DATA ITEM DESCRIPTION

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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, DC 20503.

1. TITLE	2. IDENTIFICATION NUMBER
System/Segment Interface Control Specification	DI-CMAN- 81314

3. DESCRIPTION/PURPOSE

3.1 The interface control specification defines the physical and functional interface, parameter requirements between interconnecting, interacting, or co-functioning systems, system segments, and assemblies. It is used as a top level control document governing the design of the interfacing elements of the system/segment.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
930125	G/R7		

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 systems and equipment development contracts involving hardware-to-hardware and hardware-to-external-factors (facilities, mission elements,etc) interface conditions. For hardware-to-software or software-to-software

(Continued on Page 2)

8. APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER
		G6890

10. PREPARATION INSTRUCTIONS

10.1 Content

10.1.1 Functional interface parameters. These input/output requirements shall include:

10.1.1.1 Electronic. The elements with related tolerances shall include:

a. Signal characteristics
b. Wave forms
c. Voltage
d. Frequencies
e. Shielding requirements
f. Circuit impedance
g. Current limits/requirements

10.1.1.2 Electrical . The elements with related tolerances shall include:

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11. DISTRIBUTION STATEMENT

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

Block 7, Application/Interrelationship (Continued)

ases, DI-MCCR-80303, Software Interface Control Document, DI-MCCR-80027, Interface Requirements Specification, or DI-MCCR-80027, Interface Design Document shall be used.

7.3 When the complete interface requirements shall be reflected on an interface control drawing and installation drawing as described in DOD-STD-100C, use DI-DRPR-81000, Product Drawings and Associated Lists.

7.4 This DID supersedes DI-E-5550.

Block 10, Preparation Instructions (Continued)

a. Type of power (AC or DC)
b. Frequency characteristics
c. Voltage levels
d. Power ratings (amperes, watts, volt-ampere)
e. Wave forms
f. Grounding

10.2.1.3 Hydraulic and pneumatic. The elements with related allowable fluctuations shall include:

a. Flow rates
b. Fluid temperatures
c. Pressure requirements
d. Power requirements/source

10.2.1.4 Optical/electro-optical requirements.

10.2.1.5 Human factors/engineering.

10.2.2 Physical interface parameters. These shall relate to the physical mating of systems, segments, and assemblies at a common boundary. Applicable interface control drawings (ICD) an installation drawings shall be referenced or reproduced as appropriate. Physical interface parameters elements shall include:

a. Dimensions and tolerances of mating surface (flanges, boltholes, mounting plates, etc., with applicable sizes, shapes, and spacing)
b. Weight, balance, and center of gravity
c. Materials specifications (including dissimilar material requirements)
d. Cabling requirements (connectors, routing, etc.)
e. Applied loads
f. Accessibility (installation and removal clearances)
g. Sealing requirements, leakage prevention and detection

10.2.3 Environmental and safety parameters. These elements shall include:

a. Electromagnetic interfaces, compatibility requirements
b. Vibration envelopes
c. Shock limits
d. Acceleration limits
e. Temperature limits
f. Noise factors

Block 10, Preparation Instructions (Continued)

g. Air conditioning requirements
h. Contamination control
i. Hazardous materials considerations

10.3 Format. The interface specification shall be prepared on 8 1/2 x 11" paper (metric siz A4). It may be prepared as a multi-part, book form document as appropriate to the complexity of the interface(s) to be defined. It shall contain the following (see figure 1 for an outli of the specification structure and paragraphing):

10.3.1 Front cover/title page. The cover and title page shall contain the following:

10.3.1.1 Specification number. The expression "SPECIFICATION NUMBER:" (all capital letters) followed by the assigned assigned specification number shall appear in the upper rig corner.

10.3.1.2 Date. The expression "DATE:" (all capital letters) followed by the issue date of tl specification (day, month, year) shall appear directly under the specification number in the upper right corner.

10.3.1.3 Title. The title shall be a multi-line entry centered in the middle of the cover o: title page as follows:

a. The first two lines shall read (all capital letters):
INTERFACE CONTROL SPECIFICATION
FOR
b. The third and subsequent lines shall include:

(1) The nomenclature of only the primary system, segment or configuration item (including name and type designation and configuration item number) when mo than one interfacing item is involved, or

(2) The nomenclature of each interfacing system, segment, or configuration item (including name and type designation and configuration item number) where only two items are interfacing.

10.3.1.4 Approval certification. Approval certifications shall be entered on the title page only(not cover sheets) under the title. Provisions for office title, person's name, signature and approval date shall be included as identified by the government.

10.3.2 Section 1.0, Scope. The scope shall include:

10.3.2.1 System/segment interface identification. This section shall briefly describe the overall system, segment, or equipment to be addressed by the interface specification. It shal include a matrix diagram identifying each interfacing item, and show the origin and destinatic of each interface.

10.3.2.2 Documentation organization. This section shall describe the manner in which the specification is structured, and provides guidance on its use.

Block 10, Preparation Instructions (Continued)

10.3.2.3 Limitations and restrictions. This section shall describe any limitations or restrictions to the use of the specification.

10.3.2.4 Definitions. This section shall specify definitions of major terms and acronyms use in the specification.

10.3.3 Section 2.0, Applicable documents. All documents having a bearing on the system and segment interfaces shall be identified in sub-sections by title, number, and applicable data. This shall include:

a. Military and Federal specifications, standards, and handbooks.
b. Interface control documentation. This includes all related or referenced interface control drawings and interface control specifications.
c. Other documentation. This includes any applicable industry or other documentation.

10.3.4 Section 3.0, Interface requirements. This section provides the detailed description o the interface requirements. Each interface shall be separately covered in its own subsection (see figure 1), and include:

a. Interface identification and description.
b. Functional interface specification details by parameter.
c. Physical interface specification details by parameter.
d. Environmental parameter details by parameter.

10.3.5 Section 4.0, Quality assurance. This section shall identify and define the inspection and test requirements necessary to verify the designed end product complies with th interface requirements of section 3.0.

10.3.6 Section 5.0, Notes. This section shall include non-binding administrative information such as supersession data or other clarifying information. Each independent subject area shal be in a separate sub-section.

1.0 SCOPE

- 1.1 System/segment interface identification
- 1.2 Document organization
- 1.3 Limitations and restrictions
- 1.4 Definitions

2.0 APPLICABLE DOCUMENTS

- 2.1 Military and Federal specifications, standards, and handbooks
- 2.2 Interface documentation
- 2.3 Other documentation

3.0 INTERFACE REQUIREMENTS

- 3.1 System/segment 1 interface specification
  - 3.1.1 Interface 1
    - 3.1.1.1 Interface identification
    - 3.1.1.2 Interface description
    - 3.1.1.3 Functional interface specification
      - 3.1.1.3.1 Interface parameter 1
      - 3.1.1.3.N Interface parameter N
    - 3.1.1.4 Physical interface specification
      - 3.1.1.4.1 Interface parameter 1
      - 3.1.1.4.N Interface parameter N
    - 3.1.1.5 Environmental interface specification
      - 3.1.1.5.1 Interface parameter 1
      - 3.1.1.5.N Interface parameter N
  - 3.1.2 Interface 2
    - o
    - o
    - o
  - 3.1.M Interface M
    - o
    - o
    - o
- 3.2 System/segment 2 interface specification
  - o
  - o
  - o

4.0 QUATLITY ASSURANCE

5.0 NOTES

FIGURE 1. Interface specification organization and structure