Department of the Army Pamphlet 25–4

Information Management: Management of Subdisciplines

Information Systems Technical Documentation

Headquarters
Department of the Army
Washington, DC
10 April 1991

UNCLASSIFIED

SUMMARY of CHANGE

DA PAM 25–4
Information Systems Technical Documentation

This pamphlet--

- Adds an end user manual. This document is directed toward functional users of automated information systems who access their systems through terminals.

- Eliminates the document types for the data requirements document because of the extensive information available with the database specification.

- Revises all document types to eliminate or reduce the emphasis on batch processing and reorient the standard to the use of terminals as I/O devices and to the use of advanced software technology.

- Adds new or increased information requirements to each document type for security, continuity of operations, and communications.

- Includes a discussion of how to document systems that use off-the-shelf software along with a recommendation that documentation be prepared using electronic media.

- Uses the term "software unit" to replace the term "program" as a generic description for any logic grouping code. This allows system developers to define the extent of the code they should include in one software unit specification (formerly the program specification) to make the document more useful for the target environment.

Headquarters
Department of the Army
Washington, DC
10 April 1991

*Department of the Army Pamphlet 25–4

Information Management: Management of Subdisciplines

Information Systems Technical Documentation

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

Official:

PATRICIA P. HICKERSON
Colonel, United States Army
The Adjutant General

History. This UPDATE printing publishes a new DA pamphlet. This publication has been reorganized to make it compatible with the Army publishing database. No content has been changed.

Summary. This pamphlet describes how to carry out policies and procedures prescribed by AR 25–3 and AR 25–8 relating to the Army Information Standards Management program. It also sums up requirements for documenting information systems for all Information Mission Area disciplines: automation, printing and publications, telecommunications, visual information, and records management. Chapter 2 supplements DOD–STD–7935A and describes how to select and prepare required documents. Chapter 3 describes unique Army forms that apply to commercial, off-the-shelf, end user computing systems. Future editions will include technical documentation requirements for disciplines other than automation.

Applicability. This pamphlet applies to the Active Army, the Army National Guard, and the U.S. Army Reserve.

Proponent and exception authority. Not applicable.

Interim changes. Interim changes to this pamphlet are not official unless they are authenticated by The Adjutant General. Users will destroy interim changes on their expiration dates unless sooner superseded or rescinded.

Suggested Improvements. The proponent of this pamphlet is the Director of Information Systems for Command, Control, Communications, and Computers. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commander, U.S. Army Information Systems Engineering Command, ATTN: ASQBI–TS, Fort Belvoir, VA 22060–5456.

Distribution. Distribution of this publication is made in accordance with the requirements on DA Form 12–09–E, block number 5202, intended for command levels B, C, and D for Active Army, Army National Guard, and U.S. Army Reserve.

Contents (Listed by paragraph and page number)

*This pamphlet together with AR 25–3 supersedes TB 18–111, April 1983. It also rescinds DA Form 4746, April 1983.

UNCLASSIFIED

Table List

Figure List

Chapter 1
Introduction

1–1. Purpose

a. This pamphlet is a guide for the technical documentation of information systems used within the Information Mission Area (IMA). Future chapters will address the technical documentation used for nonautomated systems.

b. Information systems developed and used in the IMA disciplines of automation, telecommunications, visual information, records management, and printing and publications will be documented in accordance with this pamphlet. Strategic, theater/tactical, and sustaining base information systems are covered.

c. This pamphlet provides standards and guidelines that apply to all Army activities responsible for the design, programming, documentation, implementation, utilization, testing, maintenance, and functional use of information systems.

d. To comply with the requirements of AR 25–3 and AR 25–8, information systems will be documented as described in this pamphlet. This pamphlet also implements DOD–STD–7935A and the provisions of DODI 7935.1.

1–2. References

Required and related publications and referenced forms are listed in appendix A.

1–3. Explanation of abbreviations and terms

Abbreviations and special terms used in this pamphlet are explained in the glossary.

1–4. Tasks

a. Headquarters (HQ), U.S. Army Information Systems Engineering Command (USAISEC), as the administrator of the software and data element standardization portion of the Army Information Standards Management (AISM) program—

(1) Assigns an automated information system (AIS) code for each Army AIS.

(2) Assigns the first or first two characters that identify the system/subsystem of a system identification code (SIC) for each Army staff (ARSTAF) and major Army command (MACOM) AIS (see TB 18–103). Other positions are assigned as described in *b* below.

(3) Provides a structure for system identification to be used by each ARSTAF agency and MACOM for systems other than those identified above. The AIS code and SIC are used to track an AIS and to identify AIS manuals (see AR 25–30 and TB 18–103).

(4) Processes all waiver requests received from ARSTAF agencies and MACOMs relating to the requirements of this pamphlet or DOD–STD–7935A. (See AR 25–8.)

b. The Deputy Chief of Staff for Information Management (DCSIM) or equivalent at ARSTAF or MACOM—

(1) Assigns the unique second and third or only the third character of the SIC to each AIS within the developmental purview of that DCSIM to identify the system.

(2) Ensures that subordinate elements comply with the provisions of this pamphlet.

(3) Ensures compliance with AR 25–400–2 as to the disposition of machine-readable records.

(4) Processes waiver requests from subordinate elements to produce fewer than the number of documents recommended.

(5) Forwards to HQ USAISEC any waiver to deviate from this pamphlet if the waiver applies to a Standard Army Management Information System (STAMIS).

1–5. Waivers

a. Organizations can request a waiver if they are developing systems requiring less than the documentation specified or documentation that does not conform to the standards specified.

b. The use of other standards than DOD–STD–7935A for the technical documentation of an AIS, such as DOD–STD–2167A, requires that a waiver be submitted. No request for proposal, statement of work, or other plans will be prepared referencing such a standard until after the waiver request has been approved.

c. Waiver requests from AISs (including mission-critical AISs) using a standard other than DOD–STD–7935A must be submitted to USAISEC for comment and forwarding to the Director of Information Systems for Command, Control, Communications, and Computers (DISC4) for approval.

d. Additional details about waiver requests are contained in paragraph 2–4.

Chapter 2
Automated Information System Documentation

Section I
General

2–1. Introduction

a. This chapter provides documentation standards for AIS and general-purpose software used anywhere within the information architecture.

b. This chapter supplements DOD–STD–7935A, which is the basis for the Army's IMA AIS documentation standards. Users of this pamphlet must therefore comply with those standards as well as with any others in this pamphlet.

c. A brief description of documents found in DOD–STD–7935A, required Army supplementation to those documents, and documents unique to this pamphlet are at paragraphs 2–8 through 2–22. Review these documents completely before selecting a documentation set.

2–2. Compliance requirements

a. DOD–STD–7935A and this pamphlet arc used to document:

(1) All new or undocumented AISs.

(2) Major revisions to a documented AIS. A major revision is defined as any change, new or cumulative, that affects 40 percent or more of a manual.

b. Existing AISs need not be redocumented unless *a*(2) above applies.

Section II
Documentation Selection

2–3. Selecting a documentation subset

a. Introduction. Cost-effective AIS documentation requires careful selection of a documentation subset from the documents found in DOD–STD–7935A and this pamphlet. The subset selection should be based on the stability, criticality, physical environment, hardware, software, maintainability. and other factors that affect the life cycle of the system to be developed. Managers should verify that the selected subset will adequately support the AIS throughout its life cycle.

b. DOD–STD–7935A subset selection. Use the following procedures to select the appropriate documentation subset from the formats in DOD–STD–7935A:

(1) On a reproduced copy of figure 6–1 from DOD–STD–7935A (extract at fig 2–1), compute the complexity total of the AIS.

(2) Match the complexity total to those listed in figure 6–2 of DOD–STD–7935A (extract at fig 2–2), to determine which of the following document types would make a suggested minimal subset:

(a) Functional Description (FD).
(b) System/Subsystem Specification (SS).
(c) Software Unit Specification (US).
(d) Users Manual (UM).
(e) End User Manual (EM).
(f) Computer Operation Manual (OM).
(g) Maintenance Manual (MM).
(h) Test Plan (PT).
(i) Test Analysis Report (RT).

(3) The following situationally dependent document types may also apply:

(a) Database Specification (DS).

(b) Implementation Procedures (IP).

(4) Review the document descriptions (see para 2–5 and DOD–STD–7935A) to determine which document types (both suggested and situationally dependent) must be produced.

c. Additional documentation considerations. Review the following Army-developed documents (described in para 2–5) to determine if one or more of them should be selected to augment or replace documents selected from DOD–STD–7935A:

(1) Utility Software Manual (UT) (see app B).

(2) Utility Software Maintenance Manual (SM) (see app C).

(3) System Developers Manual (SD) (see app D).

d. Redundancy. The apparent redundancy of the information called for in different documents tends to encourage the selection of an inadequate subset. However, developing an extra document ultimately saves more time than omitting a needed document. Because different projects require different subsets of documentation, several document types call for similar information. By selecting the appropriate level of detail, most real redundancy can be eliminated.

e. Level of detail. Determine how much detail belongs in each document. For example, when the selected subset includes the FD, the SS, and the US, the FD should contain just system summary information, with elaboration supplied in the SS and the US. If the SS and the US are not going to be written, the FD must be more detailed.

2–4. Minimum documentation and waivers

a. The "level of project complexity" chart at figure 2–1 generally determines minimum documentation requirements for an AIS. Developers who elect to use fewer documents than the table suggests or who want to follow documentation procedures not described in this chapter must request waivers early in the life cycle.

b. Minimum documentation for a DOD-designated AIS or STAMIS consists of documents identified in table 2–1.

c. Waiver requests to use fewer than the number of documents determined by figure 2–1 for AISs used within a MACOM are submitted to the DCSIM for that MACOM.

d. Waiver requests to use fewer than the number of documents determined by table 2–1 are submitted in writing to: Commander, U.S. Army Information Systems Engineering Command, ATTN: ASQB–ITS, Fort Belvoir, VA 22060–5456. The request must contain at least the following:

(1) Requesting element (address).

(2) Specific standard for which waiver is desired.

(3) AIS, programs involved, and their component identification codes.

(4) Justification for having the standard waived.

(5) Substitute procedure or standard.

(6) Impact statement citing resources required if waiver is not approved.

(7) Completed copy of the complexity chart.

(8) Point of contact and telephone number.

2–5. Document descriptions

The following paragraphs describe the purpose of each document type and provide general guidance. Paragraphs 2–8 through 2–22 provide detailed directions about each document type.

a. Functional Description.

(1) The FD states the system requirements and the capabilities needed to satisfy those requirements. The functional proponent states the needs to be satisfied. The developer responds with the capabilities that will meet at least some of the needs. The functional proponent and the developer must agree that the FD describes the proposed system in quantifiable terms.

(2) A good way to test for a clear, quantifiable FD is to prepare at least the skeleton of a PT. The requirements of the system must be stated in quantifiable terms in order to be tested; a poorly written FD with generalized, nonspecific requirements will be proved untestable by a PT.

(3) Authors should remember that the FD is reviewed by personnel with varying backgrounds in the functional and data-processing areas. Avoid jargon.

(4) The FD must include requirements of wartime-essential needs to provide the basis for a flexible, modular, technical design by which operations could be streamlined during times of emergency, accident, or crisis.

(5) If the automated data processing equipment (ADPE) is known, it should be described. If the ADPE is yet to be acquired, the FD should not constrain acquisition by specifying the hardware.

(6) Once developed and approved, the FD must be subject to rigorous configuration management controls. This prime system baseline document will facilitate system enhancements and modifications.

b. System/Subsystem Specification. The SS is a technical document written by and for the system developer. It further defines the equipment and software required to implement the system described in the FD. As the system becomes more structured and defined, errors or conflicts in the FD are resolved. However, the SS must not introduce new capabilities into the system. If no US is planned, the SS may correlate programs to functions and supply detailed software unit information.

c. Software Unit Specification.

(1) The US is prepared by the system developer. It provides information needed for coding the software unit. Software unit, as used here and in DOD–STD–7935A, may refer to any unit of code, such as a program, module, or package. The DS, if developed, supplants much of the descriptions about data requested by the US.

(2) The US is usually developed for only the largest, most complex systems, or when the software unit coding is done by an organization remote from the rest of the development effort. Unlike most other documentation standards, the US is not used for system and/or software unit maintenance. The US is for development efforts only and is, therefore, a short-lived document. The MM is designed for the maintenance effort.

(3) Of the four sections in the US, usually only section 4, Design Details, differs from one software unit to another. Sections 1, 2, and 3 should be developed only once; section 4 will describe each program. See paragraph 2–6*c*(6) for instructions on dividing documents into parts.

d. Database Specification. This technical document is mandatory for all AISs that use a database management system. The DS gives the programmer a complete description of the physical and logical characteristics of the data. Often, much of the information called for in this document may be replaced by a reference to a data dictionary.

e. Users Manual.

(1) This (or the End User Manual, para 2–5*f*) is the only document in DOD–STD–7935A that is suggested for every AIS. The functional proponent prepares the UM to help the functional user interface with and control the AIS. When necessary, the system developer supplies technical information for the UM, using a writing style appropriate for the users of the system. The EM described in *f* below may be substituted for the UM in some cases.

(2) The UM may be used to document batch systems and those systems that combine batch and interactive processing. Section 5 of the UM is designed to provide instructions for a functional user at a terminal. The degree of detail in section 5 should be inversely proportional to the sophistication of the interactive system being documented. For example, as the use of "menu" / "help" screens increases, only the procedure to display the "menu" / "help" need be discussed in the UM, paragraph 5.3, if the "menu" / "help" screen provides all other information necessary to complete the transaction. The same is true for error correction, discussed in the UM, paragraph 5.4. If a "help" screen provides all information necessary to determine corrective action, only the procedure to access the "help" screen need be included in paragraph 5.4. If the error message does not provide access procedures to the appropriate "help" screen, or if

there is no "help" screen, then the appropriate instructions must be provided in paragraph 5.4.

(3) Section 2 of the UM, System Summary, can also serve as a system overview for senior management. If necessary, section 2 may be tailored by adding subparagraphs. Information must be provided by both the functional proponent and the system developer. The preparers of the UM should ensure that section 2 includes only enough detail to serve as a summary; further details belong in later sections.

f. End User Manual. The EM may be substituted for the UM in some cases. The UM is designed for systems that may be accessed through terminals but that also have some batch runs. If all the runs of a system are accessed through terminals, the EM may be used to document the system. The same guidance given in *e*(2) above for the UM's "menu"/ "help" screens applies to the EM.

g. Computer Operation Manual.

(1) The OM is prepared to provide precise, detailed information about the control requirements and operating procedures necessary to successfully initiate, run, and terminate a system. Extracts of the OM, rather than the complete document, may suffice for computer center personnel in remote job entry environments, those who use automated schedulers or automated tape libraries, or those who have quality control sections that review output products in detail. These extracts from the OM may be used so long as the complete OM is available for reference.

(2) Processing instructions for functional users of terminals are contained in section 5 of the UM or in the EM. Any operations that must be performed at the computer center by computer operators are documented in the OM. The complete description of computer processing is split among the UM, EM, and OM.

h. Maintenance Manual.

(1) The MM is prepared by the system developer to aid in system maintenance.

(2) Because the MM must reflect the current AIS, any corrections or changes resulting from system failures, testing, or modifications must be entered in the documentation. DA Form 4752–R (Program Revision) is used to maintain a record of changes. DA Form 4752–R may be locally reproduced on 8½- by 11-inch paper. A copy for reproduction purposes is located at the back of this pamphlet.

(3) The accuracy of documentation determines its worth. Many small changes may be made to the MM in a short period. Fortunately, this volatile document is usually not a formal publication; handwritten corrections and annotations may be appropriate. The MM must be kept in a state that is usable by newcomers to the system.

(4) Maintenance personnel will have access to all documentation. In a very small documentation subset, the MM will contain pertinent information that would be placed in other documents if a larger documentation subset were selected. When an FD is not included, for example, the MM should contain the basic system requirements.

(5) Like the US, the MM may be used to document any unit of code, including general-purpose software. When documenting general-purpose software (a subroutine, for example), system information may be inappropriate and, therefore, not recorded. Employing the same format for all software maintenance eases the transition of application-unique software to general-purpose software.

i. Test Plan.

(1) Some specific requirements for PT authorship and responsibilities are in TB 18–104.

(2) The PT may be used to describe single tests or multiple tests in numerous locations. Its contents provide for the basics (pretest activities, test specifications, and evaluations) and descriptions of specific tests. Although the document may seem unusually long, a basic PT, including pretest activities, test specifications, and evaluation criteria, started during the preparation of an FD may be supplemented during the development process to produce the complete PT.

(3) For systems that are tested at their development site, the documentation requirements can be fulfilled by using a basic PT and a description of the specific tests needed to verify the completeness and accuracy of the AIS.

(4) For new AISs, the basic PT can be drawn from other local AISs and modified.

j. Test Analysis Report.

(1) Procedures for using the RT are in TB 18–104.

(2) The RT records the results of each test and summarizes the system's capabilities, deficiencies, and suggested improvements. The RT is a natural follow-on to the PT, and it may also be prepared during the time that testing is actually being performed rather than waiting for the completion of testing.

k. Implementation Procedures.

(1) The IP are required to facilitate implementing an AIS at sites other than the test site. The IP provide an overview and specific instructions for each computer and user site. References may be made to the OM, EM, and UM for previously documented processes.

(2) The IP are prepared by either the system developer and functional proponent or by an agreed-to party. The life of the IP ends with the final implementation of the system.

l. Utility Software Manual. The UT catalogs and provides the user information and instructions necessary to use available general-purpose software (that is, utility software units, subroutines MACROs, facilities, and vendor software). (See app B.)

m. Utility Software Maintenance Manual. The SM tells how to maintain general-purpose software. (See app C.)

n. System Developers Manual.

(1) The SD was designed for relatively small AISs run on microcomputers in the stand-alone/online interactive environment. The SD reduces documentation requirements and provides information for systems development, maintenance, testing, and implementation. If an SD is to be used, a request to waive production of the other documents must be submitted. Its use is limited to systems with a complexity total of under 26, as shown in figure 2–1. (See app D.)

(2) The number of documents replaced depends on the amount of detail that goes into creating the SD.

Section III
Preparing Documentation

2–6. Documentation development

a. Development approach.

(1) A review of the documentation subset selected for an AIS will reveal that most of the required information will naturally be recorded during the development process. This initial recording can be used to develop, piecemeal, the required paragraphs, sections, and, finally, the documents. Such an approach may be useful in systems designed using contemporary methodologies or those programmed in Ada.

(2) AISs of various sizes and complexities are developed in different organizational environments, which precludes establishing rigid rules for preparing all documents. The functional proponent and the system developer must provide and exchange the information required to complete the documents.

