SYSTEM DELIVERABLE DOCUMENTATION

CONTENTS PAGE

1. GENERAL

1.01 The purpose of this Bell System Practice is to:

(a) Define the various types of system deliverable documentation that are required to support the operation, use, and maintenance of an Information System,

(b) Define the additional system deliverable documentation that is required to support planning, installation, and technical support for Information Systems,

(c) Define the users of each of these deliverable documents in terms of previously defined Functional Roles (see Section 007-200-310, Functional Roles in A Systems Environment),

(d) Identify the Developmental Documentation components used as information resources to produce each of the deliverable documents (see Section 007-227-310, Developmental Documentation Specifications).

1.02 This standard replaces Comptroller's Letter M-452, Introduction to Documentation—System Maintenance and Processing Documentation. Whenever this section is reissued, the reason for reissue will be given in this paragraph.

1.03 This is a Bell System standard applicable to Centrally Developed Systems (CDSs) and any entity responsible for developing CDSs. It is issued by the AT&T AVP Information Systems. This standard is recommended for developers of local information systems. See paragraph 2, Scope of Application, for more specifics.

1.04 System deliverable documentation is defined as those documents which must be delivered to personnel involved with system planning and installation, operations and maintenance, and technical support.

1.05 All deliverable documents covered by this standard should carry a NOTICE restrictive marking (see Guidelines and Procedures for Safeguarding Proprietary Information distributed under GL77-01-152).

2. SCOPE OF APPLICATION

2.01 This standard applies to centrally developed systems (CDSs) which are either deployed (ie, installed and operated at the associated company) or nondeployed (ie, installed and operated at a central location and accessed by the associated companies). The developers of CDSs such as AT&T (including Long Lines), Bell Laboratories, Western Electric, OTCs, or vendors under contract will adhere to this standard.

It is recommended that organizations in any Bell System company, developing information systems for local use, follow this standard.

2.02 There are differences in the deliverable documentation requirements associated with the following categories of system development and operation: (1) a system centrally developed and deployed and operated in the OTC (central/deployed); (2) a system centrally developed, operated at a central location and accessed by the OTCs (central/nondeployed); and (3) a system developed by an OTC for its own use (local). This practice defines the full range of system deliverable documentation and specifies the documentation requirements and options appropriate to each of these three development/operation categories.

2.03 The documentation needs for information systems based on various types of computers (ie, micro, mini, mainframe) are covered by this BSP.

2.04 The System Documentation requirements, outlined in Section 007-203-100, Rules for Centrally Developed Systems, General Information, will be satisfied by the deliverable documentation described in this standard.

2.05 The deliverable documents described in this Section are applicable to the initial release of an information system (new systems) and all subsequent releases (new version or generic). All deliverable documentation produced for the initial release must be updated and maintained as required for each subsequent release of the system.

2.06 The AT&T Segment/Department Project Manager, in consultation with the system developing organization and the release agent, determines the organizations responsible for producing each deliverable document and how to package the deliverables. The Project Manager's responsibility is defined further in Section 007-208-310, Project Management, and paragraph 3.04 of this standard.

3. DELIVERABLE DOCUMENTATION AND DOCUMENT USERS

3.01 Deliverable documentation is required in order to provide the necessary information to people performing in specific functional roles related to planning and installation, operations and maintenance, and support of an information system.

3.02 A list of 21 possible deliverable documents is presented in Figure 1. Shown for each document are the functional roles, as described in Section 007-200-310, for whom the information contained in each document would be targeted. However, other functional roles may have a need, at some point in time, to reference any of the documents.

> ***Note:*** The installation team is comprised of personnel representing a variety of functional roles. It is not defined in the referenced Section as a unique entity.

