DATA ITEM DESCRIPTION

Form Approved
OMB No. 0704-0188

2. TITLE	1. IDENTIFICATION NUMBER
SOFTWARE DEVELOPMENTAL STATUS REPORT (SDSR)	DI-MCCR-80459

3. DESCRIPTION / PURPOSE

3.1 The Software Developmental Status Report (SDSR) provides the status of the software development parameters for a particular computer software configuration item (CSCI) or hardware configuration item (HWCI) that incorporates software technology. The SDSR consists of: parameter requirements, status of parameter development, (continued on Page 2)

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6a. DTIC REQUIRED	6b. GIDEP REQUIRED
871009	F/ASD/ENFZ		

7. APPLICATION / INTERRELATIONSHIP

7.1 This data item description contains the format and content preparation instructions for the data product generated by the specific and discrete task requirements as delineated in the contract.

7.2 This data item is applicable to a CSCI and may be applied during the Full Scale Development (FSD) phase of the program.

8. APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER
		F4238

10. PREPARATION INSTRUCTIONS

10.1 Reference Document. The applicable issue of the documents cited herein, including their approval date, and dates of any applicable amendments and revisions shall be as reflected in the contract.

10.2 Content and Format Instructions. All paragraphs, subparagraphs, and graphs shall be included in the document. The letter "X" serves as in identifier for a series of paragraphs decriptions or figures. This document shall consist of the following:

a. Cover Page
b. Table of Contents
c. Scope
d. Referenced Documents
e. Development Report
f. Appendices

10.2.1 · Cover Page. This page shall contain the document control number and date issued in the upper right hand corner. In the center of the page, the following format shall be used:

(continued on Page 2)

11. DISTRIBUTION STATEMENT

Distribution Statement A: Approved for public release; distribution is unlimited.

3. DESCRIPTION/PURPOSE (cont'd)

graphical representation of each parameter's evolution, deviations from requirements, and corrective action.

3.2 The SDSR augments conventional status assessments of the software development. It will aid in tracking development progress and insure requirements are satisfied.

3.3 The SDSR shall be used in conjunction with design reviews, specifications, and other CSCI or HWCI data items to evaluate and monitor the software development.

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10. PREPARATION INSTRUCTIONS (cont'd)

SOFTWARE DEVELOPMENT REPORT
FOR THE
(PROJECT NAME)

(PERIOD OF REPORT, day month year - day month year)

CONTRACT NO: (contract number)

CDRL SEQUENCE N0: (CDRL number)

DATA ITEM NO: (data item number)

Prepared for:

(Contracting Agency Name, Department code)

Prepared by:

(contractor name and address)

10.2.2 Table of Contents. This document shall contain a table of contents, listing the title and page number of all titled paragraphs/subparagraphs. Figures, graphs, tables, and appendices shall be listed after the paragraph/subparagraph listings.

10.2.3 Scope. This section shall be numbered 1 and divided into the following paragraphs.

10.2.3.1 Identification. This paragraph shall be number 1.1 and contain the approved identification number and title of the CSCI or HWCI and the system to which this software development report applies. It shall also specify the version of software existing within the system.

10.2.3.2 Introduction. This paragraph shall be numbered 1.2 and summarize the purpose and contents of this document.
10.2.4 Referenced Documents. This section shall be numbered 2 and list, by document number and title, all documents referenced in this report. This section shall also identify the source for all documents not available through normal Government stocking activities.

10.2.5 Development Report. This section shall be numbered 3 and divided into the following paragraphs and subparagraphs.

10.2.5.1 Development Status. This paragraph shall be numbered 3.1 and summarize the development progress of the CSCI or HWCI.