(3) Memorandums of agreement or understanding are recommended to state clearly the duties and responsibilities of the involved parties. Such memorandums should be prepared immediately after selecting the documentation subset and then updated as necessary.

b. Document conversion. Volumes of documentation prepared following previous standards need not be converted until 40 percent of the volume's pages are identified as "change pages." Then that volume must be converted to conform to DOD–STD–7935A and this pamphlet. This approach will result in some old volumes and some new volumes. Fortunately, because most changes occur in the documentation intended for the user and computer operations personnel, those volumes are converted first. Other documents may be phased out as manuals prepared in accordance with this pamphlet become available.

c. Section and paragraph titles. The sequence of section and paragraph titles and numbering, as shown in the table of contents for each document in DOD–STD–7935A, will not be altered. However,

the following options may be used to tailor the documents to the individual AIS:

(1) When the information specified in a two-position numbered paragraph is not applicable, insert "NA" after the paragraph number and title. Subordinate paragraph numbers and titles will not be documented.

(2) When the information specified in a section of a document is not applicable, insert the rationale for not documenting that section after the section number and title. Do not include any paragraphs.

(3) Additional two-position numbered paragraphs and their subordinate paragraphs may be added at the end of a section to facilitate the addition of necessary information that cannot be incorporated into other paragraphs.

(4) Additional subparagraphs are permitted.

(5) Additional sections may not be used except as allowed in the DS, UM, EM, PT, and IP.

(6) Any AIS manual may be subdivided into parts. The hierarchical structure will then be the part, followed by one or more sections, for each manual. Parts will be used when a given section recurs within a manual. For example, a US may be subdivided into parts as shown in figure 2–3.

(7) Attachments or appendixes to the manual may be used when information necessary for meaningful documentation cannot be appropriately provided in either a subparagraph or a paragraph in a section of an AIS manual. The attachment format is given in paragraph 2–7*c*(2); the appendix format is given in paragraph 2–7*c*(1).

d. Different hardware and/or software. When an AIS is run on processors from different manufacturers and/or with different operating systems, the proponent of the AIS manual may elect to produce one or more manuals of the same type (that is, OM, UM, and the like). This decision must be based on considerations of cost versus benefits, ease of maintenance and use, distribution of changes, degree of redundancy, and clarity of contents. Included within the AIS manual identifier structure is a three-position code that identifies the manufacturer of the processor. When the AIS runs on processors from different manufacturers and a combined manual is developed, the code "ZZZ" will be used in lieu of the manufacturers' code (for example, AIS Manual 25–LOI–AAA–ZZZ–OM).

e. AIS mission-essential considerations. Conditions such as war, exercises, mobilization, and civil defense emergencies can affect normal AIS processing. These conditions influence design and documentation requirements such as run frequency or sequence, type and quantity of inputs and outputs, real-time attributes, and elimination of existing requirements. Document authors must consider these variables.

f. Publication. Documents must follow the formats prescribed by DOD–STD–7935A and this pamphlet. The decision to publish any document must be based on the requirements for distribution and system maintenance. For some in-house systems, the UM may have handwritten corrections; other systems will require a formally printed UM. Publication is not necessary for an MM that remains within the development office. A clear, legible, up-to-date copy with a valid source code listing and DA Form 4752–R is adequate. Documentation needed to support or assist in the continuing development of maintenance effort must be complete, adequate, reproducible, and usable by newcomers. Consideration must also be given to the Continuity of Operations Plan (COOP), transfer of AIS responsibility, configuration management, and similar requirements.

g. Verification and validation. Procedures for verification and validation of the software, such as documentation review analysis, requirements traceability analysis, and design-to-code traceability analysis, can be facilitated by the documentation discussed in this pamphlet. Documentation can be evaluated for conformance to DOD–STD–7935A and also, more importantly, for the internal consistency and accuracy of information as well as the external traceability of information through all systems documentation. For example, review analysis of the FD can be used to verify its conformance to DOD–STD–7935A as well as to substantiate its internal consistency, accuracy, and traceability of requirements. Likewise, requirements traceability analysis can be used to verify the traceability of information among requirements, design, implementation, and test documentation.

h. Use of automated tools.

(1) The text of any document may be prepared using automated word-processing tools. The format and content must conform with DOD–STD–7935A as implemented by this pamphlet.

(2) Any figures or graphics may be prepared using an automated graphic package.

(3) When an automated development tool produces output that is called for in several paragraphs of a document, the output may be included in an appendix or figure and referred to from the appropriate paragraphs.

(4) When an automated development tool produces output that is subject to frequent change, and when that tool and its output are directly accessible by all users of the relevant document, a reference to that output, rather than a copy of it, can be included in the document. Hard copy must, however, be available. This technique should not be applied to an FD, which is a development baseline, or to the OM, UM, or EM; they are intended to be used in time-sensitive operations that would prevent getting information from another source.

(5) The user of a document must be considered in preparing all documentation. Functional users need the FD, UM, and EM to be written in terms understandable to functional area specialists rather than to computer specialists.

(6) Care must be taken not to overdocument systems and to keep documents a reasonable size. The MM, for example, is often much too detailed. Because the MM is usually for the central staff that maintains the system, it should be developed as a "bridge" between the programmers and the detailed program listing.

(7) The common items in nearly identical, repetitious operations should be documented only once. For example, if a terminal-driven system contains six different automated forms, each with 10 or 12 minor variations that are completely explained on the six different input screens, the variations for each form need not be explained on a separate page of the hard-copy document for each screen. The screens may provide sufficient detail, or a single page summarizing the variations may be sufficient.

(8) If an automated development tool produces a single, integrated output that provides information called for in two or more separate numbered paragraphs, the following guidelines apply:

(a) The information required by each paragraph must be clearly identifiable in the included or referenced output.

(b) The information required by each paragraph must be grouped in some logical way, such as in a separate column, in an item in a list of other related items that may be repeated for each software unit or other component, or in a portion of the output that has a consistent, identifying characteristic that can be specified in the paragraphs referring to that output.

(c) Long series of references from many different paragraphs of a document type to a single, complex output from an automated development tool do not satisfy the intent of DOD–STD–7935A and will not be used.

(9) The completed document must satisfy the intent of the document type in the life-cycle development of the AIS. For example, the US must specify the features that will be built into the software unit; the EM must describe the AIS as delivered.

2–7. Documentation format

a. Preparation instructions.

(1) Documents are prepared in the format described in chapter 5 of DOD–STD–7935A. However, page numbering is as specified in *d*(3) below. Pages do not have line borders.

(2) All titled paragraphs and their paragraph numbers are underscored as in DOD–STD–7935A unless the capability is not available.

(3) Facsimile documentation produced by automated tools is permitted. This includes documentation placed on floppy disk, optical disk, or other machine-readable media. Documents are formatted as described in this pamphlet to include headings, paragraph titles, form numbers, and item descriptions, if applicable.

(4) Each AIS manual has a front and back cover. The front cover (fig 2–4) contains the AIS manual Identifier, the date of the manual, the words "Automated Information Systems Manual," AIS title, the manual name, the operating system, a block citing availability of the publication, the name of the preparing activity, and, if applicable, the security classification marking and privacy act statements. The only information required on the back cover is the security classification marking and privacy act statement, if applicable.

(5) Standard command or agency covers are authorized, provided they contain the information in (4) above.

(6) All flowcharts conform to FIPS PUB 24. In flowcharts produced either manually or with an automated tool, the size of each symbol may vary, provided that the dimensional ratio of each symbol is maintained.

(7) Clear, legible hand-lettering in reproducible ink or dark pencil may be used on forms (for example, logic charts, flowcharts) and machine-generated listings. Narrative text is typed, single-spaced. The output of letter-quality printers is considered equivalent to "typed" text. Twelve-pitch Letter Gothic type is recommended for clarity on reproduced copies, including microform.

(8) Each page of a manual contains the AIS manual identifier, publication date, page number, and, if applicable, change number, security classification marking, and privacy act statement. The AIS manual identifier is centered at the top of the page or directly below the security classification marking or privacy act statement, if required. The publication date of the original or revised page is centered on the line below the AIS manual identifier. If the page is replaced by a change page, the change number and date (for example, C1, 15 Jul 89) are entered in place of the original or revision date. The page number is positioned ½ inch from the bottom and centered on the page, immediately above the security classification marking or privacy act statement, if required.

(9) Documentation must be appropriate for the average reading skill level of the intended audience. Guidance is contained in AR 25–30.

b. Table of contents.

(1) Each manual will contain a title page as the first page of the table of contents. The title page begins on an odd-numbered (righthand) page and contains the title of the manual and at least the start of the table of contents. The page is structured as shown in DOD–STD–7935A, except as follows:

(a) Include any titled paragraphs added by the documentor; do not include untitled paragraphs. When an entire section is not required in the completed document, do not include its paragraphs.

(b) Include, if applicable, a list of figures, attachments, and appendixes.

(c) Number the pages of the table of contents sequentially in lower-case roman numerals.

(2) When an AIS manual is revised, include a supersession statement at the bottom of the first page of the table of contents.

(3) If one manual is developed for different processors and/or operating systems (see para 2–6*d*), provide in narrative form the various manufacturers' codes and identify the operating systems. Place this narrative after the title of the manual and before the beginning of the table of contents.

c. Appendixes and attachments.

(1) *Appendixes.* Appendixes contain essential supplemental material. Appendixes serve as a separate source of information: they are not part of the main body of the publication, but must be referred to in the main body. Identify appendixes with the word "APPENDIX," followed by a letter in alphabetical sequence, at the top of the page. Use no end punctuation. If there is only one appendix, omit the alphabetical designation. Appendixes are provided in the order they are cited: the first appendix mentioned will be APPENDIX A, the second, APPENDIX B, and so on. Use initial uppercase letters for the principal words in the appendix titles. Place appendixes after the text of an AIS manual but before the signature page.

(2) *Attachments.* Attachments contain additional information about a document. Place attachments after the text of an AIS manual but before the signature page. Attachments come after appendixes if both are used in the same document.

d. Numbering systems.

(1) *Identifier.* See TB 18–103 and AR 25–30 (paras 2–77 and 6–36) for the identifier structure and assignment responsibilities.

(2) *Paragraph numbering.* Give paragraph numbers in decimal form: do not indent. The first digit of the paragraph number indicates the section number: subsequent digits indicate paragraph divisions (for example, 3.1.2 is section 3, paragraph 1, subparagraph 2). In DOD–STD–7935A, some paragraphs contain information or "memory jogger" items labeled with lower-case letters. These items should be considered when composing the paragraph but need not be listed separately. An example of a page of text with numbered paragraphs is at figure 2–5.

(3) *Page numbering.*

(a) General. All page numbers are centered at the bottom of the page. Each part, section, and attachment begins on an odd-numbered (right-hand) page and is numbered in sequence.

(b) Parts. When a document contains parts, the word "Part," a space, the part number, and another space precede the page number; for example, Part 6 3–5 is part 6, section 3, page 5.

(c) Sections. Sections are designated by their number followed by a hyphen and a sequential page number (for example, 1–10 is section 1, page 10).

(d) Appendixes. Appendixes are designated by their alphabetic identification followed by a hyphen and a sequential page number (for example, A–1 is appendix A, page 1).

(e) Attachments. Attachments arc designated by the letter "A" followed by the attachment number, a hyphen, and a sequential page number (for example, A1–10 is attachment 1, page 10).

(f) Blank pages. If a table of contents part, section, figure, appendix, or attachment ends with a blank page, the page is not counted as part of the manual and is left entirely blank. However, the insertion of a blank page to ensure odd-even continuity due to page additions or deletions will contain the required page identifiers as well as the words "Blank Page" centered 1½ inches from the top of the page.

(g) Adding pages. New pages added at the end of a page series follow normal page-numbering rules. If expanded material requires inserting a page or pages, use decimalized page numbers: for example, 1–10.1 is a page inserted between pages 1–10 and 1–11. A "Blank Page," as described in (f) above. is inserted after decimalized pages if necessary to preserve the odd-even continuity.

(h) Deleting pages. Deleted pages are replaced by "Blank Pages" as described in (f) above. When a single page or two consecutive pages are deleted, each page will be replaced by a "Blank Page" numbered the same as the deleted page it replaces. When three or more consecutive pages are deleted, the replacement is one or two "Blank Pages" as required to preserve the odd-even continuity. For deleted pages that both begin and end with odd numbers or with even numbers, the replacement is a single "Blank Page" numbered with the inclusive page numbers separated by "thru." For example, if pages 3–5, 3–6, and 3–7 are deleted, the blank replacement page will be numbered as "3–5 thru 3–7." For deleted pages that begin with odd numbers and end with even numbers or vice versa, the replacement is two "Blank Pages." One replacement page contains all the inclusive deleted page numbers, except the first or last deleted page, which retains its page number. For example, if pages 3–5, 3–6, 3–7, and 3–8 are deleted, the two replacement pages may be numbered "3–5 thru 3–7" (odd) and "3–8" (even) or they may be numbered "3–5" (odd) and "3–6 thru 3–8" (even).

(4) *Figure numbering.* Figures are identified by the word "Figure" followed by a space, the two-position number of the referential paragraph followed by "–", and a sequential number assigned by the documentor. For example, the third figure referred to in paragraph 3.2 of the UM is identified as "Figure 3.2–3." An exception is when figures are referred to in MM paragraph 2.4.1 through 2.4.n. In this case the three-position numbered paragraph replaces the two-position numbered paragraph. If any figure is within a part, the entire figure identification will be preceded by the word "Part," a space, the part number, and a space.

e. Cross referencing.

(1) Some paragraphs in documents described in DOD–STD–7935A require the documentor to relate information to other documents. Such relationships will not be attempted unless the other documents are available to the reader.

(2) A referenced item may not contain only another reference. It must contain some necessary information.

(3) Each figure, appendix, or attachment in an AIS manual is referenced from a paragraph in the same manual. However, additional referencing may be made from other sources.

f. Illustrations.

(1) Nontext material—forms, visuals, tables, sample pages, and the like—having an image area exceeding 6¾ by 8¾ inches including the official designators at the bottom of a form) should be reduced to approximately that size and centered on 8½- by 11-inch paper. After reduction, the necessary page identifiers (manual identifier, date, and the like) can be added within the prescribed ½-inch margins at the top and bottom of each page. The page is then ready for publication.

(2) An illustration whose print lines exceed the space provided between the left and right margins may he positioned so that the print lines read across the length of the page. The top of the illustration should be positioned at the left side of the page. Retain the usual positioning of the page identifiers (manual identifier, figure number, and the like).

(3) Foldouts will not be used.

g. Margins of manuscript. The camera-ready master of the manual is typed on 8½- by 11-inch paper. The first line of text begins 1½ inches from the top of the paper; the last line ends 1½ inches from the bottom. The left and right margins are 1¼ inches from the edge of the paper.

h. Printing instructions. Instruct the printer to position illustrations so as to leave a 1¼-inch left margin on odd-numbered pages and a 1¼-inch right margin on even-numbered pages. Print each page front and back, head-to-head. Each new part or section is printed on a right-hand page; that is, if Part 1, Section 1, ends on an odd-numbered page, the back of that page will be blank; Part 1, Section 2, will begin on the next right-hand page.

i. Changes.

(1) Changes to published AIS manuals are issued on numbered change notices, which consist of a change sheet (fig 2–6) and sequentially numbered replacement pages with change indicators as explained below.

(2) To identify new or changed material, delete all previous change indicators for the entire page. Place an asterisk or a vertical line in the outer margin (left margin on even-numbered pages; right margin on odd-numbered pages) of the affected line. Only actual changes are affected; renumbered or relocated material does not require an asterisk or a vertical line. When relocating material to another page because of an overflow of material from a previous page, no asterisk or vertical line is required for the relocated material, but the page will be considered a change page and will have the current change number and date at its top. If an entire paragraph is changed, place an asterisk or vertical line in the appropriate margin of the first line. If the entire paragraph is deleted, the paragraph number is retained; however, substitute the word "DELETED" for the paragraph title, and place an asterisk or a vertical line in the appropriate margin. To indicate new or changed material in a figure, appendix, or attachment, place an asterisk or a vertical line and a space before the word "Figure," the attachment number, or the word "Appendix" as well as the required asterisk or vertical line on the affected line. For figures, appendixes, or attachments that must be rotated to be read, place the asterisk or vertical line to the left of the affected line.

j. Revisions.

(1) A revised edition should be prepared when 40 percent of the pages in a manual are affected by changes. In applying the 40 percent criterion, each sheet of paper consists of two pages of documentation—a front and back. If both the front and back of a single sheet of paper are changed, it counts as two changed pages. If only one side is changed, it counts as one changed page. Multiple changes to a single page count as one changed page. A manual may be revised even if less than 40 percent of it has been changed. A revised publication supersedes a basic or previously revised edition and its changes.

(2) Because all pages of a revised edition are changed, at least as to the date, no change notice is prepared. Any evidence of previous changes (asterisks, change numbers, and the like) is removed. A supersession statement appears at the bottom of the first page of the table of contents.

k. Department of the Army documentation forms.

(1) A list of the Department of the Army (DA) forms approved to document AISs is in table 2–2. When a form is not applicable to the system being documented, it is not prepared.

(2) The spacing on the DA forms is most suitable for 12-pitch type.

(3) The following four DA forms are for general use. These forms may be locally reproduced on 8½- by 11-inch paper. Copies for reproduction are located at the back of this pamphlet.

(a) DA Form 4735–R (Logic Chart) is used for all logic, data flow, or flowcharting unless structured design technology is used. See table 2–3.

(b) DA Form 4736–R (Decision Table) is used for all graphic representations of a decision matrix. See table 2–4.

(c) DA Form 4737–R (File Specification). See table 2–5.

(d) DA Form 4738–R (Record Specification). See table 2–6.

(4) The following three DA forms support structured design technology. They may be used in lieu of or in conjunction with Data Processing Logic Charts or Decision Table Charts. These forms may be locally reproduced on 8½- by 11-inch paper. Copies for reproduction purposes are located at the back of this pamphlet.

(a) DA Form 4739–R (Input-Process-Output). See table 2–7.

(b) DA Form 4740–R (Input-Process-Output Cross Reference). See table 2–8.

(c) DA Form 4741–R (Input-Process-Output Extended Description, Process Number). See table 2–9.

(5) The following two DA forms support functions performed by a data processing activity (DPA). These forms may be locally reproduced on 8½- by 11-inch paper. Copies for reproduction purposes are located at the back of this pamphlet.

(a) DA Form 4742–R (Cycle Summary). See figure 2–7.

(b) DA Forms 4743–R (Control Card Preparation) and 4743–1–R (Control Card Preparation (Continuation)). See table 2–10.

(6) DA Form 4486–R (Test Condition Requirements) is prescribed by TB 18–104 and used by the functional proponent and the system developer to facilitate AIS testing. The form also provides a means to specify tests, project results, and document test evaluation questions.

l. Local forms. When the requirements of a specified paragraph cannot be met by using the DA forms, local forms may be used as a supplement. Local forms will not be substituted for the DA forms. Activities are encouraged to submit local forms as candidates for use in this standard.

m. Substitutions. System title, system acronym (if applicable), and SIC will be substituted for project name and project number, respectively, in section 1, General, and in paragraph 1.1, Purpose, as found in all documents.