DELIVERABLE DOCUMENTS	DOCUMENT USER'S FUNCTIONAL ROLES
1. System Requirements Overview	Application Planning EDP Planning Project Management System Management Data Systems Management
2. Development Letter (DL)	Application Planning EDP Planning
3. System Description	Any functional role
4. System Index	Project Management Installation Team System Management Application Specialist PSS/CSS Maintenance
5. Installation Planning Guide	Project Management Installation Team
6. Performance Test Requirements	Installation Team
7. System Release Description	Project Management System Management Data Systems Management Computer Center Technical Support
8. System Administration Guide	System Management
9. System Operations Guide	Data Systems Management Position Supervision Computer Center Supervision Position Operation Computer Center Operations
10. User Guide	System User
11. System Maintenance Guide	CSS Maintenance PSS Maintenance Application Specialist Computer Center Technical Support Network (Data Communications) Control
12. Program Listing	Application Specialist CSS Maintenance Computer Center Technical Support

Fig. 1—Deliverable Documents (Sheet 1 of 2)

DELIVERABLE DOCUMENTS	DOCUMENT USER'S FUNCTIONAL ROLES
13. Program Map	Application Specialist CSS Maintenance Computer Center Technical Support
14. Work Module Instruction (May be a subset of System Administration, System Operations, User, or System Maintenance Guides)	Any related functional roles
15. Data Base Administration Guide	Data Base Administration Operational Data Base Administration
16. System Controls and Examination Guide	System Management Data Systems Management Audit
17. Training Administration Guide	Training Administration
18. Instructor Guide	Course Instruction
19. Student Guide	Student
20. Forms/Display Catalog	Installation Team Position Supervision PSS Maintenance Course Instruction
21. Performance Aids Catalog	Installation Team Position Supervision PSS Maintenance Course Instruction

Fig. 1—Deliverable Documents (Sheet 2 of 2)

3.03 The deliverable documentation is subdivided into three basic uses, as shown in Figure 2: (1) Planning and Installation; (2) System Operations and Maintenance; and (3) Support. Figure 2 also shows the three development categories and which of the deliverables are required (X) and optional (O) for each category. For centrally developed systems, if an approval document is determined to be needed, then it will be provided in accordance with this standard. For the centrally developed/nondeployed category, the figure also shows whether recipients of a document are at the OTC or where the system is being centrally operated or both. Explanatory information about various documents within each development category is included as notes on Figure 2.

3.04 Several of these deliverable documents are not required for locally developed systems since the information is contained in the local developmental documentation (O). However, companies may find it advantageous to provide the nonrequired documents for local systems so that the documentation scheme is consistent for all systems, centrally or locally developed.

DELIVERABLE DOCUMENTS	DEVELOPMENT CATEGORIES			
	CENTRAL/ DEPLOYED	CENTRAL/ NON DEPLOYED		LOCAL
		OTC	CENTRAL OPERATIONS	
PLANNING AND INSTALLATION				
1. System Requirements Overview	X	X	—	O
2. Development Letter (DL)	X	X	X	O
3. System Description	X	X	X	X
4. System Index	X	X	X	X
5. Installation Planning Guide	X	—	X	O
6. Performance Test Requirements	X	—	X	O
7. System Release Description	X	—	X	X
SYSTEM OPERATIONS AND MAINTENANCE				
8. System Administration Guide	X	—	O	X
9. System Operations Guide	X	—	X	X
10. User Guide	X	X	—	X
11. System Maintenance Guide	X	—	X	X
12. Program Listing	O	—	O	O
13. Program Map	O	—	O	O
14. Work Module Instruction	O	O	O	O
SUPPORT				
15. Data Base Administration Guide	X	—	X	X
16. System Controls & Examination Guide	X	—	X	X
17. Training Administration Guide	X	X	X	X
18. Instructor Guide	X	X	X	X
19. Student Guide	X	X	X	X
20. Forms/Display Catalog	O	O	—	O
21. Performance Aids Catalog	O	O	—	O

X = Required
O = Optional
— = Not required

Note 1. CENTRAL/DEPLOYED

12 and 13. Program Listing and Program Map—These two documents are not normally provided except upon request and authorization by appropriate level signature. (See Section 007-203-110).

