DATA ITEM DESCRIPTION

Title: TASK PERFORMANCE ANALYSIS REPORT

Number: DI-HFAC-81894
AMSC Number: 9331
DTIC Applicable: No
Office of Primary Responsibility: AM
Applicable Forms: N/A

Approval: 20130325
Limitation: N/A
GIDEP Applicable: No

Use/Relationship: The analysis of human tasks involved in the operation, maintenance, or support of the equipment under development provides one of the bases for making decisions in the area of human engineering, training, test and evaluation, manning, and work load. This Data Item Description (DID) identifies the Government content and format requirements to prepare a report of task performance analysis data. The Task Performance Analysis Report shall be presented in both graphical and textural form.

Task Performance Analysis is used by trainers, logisticians, human engineers, and specialists in health and safety, manpower and personnel to make decisions regarding the design, performance, and support of a weapon system. From the earlier stages throughout the sustainment phase; its Activities, 11.3 through 11.6, are in Tables 12 through 16 of MIL-HDBK-502A; and the Activity 12 (also associated with Human Engineering), is located in table 17 through 21.

a. This DID contains the preparation instructions for a Task Performance Analysis Report as required by the applicable tasks of the Human Engineering Requirements for Military Systems, Equipment, and Facilities in MIL-STD-46855.

b. This DID is applicable to the acquisition of military systems, equipment, and facilities.

c. Structural elements 3.1d through 3.1j will be furnished per Activity 9.8 - Task Inventory of TA-STD-0017. All data associated with Task Inventory will be documented in accordance with the Logistics Product Data as defined in Chapter 2 of GEIA-STD-0007 Logistics Product Data.

Requirements:

1. Reference documents. The applicable issue of documents cited herein, such as MIL-STD-46855, TA-STD-0017 and GEIA-STD-0007, including their approval dates and dates of any applicable amendments, notices, and revisions, shall be as specified in the solicitation or contract.

Tailoring. The Task Performance Analysis Report DID shall be tailored to reflect the Statement of Work (SOW) and/or its equivalent, system specification, and phase of development. Any proposed tailoring shall identify the DID paragraph, the proposed change(s) and a rationale. Tailoring specified by the procuring agency shall also be included. If no tailoring is proposed beyond that specified by the procuring agency, this shall be stated.

2. Format. The Format shall delineate the data content, format requirements and contain the following information applicable to a single data product. The textural format for the Task Performance Analysis Report shall be selected by the contractor for maximum clarity of presentation based upon the number of data elements selected from the list in 3.1 and 3.2 below.

Graphic. The graphic presentation shall be time-based and shall have the cumulative time shown in the selected units (hours, minutes, or seconds) clearly marked at the bottom of each page or frame of display. Tasks shall be indicated in the space above the time markings in Gantt-type format with each task occupying that amount of time required for criterion performance. All critical tasks and other designated tasks shall appear on the illustration. Tasks whose performance is unscheduled shall be illustrated by reference to a scenario in which the task reasonably appears. Each page or frame of display shall be consecutively numbered at a location which does not interfere with the technical information being presented.

For any section below whose content is substantially covered in another document, the contractor has the option to provide the required content in the Task Performance Analysis Report, or to provide a summary of the content and reference(s) or link(s) to the document section(s) that contain the content.

3. Content. The content of the Task Performance Analysis report shall delineate the data content requirements and contain the following information applicable to a single data product.

3.1. Structural elements:

a. System name
b. Mission
c. Scenario or conditions
d. Function
e. Job
f. Duty
g. Task
h. Task performance standards (both time and accuracy)
i. Subtask
j. Task element

Structural elements a. through d. may be shown only on the first page or display frame. Structural elements e. through j. shall be shown as needed.