(1) A signature page is required only for published AIS manuals. It is the last page of the manual, following any attachments or appendixes, and is an unnumbered, right-hand page. A proponency block is centered and boxed at the top of the page. Following the proponency block are the authority lines "FOR THE COMMANDER" and "OFFICIAL," and signature blocks for the Chief of Staff or other authorized individuals. An example is provided at figure 2–8. The authentication on the signature page will remain unchanged until a revised edition of the AIS manual is published.

(2) Any system documentation (excluding STAMISs) that crosses command lines may use a joint authentication signature. Authorized individuals responsible for the major or major subordinate command and ARSTAF agency administration, such as the Chief of Staff or

Executive Officer, will authenticate command and agency AIS manuals. Deputy Installation Commanders of Continental United States (CONUS) installations that do not have Chiefs of Staff normally will authenticate installation AIS manuals.

(3) The authenticating organization is the sole distribution point. Where joint authentication is used, the organizational element responsible for the design, development, test, deployment, and maintenance of the information system will be the sole distribution point.

(4) The following information is provided to the Commander, U.S. Army Publications and Printing Command, ATTN: ASQZ–IM, Alexandria, VA 22331–0302, concurrent with the publication of each AIS manual (no copy of the document will be forwarded):

(a) AIS manual identifier.

(b) Title.

(c) Originating organization (proponent), address, and telephone number (both commercial and AUTOVON).

(d) Name, address, and office symbol of organization where requests for copies of these publications are to be submitted.

n. Printing AIS manuals. The authenticating organization arranges for the printing of its AIS manuals. Printing options include using local Army duplicating facilities, commercial facilities under contract, or Information Service Support Centers. Criteria to consider in selecting the most appropriate printing facility include cost, quantities needed, and time required to satisfy user requirements for both the printing and distribution of the AIS manuals.

Section IV
Documentation Requirements

2–8. Functional description

Follow DOD–STD–7935A with the following additional requirements:

a. Section 1, paragraph 1.2. Include reference to AR 25–9 and to any approved waivers to documentation standards.

b. Section 7. Include or reference all applicable AIS development plans required by AR 25–1, associated technical bulletins, and DA Pamphlets.

c. Section 8. Include or reference all cost factors required by AR 25–1 and associated references.

2–9. System/subsystem specifications

Follow DOD–STD–7935A with the additional requirement that DA Form 5973–R (Document Analysis and Data Summary (DADS)), DA Form 5974–R (Grid Chart), and DA Form 5997–R (Data Analysis Summary) may be used to record the analysis of input and output documents required to prepare the SS or the DS. These forms may be locally reproduced on 8½- by 11-inch paper. Copies for reproduction purposes are located at the back of this pamphlet. The forms provide a common, comprehensive methodology for performing data analysis and for recording data characteristics. Use of these forms is optional.

a. The completed DA Form 5973–R records generalized and detailed data in an existing system, identifies data elements by document, and can be used to trace data flow. (See fig 2–9.) Information on the completed DA Form 5973–R is used to complete DA Form 5974–R (see fig 2–10).

b. The completed DA Form 5974–R can be used to ensure that all documents within the scope of a study have been collected, to verify the information found in blocks 1, 15, and 20 of the DA Form 5973–R and to establish the relationship between input and output.

(1) Be sure that source input documents (code 0) never appear as output, final outputs (code 3) never appear as inputs, and that intermediate records (code 2) and basic records (code 1) appear as both input and output.

(2) A reverse slash (\ ) can indicate an input that does not support an output or an output document that is not supported by an input document. If this occurs, further analysis is required to determine if a document was collected outside the scope of the study or if an input document was omitted.

c. While the DA Form 5974–R provides a comparison of input and output documents, the completed DA Form 5997–R (see fig 2–11) provides a comparison among the individual data elements found on the various input and output documents.

(1) Two or more input documents containing the same data element may be modified or consolidated to eliminate input redundancy.

(2) Data elements found on more than one output document may indicate output redundancy and could indicate outputs that could be eliminated or consolidated.

2–10. Software unit specification

Follow DOD–STD–7935A with the following additional requirements:

a. Section 1, paragraph 1.2c. Reference to related USs will be restricted to software units of other AISs.

b. Section 2, paragraph 2.1. Describe the software unit briefly in general terms, for example: "Update database."

c. Section 2, paragraph 2.2. Provide a chart briefly listing all system functions and cross references to the software unit or units they satisfy. For example, for an update requirement (paragraph 2.1), this paragraph might say: "Add and change. but not delete—(Software Unit ID)."

d. Section 2, paragraph 2.2.1. Repeat or reference the requirements specified in paragraph 3.1.1 of the FD or paragraph 2.2.1 of the SS. If requirements are different for a specified software unit or units, so indicate here.

e. Section 2, paragraph 2.2.2. Same as *d* above, except contents of paragraph 3.1.2 of the FD or paragraph 2.2.2 of the SS may be repeated or referenced.

f. Section 2, paragraph 2.3. Record by individual software units in subparagraphs as required.

2–11. Database specification

Follow DOD–STD–7935A with the additional guidance that the forms discussed in paragraph 2–9*b* may be incorporated in the DS rather than the SS if the project schedule calls for the SS to be completed before the data analysis is completed.

2–12. Users manual

Follow DOD–STD–7935A with the following additional requirements:

a. Section 1, paragraph 1.2.

(1) Identify functional directives issued by the proponent activity.

(2) If other document types have been waived and the UM is the only document produced for an AIS, reference the location of the annotated source listing.

(3) Reference location of any approved waiver to documentation standards.

b. Section 2, paragraph 2.7. List each data element used in the system. For those data elements found in AR 25–9 or in DOD 5000.12–M, list the data element name and number.

c. Section 3, paragraph 3.1. Use DA Form 4743–R to document control card formats if control cards are used to initiate the system operation.

d. Section 4, paragraph 4.1. Show the approximate response time for each programmed query provided with the system. Include in this paragraph a brief narrative describing the environment (that is, hardware, file size, number of users, and the like) used to establish the approximate response times. Various known environments should be listed to give users an estimate based on their particular environment.

e. Section 5, paragraph 5.3.1 through 5.3.n. Specify the approximate response time for each standard display and retrieval provided with the system. Show approximate response time as in *d* above.

2–13. End user manual

Follow DOD–STD–7935A with the following guidance. The EM was developed for AIS and microcomputer applications designed for use on microcomputers in the standalone or online interactive environment. The Army documentation standard titled Functional Users

Manual has been superseded by the EM contained in DOD–STD–7935A. The EM is created by the system developer and the functional proponent to give the end user the documentation necessary to use the system effectively. The media may be either online or on a floppy disk. In either case, provision to create a hard-copy document is mandatory when and if required. In the absence of hard copy, a table of contents containing reference "calls" to individual paragraphs or to all of the document is required.

2–14. Computer operation manual

The OM has a wider audience and is used more often than other AIS manuals when documenting a batch-oriented system. The supplemental instructions provide very detailed guidance. An index must be used to identify all subparagraphs of a run (paragraph 3.5 through 3.n); hence there is no need to list the subparagraphs in the OM table of contents. For ease of reference, each DOD–STD–7935A paragraph and section title and number is listed in figure 2–12, followed by its implementing instructions. Instructions for preparing a run index are given in figure 2–13.

2–15. Maintenance manual

Follow DOD–STD–7935A with the following additional requirements:

a. Section 3, paragraph 3.3.1 and paragraph 3.3.2. If a current DS is available to maintenance personnel, use these paragraphs to reference appropriate DS paragraphs.

b. Section 4, paragraph 4.1. Cite FIPS PUB 24 for conventions and symbols.

c. Section 4, paragraph 4.2. Reference TB 18–104 for verification requirements.

d. Section 5, paragraph 5.n. Include a DA Form 4752–R as the last page for each program. This and subsequent forms will be used to record all changes, corrections, modifications, and the like to each program.

2–16. Test plan

Follow DOD–STD–7935A with the following additional requirements:

a. General. Refer to TB 18–104 for additional development criteria.

b. Section 4, paragraph 4.2.1. Use DA Form 4486–R to depict special sets of inputs and databases.

c. Section 5. Describe the first test.

d. Section 6 and subsequent sections. Use for additional logical groupings of tests, as required.

2–17. Test analysis report

Follow DOD–STD–7935A. No additional guidance is needed.

2–18. Implementation procedures

Follow DOD–STD–7935A. No additional guidance is needed.

2–19. Utility software manual

The UT addresses the users of utility software units, subroutines, MACROs, and facilities (that is, groups or sets of utility software units, subroutines, and/or MACROs). Any vendor-supplied, general-purpose software documentation will be referenced, not rewritten, in the UT catalog.

a. The SM and the UT may be used together to support the maintenance of general-purpose software. These manuals document the specifics of the code and the user interface. The SM may be used for any grouping of code; it is not restricted to a "program" or "software unit."

b. The format for the UT is at appendix B.

2–20. Utility software maintenance manual

a. This document is a companion of the UT. It supports the maintenance of general-purpose software.

b. The format for the SM is at appendix C.

2–21. System developers manual

a. The SD was developed for AISs designed for use on microcomputers in the standalone or online interactive environment. The SD is intended only for small AISs that do not have a complexity total of more than 26 (fig 2–1). The SD reduces documentation requirements and provides information for systems development, maintenance, testing, and implementation. Activities that want to produce an SD rather than the other document types of DOD–STD–7935A must request a waiver of those documents.

b. The SD is created by the system developer online or on a floppy disk. In either case, provision to create a hard-copy document is mandatory when and if required. In the absence of hard copy, a table of contents containing reference "calls" to individual paragraphs or to all of the document is required.

c. The format for the SD is at appendix D.

2–22. Functional users manual

Because DOD–STD–7935A now contains the EM, that document rather than an FM will be created to give the end user the information necessary to use the system.

Table 2–1
Minimum documentation required for DOD-designated AIS or STAMIS

	Complexity total	
Documentation	Greater than or equal to 26	Less than 26
Functional Description (FD)	X	X
System/Subsystem Specification (SS)	X	
Software Unit Specification (US)	X	
Users Manual (UM)	X	X
End User Manual (EM)	X [1]	X [1]
Computer Operation Manual (OM)	X	X
Maintenance Manual (MM)	X	
Test Plan (PT)	X	X
Test Analysis Report (RT)	X	X
Implementation Procedures (IP)	X	
Database Specifications (DS)	X [2]	X [2]

Table 2–1
Minimum documentation required for DOD-designated AIS or STAMIS—Continued

Documentation	Complexity total: Greater than or equal to 26	Complexity total: Less than 26
System Developers Manual (SD)		X [3]

Notes:
[1] May be used in lieu of UM and OM, depending on type of system.
[2] Will be used whenever a database management system is employed.
[3] May be used in lieu of SS, US, MM, and IP, depending on the amount of detail placed in the document if a waiver is first obtained.
Although not specifically required for a STAMIS, development of the SS, US, and IP should be considered during the selection of a documentation subset. Developers may use these documents to provide additional support for the system and in the development of other documents that are required.

Table 2–2
DA information system documentation forms

DA Form No.	Title	Application
4735–R	Logic Chart	Presents graphic information, such as data flow diagram, logic flow diagram, and interface diagram.
4736–R	Decision Table	Presents information as a problem/solution diagram; processing decision; presenting alternatives or exceptions; processing sequences.
4737–R	File Specification	Documents input, output, and intermediate files.
4738–R	Record Specification	Records layout formats.
4739–R [1]	Input-Process-Output	Provides input-processing-output (IPO) information about structured programming modules.
4740–R1 [1]	Input-Process-Output Cross Reference	Provides cross reference information between IPOs.
4741–R1 [1]	Input-Process-Output Extended Description, Process Number	Provides detailed information about selected items on IPO forms.
4742–R	Cycle Summary	Summarizes information for each cycle within the AIS.
4743–R	Control Card Preparation	Provides control card format and preparation instructions.
4743–1–R	Control Card Preparation (Continuation)	Continues the Control Card Preparation form.
4744–R	Run Setup-Console Operating Information	Provides data processing installation operations personnel with run-setup and console-operating information.
4745–R	Run Messages and Responses	Records program message and corresponding operator action required.
4748–R	Output Reports	Provides means of identifying printed listings and cards produced by each run.
4749–R	Reproduced Output Reports	Identifies computer-generated reports produced after a run.
4750–R	PCM Processing Instructions	Provides punched-card machine (PCM) processing information.
4751–R	Recovery Instructions	Provides restart and recovery procedures required by operations center.
4752–R	Program Revision	Provides a history of changes to a specific program after its initial program validation test.

Notes:
[1] DA Forms 4739–R, 4740–R, and 4741–R are used together.

Table 2–3
Instructions for completing DA Form 4735–R

Block number and name	Instructions
1. Date	Enter date (YYMMDD) chart was initially prepared or revised.
2. ID	Enter the appropriate system, cycle, run, or software unit identification code.
3. Title	Enter the appropriate title of the system, cycle, run, or software unit.

Table 2–4
Instructions for completing DA Form 4736–R

Block number and name	Instructions
1. Table Type	Check appropriate space indicating if the table type is open or closed.
2. Date	Enter date (YYMMDD) this form was prepared or revised.
3. ID	Enter the identification code assigned to the system and/or software unit described. (See TB 18–103.)
4. Title	Enter the title and number assigned to the decision table.
5. Seq No	Enter the identifier number for each condition/action identified in Column 6. Numbers should be in sequence, starting with "01."
6. Conditions/Actions	Use the upper part of the table as the Condition Stub Part; use the lower part as the Action Stub Part.
a. Condition Stub Part	Enter questions or statements about the problem being analyzed.
b. Action Stub Part	Enter commands or indicate actions to be taken on or with data when performing an operation.
7. Rules	Use the upper part of the table as the Condition Rule Part and the lower part as the Action Rule Part.

Table 2–5
Instructions for completing DA Form 4737–R

Block number and name	Instructions
1. Date	Enter date (YYMMDD) this file specification was prepared or revised.
2. ID	Enter the identification code assigned to the file. (See TB 18–103.)
3. Title	Enter the title assigned to the file, such as "Stock Control File."
4. File Description	Enter a brief narrative description of the file.
5. Storage Media	Enter the device ("tape," "disk pack," "drum," and the like) on which the file will be stored.
6. Record Format	Enter "fixed," "variable, " or "undefined" ; see vendor's manual for other allowable formats.
7. File Organization	Enter file organization, such as "sequential," "random," or "indexed sequential."
8. Seclas/Priv	Enter the security classification code (for example, U = unclassified, C = confidential) and the privacy considerations (Y = yes, N = no) for the file.
9. Tape Rec Mode	Enter the mode in which the data are recorded, such as "BCD" (Binary Coded Decimal) or "EBCDIC" (Extended Binary Coded Decimal Interchange Code).
10. Label Format	Indicate label conventions, such as "standard," "omitted," or "nonstandard."
11. Sequence	Enter the primary and subordinate keys used to sequence records on a file, such as "day within month" or "within year" for chronological sequence. Keys may include record positions or reference to a data dictionary.
12. Parity	(For tape only.) Enter type of parity ("odd" or "even").
13. Tape BPI/Track	Enter recording density ("800," "1600," or "6250 BPI") and number of tracks ("7" or "9").
14. Min-Max Space Req	Estimate file size showing anticipated minimum and maximum number of records. Estimate growth factor, if known.
15. Block Factor	(For tape only.) Enter number of logical records in a physical record.
16. Retention	Enter the length of time the file will be retained. Express the retention period as number of versions, cycles, or other event-based period, for example, "upon verification of final report." DPI may modify entries.
a. Upon Termination	Enter the planned retention of the last "current" file upon termination of the system or use of the file. If a precise period cannot be determined, enter: "WHEN DET NLN FOR MSN RQMTS," which is the abbreviation for "When determined no longer necessary for mission requirements."
b. Upon Update	Enter the length of time the "prior" file is to be retained, that is, the "current" file once superseded by cyclic update or other replacement.
c. Duplicate(s)	If applicable, enter the length of time to retain auxiliary transactions or duplicate files for historical, security backup, or other similar purposes. Do not include duplicate files that are prelocated as a part of the HQDA COOP.
17. Record Title	List the name for each type of record to be maintained on the specified file, for example, "Material Release Order" or "Material Receipt Confirmation." Record title must be identical to that shown on DA Form 4738–R (Record Specification).
18. Record ID	Enter the numeric code assigned by the developer to each record in the system in the same sequence as the DA Form 4738–R for ease of access.
19. % File	Enter estimate of the percentage of the overall file the record represents.

Table 2–5
Instructions for completing DA Form 4737–R—Continued

Block number and name	Instructions
20. Remarks	Enter any other pertinent information.

Table 2–6
Instructions for completing DA Form 4738–R

Block number and name	Instructions
1. Date	Enter date (YYMMDD) this form was prepared or revised.
2. ID	Enter the Record ID as recorded in Column 18 of DA Form 4737–R.
3. Title	Enter the title of the record.
4. Description	Enter a general description of the purpose of the record. Do not refer to specific files or software units.
5. Length	Enter the record length in number of characters without regard to recording mode. For variable length, describe min-max length.
6. Seclas/Priv	Enter the security classification code (for example, U = unclassified, C = confidential) and the privacy considerations (Y = yes, N = no).
7. Position	Enter the starting and ending position numbers for the field. If the field is only one position long, enter only one number.
8. Field	Consecutively number each record field.
9. Field Titles	Enter the title of the field. Include standard data elements or data use identifiers, if possible.
10. Class	Enter either A for Alphabetic, AN for Alphanumeric, N for Numeric, SP for Special Characters, or NS for Numeric Signed.
11. Length	Enter the number of characters.
12. Remarks	Enter any appropriate additional information, such as file key, sequence information, or information necessary to validate or otherwise process the field.

Table 2–7
Instructions for completing DA Form 4739–R

Block number and name	Instructions
1. Date	Enter date (YYMMDD) this form was prepared or revised.
2. Module ID	Enter the identification code assigned to the module. (See TB 18–103.)
3. Module Name	Enter the name assigned to the module.
4. Version No	Enter the latest version number of the module.
5. Analyst	Enter the name, office symbol, and telephone number of the analyst assigned to this module.
6. Programmer	Enter the name, office symbol, and telephone number of the programmer assigned to this module.
7. Input	Identify, by name and in numeric sequence, each input provided to this module.
8. Process	Identify, by name and in numeric sequence, each processing subfunction performed by this module.
9. Output	Identify, by name and in numeric sequence, each output produced by the processing subfunctions of this module.