14. Work Module Instruction—Only provided if work modules have been designed. (See also paragraph 3.05).

Fig. 2—Deliverable Documents—Three Basic Uses (Sheet 1 of 2)

17, 18, and 19. Training Administration Guide, Instructor Guide, and Student Guide—Depending upon the specific funding arrangements for a system, these three documents may or may not be produced by the central developer. If they are not produced by the central developer, then a training specification will be produced by the central developer and delivered to the organization assigned the training development responsibility.

20 and 21. Forms/Display Catalog and Performance Aids Catalog—These two catalogs are shown as optional deliverables. However, several factors must be considered in determining whether or not a catalog should be delivered:

- Number of forms or displays which must be controlled and maintained.
- The need for local production of forms or hard copy of dislays with local company logo.
- Number of performance aids which must be controlled and maintained.
- The need for local production or manufacturing of performance aids for multiple copies or the need to include company specific information.

Note 2. CENTRAL/NONDEPLOYED

8. System Administration Guide—Production of this guide is dependent on the size and complexity of the system and therefore the identification of specific system administration requirements.

12 and 13. Program Listing and Program Map—Same notation applies as for CENTRAL/DEPLOYED.

14. Work Module Instruction—Same notation applies as for CENTRAL/DEPLOYED.

17, 18, and 19. Training Administration Guide, Instructor Guide, and Student Guide—Same notation applies as for CENTRAL/DEPLOYED.

20, and 21. Forms/Display Catalog and Performance Aids Catalog—Same notation applies as for CENTRAL/DEPLOYED.

Note 3. LOCAL

The documents shown with an "O" (excluding #14) would not need to be produced for a locally developed system as the corresponding developmental documentation should be available. If the developmental documentation is not in a form usable by the functional roles for whom they are targeted, then production of the deliverable documents is recommended.

14. Work Module Instruction—Same notation applies as for CENTRAL/DEPLOYED.

Fig. 2—Deliverable Documents—Three Basic Uses (Sheet 2 of 2)

3.05 The size of a system, usually based on the type of computer such as a microcomputer or minicomputer versus a large scale general purpose computer (maxicomputer), will usually have an impact on how the deliverable documentation is packaged. This packaging situation is primarily related to the documents to support operations and maintenance.

3.06 Depending upon the number of people required to operate and maintain a system, and whether or not work modules (positions) have been designed, there are options to packaging the documents. For example, it may be appropriate, if it is a small system, to combine the System Operations Guide and the Maintenance Guide into one document. This is assuming that one person would probably be performing the work activities related to both of these guides. If this type of packaging is done, the names of both deliverable documents must be reflected in the title of the final document, for example, "System Operations/Maintenance Guide."

3.07 Another packaging situation relates to the design and documentation of work modules. This situation frequently occurs with larger systems when the number and complexity of work activities related to operations and maintenance requires that a large set of work activities be broken down into subsets of work called work modules. When any modules are designed for system administration, system operations, system maintenance, or user, then Work Module Instructions will be delivered. In this type of packaging situation the title of the delivered document will reflect the name of the primary area of operations/maintenance, that it is a work module instruction, and the name of the work module, eg, "System Operations—Work Module Instruction—Service Order Coding."

3.08 There may also be a need to have a separate document for computer operations. When this need arises, the title of the delivered document should be "System Operations/Computer Operations Guide."

3.09 Documentation may be delivered by means other than an 8-1/2 by 11 inch hard copy, eg, tapes, disks, mircoform, and electronic transmission. Additionally, it may be imbedded as part of the system software and available on-line or through a file access. The content requirements are flexible enough to accommodate the various means of delivery. The actual size of hard copy delivered documents, primarily those related to operations and maintenance, may be other than 8-1/2 by 11 inches depending on the work station design where a document will be used.

