed down and allocated to the equipment and subsystem-level and structural features, and the general methodology for verifying each requirement, such as analyses, bench tests, component-piece part tests, subsystem tests, full system tests, and inspections.

- a. Margins.
- b. Intrasystem Electromagnetic Compatibility (EMC), including where applicable: ship hull intermodulation interference, internal electromagnetic environments, powerline transients, and multipaction.
- c. Intersystem EMC.
- d. Lightning.
- e. Electromagnetic pulse.
- f. Subsystem and equipment electromagnetic interference, including where applicable: non-developmental items, commercial items, electromagnetic spectrum compatibility, and DC magnetics.
- g. Electrostatic charge control, including where applicable: vertical lift and in-flight refueling, precipitation static, and explosive subsystems.
- h. Electromagnetic radiation hazards, including where applicable: hazards of electromagnetic radiation to personnel, hazards of electromagnetic radiation to fuel, and hazards of electromagnetic radiation to ordnance.
- i. Life cycle E3 hardness.
- j. Electrical bonding, including where applicable: power current return path, antenna installations bonding, and EMI bonding.
- k. External grounds, including where applicable: aircraft grounding jacks.
- l. TEMPEST.
- m. Emissions control.
- n. Electronic protection.

10.3 Other information sources. When other information sources contain data required by this DID, these sources shall be referenced rather than being duplicated within this report.