10.2.5.2 Development Parameters. This paragraph shall be numbered 3.2 and divided into the following subparagraphs. The following list of parameters shall be reported on and shall be in the following order:

1. Memory (use) — The percent usage of the total available program memory and percent usage of total available storage memory. The following formula shall be used to calculate memory usage.

$$\text{Memory Usage} = \frac{\text{amount of memory used}}{\text{total deliverable memory}} \times 100\%$$

2. Timing (use) — The worst case percent usage for the major frame, and the worst case percent usage for all minor frames. A minor frame is defined as the smallest time interval subdivision within which a specific function or functions must be performed. For example, the highest frequency interrupt rate would constitute a minor frame. A major frame is defined as multiple minor frames that completes the processing of all foreground functions. The following formula shall be used to calculate timing usage.

$$\text{Timing Usage} = \frac{\text{amount of time used for the frame}}{\text{amount of time allocated for the frame}} \times 100\%$$

3. High Order Language (HOL) — The percent of the total object code which is generated by the compilation of HOL statements.

4. Software designed — The percent of software units designed of the total number of units required to meet the functional requirements. (Unit as defined by DOD-STD-2167)

5. Software coded — The percent of software units coded of the total number of units required to meet the functional requirements.

6. Software units tested — The percent of software units successfully tested of the total number of units required to meet the functional requirements.

7. Closed Software Problem Report — The percent of closed Software Problem Reports (SPR) of the total number of SPRs. A list of all open SPRs shall be provided. A list of SPR closed during this reporting period shall be provided. The lists shall contain the following information: the SPR's number, title, date, severity/criticality, and the version of software that it was written against.

8. Functional Requirements Verified — The percent of functional requirements fully verified of the total functional requirements in the software requirement specification. Any functional requirement that has no viable testing method shall be listed.

9. Input/Output (use) — The percent usage of the total hardware and software addressable I/O units, analog and digital, where an I/O unit is a single discrete/analog path.

10. Cost — The percent of software developmental cost of the originally predicted software developmental cost. The software developmental cost shall be the cost to design, develop and test CSCI software; including manpower, facilities, and documentation.

11. Manpower — The percent of current software development staff of the required staff to meet the schedule. A list of any open key positions and any key personnel gained or lost from the program shall be reported.

12. Schedule — The current software development schedule shall be included. This schedule shall contain major hardware/software milestones, and the software development activities and documentation delivery dates.

13. Software Development Tools — A list of development tools, their need date, and their availability date. Closure plans for any schedule impacts due to late availability of any software development tools. Status of any software problem reports involving software development tools.

14. Status — The status of CSCI or HWCI related Contract Data Requirement List items, Engineering Change Proposals, Request For Actions of the last review, and any open RFAs from prior reviews. Closure plans for any open RFAs from prior reviews.

10.2.5.3 (Name X) Parameter. This subparagraph shall be numbered 3.2.X (beginning with 3.2.1) where X refers to the number of the corresponding item in paragraph 10.2.5.2. The subparagraphs below shall specify the requirements, evolution, deviations and corrective action for parameter X.

10.2.5.3.1 Requirements. This subparagraph shall be numbered 3.2.X.1 and provide a detailed description of all requirements for parameter X. This includes requirements specified directly for, or implicitly for, the system and its hardware and software configuration items; i.e., spare, performance, resources, schedule.

10.2.5.3.2 Evolution. This subparagraph shall be numbered 3.2.X.2 and summarize the status of parameter X development. If the status of parameters 4, 5, and 6 are less than 100%, the functional requirements which are not designed, coded, or tested shall be identified. The evolution of each parameter X except for parameters 12,13,14 shall be graphically represented and updated with each development report. An example is provided in figures 1 and 2. The charts shall be labeled as Figure X (Name X) parameter evolution. The abscissa axis shall represent time (program milestones), partitioned by months or weeks as specified by the procuring activity, and the milestones of the CSCI or HWCI and its system's name. The units of measure for parameter X shall be identified on the ordinate with the percent design allocation or capacity and be partitioned by percents (0-100).

10.2.5.3.3 Deviations. This subparagraph shall be numbered 3.2.X.3 and specify the deviation(s), if any, from the parameter X requirements. Each description shall include the rationale for the deviation(s). Impacts to the CSCI or HWCI and the system shall be identified.

10.2.5.3.4 Corrective Action. This subparagraph shall be numbered 3.2.X.4 and provide the plans to alleviate deviations from the requirements of parameter X. The affect of the corrective action on other parameter requirements, the CSCI or HWCI, and the system shall be assessed.