3.2. Analysis elements. The analysis elements, which shall be reported for each of the structural elements in 3.1 above are:

a. Performance concerns
    (1) Task criticality
    (2) Performance of task
        (a) Source of data

1. Subject matter expert (SME) opinion
2. Comparability analysis
3. Objective measurement

(b) Task performance measures (time and accuracy, calculated variance, number of observations)
(c) Work measures (name and numerical score)
(d) Identification of human errors (expected or encountered)

b. Health considerations (expected or encountered)
(1) Temperature and humidity WET-BULB GLOBE TEMPERATURE (WBGT) at performance site
(2) Exposure to ambient noise
(3) Exposure to shock, vibration, motion recoil
(4) Exposure to windblast
(5) Exposure to pressure fluctuations
(6) Exposure to surface heat or cold
(7) Exposure to electromagnetic radiation
(8) Exposure to toxins (bacteria, chemical, dust, fuel, fumes, fungi, liquids, smoke, vapors)
(9) Conditions of psychological stress
(a) Confined spaces
(b) Isolation
(c) Sensory or cognitive overload
(d) Body disorientation (vestibular or kinesthetic)
(e) Sustained or continuous operations (implying sleep deprivation)
(f) Human waste elimination constraints

c. Human engineering considerations
(1) Equipment parameters including personal protective equipment
(a) Description of equipment
(b) Description of changes in equipment since last task performance analysis
(c) Personal protection fit analysis for the operator performing the task.
(d) Documentation of personal protective equipment interface issues affecting task performance
(2) Input parameters
(a) Information required
(b) Information available
(c) Initiating cues
(d) Data display format
(3) Response parameters
(a) Action taken
(b) Body movements required by action taken
(c) Workspace envelope required by action taken
(d) Workspace envelope available
(4) Feedback parameters
(a) Feedback required

(b) Feedback available
(c) Cues indicating task completion
(d) Relative rate of feedback update
(e) Form of feedback
(5) Ambient lighting (in foot-candles)
(6) Ventilation

d. Logistics considerations
(1) Skills required
(a) Skill level code
(b) Skill specialty code
(c) Skill specialty evaluation code
(2) Tools required
(3) Job aids and manuals required
(4) Support and test equipment identification
(a) Support item sequence code
(b) Item category code
(5) Electric power requirements
(6) Spares and expendables required
(7) Number of persons per skill specialty code
(8) Number of man-hours per skill specialty code
(9) Logistic support analysis control number

e. Manpower and personnel considerations
(1) Physical characteristics of task performers (physical capacity or stamina, upper extremities, lower extremities, hearing and ears, eyes, and psychiatric (PULHES) codes)
(2) Aptitude characteristics of task performers (Armed Services Vocational Aptitude Battery (ASVAB) scores)
(3) Planned military occupational specialty (MOS) of performers
(4) Range of criterion ASVAB scores for lower 20% of personnel currently assigned to MOS identified in 3.1e above
(5) Anthropometric restrictions and characteristics of task performers (e.g., height, weight, sitting eye height, arm reach, buttock to knee length)

f. Safety considerations
(1) Special protective equipment required
(2) Hazards encountered
(a) Frequency
(b) Cause
(c) Consequence
(3) Weights to be lifted or transported

g. Training considerations
(1) Type of training given to task performers
(2) Length of training (in hours)

(3) Estimated cost/trainee/hour
(4) End of training comprehension and performance test score for each trainee

h. Discussion
(1) Identification of problem areas by concern
(a) Human engineering
(b) Manpower
(c) Personnel
(d) Training
(e) System safety
(f) Health hazards
(g) Workload
(h) Logistics
(i) Survivability
(j) Habitability
(2) Proposals for solving problems in the areas identified above
(3) Estimated impact upon manned system performance requirements of the time and accuracy measures of task performance

i. Conclusions. State whether the above analysis does or does not support the projected attainment of manned system performance requirements (effectiveness and availability) given the present design of system hardware and software, the present criteria for personnel selection and affordability, and the present training concept.

4. End of DI-HFAC-81894.