Table 2–8
Instructions for completing DA Form 4740–R

Block number and name	Instructions
1. Date	Enter date (YYMMDD) this form was prepared or revised.
2. Module ID	Enter the identification code assigned to the module. (See TB 18–103.)
3. Module Name	Enter the name assigned to the module.
4. Version No	Enter the latest version number of the module.
5. Analyst	Enter the name, office symbol, and telephone number of the analyst assigned to the module.
6. Programmer	Enter the name, office symbol, and telephone number of the programmer assigned to the module.
7. IPO Number	Enter, in the appropriate column, each numbered Input, Process, Output (from DA Form 4739–R) that requires an extended description on DA Form 4741–R.
8. Extended Description Items	For each IPO number entered in Column 7, enter the corresponding title of the associated Input, Process, and Output as contained on DA Form 4739–R.
9. Page Ref	Enter the page numbers of DA Form 4741–R on which the extended description items identified in column 8 are described.

Table 2–9
Instructions for completing DA Form 4741–R

Block number and name	Instructions
1. Date	Enter date (YYMMDD) this form was prepared or revised.
2. Module ID	Enter identification code assigned to the module. (See TB 18–103.)
3. Module Name	Enter name assigned to the module.
4. Version No	Enter the latest version number of the module.
5. Analyst	Enter the name, office symbol, and telephone number of the analyst assigned to the module.
6. Programmer	Enter the name, office symbol, and telephone number of the programmer assigned to the module.
7. Remarks	Enter the information necessary to explain the Input, Process, or Output to be accomplished.

Table 2–10
Instructions for completing DA Forms 4743–R and 4743–1–R

Block number and name	Instructions
1. Date	Enter date (YYMMDD) this form was prepared or revised.
2. Run ID	Enter the identification code assigned to the run. (See TB 18–103.)
3. Run Title	Enter the title of the run.
4. Control Card ID	Enter the identification code assigned to the control card. (See TB 18–103.)
5. Control Card Title	Enter the title of the control card.
6. Control Card Purpose and Remarks	Define the purpose of the control card.
7. User information	If responsibility for information in this control card is assigned to the functional user, include such information as Authorized Agent, Frequency and Due Dates, and Medium for Transmittal of Functional Data.
8. Control Card Instructions	Positions 1–13 must contain Control Card ID as in 4 above.
a. Field	Enter the data name of the card field being defined.
b. Position	Enter the first and last column for the field specified in column a. All columns in the card will be recorded.
c. Preparation Instructions	Enter the information necessary to allow proper completion of the field in the control card. This entry may be a prescribed code, a list of optional entries, or a reference to a code table.
d. Responsible Agency	Enter the agency responsible for specifying the field entry.

FACTORS \ COMPLEXITY	0	1	2
1. ORIGINALITY REQUIRED	None; use prescribed query procedure	None; reprogram on different equipment	Minimum; more stringent requirements
2. PROCESSING FLEXIBILITY	No flexibility ; for one time need	Very restricted; single process	Restricted; parameterized for selection of input - output formats
3. SPAN OF OPERATIONS	Single workstation	Local or utility	Component command
4. DYNAMICS OF REQUIREMENTS	No changes	Infrequent changes	Occasional changes
5. EQUIPMENT COMPLEXITY	Single remote terminal or micro-computer for a local unique application.	Single CPU, routine processing	Single CPU, routine processing, extended peripheral system
6. PERSONNEL ASSIGNED TO DEVELOPMENT EFFORT	Total requirement is not significant enough for long term assignment. Less than 1.	1 - 2	3 - 5
7. SYSTEM DEVELOPMENT COSTS (EXCLUDING HARDWARE)	Less than $25K	$25K - 100K	$100K - 300K
8. CRITICALITY OF OPERATIONS	Non-critical	Data processing, internal operations	Mission requirements
9. RELATIVE PRIORITY FOR SOFTWARE CHANGES	No changes to any programs needed	When available, fill-in work	Lowest scheduled
10. PROCESSING REQUIREMENTS (A) CRITICALITY OF FILE UPDATES FOR BATCH SYSTEMS	Does not update any file	2 or more weeks allowed	Must be processed within 1 - 2 weeks
10. PROCESSING REQUIREMENTS (B) REQUIRED RESPONSE TIME FOR TERMINAL DRIVEN SYSTEMS	N/A	Queued for batch	Conversational mode
11. PROGRAMMING LANGUAGES	No language used by developer	Advanced software technology	High order language
12. CONCURRENT SOFTWARE DEVELOPMENT	None	Very limited	Limited
13. COMMUNICATIONS ARCHITECTURE	None; no communications requirements	Terminal to host and return	LAN point to point transfer of data; remote job entry terminal
TOTALS	x 0 = 0	x 1 =	x 2 =

Figure 2-1. Level of project complexity (extracted from DOD–STD–7935A)

3	4	5	COMPLEXITY / FACTORS
Limited; more environment, new interfaces	Considerable; apply existing state of art to environment	Extensive; requires advance in state of the art	1. ORIGINALITY REQUIRED
Limited flexibility; allows limited variety in input - output formats	Moderately flexible; processes a variety of outputs	Very flexible; to process a broad range of data matter on different equipment	2. PROCESSING FLEXIBILITY
Single command	Multi-command	Defense world-wide	3. SPAN OF OPERATIONS
Frequent changes	Very frequent changes	Continuous change	4. DYNAMICS OF REQUIREMENTS
Multi-computer, standard peripheral system	Multi-computer, advanced programming, complex peripheral system	Master control system, multi-computer, auto input - output and display equipment	5. EQUIPMENT COMPLEXITY
6 - 10	11 - 18	19 and over	6. PERSONNEL ASSIGNED TO DEVELOPMENT EFFORT
$300K - 500K	$500K - 1000K	Over $1000K	7. SYSTEM DEVELOPMENT COSTS (EXCLUDING HARDWARE)
Personnel safety	Unit survival	National defense	8. CRITICALITY OF OPERATIONS
Average placement in schedule	High priority in schedule	Highest priority	9. RELATIVE PRIORITY FOR SOFTWARE CHANGES
Must be processed within 1 - 7 days	Must be processed within 1 - 24 hours	Must be processed within 0 - 60 minutes	10. PROCESSING REQUIREMENTS: (A) CRITICALITY OF FILE UPDATES FOR BATCH SYSTEMS
Real-time	Real-time with automatic backup	Real-time with national security considerations	(B) REQUIRED RESPONSE TIME FOR TERMINAL DRIVEN SYSTEMS
Multiple high order languages	High order and assembly language	Assembly or machine language	11. PROGRAMMING LANGUAGES
Moderate	Extensive	Exhaustive	12. CONCURRENT SOFTWARE DEVELOPMENT
LAN distributive processing	Geographically distributed subscriber - type processing	Geographically distributed multi-network processing	13. COMMUNICATIONS ARCHITECTURE
x 3 =	x 4 =	x 5 =	
		Complexity Total:	

Figure 2-1. Level of project complexity (extracted from DOD–STD–7935A—Continued)

Complexity Total	Document Types										
0 - 12 [2,3]				EM [4]							
13 - 18 [3]				EM [4]	UM						
16 - 28 [3]				EM [4]	UM	OM	MM	PT	RT		
26 - 42	FD	DS [1]		EM [4]	UM	OM	MM	PT	RT	IP [1]	
39 - 54	FD	SS	DS [1]	EM [4]	UM	OM	MM	PT	RT	IP [1]	
52 - 65	FD	SS	US	DS [1]	EM [4]	UM	OM	MM	PT	RT	IP [1]

Abbreviations:

FD - Functional Description
SS - System/Subsystem Specification
US - Software Unit Specification
DS - Database Specification
EM - End User Manual
UM - Users Manual
OM - Computer Operation Manual
MM - Maintenance Manual
PT - Test Plan
RT - Test Analysis Report
IP - Implementation Procedures

1. Preparation of the DS and the IP is situationally dependent.
2. For complexity totals below 13, a documentation package of relevant automated outputs such as display menus, project correspondence, or vendor procedures should be compiled under a system document cover.
3. Additional document types may be required at lower complexities.
4. An EM may be substituted for a UM or an OM or for both in some situations.

Figure 2-2. Document types and project complexity (extracted from DOD–STD–7935A)

PART 1.

SECTION 1. GENERAL

SECTION 2. SUMMARY OF REQUIREMENTS

SECTION 3. ENVIRONMENT

PART 2. Program AAA21P

SECTION 4. DESIGN DETAILS

PART 3. Program AAA28P

SECTION 4. DESIGN DETAILS

.

.

.

PART n. Program AAA57P

SECTION 4. DESIGN DETAILS

Figure 2-3. Sample parts of an AIS manual

AIS Manual 25-(Manual Identifier)
(Date)

Automated Information System Manual

(AIS Title)
(Manual Name)
(Operating System)

This Publication is not available through the U.S. Army Publications Distribution Center. Request copies through (Command Address).

(Name of Command)

Figure 2-4. Sample AIS manual cover page

```
SECTION 1.**TITLE
%
*****The first line of section text shall be indented five spaces. Subsequent
lines shall be flush with the left margin.
%
*****If there is no information for a section, state the reason for leaving it
blank. Do not include any other paragraphs.
%
1.1**Title of Paragraph.**The paragraph text shall begin two spaces from the
period after the paragraph title.
%
*****a.**Untitled itemization shall begin two spaces from the period and
continue on the next line.
%
*****b.**Only one itemized series may be used in each numbered paragraph.
%
1.2**Title of Paragraph.**Two paragraphs at the same organizational level may
be provided.
%
1.2.1**Title of Paragraph.**Paragraphs at the same organizational level must
be logically related.
```

Figure 2-5. Formatting narrative information

```
%
*****The first line of unnumbered, unitemized paragraphs shall be indented
five spaces from the left margin; subsequent lines shall be flush with the
left margin.
%
1.2.1.1**Title of Paragraph.**No paragraph number should exceed the fourth
organizational level.
%
1.2.1.2**Title of Paragraph.**The following format shall be used for
progressive itemization:
% *****a.**Item

        b.**Item
        %
        ****(1)**Item
            %
            (2)**Item
%
1.2.2**Title of Paragraph.**All titled paragraphs and their numbers shall be
underscored as in DOD-STD-7935A unless the capability is not available.
%
*****a.**Title of Item.**Items may be titled or untitled. If an item at one
level is titled, all items at the same level within the paragraph also must be
```

Figure 2-5. Formatting narrative information—Continued

titled.

%

*****b.**Title of Item.**The text shall begin on the same line as the title. All succeeding lines shall be flush with the left margin.

%

1.3**Title of Paragraph.**NA. (When the information specified in a two-position numbered paragraph is not applicable, insert "NA" after the paragraph number and title. Subordinate paragraph numbers and titles need not be documented.)

%

*****Additional sections may not be included except as allowed in DOD-STD-7935A. Subparagraphs, however, may be added as required.

---

* An asterisk (*) indicates a single, blank, horizontal space.

% A percent sign (%) indicates a single, blank, vertical space.

Figure 2-5. Formatting narrative information—Continued

SUBJECT: CHANGE 6 - Errata Sheet

Replacement pages for STARCIPS Computer

Operation Manual AIS Manual 25-CO3-AVA-IBM-OM

1. Request the attached replacement pages be posted in the subject manual as follows:

Remove	Insert
3-315 and 3-316	3-315 and 3-316
3-317 and 3-318	3-317 and 3-318
	3-320.1 and 3-320.2
	3-326.1 and 3.326.2
3-329 through 3-330	3-329 through 3-330

2. The replacement pages contain changes required after the printing of this manual's documentation changes.

3. This Errata Sheet and Change Sheet for Change 6, 1 May 1988, will be placed in the front of the manual.

Figure 2-6. Sample change sheet

The proponent agency of this manual is (Name of Organization). Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to (Name of Organization).

FOR THE COMMANDER:

JOHN E. DOE
Colonel, GS
Chief of Staff

JOHN SMITH
Major, GS
Assistant Chief of Staff
for Information Management

DISTRIBUTION:
300-Cdr, USAISSC Software Development Ctr. (Ft. Lee)
10-Cdr, USAISSC Software Development Ctr. (PAC)
20-Cdr, USAISSC Software Development Ctr. (Atlanta)

Figure 2-6. Sample change sheet—Continued

Instructions for completing DA Form 4742–R

Block 1. Date. Enter date (YYMMDD) this form was prepared or revised.

Block 2. Cycle ID. Enter the identification code assigned to the cycle. (See TB 18–103.)

Block 3. Cycle Title. Enter the title assigned to the cycle; for example, "Daily Cycle," "As Required Cycle."

Block 4. Summary. The formatting of data in this part of the form may vary, depending on the amount of detail required to adequately describe the cycle. Prepare this form in five parts:

a. Part 1. Cycle Summary. Enter a brief narrative summary for each cycle. Also include the following tabulation:

(1) *First tab—Run ID.* List the runs in the sequence they will run.

(2) *Second tab—Run Title.* Provide the title of the run.

b. Part II. Security and Privacy. In subparagraph "a. Security," list each classified component of the cycle and its classification. If no component is classified, so state; "NA" is not an appropriate entry. In subparagraph "b. Privacy," list each component of the cycle that requires privacy safeguards and describe the privacy requirements. If no component is subject to privacy considerations, so state; "NA" is not an appropriate entry.

c. Part III. Restrictions. Describe any restrictions associated with the processing cycle. Also list all the approved waivers authorizing exemptions from the processing standards for this AIS.

d. Part IV. Interface. Complete the following tabulation:

(1) *First tab—File ID.* List those files that are received from or are input to another cycle. Sequence by file ID.

(2) *Second tab—I/O.* Record either 'I,' 'O,' or 'I/O' for the associated file.

(3) *Third tab—File Name.* Record the name of the associated file.

(4) *Fourth tab—Source/Disposition.* Record the cycle ID of either the source or the disposition of the file. For files that are I/O, show the source cycle followed by the disposition cycle. (Note: "All cycles" is a valid entry. For those file used in more than one cycle, 'library' is an acceptable entry. When the source of an input file is external to the data processing activity (DPA), record the means of receipt, that is, AUTODIN, hand-carry, and the like, DPA entry.)

e. Part V. Other Information. Enter subparagraph "a. Reports." If no reports are produced in this cycle, enter "NA." (Note: "produced" here means prepared or made ready, but not necessarily printed.) If reports are produced, prepare and complete the tabulation as shown in (1) and (2). Enter subparagraph "b. Control Cards." List by control card ID sequence each control card used in the cycle. If none, record "NA." Enter subparagraph "c. General Information." Enter any general information that is not recorded elsewhere in this AIS manual and that is necessary to process this cycle.

(1) *First tab—Report PCN and RCS.* List the PCN with the RCS (if available), to the right of the PCN. Sequence by PCN in alphanumerical sequence.

(2) *Second tab—Report Title.* Record the title of the report.

Figure 2-7. Sample of a completed DA Form 4742–R

CYCLE SUMMARY For use of this form, see AR 25-3; the proponent agency is ODISC4	1. DATE 900727
2. CYCLE ID ABCD02	3. CYCLE TITLE DAILY MASTER FILE UPDATE

4. SUMMARY

PART I CYCLE SUMMARY. THIS CYCLE APPLIES THE EDITED INPUT TAPE PRODUCED IN THE PREVIOUS CYCLE TO THE MASTER DATABASE.

RUN ID	RUN TITLE
ABCO1O	FILE UPDATE

PART II SECURITY AND PRIVACY

a. SECURITY. NO CLASSIFIED COMPONENTS b. PRIVACY. FILE UPDATE AND MASTER FILE CONTAIN INFORMATION SUBJECT TO THE PRIVACY ACT. NO UNAUTHORIZED COPIES OR PRINTOUTS MAY BE MADE.

PART III RESTRICTIONS. NO RESTRICTIONS OR WAIVERS APPLY

PART IV INTERFACE

FILE ID	I/O	FILE NAME	SOURCE	DISPOSITION
ABCBCF	I	MASTR nn	ABCD02	(nn=PREV DAY)
ABCCDG	I	UPDT nn	ABCD01	(nn=THIS DAY)
ABCFGH	O	MSTR nn	ABCD02	(nn=THIS DAY)

PART V OTHER INFORMATION

a. REPORTS N/A b. CONTROL CARDS N/A c. GENERAL INFORMATION N/A

DA FORM 4742-R, APR 83 REPLACES DA FORM 4742, NOV 78, WHICH IS OBSOLETE.

Figure 2-7. Sample of a completed DA Form 4742–R

AIS Manual 25-L01-AAA-XXX-MM

30 JUNE 1989

The proponent agency of this manual is the (name of preparing agency). Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to (address of preparing organization).

FOR THE COMMANDER:

JOHN DOE
Colonel, GS
Chief of Staff

OFFICIAL:

JOHN SMITH
Major, GS
Assistant Chief of Staff
for Information Management

Figure 2-8. Sample signature page

Instructions for completing DA Form 5973–R

Block 1. Document Identifier. Enter the document name and/or the form number or PCN.

Block 2. Document Type. Enter code for type of document; that is source document (O), basic record (1), intermediate record (2), or final output (3). Use the following information to determine document type:

a. Source Document (Type 0). Source documents are the original documents on which data enter the scope of the system for the first time. In a computer system, because of the nature of the data contained on these documents, the content may have to be converted to a computer-readable medium on a daily basis. An example would be the hand-written or typed source document (hardcopy) used for key-to-magnetic-media entry.

b. Basic Record (Type 1). A group of related facts or fields of information treated as a unit (to include hardcopy documents, listings, forms, magnetic tape, or disk files) is considered a basic record or master file. For example, an automated inventory control system that has fixed or permanent data (such as item name and stock number, quantity on hand, reorder point, and so forth) recorded on a disk or tape file.

c. Intermediate Record (Type 2). Intermediate records or files are called by a number of names: worksheets, summary sheets, intermediate files, and work files. An intermediate record is temporary in nature, and is used to transmit data from one processing step to another. Like basic records, intermediate records are internal to the system and do not exit the scope of the system.

d. Final Outputs (Type 3). Final outputs are reports that are necessary to accomplish a specific operational task or are required for decisionmaking, planning, and control purposes. Reports are not media dependent and may be hardcopy, microfiche, presentations on cathode ray tubes, or even magnetic tapes or disks. Final output documents are the end result (product) of the data processing system and, as such, should not require further machine processing. Final outputs may be used by managers and operational personnel within the organization element being studied, or they may be needed to satisfy interface requirements within the scope of the system.

e. Turnaround Documents (Type 0 and 3). Turnaround documents are produced by the system as outputs, forwarded to a user who adds a limited amount of data, and are then returned to the system as input for further processing. This is the only document that bears more than one document type code. Two separate DADS forms must be completed for a turnaround document, one as Type 0 and one as Type 3.

Block 3. No. of Pages. If the medium of the Document Type is hardcopy, enter number of pages in the document received. For all other media (tape, disk, and the like) enter "N/A."