10.2.6 Appendices. The appendices shall contain supplemental information for supporting the data provided.

10. Preparation Instructions (Cont'd)

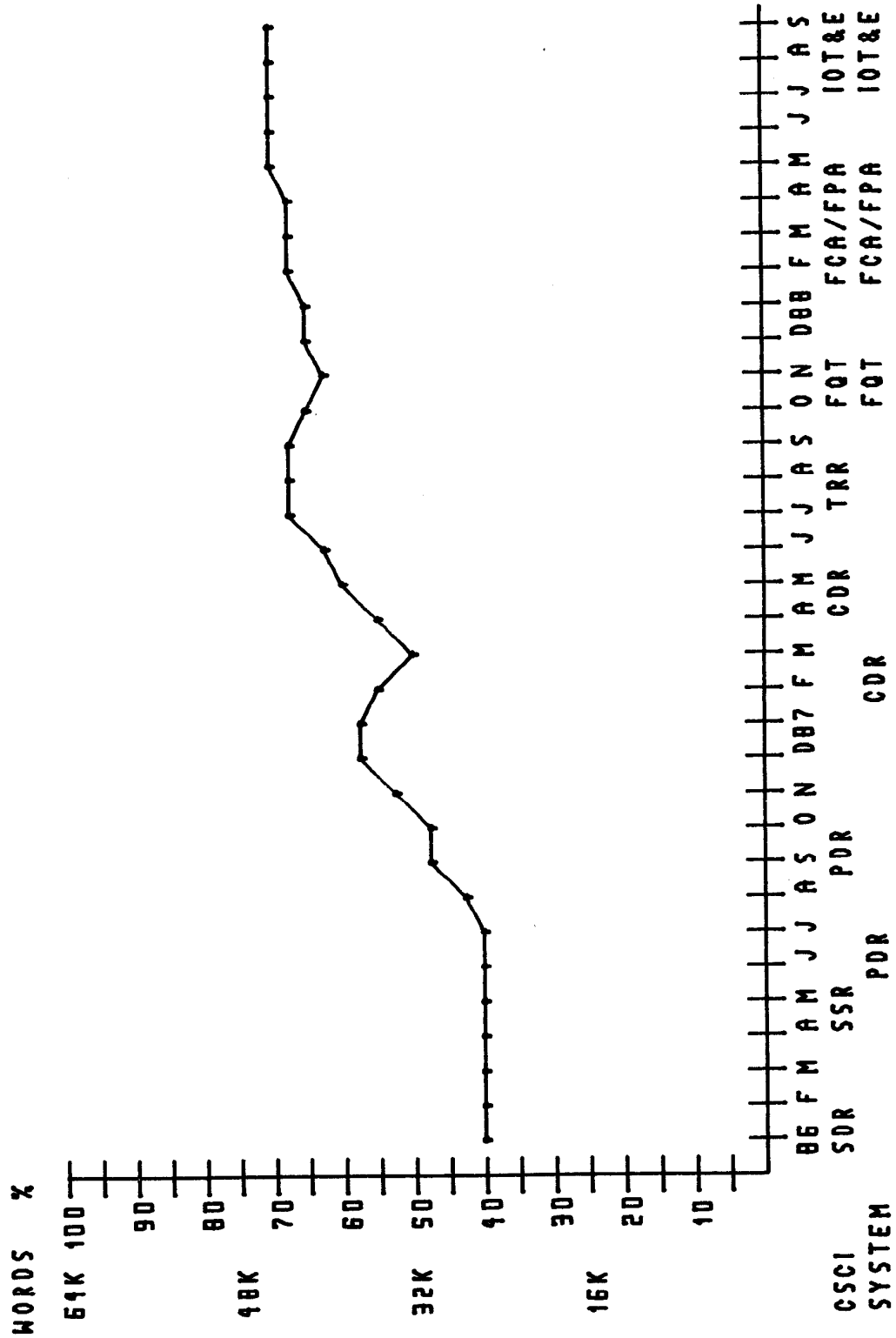