3.10 Each of the 21 deliverable documents is fully described in Part 4 of this Section. The paragraph number, eg, 4.01, corresponds with the number of the document as shown in Figures 1 and 2, ie, 4.01 System Requirements Overview. Each document description is in the following format:

GENERAL—Presents an overview of the document, it's contents, and purpose.

ORGANIZATION AND CONTENT—Specifies the information to be contained in the deliverable document and the organization or sequence of that information.

DELIVERED—Identifies the time frame within the development process when the document should initially be available,for a new system, for delivery to the document users. Also it specifies whether the document must be delivered with subsequent system releases or only as required by changes in the release. Documents may be revised at any time. The numbering scheme for documents will identify the issue and related release.

DOCUMENT USER—Identifies the Functional Roles for whom the document is targeted.

PREREQUISITE DEVELOPMENTAL COMPONENTS—Identifies the Developmental Documentation components, specified in Section 007-227-310, which will provide the basic input to the preparation of the deliverable document.

4. DELIVERABLE DOCUMENTATION DESCRIPTIONS

PART 4—INDEX OF DOCUMENTATION DESCRIPTIONS

4.01 SYSTEM REQUIREMENTS OVERVIEW

GENERAL

The System Requirements Overview document provides the basic requirements information at the end of the Definition Phase. This will address initial system requirements for a new system or major enhancements to an existing system. This includes information on system objectives, environment, and expected performance capabilities. This document is controlled through a formal change procedure to ensure coordination, agreement, and control of all requirements changes during the life cycle of the system.

ORGANIZATION AND CONTENT

The System Requirements Overview contains the information described in the following paragraphs and in the sequence shown. In addition, the content can include other information judged to be useful to the document users. ***This information should be at a level of detail to satisfy the needs of the primary document users for planning and approval.*** It is not intended to be the detailed system requirements to be passed to the system designers.

General Description

This part provides an overview of the proposed system based on the system's functional structure, major capabilities, and the intended usage based on its relationship to other systems and/or centers as described in the various operations plans such as the Total Network Operations Plan (TNOP), Business Segment Operations Plan (BSOP), etc. This will include a diagram showing the flow of data among major system functions and interfaces with centers and other systems. A general description of the system's outputs, inputs, and data will be provided in support of the diagram.

The business objectives supported or achieved by the system and the specific system objectives, with performance specifications, are fully described.

A brief statement of the problems/opportunities which led to the definition of the proposed system should be included in the General Description.

General System Environment

Provides a description of the system's developmental and operational environments in terms of constraints, assumptions, and potential problem areas. The constraints, within which the system must be developed, operated, and maintained, are described. This includes factors such as internal or external policies, hardware/software availability, operational or cost restrictions, developmental schedules and resources, and interfaces with other systems.

Identify those assumptions which have not been verified or which have not been included as constraints. Also described are any potential problem areas, both within the proposed system and beyond the system boundaries, which could significantly contribute to product or performance degradation.

Core System Requirements

This part presents the requirements for system input, data handling functions, data, and outputs. Each input is described in terms of: name/identifier; description of the use and purpose; source and quality; volume and frequency; volatility of the information; list of the data group/elements contained in the input; media or mode of transmission, if known.

The data handling functions are graphically represented, eg, data flow diagram, flowchart, hierarchical diagram. Each function/subfunction on the diagram is described to include: name/identifier; conditions under which it is performed; formulas, algorithms, etc, to be performed; data to be processed; any constraints or restrictions on the function or its performance.

The system data requirements are stated in terms of information sets with the following characteristics defined: name/identifier; functions which process the data; performance requirements, eg, accuracy, completeness, and security; volatility and retention; relationship with other system data; requirements of other systems on the data; data groups/elements contained in the information set.

The data group/elements are defined in terms of: name/identifier; data elements contained in a group; synonyms, acronyms, abbreviations and codes; logical relationships with other groups/elements; attributes and attribute values, etc; inputs and outputs in which the group/element is contained; functions which interact with the group/element.