Block 4. Document Collection Level. Enter the code that identifies the organization level at which the document was collected. A suggested method of organization coding is provided below:

Code: 00.
Meaning: Major element

Code: 00.0
Meaning: Division

Code: 00.00
Meaning: Branch

Code: 00.000
Meaning: Section

Code: 00.0000
Meaning: Unit

Code: 00.00000
Meaning: Subunit

Block 5. Frequency. Enter the frequency of the document. Entries that should be used in this block and their abbreviations are as follows:

a. For Type 0 documents, show how often the document is received.

b. For Type 1 documents, show how often file updates or maintenance occurs.

c. For Type 2 documents, show how often file or document is produced.

d. For Type 3 documents, show how often the final output is created: daily (D); weekly (W); monthly (M); quarterly (Q); semiannually (S); annually (A); as required (AR).

Block 6. Volume. Enter the volume of source documents or final outputs. There are two factors involved in defining volume—average and peak (maximum) volumes. Any possibility for file expansion should be noted. File volumes should be shown as outlined below:

a. Type 0 documents should have both average and peak number of documents received.

b. For type 1 and 2 documents, enter the number of records in the file in PK Block followed by the notation "Rec."

c. For Type 3 documents, enter both the average and peak number of final outputs produced.

Block 7. No. Copies Received. Enter the number of copies received.

Block 8. No. Copies Forwarded. Enter the number of copies of the document that are forwarded to other organizations.

Block 9. Source Organization. Enter the name of the organization or agency that actually created or submitted the document.

Block 10. Destination Organization. List all the destination organizations (addresses) of the file or document.

Block 11. Use of This Document. Explain how the document is used. Include any special handling the document requires, including security classification/privacy considerations.

Block 12. Disposition. Enter the final disposition of the document. Show if the document is placed in a suspense file prior to final disposition. Place an "X" in the appropriate box or boxes.

Block 13. How Prepared. Enter how the document is prepared (manually, mark sense, computer, and so forth).

Block 14. Media. Enter the media on which the document is created (tape, disk, CRT, and so forth).

Block 15. Total No. of Data Items. Enter the number of separate primary data items or fields appearing on the document or record. Do not confuse items with subitems, as explained in the following example.

ITEM: EMPLOYEE COMPLETE ADDRESS
Subitem: Employee Full Name
Subitem: Employee Street Number and Name
Subitem: Employee City, State, and Zip Code

In the above record, the data element " Employee Complete Address" is made up of the three subitems listed. This is an illustration of a single data item that contains three subitems, so a "1" would be entered in Block 15 if this were the only field on the document type.

Block 16. Documents Originating From This Document and Being Updated by This Document (DOF). Enter the name and/or form number of any document that is created, updated, or directly altered by this document. This section of the DADS is extremely important since the information in the DOF is beneficial for use in preparing flowcharts and matrix charts. There will be no entries in the DOF for Type 3 documents because they are final products and undergo no further machine processing. Be sure that all documents listed in the DOF are directly affected by this document.

Block 17. Sequence by. Enter the primary and subordinate fields (keys) used to sequence the file.

Block 18. Access Requirement. Enter how often the information on the document of file is retrieved or used. In many cases, both the access requirement and the frequency will be the same. On the other hand, the entries may differ, particularly in the case of basic records. Some basic records may be updated weekly (frequency) even though the information is retrieved from them on a daily basis (access requirement).

Block 19. Retention Characteristics. Enter the amount of time the file or document is being retained or reviewed for retention in the system. This is usually stated in periods of time, a number of versions, or a number of cycles, and can be either written out or abbreviated as indicated below:

Factor: Cycle
Abbr: C

Factor: Day
Factor: D

Factor: Version
Factor: V

Factor: Week
Factor: W

Factor: Review Period
Factor: R

Factor: Month
Factor: M

Factor: Year
Factor: Y

Using the abbreviations above and assuming a three-character field, a file which has a retention period of two cycles could be shown as "C01" : one which is retained 6 months could be shown as "M06," and so on.

Block 20. Backup Documents That Can Be Used to Reconstruct This Document (BD). Enter the names of all of the documents that can be used to reconstruct the document if it should be lost or destroyed. Entries will be made in this section only for Type 1, 2, or 3 documents. Because Type 0 documents originate outside the scope of the system, there are no backup documents for them within the system. The entry for Type 0 documents will always be "None" or "N/A."

Block 21. Remarks. Enter any additional information that the analyst feels will help in the analysis of the document.

Block 22. Date DADS Prepared. Self explanatory.

Block 23. *a.* NAME OF PREPARER. Enter the name *b.* OFFICE SYMBOL. Enter the Office Symbol TELEPHONE NUMBER. Enter the telephone number of the person who prepared the DA Form 5973–R.

The reverse side of DA Form 5973–R is.used to record a complete description of each data element found in the document.

Column 1. Item No. Enter the number assigned to each data element in this column. Number each data element sequentially, beginning with 1.

Column 2. Sub No. Enter the subitem number if a data element is composed of a number of logical subelements. Use the subitem entry to define each of the logical subelements of a data element.

Column 3. Description. Enter the name and/or number of the data element (field) being identified. Where possible, use the Standard Data Element name (AR 25–9 or the proposed nonstandard data element name). Reference AR 25–9 for registration procedures for nonstandard data elements. Note if the data element is classified or subject to privacy restrictions.

Column 4. No. of Char. Enter the number of characters contained in the data element named in Column 3. This entry contains columns for both the maximum and average number of characters in a data element. If the average number of characters cannot be determined, enter the maximum number of characters.

Column 5. Alpha/Numeric A/AN/N. Enter the class of data: either alphabetic (A), numeric (N), or alphanumeric (A/N). Enter "NP" for numeric fields for tape or disk files in packed format.

Column 6. No. of Dec Positions. Enter the number of decimal positions required. This number is included in the maximum number of characters listed in Column 4.

Column 7. Total Max Characters of Information. Enter the total derived by adding the maximum number of characters for each of the data items on the document.

Figure 2-9. Sample of a completed DA Form 5973–R—Continued

DOCUMENT ANALYSIS AND DATA SUMMARY

For use of this form, see AR 25-3; the proponent agency is ODISC4

1 OF 1 SHEETS

1. DOCUMENT IDENTIFIER	2. DOCUMENT TYPE	3. NO OF PAGES	4. DOCUMENT COLLECTION LEVEL
DA FORM 31	O	1	

5. FREQUENCY	6. VOLUME		7. NO COPIES RECEIVED	8. NO COPIES FORWARDED
	AVG	PK		
32	25	48	4	2

9. SOURCE ORGANIZATION	10. DESTINATION ORGANIZATION
INDIVIDUAL	COMPANY HQ

11. USE OF THIS DOCUMENT

TO REQUEST AND SHOW APPROVAL OF MILITARY LEAVE

12. DISPOSITION	FORWARDED		SUSPENDED		FILED		DESTROYED	
		X		X				

13. HOW PREPARED	14. MEDIA	15. TOTAL NO OF DATA ITEMS
MANUAL	PAPER	30

16. DOCUMENTS ORIGINATING FROM THIS DOCUMENT AND BEING UPDATED BY THIS DOCUMENT

MONTHLY SUMMARY OF LV TAKEN

MONTHLY SUMMARY OF LV PLANNED

17. SEQUENCE BY	18. ACCESS REQUIREMENT
DATE/ALPHA	DAILY

19. RETENTION CHARACTERISTICS

Y01

20. BACKUP DOCUMENTS THAT CAN BE USED TO RECONSTRUCT THIS DOCUMENT

NONE

21. REMARKS

NONE

22. DATE DADS PREPARED	23a. NAME OF PREPARER	23b. OFFICE SYMBOL	23c. TELEPHONE NO.
90 07 27	R HEGLAND	ASQB-ITS	AV-345-7095

DA FORM 5973-R, DEC 90

Figure 2-9. Sample of a completed DA Form 5973–R

24. ITEM NO	25. SUB NO	26. DESCRIPTION	27. NO OF CHAR		28. ALPHA/NUMERIC A/AN/N	29. NO OF DEC POSITION
			MAX	AVG		
1		Name (Last, First, Middle)	32	21	A/N	NA
2		SSN	9	9	N	NA
3		Pay Grade	3	2	A/N	NA
4		Date	6	6	N	NA
5		Control No.	4	4	N	NA
30 TOTAL MAX CHARACTERS OF INFORMATION						

REVERSE OF DA FORM 5973-R, DEC 90

Figure 2-9. Sample of a completed DA Form 5973–R—Continued

Instructions for completing DA Form 5974–R

(*Note:* Before preparing this form, you will need to collect and arrange in order by Type Document (0, 1, 2, 3) all the DA Forms 5973–R being analyzed using this form.)

Block 1. Major Area. Enter the system/major area being analyzed.

Block 2. Sub Area. Enter the subsystem/sub area being analyzed if the analysis does not cover the entire system.

Block 3. Organization. Enter the name of the organization responsible for the system/subsystem being analyzed.

Block 4. Input Documents. Enter the document name, identification, or title of each Type "0", "1", and "2" , document. (See block 1 of DA Form 5973–R that was prepared for each document being analyzed.)

Block 5. End Products or Outputs. Enter the document name, identification, or title of each Type "1", "2", and "3" document. (See block 1 of DA Form 5973–R that was prepared for each document being analyzed.)

Block 6. Frequency. Enter the frequency of each document. (See block 5 of DA Form 5973–R that was prepared for each document being analyzed.

Block 7. Type Document. Enter the type document for each document. (See block 2 of DA Form 5973–R that was prepared for each document being analyzed.

Block 8. Date Grid Chart Prepared. Enter the Date (YYMMDD) the DA Form 5974–R was completed.

Block 9. Name of Preparer. Enter the name of person who prepared the DA Form 5974–R.

Block 10. Office Symbol. Enter the office symbol of person who prepared the DA Form 5974–R.

Block 11. Telephone Number. Enter the telephone number of the person who prepared the DA Form 5974–R.

COMPLETION STEPS

Step 1—For each document listed in block 4 of DA Form 5974–R, refer to block 16 of DA Form 5973–R. Place a slash (/) in the intersecting square for each document listed in block 16 of DA Form 5973–R and shown across the top of the DA Form 5974–R (block 5).

Step 2—For each document listed in block 5 of the DA Form 5974–R, refer to block 20 of DA Form 5973–R. Place a backslash (\ ) in the intersecting square for each document listed in block 20 of DA Form 5973–R and shown down the left side of the DA Form 5974–R (block 4).

(*Note:* The basic record (Type 1) and intermediate file (Type 2) must be listed on both the left side (block 4) and across the top (block 5) of DA Form 5974–R. These two document types must be treated as both input and output within the system.)

Figure 2-10. Sample of a completed DA Form 5974–R

GRID CHART

For use of this form, see AR 25-3; the proponent agency is ODISC4

1 OF 1 SHEETS

1. MAJOR AREA: PERSONNEL

2. SUB AREA: LEAVE ACCOUNTING

3. ORGANIZATION: USAISSC

6. FREQUENCY →

7. TYPE DOCUMENT →

5. END PRODUCTS OR OUTPUTS (TYPE DOCUMENTS 1,2,3)

4. INPUT DOCUMENTS (TYPE DOCUMENTS 0,1,2)

			W	W										
			MO LV TAKEN	MO LV TAKEN										
32	0	DA FORM 31												

8. DATE GRID CHART PREPARED	9. NAME OF PREPARER	10. OFFICE SYMBOL	11. TELEPHONE NO
90 07 27	R. HEGLAND	ASQB-ITS	AV 345 7095

DA FORM 5974-R, DEC 90

Figure 2-10. Sample of a completed DA Form 5974–R

Instructions for completing DA Form 5997–R

Column 1a. Input.

a. Document Name. Enter the document name, identification, or title of each input document. (See block 4 of DA Form 5974–R that was prepared for the area being analyzed.)

b. Type Document. Enter the type document for each input document. (See block 7 of DA Form 5974–R that was prepared for the area being analyzed.)

c. General Flow Reference Number. Enter the page number where the document appears on the flowchart of the present system (DA Form 4735).

d. Peak Volume. Enter the peak volume for each input document. (See block 6 of DA Form 5974–R that was prepared for each document being analyzed.)

e. Frequency. Enter the frequency for each input document. (See block 6 of DA Form 5974–R that was prepared for the area being analyzed.)

Block 2. Area. Enter the AREA/SYSTEM that the Data Analysis Summary (DAS) is being used to analyze (for example, SIDPERS, JUMPS, SAILS). (See block 1 of DA Form 5974–R that was prepared for the area being analyzed.)

a. Document Name. Enter the document name, identification, or title of each input document. (See block 5 of DA Form 5974–R that was prepared for the data being analyzed.)

b. Type Document. Enter the type document for each output document. (See block 7 of DA Form 5974–R that was prepared for the data being analyzed.)

c. General Flow Reference Number. Enter the page number where the document appears on the flowchart of the present system (DA Form 4735).

d. Peak Volume. Enter the peak volume for each output document. (See block 6 of DA Form 5973–R that was prepared for each document being analyzed.)

e. Frequency. Enter the frequency for each output document. (See block 6 of DA Form 5974–R that was prepared for the area being analyzed.

Column 4. Elements of Data.

a. Data Code. Enter DATA CODE (I, Q, R, G, or C) based on the following information.

1. *Fixed Elements of Data.* These data elements are considered permanent or semipermanent in nature and usually change very little. The two types of fixed data elements described below are fairly permanent in nature and are usually well suited for retention in master files.

(a) *Identifying (I).* These elements will either name or otherwise uniquely identify a document, record, or other entry to the system.

(b) *Quantitative (Q).* These are fairly constant elements that are used in arithmetic operations (calculations) or in measuring.

2. *Variable Elements of Data.* Variable elements of data are continuously changing in nature as a result of some action or calculation and are used to convey information into the system.

(a) *Reported (R).* This type of data enters the system on TYPE "0" documents. "R" data elements are distinguished by the fact that they are data coming into the system for the first time.

(b) *Generated (G).* These elements result from arithmetic operations (calculations) or are used to indicate that some action has been taken (usually G=R*Q or G=R*C).

3. *Constant (C).* Constants are normally in the nature of administrative data items used for repetitive processing, constant items in output reports, or mathematical constants used repeatedly in processing. Constants may be stored in the computer or entered using the console typewriter or a control card.

b. Description. Enter the description for all the data items in the area being analyzed (see column 3 on the reverse side of DA Form 5973–R that was prepared for each document being analyzed).

c. No. Char. Enter the maximum number of characters contained in each data element (see column 4 on the reverse side of DA Form 5973–R that was prepared for each document being analyzed).

d. Type of Code. Enter the type of characters (alphabetic, numeric, or alphanumeric) found in the data element (see column 5 on the reverse side of DA Form 5973–R that was prepared for each document being analyzed).

e. Dec Pos. Enter the number of decimal positions contained in the numeric data elements (see column 6 on the reverse side of DA Form 5973–R that was prepared for each document being analyzed).

Column 1b. Input. The INPUT document columns and the ELEMENTS OF DATA rows intersect in column 1b. Examine the information on the reverse side of DA Form 5973–R. If an element of data is found to be in a specific DADS, enter an "X" in the box where the specific INPUT document column and ELEMENTS OF DATA row intersect.

Column 3b. Output. The OUTPUT document columns and the ELEMENTS OF DATA rows intersect in column 3b. Examine the information on the DA Form 5973–R. If an element of data is found to be in a specific DA Form 5973–R, enter an "X" in the box where the specific OUTPUT document column and ELEMENTS OF DATA row intersect.

Block 5. Date DAS Prepared. Enter the date (YYMMDD) that this DA Form 5997–R was completed.

Block 6. Name of Preparer. Enter the name of the person who prepared this DA Form 5997–R.

Block 7. Office Symbol. Enter office symbol of the person who prepared this DA Form 5997–R.

Block 8. Telephone Number. Enter telephone number of the person who prepared this DA Form 5997–R.

Figure 2-11. Sample of a completed DA Form 5997–R

DATA ANALYSIS SUMMARY

For use of this form, see AR 25-3; the proponent agency is ODISC4

_____OF_____SHEETS

1a. INPUT	2. AREA	3a. OUTPUT					
DA FORM 31	← DOCUMENT NAME For Input and Output Data →	LV TAKEN	LV PLANNED				
0	← TYPE DOCUMENT →	3	3				
7	← GENERAL FLOW REFERENCE NUMBER →	35	39				
48	← PEAK VOLUME →	48	48				
32	← FREQUENCY →	32	32				

1b. INPUT

4. ELEMENTS OF DATA

3b. OUTPUT

DATA CODE	DESCRIPTION	NO CHAR	TYPE OF CODE	DEC POS
I	NAME	32	A/N	NA
I	SSN	9	N	NA
I	PAY GRADE	3	A/N	NA
R	DATE	6	N	NA
R	CONTROL NO	4	N	NA

5. DATE DAS PREPARED	6. NAME OF PREPARER	7. OFFICE SYMBOL	8. TELEPHONE NO.
90 07 27	R HEGLAND	ASQB-ITS	AV 345-7095

DA FORM 5997-R, DEC 90

Figure 2-11. Sample of a completed DA Form 5997–R

SECTION 1. GENERAL

1.1 Purpose of the Computer Operation Manual. The following statement shall be used in this paragraph: "The objective of this Computer Operation Manual for (AIS title and acronym) with assigned system identification code of (SIC per TB 18-103) is to provide computer operations personnel with a detailed operational description of the system and the associated environment with which they will be concerned during the performance of their duties."

1.2 Project References. The following tabulation shall be used:

Document identifier	Document title	Source	Security classification	Priv.
List the identifiers of the documentation required for the target audience to operate this AIS. List in alphanumeric sequence.	Provide the title of the related document.	Provide the documentation source.	Record the security classification as one of the following: "TS" "SECRET" "CONF" "UNCLAS"	Record "YES" or "NO"

1.3 Terms and Abbreviations. The developer provides a listing or refers to a figure showing those unique terms, acronyms, and abbreviations that are applicable to the AIS and the AIS manual being documented. If there are fewer than 50 total terms, acronyms, and abbreviations, present them in subparagraphs titled "1.3.1 Terms" and "1.3.2 Abbreviations and Acronyms." If the total exceeds 50, present them in two figures, "Terms" and "Abbreviations and Acronyms," and reference them from this paragraph. The tabular presentation of abbreviations and terms is as follows:

Terms	Explanation
List terms in alphanumeric sequence.	Provide appropriate explanation of terms.

Abbreviations and Acronyms	Definition
List abbreviations and acronyms in alphanumeric sequence.	Provide appropriate word or phrase.

SECTION 2. SYSTEM OVERVIEW

2.1 System Application. This paragraph provides a narrative description of the purpose and use of the AIS for data processing activity (DPA) management. The narrative will not exceed two typewritten pages.