FIGURE 1. Sample memory allocation evolution

10. Preparation Instructions (Cont'd)

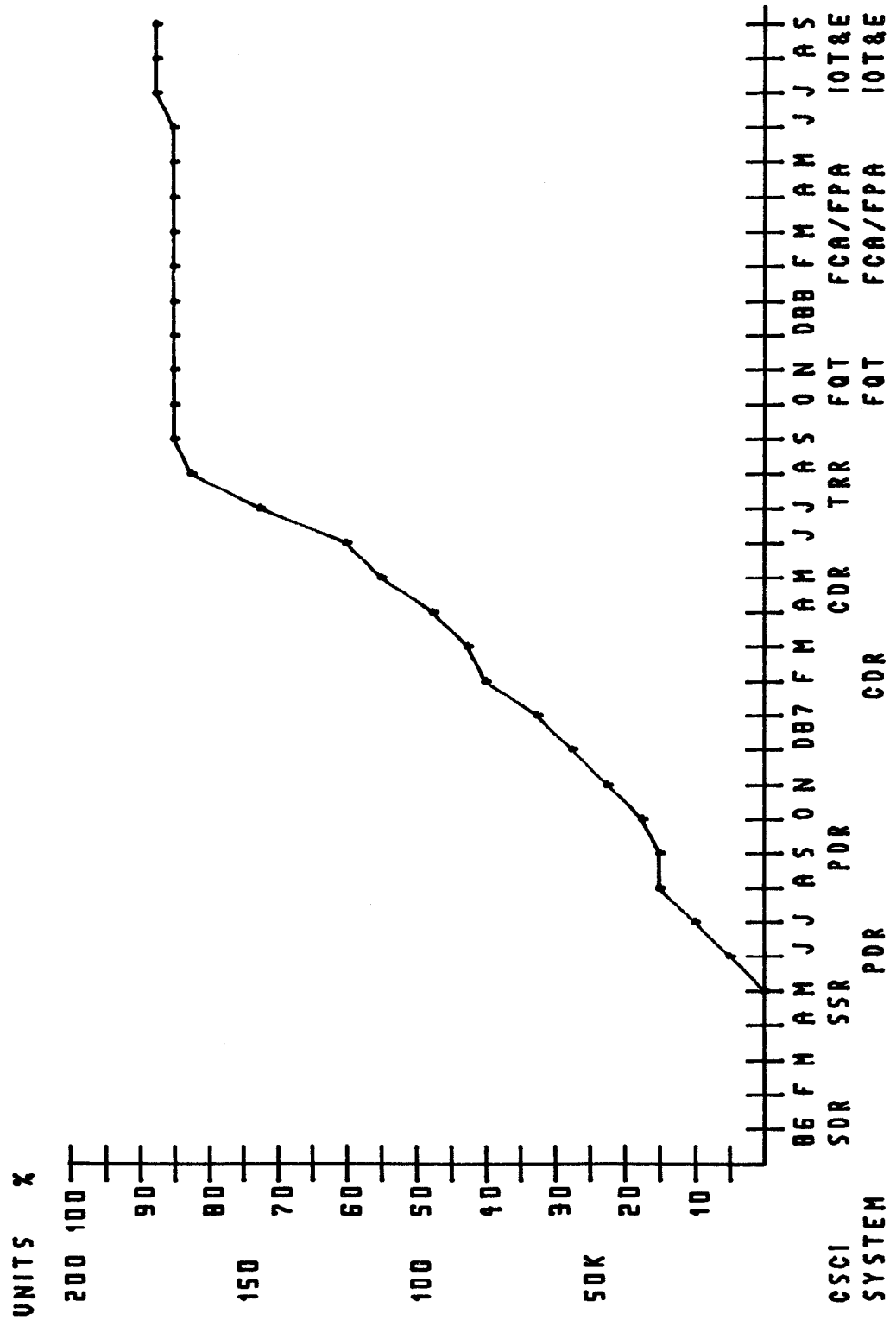

FIGURE 2. Sample software design evolution