The system outputs are each described in terms of: name/identifier, description of the use and purpose;

identification of destination and prime user; functions outside the system which will use the output; volume and frequency; volatility of information; performance criteria, eg, accuracy, timeliness, security, etc; list of group/elements contained in the output; media or mode of transmission, if known.

General System Requirements

General requirements, such as system controls and reliability will be defined in this part. For each major area of processing, identify: critical performance criteria; process control requirements; administrative control requirements; other requirements, if any, to ensure system integrity and effectiveness.

Reliability requirements are defined for each major area of processing and will include: identification of potential areas of system failure, estimated probability of the failure occurring, and estimated operational and economic impact of the failure; requirements for fallback and recovery.

Conversion Considerations

This part presents information about conversion needs which must be considered during design. The source and condition of data which must be converted before system operation can begin are identified. Also, general conversion considerations such as conversion strategies, conversion subsystem, and "dummy" data base for training/testing/audit are described.

System Glossary

This information will be the last part of the document. It contains definitions of all words, expressions, abbreviations, and acronyms that apply to the system. The order of appearance is alpha and then numeric in accordance with the first character.

DELIVERED

End of Definition Phase (Also maintained throughout life cycle of system)

DOCUMENT USERS

- Application Planning
- EDP Planning
- Project Approval
- User Approval
- Project Management
- System Mangement
- Data Systems Management.

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

2.02 — Problem/Opportunity Statement

2.04 — General Assumptions and Constraints

2.05 — System Objectives

2.09 — System Model

2.10 — Business Objectives

3.01 — System Constraints

3.02 — System Output Requirements

3.03 — System Input Requirements

3.04 — System Data Requirements

3.05 — Group/Element Definition

3.06 — Data Conversion Considerations

3.07 — Function Structure

3.08 — Function Description

3.09 — Potential Problem Areas

3.10 — System Control Requirements

3.11 — System Reliability Requirements

3.12 — System Overview—Definition.

4.02 DEVELOPMENT LETTER (DL)

GENERAL

The Development Letter (DL) announces the impending availability of a new system or enhancements to an existing system. It provides advance information such as: system features, architecture, capacity planning data, availability, cost/benefits, and installation/conversion considerations. This information can be used by OTCs to assess the system's economic and operational feasibility and to make decisions regarding acquisition. Furthermore, the DL can provide announcements of: development status; estimated completion date; disposition of development expense; priorities of project development; reasons for changes in the original system or design requirements; estimated availability date. The DL can be used at any time during the life cycle of a system as a communications vehicle. However, it must be delivered, at a minimum, at the end of Detailed Design with the information as described below.

ORGANIZATION AND CONTENT

The Development Letter contains the information specified in the following paragraphs and in the sequences shown. Additional information, judged to be useful to the document users, may also be included.

Introduction

This part contains a brief description of the content, purpose, scope, and organization of the development letter.

Technical Information

(a) ***Synopsis***—A brief overview sufficient to convey the concept of the system or the enhancements. It should identify the relationship of the system to Operations Plans, eg, Total Network Operations Plan (TNOP), Business Segment Operations Plan (BSOP).

(b) ***Description***—A description of the new system or the enhancement. This description is in terms of system functions, personnel, performance specifications, and how the system or enhancement is to be used. It can include:

(1) A description of the differences between general types of existing systems (manual or mechanized) and the new system or enhancement.

(2) A description of optional features and/or any system alternatives.

(3) Technical support planning information for hardware/software, especially in regards to capacity planning and sizing, and hardware configuration planning. (See Section 007-180-301, Computer Capacity Planning Methodology). Where Standard Operating Environments (SOE) apply, only the applicable item(s) below are specified:

- Model number, main memory size, operating system release level, etc
- Hardware options
- Data Base Management Systems
- Utilities required.