Figure 2-12. Implementing instructions for DOD–STD–7935A

2.2 System Organization. This paragraph refers to a figure consisting only of DA Forms 4735-R. If this system interfaces with other systems or subsystems, make the first page of this figure a chart depicting the relationships. In this chart, show each system or subsystem as a single symbol. Use subsequent logic charts to depict sets of runs or individual runs for the system being documented grouped by time cycles--that is, daily, weekly, as required, and so forth. Maintaining good flowcharting techniques, show all runs for a given cycle on the minimum number of DA Forms 4735-R. Do not combine different time cycles on a single DA Form 4735-R. Identify the time cycle depicted on each form in block 3. Depict each run with a process block symbol. Record the run identification in the process block symbol. Depict each input or output external to the AIS being documented with its source of inputs and disposition of outputs.

2.3 Software Inventory. This paragraph contains the following tabulation:

Software unit identifier	Software unit name	Security classification	Priv.
List each software unit ID in alpha-numeric sequence.	Record the software unit name.	Record the security classification as one of the following: "TS" "SECRET" "CONF" "UNCLAS"	Record "YES" or "NO"

If automated means are used to provide all or most of the above information, develop a subparagraph, titled "2.3.1 Control Input for Program Inventory," that lists the required control inputs. If necessary, another subparagraph, titled "2.3.2 Additional Information," may be developed to augment the automated information.

2.4 Information Inventory.

2.4.1 Resource Inventory. This paragraph lists all the application files and databases or data banks of the AIS that have been assigned retention in time, date, or event. Do not list those without retention requirements. Complete the following tabulation:

File ID	File name	Media	Security file size	Classification	Priv.	COOP req.
List each file ID in alphanumeric sequence.	Record the file name.	Record one of the following: "Tape" "Disk" or "Card"	Record the file size by number or percentage of devices. For card files, record the number of cards.	Record the security classification as one of the following: "TS" "SECRET" "CONF" "UNCLAS"	Record "YES" or "NO"	Record "YES" or "NO"

Figure 2-12. Implementing instructions for DOD–STD–7935A—Continued

If automated means are used to provide all or most of the above information, develop a subparagraph, titled "2.4.1.1 Control Input for Resource Inventory," that lists the required control inputs. If necessary, another subparagraph, titled "2.4.1.2 Additional Information," may be developed to augment the automated information.

2.4.2 Report Inventory. This paragraph lists all the reports the AIS produces. If the system can produce ad hoc reports on user demand, simply list "Ad hoc reports" in addition to the predefined reports.

2.5 Processing Overview. This paragraph refers to a figure consisting only of completed DA Forms 4742-R for each cycle. Sequence the forms alphanumerically by cycle ID.

2.6 Communications Overview. This paragraph refers to a chart that shows the required communications facilities.

2.7 Security. This paragraph provides general or summary information on the security and privacy considerations or references the location of detailed information. If no AIS component or data has security or privacy considerations, just write a simple sentence to that effect. Otherwise, in subparagraphs "2.7.1 Program," "2.7.2 File," and "2.7.3 Data," provide summary statements such as "The highest classification of any (software unit/file/data) is (security classification)," and similar statements concerning privacy. Paragraphs 2.7.1 and 2.7.2 should also provide references to the information called for in paragraphs "2.3 Software Inventory" and "2.4 Information Inventory," respectively.

SECTION 3. DESCRIPTION OF RUNS

3.1 Run Inventory. This paragraph uses a figure to provide a brief summary of each run's purpose followed by this tabulation:

Run ID	Software unit ID
List each run ID in alphanumeric sequence.	For each run ID, record the software unit ID used in the associated run.

3.2 Phasing. This paragraph records any preparatory processing requirements or limitations associated with the runs.

3.3 Diagnostic Procedures. This paragraph explains the general nature of the diagnostic procedures that should be used for all runs of the system. Specific diagnostic procedures for each run will be provided in paragraphs 3.n.2.2 and 3.n.8, so they should not be detailed in this paragraph.

3.4 Error Messages. This paragraph refers to a consolidated listing of all error messages the AIS may produce.

Figure 2-12. Implementing instructions for DOD–STD–7935A—Continued

3.5 Run Description (Identify). Record run ID as part of the paragraph title. Each paragraph 3.5 through 3.n will consist of only the paragraph heading, the run identifier, and reference to a figure. Begin each figure with an index that starts at the top of a right-hand page. Represent each run in a separate figure. For example, the paragraph entry for a run numbered "123" within a system identified as "AAA" is: "3.5 Run Description for AAA123. See figure 3.5-1." Construct the index as shown in figure 2-13.

Figure 2-12. Implementing instructions for DOD–STD–7935A—Continued

RUN (Identify)

INDEX for FIGURE (Figure Number)

Name	Page No.
3.5.1 Control Inputs.	Provide the beginning page number for each different type of form and listing.
3.5.1.1 Control Cards. (Record all control card information on DA Forms 4743 and 4743-1-R.)	Make no entry when the form or listing in paragraph 3.5.1.2 is not used. Do not include blank forms.
3.5.1.2 Control Input Statements. (List the control input statements necessary to either process this run or to cause them to be provided by the computer.	
3.5.2 Management Information.	

Name	Page No.
3.5.2.1 Run Setup and Process. (Provide all setup and console-operating information on DA Form 4744-R.)	
3.5.2.2 Messages and Responses. (Provide all messages and responses on DA Forms 4745-R.)	
3.5.2.3 Logic Chart. (On DA Forms 4735-R, provide a run flowchart depicting all programs (each as a single block), files, databases, and reports associated with the run.) (Refer to FIPS PUB 24 for proper symbols and their usage.)	
3.5.3 Input-Output Files. (Record "See DA Form 4739-R for I/O file information.")	

Figure 2-13. Instructions for preparing run index

Name **Page No.**

3.5.4 Output Reports.
(If reports are prepared in the run, complete DA Form 4748-R.)

3.5.5 Reproduced Output Reports.
(If a report must be reproduced, complete DA Form 4749-R.)

3.5.5.1 PCM Instructions.
(Provide all PCM instructions on DA Form 4750-R.)

3.5.6 Restart/Recovery Procedures.
(Provide all restart/recovery instructions on DA Form 4751-R.)

Figure 2-13. Instructions for preparing run index—Continued

Chapter 3
Commercial Off-the-Shelf End User Computing Systems

3–1. Introduction
This chapter describes three forms designed to document the use of commercial off-the-shelf applications for personal computers in cases where the documents identified in chapter 2 would be excessive. Use of these forms with any STAMIS is not appropriate. Documentation of a STAMIS must follow the standards described in chapter 2.

3–2. Application
DA Form 5970–R (User Procedures), DA Form 5971–R (Maintenance Procedures), and DA Form 5972–R (File Changes/Backups Procedures) provide minimal information about software and databases used in offices. Such software and databases might be used with vendor-supplied software, such as spreadsheets, with very small packages of software written in a fourth-generation language for use in a single office, and with other applications of limited distribution. Occasionally, such applications are made available to offices other than the originating office. In these cases, these forms provide office management with a minimal set of documentation to ease the transition for new personnel who are not familiar with the software or database used in that office. The forms may be locally reproduced on 8½- by 11-inch paper. Copies for reproduction are located at the back of this pamphlet.

a. Automated creation of forms. DA Forms 5970–R, 5971–R, and 5972–R may be created using automated tools as long as the headers are maintained.

b. Automated storage of forms. A file containing the information on DA Forms 5970–R, 5971–R, and 5972–R may be created on the medium used to store the software or database. The filename must then be written externally on the medium to allow a new user to access the information. Automated storage does not preclude the need for hard-copy documentation, which will provide information if the system is down or if the software is not in use when a question arises. This information may be automatically displayed when the system is first accessed.

c. Controlled information. If any information in the software or database is classified, subject to privacy restrictions, copyrighted, or otherwise requires special handling, appropriate warnings must be included in the narrative descriptions. Security markings must be noted on the documentation, following the provisions of AR 380–380.

d. Variety of media. DA Forms 5970–R, 5971–R, and 5972–R are designed to be used with software and databases that may be stored on a variety of media, including floppies and hard disks.

e. Multiple files. If the medium contains multiple files of software or databases, each separate "system" or database should have a set of forms that applies to it. One disk may, therefore, have several different forms associated with it.

f. Multiple removable disks. Some databases, particularly those stored on hard disks, may fill more than one removable disk when copied or "backed-up." When this is the case, the description (particularly in the "Backups Made" column of DA Form 5972–R) must indicate how many removable disks there are in the backup.

g. Storage of hard-copy forms. Whether all forms are kept together or are stored separately depends on the requirements of the office. In some situations DA Forms 5970–R and 5972–R can be kept in the same three-ring binder by the terminal. In other situations only DA Form 5970–R need be kept by the terminal, and DA Form 5972–R may be maintained by the person responsible for performing those functions. DA Form 5971–R is usually kept by the person responsible for maintaining the software or database.

3–3. Discussion of Individual forms
a. General. The following apply to DA Forms 5970–R, 5971–R, and 5972–R:

(1) *Point of contact (POC).* The POC is the person or office that can answer questions about using the software or database. The forms should provide the POC's full mailing address, office symbol, and phone numbers.

(2) *Information center or trouble desk.* If the software or database is available as part of a network that has an information center or "trouble desk" to call with problems, the forms should be available at the center.

(3) *Status of software or database.* Management must decide when the forms should be used to document software or a database. Usually, the forms should not be used until the software or database is "mature" and considered in a maintenance status.

b. DA Form 5970–R. This form provides a short description of the software or database, the resources needed to execute the run, and any other nonapparent information a user would need. Instructions for completing DA Form 5970–R are as follows:

(1) *Media ID:* Identify the medium on which the file resides.

(2) *Version ID:* Specify the version of the media, if any, such as "MASTER 1" or "1 JUL 90."

(3) *Run/job name:* Specify the access name of the run/job/file.

(4) *Hardware:* Specify the operational computer and any special features needed.

(5) *Software:* Specify the operating system, support software, and language used.

(6) *Reference:* Identify any supporting hard-copy reference for this run/job/file. Do not specify operating system, support software, or language manuals.

(7) *POC:* Provide the name, address (including office symbol), and phone numbers (both AUTOVON and commercial) of the point of contact.

(8) *Description:* Provide a short narrative of the software or database capabilities, such as "Contains mailing addresses of points of contact of all Army representatives to the Information Management Standards Council. Either address labels or standard distribution lists can be printed with various optional subsets described in the main menu."

(9) *Operating procedures:* Provide loading, access, and any necessary operating procedures. Samples of screens may be attached or a reference may be cited.

(10) *Restrictions/cautions/comments.* Provide any information necessary for the successful use of the system.

(11) *Data description/formats/entry instructions:* Describe the formats of the data the system accepts. Identify the date of the initial database, if applicable, and provide any special considerations about the data that may not be obvious from the screens.

c. DA Form 5971–R. This form informs future maintenance personnel about special considerations for maintaining the software. Instructions for completing DA Form 5971–R are as follows:

(1) *Media ID:* Identify the medium on which the file resides.

(2) *Version ID:* Specify the version of the media, if any, such as "MASTER 1" or "1 JUL 90."

(3) *Run/job name:* Specify the access name of the run/job/file.

(4) *Hardware:* Specify the operational computer and any special features needed.

(5) *Software:* Specify the operating system, support software, and language used.

(6) *Reference:* Identify any supporting hard-copy reference for this run/job/file. Do not specify operating system, support software, or language manuals.

(7) *POC:* Provide the name, address (including office symbol), and phone numbers (both AUTOVON and commercial) of the point of contact.

(8) *System structure/overview:* Provide a chart or narrative describing how to change the run/job/file. Shown may be major software structure segments such as edit of screens. report option generator, error code narratives, and processing code for computing report/screen. Limit these descriptions to identifying the basic functions performed by major modules or groups of modules.

(9) *Special procedures for changing software:* Describe any restrictions or special considerations for changing all or part of the software. If there are no such procedures, specify "none." Specify any language or software package used to create the software or database. Specify the location of source listing or other reference material.

(10) *Standards/conventions used:* Describe or identify the source of standards and conventions used in preparing the software, such as the requiring Army regulation or pamphlet, naming conventions, structured development standards, or screen identification standards.

d. DA Form 5972–R. This form is used to record the changes that have been applied to the medium and to indicate whether a backup was made after the last software change or data update. Whether using this form is appropriate depends on the nature of the updates made to a database. If, for example, changes are held in a file folder and applied when the responsible individual has time to do so, or if many individuals might make the changes, then the changes should be clipped together and given a local control number that is recorded on DA Form 5972–R to let other users know that those changes have been applied. Instructions for completing DA Form 5972–R are as follows:

(1) *Media ID:* Identify the medium on which the file resides.

(2) *Version ID:* Specify the version of the media, if any, such as "MASTER 1" or "1 JUL 90."

(3) *Run/job name:* Specify the access name of the run/job/file.

(4) Software change/data updates

(a) Date: Specify the date the software change or data update was applied to the file.

(b) Initials: Specify the initials of the person who applied the software change or data update to the file.

(c) Description: Briefly describe the nature of the software change or data update, such as "added CY 90 withholding tax tables," "applied address change thru this date," or "applied program mod xxx."

(5) Backups made.

(a) Date: Specify the date the backup was made

(b) Initials: Specify the initials of the person who made the backup.

(c) Description: Identify the backup, including information such as the external label and date.

Appendix A
References

Section I
Required Publications

AR 25–3
Army Life Cycle Management of Information Systems. (Cited in Summary para and para 1–1.)

AR 25–8
Army Information Standards Management Program. (Cited in summary, paras 1–1 and 1–4.)

AR 25–9
Army Data Management and Standards Program. (Cited in paras 2–8 and app D.)

AR 25–30
The Army Integrated Publishing and Printing Program. (Cited in paras 1–4 and 2–7.)

DOD–STD–7935A
DOD Automated Information Systems (AIS) Documentation Standards. (Cited in paras 1–1, 1–4, 1–5, 2–1, 2–2, 2–3, 2–5, 2–6, 2–7, 2–8, 2–9, 2–10, 2–1 1, 2–12, 2–13, 2–14, 2–15, 2–16, 2–17, 2–18, 2–21, 2–22 and summary. This manual is available from Department of the Navy, Naval Publications and Forms Center, 5801 Tabor Ave., Philadelphia, PA 19120–5099.)

DOD 5000.12–M
DOD Manual for Standard Data Elements. (Cited in para 2–12.)

FIPS PUB 24
Flowchart Symbols and Their Usage in Information Processing. (Cited in paras 2–7 and 2–15.)

TB 18–103
Software Design and Development. (Cited in paras 1–4, 2–7, and 2–14.)

TB 18–104
Testing of Computer Software Systems. (Cited in paras 2–5, 2–7 2–15, and 2–16.)

Section II
Related Publications

AR 25–1
The Army Information Management Program

AR 25–400–2
The Modern Army Recordkeeping System (MARKS)

AR 380–380
Automation Security

DODI 7935.1
DOD Automated Information Systems Documentation Standards

TB 18–100
Army Automation Life Cycle Management

TB 18–115
Army Information Processing Standards (AIPS) Program—General

Section III
Prescribed Forms
This section contains no entries.

Section IV
Referenced Forms

DA Form 4486–R
Test Condition Requirement

DA Form 4735–R
Logic Chart

DA Form 4736–R
Decision Table

DA Form 4737–R
File Specification

DA Form 4738–R
Record Specification

DA Form 4739–R
Input-Process-Output

DA Form 4740–R
Input-Process-Output Cross Reference

DA Form 4741–R
Input-Process-Output Extended Description, Process Number

DA Form 4742–R
Cycle Summary

DA Form 4743–R
Control Card Preparation

DA Form 4743–1–R
Control Card Preparation (Continuation)

DA Form 4744–R
Run Setup-Console Operating Information

DA Form 4745–R
Run Messages and Responses

DA Form 4748–R
Output Reports

DA Form 4749–R
Reproduced Output Reports

DA Form 4750–R
PCM Processing Instructions

DA Form 4751–R
Recovery Instructions

DA Form 4752–R
Program Revision

DA Form 5970–R
User Procedures

DA Form 5971–R
Maintenance Procedures

DA Form 5972–R
File Changes/Backups Procedures

DA Form 5973–R
Document Analysis and Data Summary

DA Form 5974–R
Grid Chart

DA Form 5997–R
Data Analysis Summary

Appendix B
Format for Utility Software Manual

TABLE OF CONTENTS

Section 1
GENERAL

This section shall provide information about the utilities in general and about this manual.

1.1. Purpose of the Utility Software Manual.
Describe the purpose of the UT in the following words, modified as appropriate: "This Utility Software Manual for (specify computer make and model) provides the information necessary to effectively use generally available utility software units, subroutines, MACROs, facilities, and vendor software."

1.2. Environment.
Identify the operating system environment of the utility software described in Sections 2 through 6.

1.3. Terms and Abbreviations.
List or attach any terms, definitions, or acronyms unique to this manual and subject to interpretation by its user. Do not include item names or data codes.

1.4. Contents.

1.4.1. Manual Organization.
Describe how to locate a specific piece of software within this

manual. For example, Utility Software Units are in Section 2, followed by Subroutines, MACROs, Facilities, and Vendor Software in Sections 3 through 6, respectively.

1.4.2. Utility Software Inventory.
For each utility software unit, subroutine, MACRO, and facility, provide an inventory list or graphic including name, title, tags, aliases if any, purpose, and the paragraph number in which it is documented. The inventory may be sequenced by or separated into functions, purpose of the software, name, or the like.

Section 2
UTILITY SOFTWARE UNITS
This section provides all the information necessary to use all utility software units. Document the first utility software unit in paragraph 2.1, and subsequent software units in paragraphs 2.2 through 2.n.

2.1. Utility Software Unit (Identify).
Identify the utility software unit and, as appropriate, its effective date or event, name, tag, alias, and library or procedure name.

2.1.1. Function.
Describe all functions of the software unit.

2.1.2. Security
Describe any security considerations, privacy, and proprietary restrictions associated with the software unit.

2.1.3. Environmental Requirement.
Identify the environment, such as the equipment configuration, operating system, core requirements, and peripheral equipment.

2.1.4. Input-Output Chart.
Provide or refer to an input-output chart. The chart consists of a processing symbol representing the software unit and is identified by the descriptive title and software unit name. Show the run's inputs and outputs by the input-output symbol, identification, and unique title. If appropriate, enter an information collection request number, a product control number, or other report identifier in each input-output symbol.

2.1.5. Restrictions.
Describe software unit limitations and any equipment or operating system features that may restrict the use of the software unit.

2.1.6. Data File Description.
Include characteristics such as:

a. The type of medium and recording mode.

b. The sequence, such as random, sequential, or mixed.

c. The number of characters contained in each physical record. If the record is variable length, enter the maximum length.

d. The blocking factor.

2.1.7. Parameter Format.
Describe the parameter information necessary to designate software unit options. Include parameter format (fixed or keyword) with columns or position, data type (numeric, alphabetic, and the like) and content description.

