

DATA ITEM DESCRIPTION

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1. TITLE

INTEGRATED MASTER SCHEDULE (IMS)

2. IDENTIFICATION NUMBER

DI-MISC-81183A

3. DESCRIPTION/PURPOSE

The IMS is an integrated schedule developed by logically networking detailed program activities. The contract Integrated Master Plan (IMP) is the foundation of the program schedule and provides a hierarchy for schedule traceability and summarization. IMP events, accomplishments, and criteria are included in the schedule to monitor progress. This information will be used to verify attainability of program objectives, evaluate the progress of the government and contractor team toward meeting the program objectives, and to integrate program schedule among all related components.

4. APPROVAL DATE
(YYMMDD)

960209

5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)

F/ASC/FMCS

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 may be applied to programs which utilize the Work Breakdown Structure (WBS) during the concept exploration, demonstration and validation, engineering and manufacturing and development, and production phases.

7.3 This DID supersedes DI-MISC-81183.

8. APPROVAL LIMITATION

9a. APPLICABLE FORMS

9b. AMSC NUMBER

F7180

10. PREPARATION INSTRUCTIONS

10.1 **Format.** This precedence logic diagram shall be in the contractor's format in the form of a network, milestone, or Gantt chart. This diagram shall be provided in digital format.

10.2 **Content.** The schedule shall contain all of the contract IMP events and milestones, accomplishments, criteria, and activities from contract award to the completion of the contract. The schedule shall be an integrated, logical network-based schedule that correlates to the program WBS, and is vertically and horizontally traceable to the cost/schedule reporting instrument used to address variances (such as Cost Performance Report (CPR), Cost/Schedule Status Report (C/SSR), etc.). It shall have a numbering system that provides traceability through the IMP and Statement of Work (SOW). It shall contain program events and milestones and definitions, summary, intermediate and detailed schedules, and periodic analysis of progress to date. It shall be possible to access the information by product, process, or organizational lines. Descriptions of the key elements are as follow:

10.2.1 Program milestones and definitions. Key programmatic events defined by IMP, the contracting agency or weapon system contractor which define progress and completion in each WBS element along with the definition for successful completion of the milestone.

10.2.2 Summary master schedules. A graphical display of top-level program activities and key events and milestones of the IMP which depict major work activities in an integrated fashion at the summary level of the WBS, e.g. level 1-3 of the WBS.

10.2.3 Intermediate schedules. A graphical display of top-level program activities and key milestones which includes all associated accomplishments of the IMP, traceable to the WBS element as necessary to display the work effort at the intermediate level of summarization, e.g. level 3-5 of the WBS as appropriately tailored.

DISTRIBUTION STATEMENT

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

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Block 10, Preparation Instructions (Continued)

10.2.4 Detailed Schedules. A graphical display of detailed activities and milestones which depict work activities in a particular work breakdown structure element, to include the criteria associated with each accomplishment of the WBS element as well as any additional activities necessary to display the work effort to detailed WBS levels; e.g. level 4-8 of the WBS as appropriately tailored.

10.2.5 Periodic Analysis. A brief summary which identifies progress to date, variances to the planned schedule, causes for the variance, potential impacts and recommended corrective action to avoid schedule delays. For each program activity planned, forecasted and actual completion dates shall be reported. The analysis shall also identify potential problems and a continuing assessment of the network critical path. Thresholds for impact reporting shall be identified on the DD Form 1423, CDRL.

10.2.6 Integrated Program Network. Logical diagram of all activities in the program. The key elements of the integrated network to be constructed in the diagram are as follow:

- a. Milestone or event - A specific definable accomplishment in the program/project network, recognizable at a particular point in time. Milestones are numbered and may be contained within an activity box.
- b. Activity or task - A time consuming element, e.g. work in progress between interdependent events, represented by an activity box.
- c. Duration - Planned length of time needed to accomplish an event/activity.
- d. Constraint - A line that defines how two activities or events are logically linked. It can take up to four (4) forms:
 - (1) FS (finish to start) - An activity must finish before another can start.
 - (2) SS (start to start) - An activity depends on the start of another activity.
 - (3) FF (finish to finish) - One activity cannot finish until another activity is finished.
 - (4) SF (start to finish) - An activity cannot finish until another activity starts.
- e. Slack or float - Extra time available on an activity before it will impact an activity on the critical path.
- f. Lag - The delay or wait period between two tasks.
- g. Critical path - A sequence of activities in the network that has the longest total duration through the program or project. Activities along the critical path have zero or negative slack/float. It should be easily distinguished on the report formats; e.g. a thick line, patterned or in red ink. This should be calculated by computer-based software.
- h. Target start (TS) - A program defined date of when an activity should start. This is an operator defined date rather than a computer-calculated date.
- i. Target complete (TC) - A program defined date of when an activity should finish. This is an operator-defined date rather than a computer-calculated date.
- j. Actual start (AS) - Actual start date of an activity.
- k. Actual finish (AF) - Actual finish date of an activity.
- l. Early start (ES) - The earliest start date an activity can begin the precedence relationships. Computer-calculated data.
- m. Early finish (EF) - The earliest finish date an activity can end. Computer-calculated date.

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n. Late start (LS) - The latest start date an activity can start without delaying the program or project target completion date. Computer-calculated date.

o. Late finish (LF) - The latest date an activity can have without affecting the program or project target completion date. Computer-calculated date.

p. Percent complete (PC) - Actual progress of an activity from its start to its finish.

10.3 Master integrated program schedule. It shall display all of the proposed program activities, events, and milestones from contract award to the completion of the contract.

10.4 Descriptive titles. Activities, tasks, events, and milestones shall be labeled with a brief descriptive title, numbered or coded and contain time constraints (e.g. durations, TS, ES, EF, LS, etc.). Standard abbreviations may be used to conserve space. Descriptive titles used on activities, events, and milestones shall be identical on all program schedules. A legend shall be provided to aid in ease of reading the schedules.

10.5 Schedule risk. The schedule shall include a description of the approach that will be taken to limit the schedule risks identified as a result of the contractor's risk assessment. Risk shall be defined considering impact on cost and technical performance and assessing the probability of schedule change. Additionally, technical performance measurement tasks and their correlation with contractual cost/schedule elements permit assessment of the program effort in terms of the schedule as well as cost of work increments. As technical performance measurement tasks, as well as cost reviews, reveal potential impacts to the schedule these risks will be identified.

10.5.1 Schedule risk assessment (SRA). Optimistic, pessimistic, and most likely durations for each MIPS activity/task and milestone/event shall be provided as the basis for determining the probability of meeting schedule dates. The government will assess the durations and use an appropriate cumulative probability (0-100%) for the chosen milestones to determine expected completion dates.