Information is included to determine estimated hardware sizing and configurations relating to SOE and non-SOE items (eg, number of disk and tape drives, number of remote terminals and lines, recommended number of buffers and buffer size).

This information is normally given as a comparison to a standard or known operation. It will also give information on the basis for the figures (eg, number of transactions, number of storage devices per number of records).

(4) Software, ie, type and function, and its capabilities as compared to a standard or known operation. For each case, the description shall provide any formulas for making adjustments to the sizing or capabilities based on local environments. Additionally, any cycle variations in terms of resource requirements (eg, daily, monthly, low versus peak usage) are included.

(5) A schedule of availability, including proposed start and end of trial dates and/or proposed date of general availability to post trial OTCs.

(6) A description of required interface restrictions and limitations that may depend upon other systems (manual or machine).

(7) A description of the types of personnel and a method of determining the number of personnel required for an operational system.

(8) A summary of advantages, eg, cost/benefits, maintenance, space, and personnel savings.

(9) A description of conversion, installation, maintenance, and test considerations (eg, costs, personnel, time factors) including any special hardware (eg, peripherals, test equipment, interface devices) or software (eg, vendor software).

(10) Procedures for planning and evaluating alternative geographical configurations of computer facilities upon which the system operates.

(c) ***Training***—An overview on the types of training that are required and when any of the training material or documents will be available.

Other supportive information, such as references and exhibits, may be provided as appropriate.

DELIVERED

As a minimum, no later than the end of Detail Design Phase for initial system development and each subsequent release. May also be delivered at other times during the life cycle of a system to communicate information useful to the document users at that point in time.

DOCUMENT USERS

- Application Planning,
- EDP Planning,
- Project Management.

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

4.25 — Refined Economic Analysis

5.04 — System Personnel Guidelines

5.22 — Hardware Sizing Guidelines

5.24 — Training Overview

5.26 — Equipment Specifications

5.27 — Transportation Specifications

5.28 — Communications Network Specifications

5.29 — DPC Hardware Specifications

5.30 — Software Specifications

5.31 — Facility Planning

5.37 — System Conversion Plan

5.38 — System Overview—Detail Design.

4.03 SYSTEM DESCRIPTION

GENERAL

The System Description provides a broad overview of the scope, objectives, and capabilities of a system which enables the reader to gain a general understanding of the system.

ORGANIZATION AND CONTENT

A System Description should present a broad overview of the system including high-level flow and/or block diagrams. The recommended organizational sequence and content level are described below. In addition, the content can include other information judged to be useful to the document users.

General Description

This part provides a general description of the system. Include information such as purpose and objectives (system and service), intended use, major inputs and outputs, capabilities, and features. Also provided are the manual and/or machine interfaces among functions within the system, and between the system and other systems. The role of the system as it relates to other systems and/or centers, as described in various operations plans such as Total Network Operations Plan (TNOP), Business Segment Operations Plan (BSOP), Residence Market Operations Plan (RMOP), and Public Communications Services Market Operations Plan (PCSMOP), is also specified.

Hardware Description and Related Vendor Software

This part contains a general description of the hardware configuration, which includes the computer, peripherals, control equipment, and any associated equipment, such as telemetry, responders, multiplex units, etc. The description may identify the equipment and computer hardware/software and their capabilities.

Software Description

This part contains a general description of the system's software (operating-control, utility, and application programs). The description includes identification of the program and/or load modules, and their functions and relationships to each other and to any associated data base. This part may also contain a brief description of each data base including general content, type (tape or disk), intended use, and related data security features.

Personnel Subsystem (PSS) Description

This part contains a general description of the personnel subsystem. The description should summarize the system work modules and provide a description of the types of personnel required to operate, support, and use the system.

System Glossary

This information will be the last part or section of the document. It contains definitions of all words, expressions, abbreviations, and acronyms that apply to the system. The order of appearance is alpha and then numeric in accordance with the first character.