2.1.8. Control Inputs.
List the run stream or job control statements needed to initiate the run. Relate alternative control inputs to the functions described in paragraph 2.1.1.

2.1.9. Messages and Responses.
List any messages or codes, their meanings, and appropriate actions.

2.1.10. Recoverv and Restart Procedures.
Describe any recovery and restart procedures or information such as:

a. Any required rerun of a previous process.

b. Files to accomplish the restart.

c. Disposition of files created by an aborted process.

d. Checkpoint and restart data, including file identification and frequency of checkpoints.

2.2. Utility Software Unit (Identify).
Identify and describe the second utility software unit as in paragraph 2.1.

Section 3
SUBROUTINES
This section provides all the information necessary to use all subroutines. Document the first subroutine in paragraph 3.1 and any subsequent subroutines in paragraphs 3.2 through 3.n.

3.1. Subroutine (Identify)
Identify the subroutine. As appropriate, include the descriptive title, tag, entry point name(s) under which the subroutine was cataloged, and the library or procedure name.

3.1.1. Function.
Describe each subroutine function by entry point and core requirement.

3.1.2. Security.
Describe any security considerations, privacy, and proprietary restrictions associated with this subroutine.

3.1.3. Input Description.
Describe the inputs that must be supplied, such as:

a. Parameters and data to be passed to the subroutine, including sequence, contents, edit criteria, data type (numeric, alphabetic, and the like), and length.

b. Statements required in the calling software unit.

c. An example of each format.

3.1.4. Output Description.
Describe any outputs, including, as applicable, status, sequence, contents, data type, length, and an example of the format.

3.1.5. Restrictions.
Describe any subroutine limitations and equipment or operating system features that may restrict the use of the subroutine.

3.1.6. Messages and Responses.
List any messages or codes, their meanings, and appropriate actions.

3.2. Subroutine (Identify).
Identify and describe the second subroutine as in paragraph 3.1.

Section 4
MACROS
This section provides the information necessary to use all MACROs. Document the first MACRO in paragraph 4.1, and subsequent MACROs in paragraphs 4.2 through 4.n.

4.1. MACRO (Identify).
Give the MACRO name and descriptive title. If appropriate, include library or procedure name.

4.1.1. Function.
Describe the function of the MACRO.

4.1.2. Security.
Describe any security considerations and privacy and proprietary restrictions associated with this MACRO.

4.1.3. Format.
This paragraph shall contain an example of the formatted statement required to use the MACRO. The example will include the label, mnemonic, operand, or key word if the operand is a keyword type.

4.1.4. Operand Description.

This paragraph shall describe the operand, including information such as:

a. The keyword or tag of the operand.

b. The type (register, symbol, or the like).

c. The operand functions (operand is a length code for . . . register points to . . .).

d. Any restrictions (limitations, tolerances on the content, size, or the like) of the operand.

4.2. MACRO (Identify).

Identify and describe the second MACRO as in paragraph 4.1.

Section 5
FACILITIES

This section provides the information necessary to use a specified set of independent utility software units or subroutines in order to provide a capability not obtainable from any single item of software. Document the first facility in paragraph 5.1, and subsequent facilities in paragraphs 5.2 through 5.n.

5.1. Facility (Identify).

Give the descriptive title and any acronym of the facility.

5.1.1. Function.

Describe the function of the facility.

5.1.2. Security.

Describe any security considerations, privacy, and proprietary restrictions associated with this facility.

5.1.3. Operation.

Describe the components of the facility. Include a chart or refer to a figure depicting the process. Paragraphs 5.1.3.1 through 5.1.3.n will describe the processing characteristics and interrelationships among each increment of the facility.

5.2. Facility (Identify).

Identify and describe the second facility as in paragraph 5.1.

Section 6
VENDOR SOFTWARE

This section provides the information necessary to use all vendor software. Document the first description in paragraph 6.1 and any subsequent descriptions in paragraphs 6.2 through 6.n.

6.1. Vendor Software (Identify).

Give the descriptive title of the software.

6.1.1. Function.

Describe the function of the software.

6.1.2. Security.

Describe any security considerations, privacy, and proprietary restrictions associated with this vendor software.

6.1.3. Reference.

Provide a reference for the vendor software, including vendors' publication names and numbers that describe their software in more detail.

6.2. Vendor Software (Identify).

Identify and describe the second vendor software as in paragraph 6.1.

Appendix C
Format for Utility Software Maintenance Manual

TABLE OF CONTENTS

4.1.5. Listings

4.2. MACRO (Identify)

Section 5
FACILITIES

5.1. Facility (Identify)

5.1.1. Facility Description

5.1.2. Conventions

5.1.3. Verification Procedures

5.1.4. Error Conditions

5.1.5. Listings

5.2. Facility (Identify)

Section 6
VENDOR SOFTWARE

6.1. Vendor Software (Identify)

6.1.1. Vendor Software Description

6.1.2. Verification Procedures

6.1.3. Error Conditions

6.1.4. References

6.2. Vendor Software (Identify)

Section 1
GENERAL

1.1. Purpose of the Utility Software Maintenance Manual
Describe the purpose of the SM in the following words, modified as appropriate: "The objective of this Utility Software Maintenance Manual for (Project Name) is to provide the maintenance programmer personnel with the information necessary to effectively maintain utility programs, subroutines, MACROs, facilities, and vendor software."

1.2. Environment
Identify the operating system environment of the utility software described in Sections 2 through 6.

1.3. Terms and Abbreviations
List or include in an appendix any terms, definitions, or acronyms unique to this document and subject to interpretation by its user. Do not include item names or data codes.

1.4. Contents

1.4.1. Manual Organization
Describe how to locate a specific piece of software within this manual. For example, Utility Software Units are in Section 2, followed by Subroutines, MACROs, Facilities, and Vendor Software in Sections 3 through 6, respectively.

1.4.2. Utility Software Inventory
For each utility software unit, subroutine, MACRO, and facility, provide an inventory list or graphic including name, title, tags, aliases if any, purpose, and the paragraph number in which it is documented.

Section 2
UTILITY SOFTWARE UNITS

This section provides the information and procedures necessary to maintain all utility software units. Document the first utility software unit in paragraph 2.1 and any subsequent software units in paragraphs 2.2 through 2.n.

2.1. Utility Software Unit (Identify)
Identify the software unit.

2.1.1. Software Unit Description
Describe the details and characteristics of the utility software unit. Include the following:

a. Identification--utility software unit title, tag, or alias, including version number and effective date.If appropriate, include the library or procedure name.

b. Functions--describe the utility software unit functions and the method used to accomplish the functions.

c. Input--describes the input, including:

(1) Data records used.

(2) Control inputs.

d. Processing--describe the processing performed by the software unit, including:

(1) Major operations of the software unit. The description may reference chart(s) that may be included in an appendix. These show the general logical flow of operations, such as read an input, access a data record, make a decision, and print an output.

(2) Restrictions that have been designed into the operation of the utility software unit or any limitations on its use.

(3) Requirements to exit from the operation of the utility software unit.

(4) The amount, type, and broad parameters of storage required to use the utility software unit.

e. Output--describe the outputs produced by the utility software unit. This description may reference output described in the UT, but it should describe any intermediate output, working files, and the like.

f. Security considerations.

g. Interfaces--describe the interfaces to and from this utility software unit, including communications or linkage to any other software unit.

h. Tables--provide details and characteristics of any tables in the utility software unit. If the data description of the software unit provides sufficient information, reference it. Include at least the following for each table:

(1) Table tag, label, or symbolic name.

(2) Full name and purpose of the table.

(3) Other software units that use this table.

(4) Logical divisions within the table (internal table blocks or parts--not entries).

(5) Basic table structure (fixed or variable length, fixed or variable entry structure).

(6) Table layout (use a graphic presentation). Include table control information, details of the structure of each type of entry, unique or significant characteristics about the use of the table, and information about the items within the table, including their tag or label, purpose, and format.

i. Unique features--describe any unique features about the running of this utility software unit as included in the UT.

2.1.2. Conventions
Explain all unique rules, schemes, and conventions used within the utility software unit.

2.1.3. Verification Procedures
Describe the requirements and procedures necessary to check the performance of a utility software unit, including procedures for periodic verification of the software unit.

2.1.4. Error Conditions
Describe any unique error conditions not previously documented.

Include an explanation of the source of the error and recommended methods to correct it.

2.1.5. Listings
Refer to the location of the utility software unit listing. If necessary for clarity, explain the listing.

2.2. Utility Software Unit (Identify)
Identify and describe the next utility software unit as in paragraph 2.1.

Section 3
SUBROUTINES
This section provides the information and procedures necessary to maintain all subroutines used with this operating system. Document the first subroutine in paragraph 3.1 and any subsequent subroutines in paragraphs 3.2 through 3.n.

3.1. Subroutine (Identify)
Identify the subroutine.

3.1.1. Subroutine Description
Describe the details and characteristics of the subroutine and its relationship to other programs. Include the following information:

a. Identification--subroutine title, tag and/or alias, version number, and effective date. If appropriate, include the library or procedure name.

b. Functions--describe the subroutine functions and the method used to accomplish the functions.

c. Input--describes the input, including:

(1) Parameter call sequence, contents, edit criteria, data type (numeric, alphabetic, and the like) and length.

(2) Statements required in the calling program.

d. Processing--describe the processing performed by the subroutine, including:

(1) Major operations of the subroutine. The description may reference chart(s) that may be included in an appendix. These charts will show the general logical flow of operations, such as call sequence or decision, and printing the output.

(2) Restrictions that have been designed into the operation of the subroutine or any limitations on the use of the subroutine.

(3) Exit requirements to terminate the operation of the subroutine.

(4) The amount and type of storage required to use the subroutine.

e. Output--describe the outputs produced by the subroutine. This description may reference output described in the UT, but it should describe any intermediate output, working files, and the like.

f. Security considerations.

g. Interfaces--describe the interfaces to and from this subroutine, including communications or linkage to any other software unit.

h. Tables--provide details and characteristics of any tables in the subroutine. If the data description of the subroutine provides sufficient information, reference it. Include at least the following for each table:

(1) Table tag, label, or symbolic name.

(2) Full name and purpose of the table.

(3) Other software units that use the table.

(4) Logical divisions within the table (internal table blocks or parts--not entries).

(5) Basic table structure (fixed or variable length, fixed or variable entry structure).

(6) Graphic presentation of the table layout. Include table control information, details of the structure of each type of entry, unique or significant characteristics of the table, and information about the items within the table, including tag or label, purpose, and format.

(i) Unique features--describe any unique features about the running of this subroutines that are not included in the UT.

3.1.2. Conventions
Explain all unique rules, schemes, and conventions used within the subroutine.

3.1.3. Verification Procedures
Describe the requirements and procedures necessary to check the performance of a subroutine, including procedures for periodic verification of the software unit.

3.1.4. Error Conditions
Describe any unique error conditions not previously documented. Include an explanation of the source of the error and recommended methods to correct it.

3.1.5. Listings
Refer to the location of the subroutine for clarity, explain the listing.

3.2. Subroutine (Identify)
Identify and describe the second subroutine as in paragraph 3.1.

Section 4
MACROS
This section provides the information and procedures necessary to maintain all MACROs used with this operating system. Document the first MACRO in paragraph 4.1 and subsequent MACROs in paragraphs 4.2 through 4.n.

4.1. MACRO (Identify)
Identify the MACRO.

4.1.1. MACRO Description
Describe the details and characteristics of the MACRO operand and its relationship to the operating system or other MACROs. Include the following information:

a. Operand identification--keyword or tag of the operand.

b. Operand functions--describe the operand functions.

c. Operand type--register, symbol, and the like.

d. Operand restrictions--any limitations, tolerances on the content, size, and the like.

4.1.2. Conventions
Explain all unique rules, schemes, and conventions used within the program.

4.1.3. Verification Procedures
Describe the requirements and procedures necessary to check the performance of a MACRO, including procedures for periodic verification of the MACRO.

4.1.4. Error Conditions
Describe unique error conditions not previously documented. Include an explanation of the source of the error and recommended methods to correct it.

4.1.5. Listings
Refer to the location of the MACRO listing. If necessary for clarity, explain the listing.

4.2. MACRO (Identify)
Identify and describe the second MACRO as in paragraph 4.1.

Section 5
FACILITIES
This section provides the information and procedures necessary to maintain the set of independent utility software units or subroutines that provide a capability not obtainable from any single item of software. Document the first facility in paragraph 5.1 and any subsequent facilities in paragraphs 5.2 through 5.n.

5.1. Facility (Identify)
Identify the facility.

5.1.1. Facility Description
Describe the details and characteristics facility and its relationship to its utility software units or subroutines. Include the following information:

a. Functions--describe the facility functions and the methods used to accomplish the functions.

b. Operation--describe the operation performed by the facility, including:

(1) Major operations of the facility. The description may reference chart(s) that may be included in an appendix. These charts will show the general logical flow of operations.

(2) Restrictions that have been designed into the operation of the facility and any limitations on the use of the facility.

c. Security considerations.

d. Interfaces--describe the interfaces between the utility programs or subroutines, including communications or linkage to the next utility or subroutine.

e. Unique features--describe any unique features of the running of the facility.

5.1.2. Conventions
Explain all unique rules, schemes, and conventions used within the facility.

5.1.3. Verification Procedures
Describe the requirements and procedures necessary to check the performance of a facility, including procedures for periodic verification of the facility.

5.1.4. Error Conditions
Describe unique error conditions not previously documented. Include an explanation of the source of the error and recommended methods to correct it.

5.1.5. Listings
Refer to the location of the facility listing. If necessary for clarity, explain the listing.

5.2. Facility (Identify)
Identify and describe the second facility as in paragraph 5.1.

Section 6
VENDOR SOFTWARE
This section provides the information and procedures necessary to maintain and verify vendor software products. Document the first vendor software product in paragraph 6.1 and any subsequent software in paragraphs 6.2 through 6.n.

6.1. Vendor Software (Identify)
Identify the vendor software.

6.1.1. Vendor Software Description
Describes the details and characteristics of the vendor software and its relationship to the operating system. Include the following information:

a. Identification--software title, including version number.

b. Function--describe the software functions and the method used to accomplish the functions.

c. Operation--describe the operation of the vendor software, including:

(1) Major operations of the software. The description may reference chart(s) that may be included in an appendix. These charts will show the general logical flow of operations.

(2) Restrictions that have been designed into the software with respect to its operating system environment, or any limitations on the use of the software.

d. Security considerations.

6.1.2. Verification Procedures
Describe the requirements and procedures necessary to check the performance of the product, including procedures for periodic verification of the product.

6.1.3. Error Conditions
Describe any unique error conditions not previously documented. Include an explanation of the source of the error and recommended methods to correct it.

6.1.4. References
Provide a reference to the vendor software, including the names and numbers of vendor publications that describe the software in more detail.

6.2. Vendor Software (Identify)
Identify and describe the second vendor software product as in paragraph 6.1.

Appendix D
Format for System Developers Manual

TABLE OF CONTENTS

Section 1
SYSTEM DESIGN AND DEVELOPMENT

1.1. Purpose of the System Developers Manual
1.2. System Description

1.3. System Processes
1.4 Developmental Software Tools

1.5. File Specifications
1.6 Record Specifications

1.7. Output Reports
1.8 Messages and Responses

1.9. Data Elements

1.10. Waivers to Standards
SECTION 2SOFTWARE UNIT SPECIFICATION OR METHODOLOGY

2.1. Software Unit Description

2.N. Software Unit Description

Section 3.
SYSTEM TESTING AND EXTENSION

3.1. Pretest Activities and Results

3.2. System Testing and Extension

3.3. Change Packages

Section 1
SYSTEM DESIGN AND DEVELOPMENT
This section provides general information about the system for use by development and maintenance personnel.

1.1. Purpose of the System Developers Manual
Describe the purpose of the SD in the following words, modified as appropriate: "The objective of the System Developers Manual for (Project Name) (Project Number) is to provide application system development and maintenance personnel the definition and details of the system/subsystem."

1.2. System Description
Describe the system. Include at least the following:

a. Purpose. Specify the overall reason for developing the system, for example, to provide automated supply management at a Direct Supply Unit.

b. Objective. Identify the specific expectations of processing, for example, automated issue of supplies, reporting to higher headquarters.

c. Processes. Name and briefly describe each process or subsystem. (Detailed descriptions of each process will be provided in para 1.3.)

d. Interfaces. Name those external systems that provide input or receive output from this system. (Detailed descriptions of interfaces will be provided in para 1.3.)

1.3. System Processes

Describe each process, functional requirement, and how the system satisfies the requirements. Include at least the following:

a. Timing. Explain when the process is activated (daily cycle, receipt of input, report requirements, and the like).

b. Response time. Required time for entry and display of data, expected internal processing, and interface to other systems.

c. Volume of data. Expected volumes.

d. Media type and frequency. Specify type of media for both input and output (tape, disk, card, diskette, electrical transmission).

e. Security/privacy.

f. Decision tables. When used, they should contain description, instruction, and an example. Document decision tables on DA Form 4736-R.

g. External interface. Describe any transactions or files that must be received from or transferred to any other system. Include at least the following:

(1) Name of interface system.
(2) Purpose of interface.
(3) Media and communications.
(4) Scheduling requirements.
(5) Files or transactions to be transferred:
(a) File name
(b) Record ID.
(c) Type of transaction.

1.4. Developmental Software Tools

Specify by name and authority the developmental tools (Ada, database management system name, spread sheets).

1.5. File Specifications

Document each file or database on DA Form 4737-R. The forms may be in an appendix.

1.6. Record Specifications

Depict each record on DA Form 4738-R. The forms may be in an appendix.

1.7. Output Reports

Depict each standard output report on DA Form 4748-R.User-generated inquiries are not considered standard reports.

1.8. Messages and Responses

Depict messages and responses on DA Form 4745-R. The forms may be in an appendix.

1.9. Data Elements

For each unique data element, provide the information below as applicable. Reference may be made to a separately published or automated data element dictionary. Document nonstandard data elements as required by AR 25-9 and include a copy in an appropriate appendix.

a. Name and tag.
b. Synonymous name.
c. Definition.
d. Edit criteria, format, acceptable range of values.
e. Classification/sensitivity, if applicable.

1.10. Waivers to Standards

List all approved waivers to AIS/data elements/telecommunications or other standards applicable to the development of this system. Include at least the following:

a. Identification of the waived standard.

b. Software unit or procedure for which the waiver was approved.

c. Date of waiver request and date of approval.

d. Waiver approval authority. Waivers are not required for user-friendly software packages or aids. These types of packages are often referred to as "user-friendly programming languages" or "packages" and are generally used interactively. They consist of such programs as:

a. Data entry and screen formats.
b. Edit checks.
c. Database online queries, reports, extracts.
d. File manipulation (add, modify, delete data).
e. Statistical analysis.
f. Graphics generation.

Section 2
SOFTWARE UNIT SPECIFICATION OR METHODOLOGY

This section describes the software unit design in sufficient detail to permit production and maintenance of the system or subsystem.

2.1. Software Unit Description

Provide details and describe the functions of each software unit or process. Include a list of all software units or processes to be discussed, followed by a narrative description of each software unit or process and its utilities, subroutines, modules, tasks, or subtasks (in separate paragraphs). Begin with 2.1.1 and continue through 2.1.n. Include applicable security considerations for each item listed. Include at least the following items in the narrative description:

a. Identification—software unit title or tag, including the version number of the software unit.

b. Functions—describe the software unit functions and the method used to accomplish the functions.

c. Input—describe the input, including all information pertinent to maintenance:

(1) Data records the software unit uses during operation.

(2) Input data type and location(s) the software unit uses when its operation begins.

(3) Requirements for initiating the software unit.

d. Processing—describe the processing performed by the software unit in narrative or through appropriate graphics. Include the following information:

(1) Major operations. Describe the major operations of the software unit. The description may reference chart(s) that may be included in an appendix. These charts show the general logical flow of operations, such as read an input, access a data record, major decision, and print an output.

(2) Major branching conditions provided in the software unit.

(3) Restrictions that have been designed into the operation of the software unit or any limitations on its use.

(4) Exit requirements to terminate the operation of the program.

(5) Communications or linkage to the next logical software unit (operational, control).

(6) Output data type and location(s) the software unit produces for use by related processing segments of the system.

(7) Storage. Specify the amount and type of storage required and the broad parameters of the storage locations required to use the software unit.

e. Output—identify outputs created by the software unit. All outputs will be described in paragraph 1.7.

(NOTE: Keyboard entries produce almost simultaneous display of the entry on the video display terminal. These displays are not considered output but rather an integral part of the processing methodology. Output refers to reports, updated files, transactions to be transferred to another system, and the like.)

f. Interfaces—identify any external interfaces generated by the software unit.

g. Tables—provide details and characteristics of all tables used in the software unit. Include at least the following:

(1) Table identification or name.

(2) Purpose of the table.

(3) Table structure.

(4) Contents (label, type, tag).

(5) Arguments.

(6) Other software units affected by changes made by this software unit.

(7) Table handling techniques used in the software unit.

h. Item—the term "item" refers to a specific category of detailed information that is coded for direct and immediate manipulation by a software unit. Include the item label, purpose, and any other specific characteristics that identify its use in the software unit.

i. Unique run features—describe any unique features of the running of the software unit.

j. Error messages and responses—identify error messages (usually by number) created by the software unit.

Section 3
SYSTEM TESTING AND EXTENSION

This section provide general information on development testing.

3.1. Pretest Activities and Results

Briefly describe the testing that was conducted during system development. Include at least the following:

a. Testing methodology.

b. Test data description, origin, contents.

c. Conditions under which test was conducted (hardware, location, participants, scheduling, operating system, and the like).

d. Methodology of validation, correction of defects, initiation of enhancements, and the like.

3.2. System Testing and Extension

Provide general information on the steps to be taken after completion of pretest activities but before field testing and validation. Include at least the following:

a. Site locations. Provide a consolidated listing of known sites where the system will be installed. Information may be referenced or extracted from the material fielding plan. Include the following additional information, if known:

(1) Activity—the DPI or DPA within each site that will process the system.

(2) Testing schedule—time frame each activity will be extended.

b. Facilities. Provide details on the physical facilities required during the testing and extension period. Include at least the following:

(1) Classroom or workspace required.

(2) Training aids needed.

(3) Hardware required.

(4) Transportation and lodging required.

c. Milestone chart. Provide general information about the activities to be conducted at each site or activity. Include at least the following:

(1) Training. Provide a schedule of the activities for which the user will be trained on the hardware, software, operating system, utility software (if provided), change package procedures, and problem-reporting procedures.

(2) Conversion requirements. List the files the user must create to build the database to process the software application. For each file, provide the steps necessary to identify, collect, and prepare before system testing and extension (if appropriate).

d. Detailed procedures. Provide detailed, step-by-step information about the procedures required to initiate and complete the testing and extension phases. Refer to the EM or other documentation as needed. Include at least the following:

(1) Initiation procedures.

(2) Loading the operating system.

(3) Loading the application software.

(4) Establishing database or data bank.

3.3. Change Packages

Provide methodology for determining priorities and assigning responsibility for modifications required by Engineering Change Proposal-Software (ECP-S) actions. Include at least the following:

a. How ECP-S will be distributed among programmers.

b. Which ECP-S will be included in a specific change package.

c. The kind of testing that will be required.

d. How work in progress will be managed and monitored.

e. How changes will be validated.

f. How changes will be distributed to end users.

g. How systems documentation will be updated to reflect changes.

Glossary

Section I
Abbreviations

A
alphabetic

ADPE
automated data processing equipment

AIS
automated information system

AISM
Army Information Standards Management

AN
alphanumeric

ARNG
Army National Guard

ARSTAF
Army staff

AUTODIN
automatic digital network

AUTOVON
automatic voice network

BCD
binary coded decimal

BPI
binary bits per inch

C, CONF
Confidential

CONUS
continental United states

COOP
Continuity of Operations Plan

DA
Department of the Army

DADS
Document Analysis and Data Summary

DAS
Data Analysis Summary

DCSIM
Deputy Chief of Staff for Information Management

DISC4
Director of Information Systems for Command, Control, Communications, and Computers

DOD
Department of Defense

DPA
data processing activity

DPI
data processing installation

DS
Database Specification

ECP–S
Engineering Change Proposal-Software

EM
End User Manual

FD
Functional Description

FIPS PUB
Federal Information Processing Standard Publication

FM
Functional Users Manual

HQ
Headquarters

HQDA
Headquarters, Department of the Army

ID
identification

IMA
Information Mission Area

I/O
input-output

IP
Implementation Procedures

IPO
input-process-output

MACOM
major Army command

MIN–MAX
minimum–maximum

MM
Maintenance Manual

NA
not applicable

NS
numeric signed

OM
Computer Operation Manual

PCM
punched-card machine

PCN
Product Control Number

PK
peak

POC
point of contact

POS
positions

PRIV
privacy

PT
Test Plan

RCS
requirements control symbol

REC
recording

REF
reference

REQ
required

RETN
retention

REV
revision

RT
Test Analysis Report

SCH
schedule

SD
System Developers Manual

SEC
Secret

SECLAS
security classification

SEQ
sequence

SIC
system identification code

SM
Utility Software Maintenance Manual

SP
Special Characters

SS
System/Subsystem Specification

STAMIS
Standard Army Management Information System

STD
Standard

TB
technical bulletin

TS
Top Secret

U, UNCLAS
unclassified

UM
Users Manual

US
Software Unit Specification

USAISEC
U.S. Army Information Systems Engineering Command

USAISSC
U.S. Army Information Systems Software Center

UT
Utility Software Manual

Y
Yes

YYMMDD
Date Format (YY = Year, MM = Month, DD = Day)

Section II
Terms

Automated information system
A combination of information, computer, and telecommunications resources and other information technology. The term also includes the personnel who collect, record, process, store, communicate, retrieve, and display information.

Cycle
a. An interval of space or time in which one set of events or phenomena is completed.
b. Any set of operations that is repeated regularly in the same sequence. The operations may be subject to variations on each repetition.

Job
A unit of work that is defined by a user and that is to be accomplished by a computer. Loosely, the term "job" is sometimes used to refer to a representation of a job. This representation may include a set of computer programs, files, and control statements to the operating system.

Preprogrammed query
See standard query.

Response time
The elapsed time between the end of an inquiry or demand on a computer system and the beginning of the response, for example, the length of time between an indication of the end of an inquiry and the display of the first character of the response at the user terminal.

Run
a. A performance of one or more jobs.
b. A performance of one of more programs.

Software unit
A program, package, module, or any other convenient grouping of code that may be discussed or documented as a unit.

Standard query
An inquiry preprogrammed into the computer that the user can call up through a menu or by keying in the procedure name. Values may be entered to obtain the desired response. This definition also applies to the term "preprogrammed query."

Section III
Special Abbreviations and Terms
This section contains no entries.

Index

This index is organized alphabetically by topic and by subtopic within a topic. Topics and subtopics are identified by paragraph number.

LOGIC CHART For use of this form, see AR 25-3; the proponent agency is ODISC4	1. DATE
2. ID	3. TITLE

DECISION TABLE

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. TABLE TYPE ☐ OPEN ☐ CLOSED

2. DATE

3. ID

4. TITLE

5. SEQ NO.	6. CONDITIONS/ACTIONS	7 RULES														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

DA FORM 4736-R, APR 83

REPLACES DA FORM 4736, NOV 78, WHICH IS OBSOLETE.

FILE SPECIFICATION

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. DATE	

2. ID	3. TITLE

4. FILE DESCRIPTION

5. STORAGE MEDIA	6. RECORD FORMAT	7. FILE ORGANIZATION	8. SECLAS/PRIV
9. TAPE REC MODE	10. LABEL FORMAT	11. SEQUENCE	12. PARITY
13. TAPE BPI/TRACK	14. MIN-MAX SPACE REQ		15. BLOCK FACTOR

16. RETENTION

a. UPON TERMINATION	b. UPON UPDATE	c. DUPLICATE(S)

17. RECORD TITLE	18. RECORD ID	19. % FILE

20. REMARKS

RECORD SPECIFICATION

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. DATE	
2. ID	3. TITLE
4. DESCRIPTION	5. LENGTH
	6. SECLAS/PRIV

7. POSITION	8. FIELD	8. FIELD TITLES	10. CLASS	11. LENGTH	12. REMARKS

INPUT - PROCESS - OUTPUT

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. DATE		
2. MODULE ID	3. MODULE NAME	4. VERSION NO.
5. ANALYST	6. PROGRAMMER	

7. INPUT	9. PROCESS	9. OUTPUT

INPUT - PROCESS - OUTPUT CROSS REFERENCE

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. DATE		
2. MODULE ID	3. MODULE NAME	4. VERSION NO.
5. ANALYST	6. PROGRAMMER	

7. IPO NUMBER			8.	9.
a. INPUT	b. PROCESS	c. OUTPUT	EXTENDED DESCRIPTION ITEMS	PAGE REF

DA FORM 4740-R, APR 83

REPLACES DA FORM 4740, NOV 78, WHICH IS OBSOLETE.

INPUT - PROCESS - OUTPUT EXTENDED DESCRIPTION, PROCESS NUMBER

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. DATE		
2. MODULE ID	3. MODULE NAME	4. VERSION NO.
5. ANALYST	6. PROGRAMMER	
7. REMARKS		

CYCLE SUMMARY

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. DATE	
2. CYCLE ID	3. CYCLE TITLE

4. SUMMARY

CONTROL CARD PREPARATION

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. DATE	
2. RUN ID	3. RUN TITLE
4. CONTROL CARD ID	5. CONTROL CARD TITLE

6. CONTROL CARD PURPOSE AND REMARKS

7. USER INFORMATION, IF REQUIRED

8. CONTROL CARD INSTRUCTIONS

FIELD *a.*	POSITION *b.*	PREPARATION INSTRUCTIONS *c.*	RESPONSIBLE AGENCY *d.*

CONTROL CARD PREPARATION *(CONTINUATION)*

For use of this form, see AR 25-3; the proponent agency is ODISC4

1 DATE

2. RUN ID

3. CONTROL CARD ID *(see Block 4, DA Form 4743)*

4. CONTROL CARD INSTRUCTIONS (see Block 8, DA Form 4743)

FIELD *a.*	POSITION *b.*	PREPARATION INSTRUCTIONS *c.*	RESPONSIBLE AGENCY *d.*

RUN SETUP-CONSOLE OPERATING INFORMATION

For use of this form, see AR 25-3; the prononent agency is ODISC4

1. DATE			
2. RUN ID	3. RUN TITLE	4. SECLAS/PRIV	5 PERIPHERAL EQUIPMENT
6. CORE REQ	7. POINT OF CONTACT	8. RUN AS OF	9. RUN DATE
10. CONT CARD ID	11. DATE/TIME SCH IN	12. DATE/TIME SCH OUT	
13. SYSTEM	14. RUN NO.	15. EST TIME	16. LANGUAGE

TAPE DRIVES _____

DISK DRIVES _____

CARD READER _____

CARD PUNCH _____

PRINTER _____

OTHER _____ _____

17. ID CODE	18. FIELD ID	19. VOLUME NO.	20 I/O	21. MEDIA	22. UNIT	23 RETN	24. SECLAS/ PRIV	25. SOURCE	26. DISPOSITION	27 OPERATOR NOTES

28. REMARKS

RUN MESSAGES AND RESPONSES

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. DATE	
2. RUN ID	3. RUN TITLE

4. MESSAGE DISPLAYED	5. ACTION REQUIRED

4. REMARKS

OUTPUT REPORTS

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. RUN ID	2. DATE

3. FILE ID	4. MEDIA	5. PCN/RCS	6. SECLAS/PRIV	7. PRINTER					8. VOLUME	9. REPORT TITLE	10. DISPOSITION
				PAPER *a.*	NO. OF CYS *b.*	TAPE *c.*	PRINT POS *d.*	LINE UP *e.*			

11. REMARKS

REPRODUCED OUTPUT REPORTS

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. RUN ID	2. DATE

3. PCN/RCS	4. SECLAS/PRIV	5. OUTPUT SIZE	6. MEDIA	7. NO. OF CYS	8. INSTRUCTIONS FOR REPORT PRODUCTION	9. DISPOSITION

10. REMARKS

PCM PROCESSING INSTRUCTIONS

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. DATE		
2. RUN ID	3. RUN TITLE	4. PCN/RCS
5. SOURCE	6. DISPOSITION	7. SECLAS/PRIV

8. STEP	9. MACHINE	10. PROCEDURE

RECOVERY INSTRUCTIONS

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. DATE	
2. RUN ID	3. RUN TITLE
4. ID CODE	5. RECOVERY INSTRUCTIONS

6. REMARKS

PROGRAM REVISION

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. DATE	
2. PROGRAM ID	3. PROGRAM NAME
4. REV NO./DATE	5. DESCRIPTION OF REVISION

USER PROCEDURES

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. MEDIA ID	2. VERSION ID
3. RUN/JOB NAME	4. POINT OF CONTACT
5. HARDWARE	
6a. SOFTWARE:	
b.	
7. REFERENCE	8. PHONE AUTOVON: COMMERCIAL: ( )

9. DESCRIPTION

10. OPERATING PROCEDURES

11. RESTRICTIONS/CAUTIONS/COMMENTS

12. DATA DESCRIPTION/FORMATS/ENTRY INSTRUCTIONS

MAINTENANCE PROCEDURES

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. MEDIA ID	2. VERSION ID
3. RUN/JOB NAME	4. POINT OF CONTACT
5. HARDWARE	
6a. SOFTWARE.	
b.	
7. REFERENCE	8 PHONE AUTOVON: COMMERCIAL: ( )

9. SYSTEM STRUCTURE/OVERVIEW

10. SPECIAL PROCEDURES FOR CHANGING SOFTWARE

11. STANDARDS/CONVENTIONS:

FILE CHANGES/BACKUPS PROCEDURES

For use of this form, see AR 25-3; the proponent agency is ODISC4

1. MEDIA ID	2. VERSION ID

3. RUN/JOB NAME

SOFTWARE CHANGES/DATA UPDATES			BACKUPS MADE		
DATE	INITIALS	DESCRIPTION	DATE	INITIALS	DESCRIPTION

DOCUMENT ANALYSIS AND DATA SUMMARY

For use of this form, see AR 25-3; the proponent agency is ODISC4

_____OF_____SHEETS

1. DOCUMENT IDENTIFIER	2. DOCUMENT TYPE		3. NO OF PAGES	4. DOCUMENT COLLECTION LEVEL
5. FREQUENCY	6. VOLUME		7. NO COPIES RECEIVED	8. NO COPIES FORWARDED
	AVG	PK		
9. SOURCE ORGANIZATION			10. DESTINATION ORGANIZATION	

11. USE OF THIS DOCUMENT

12. DISPOSITION	FORWARDED		SUSPENDED		FILED		DESTROYED	

13. HOW PREPARED	14. MEDIA	15. TOTAL NO OF DATA ITEMS

16. DOCUMENTS ORIGINATING FROM THIS DOCUMENT AND BEING UPDATED BY THIS DOCUMENT

17. SEQUENCE BY	18. ACCESS REQUIREMENT

19. RETENTION CHARACTERISTICS

20. BACKUP DOCUMENTS THAT CAN BE USED TO RECONSTRUCT THIS DOCUMENT

21. REMARKS

22. DATE DADS PREPARED	23a. NAME OF PREPARER	23b. OFFICE SYMBOL	23c. TELEPHONE NO.

DA FORM 5973-R, DEC 90

24. ITEM NO	25. SUB NO	26. DESCRIPTION	27. NO OF CHAR		28. ALPHA/NUMERIC A/AN/N	29. NO OF DEC POSITION
			MAX	AVG		
30. TOTAL MAX CHARACTERS OF INFORMATION						

GRID CHART

For use of this form, see AR 25-3, the proponent agency is ODISC4

_____OF_____SHEETS

1. MAJOR AREA

2. SUB AREA

3. ORGANIZATION

6. FREQUENCY →

7. TYPE DOCUMENT →

5. END PRODUCTS OR OUTPUTS
(TYPE DOCUMENTS 1.2.3)

4. INPUT DOCUMENTS
(TYPE DOCUMENTS 0.1.2)

8. DATE GRID CHART PREPARED	9. NAME OF PREPARER	10 OFFICE SYMBOL	11. TELEPHONE NO

DA FORM 5974-R, DEC 90

DATA ANALYSIS SUMMARY

For use of this form, see AR 25-3; the proponent agency is ODISC4

_____OF_____SHEETS

1a. **INPUT**

2. AREA

3a. **OUTPUT**

DOCUMENT NAME
For Input and Output Data

TYPE DOCUMENT

GENERAL FLOW REFERENCE NUMBER

PEAK VOLUME

FREQUENCY

1b. **INPUT**

4 **ELEMENTS OF DATA**

DATA CODE	DESCRIPTION	NO CHAR	TYPE OF CODE	DEC POS

3b. **OUTPUT**

5. DATE DAS PREPARED	6. NAME OF PREPARER	7. OFFICE SYMBOL	8. TELEPHONE NO.

DA FORM 5997-R, DEC 90

USAPA

ELECTRONIC PUBLISHING SYSTEM
TEXT FORMATTER ... Version 2.63

PIN: 047944–000
DATE: 07-20-99
TIME: 10:59:44
PAGES SET: 104

DATA FILE: p25.fil
DOCUMENT: DA PAM 25–4
DOC STATUS: NEW PUBLICATION