DELIVERED

With initial system release (end of Implementation Phase) and updated, as required, for subsequent releases

DOCUMENT USER

- Any functional role

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

5.04 — System Personnel Guidelines

5.26 — Equipment Specifications

5.27 — Transportation Specifications

5.28 — Communications Network Specifications

5.29 — DPC Hardware Specifications

5.30 — Software Specifications

5.38 — System Overview—Detail Design.

4.04 SYSTEM INDEX

GENERAL

The System Index specifies all of the documentation and software associated with each system release and lists the following data about each: (1) The issue, (2) the scope or number of pages, and (3) any restrictive markings applicable. This document is designed to be used as a control tool by OTC personnel for all delivered products.

ORGANIZATION AND CONTENT

Title Page

The title page contains the following information:

- System type, name, and release
- Document title, identification number, and issue
- Bell system rating (eg, AT&TCo SPCS)
- Page number and total number of pages of the System Index.

Issue Notes

Issue Notes provide a clear concise statement of the changes made to the System Index each time it is revised. A running record of Issue Notes shall be maintained for supported System Releases appearing in the index. May include a notation concerning the time-frame during which the previous release will be supported.

System Notes

System Notes provide information which pertains to the documents and/or software related to the system. For example, various alphabetical lists of subject matter to document number may be included. The notes should be numbered sequentially.

System Documents/Software

System documents/software are listed on separate pages. Included are all system deliverable documents, applicable vendor documents required (eg, vendor program listings), and software (ie, tapes, executable load modules) applicable to each system release. Documents required by line personnel (operations, maintenance, administration, users) will be identified by a double asterisk.

System documents/software pages contain the following information.

(a) ***System Release***—Each supported release number of the system. A system release shall be assigned only when there is new or changed software.

(b) ***Identification***—Each document and software identification number.

(c) ***Issue***—Issue number of all documents and software associated with a System Release.

(d) ***Title***—Title of all documents and software.

DELIVERED

With initial system release (end of Implementation Phase) and each subsequent release

DOCUMENT USERS

- Project Management
- Installation Team
- System Management
- PSS Maintenance
- CSS Maintenance
- Application Specialist.

PREREQUISITE DEVELOPMENTAL COMPONENTS

- None

4.05 INSTALLATION PLANNING GUIDE

GENERAL

The Installation Planning Guide defines in detail all the installation and conversion activities that must be performed to install the initial system release. Additional sections will be delivered for each subsequent system release with planning information for the release. It also provides information on the suggested makeup of the installation team.

ORGANIZATION AND CONTENT

The Installation Planning guide contains the information as specified in the paragraphs below. The required information is in recommended sequence. Consideration should be given to providing sections of information oriented to Operations and Computer Center Technical Support.

General Description

This part provides a summary, sequence, and typical interval of significant installation activities such as:

- Installation team selection
- Conversion
- Hardware/software installation
- Testing (will reference the Performance Test Requirements)
- Training
- Personnel planning
- Audit.

Activities and events may be shown in tabular or chart form to indicate sequences, dependencies, and intervals. all options associated with an activity shall be covered (eg, total or phased conversion).

For each activity, the organization responsible (AT&T, BTL, OTC, WE, vendor, etc) is specified, and references to other documents that provide the details for that activity are shown. For example, the installation of software is a significant activity, however, the details concerning the setup and initialization of software are covered in the System Operations guide. For activities not covered by other documents, the detailed information is specified in the Installation Planning Guide.

Installation Team

Detailed information is provided on the numbers and types of personnel from affected OTC departments who should be represented on the installation team and the activities for which they will be responsible. When applicable, AT&T, BTL, WE, and/or vendor personnel are also included.

Conversion

(a) ***Data Conversion***—Information relative to existing manual records or mechanized data base(s) that must be converted for use with the system is provided along with the procedures to be used for conversion including translation to machine language and record purification. Any software that may be used for this purpose is also identified.

(b) ***Hardware and Facilities***—Any hardware and facilities that will be required only during conversion are described.

(c) ***Local Development Activities***—Information concerning local development and/or modification of forms, programs, manual procedures, controls, etc, is provided so that the new system or release can be accepted. Also, any legal or FCC requirements impacted are identified.

(d) ***Interface Coordination***—The applicable release levels of other software based systems that must be present and that interface with the system being installed are specified. Information such as physical connections, link protocols, etc, which are required to establish the interfaces will be included.

Hardware/Software and Facilities

The following information on the hardware/software required for the system is provided. Where standard operating environments (SOE) apply, only the applicable item(s) are specified.

- Model number, main memory size, operating system release level, etc
- Hardware options

- Data base management systems
- Utilities required.

Information is provided to assist the OTCs in determining specific installation configurations that may be required relative to SOE and non-SOE items (number of disk and tape drives, number of remote terminals and lines, recommended number of buffers and buffer size).

Information is included on any special requirements or conditions not covered by the vendor's equipment installation practices. These requirements may include additional environmental considerations, personnel safety, etc.

Requirements on the data communication network that must be available as part of the system are also provided, including terminal types, terminal options, and data set (modem) options.

Glossary

This information is optional and will be the last part or section of the document. It contains definitions of all words, expressions, abbreviations, and acronyms of a unique nature used in the document. The order of appearance will be alpha and then numeric in accordance with the first character.

DELIVERED

During Implementation Phase of initial system development and for each subsequent release as required.

DOCUMENT USER

- Installation Team. (May be comprised of various functional roles depending on the type of system).

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

5.22 — Hardware Sizing Guidelines

5.26 — Equipment Specifications

5.27 — Transportation Specifications

5.28 — Communications Network Specifications

5.29 — DPC Hardware Specifications

5.30 — Software Specifications

5.31 — Facility Planning

5.37 — System Conversion Plan

5.38 — System Overview—Detail Design.

4.06 PERFORMANCE TEST REQUIREMENTS

GENERAL

The Performance Test Requirements provides information on certification tests whose successful completion indicates that the installed system is working properly and therefore meets design objectives. This information forms one of the bases for OTC acceptance of an installed, centrally developed system.

ORGANIZATION AND CONTENT

Performance Test Requirements contains the information as specified in the following paragraphs. The required information is in recommended sequence.

General Description

This part provides an identification of the types of tests (circuit operations, CRT interface and terminal, tape reader, etc) and their sequence specified in the document. Also specified are any equipment and/or documentation required for the tests. Reference should be made to General Performance Requirements, Section 800-630-180, which covers general circuit and equipment tests.

Test Requirements

The following information is provided as applicable for each test (live or simulated) to be performed:

- Description
- Performance details
- Data to be used
- Expected results based on service objectives
- Conditions which may have caused system to fail test.

Where equipment and/or software test packages have been provided, they are identified and instructions for their use included.

Flow diagrams, tables, illustrations, etc, may be included to augment the requirements.

Reports

Information is provided on any required reports for the system (reports of test results, trouble reports, verification reports, acceptance reports, etc) and their disposition.

DELIVERED

During Implementation Phase for initial system release with updates, as required, for subsequent releases.

DOCUMENT USER

- Installation team (May be comprised of various functional roles depending on the type of system).

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

5.36 — System Certification Test Plan

6.04 — System Certification Test Instructions.

4.07 SYSTEM RELEASE DESCRIPTION

GENERAL

The System Release Description provides information on the official release of a new system or a major change release to an existing system. It provides pertinent information on features, changes, troubles corrected, and special installation procedures. All modification requests (MRs) resolved by the release will be referenced.

ORGANIZATION AND CONTENT

A System Release Description consists of a title page and succeeding page(s) containing information as specified in the paragraphs below, as applicable. In addition, it may contain other information that may be required by the various document users.

Title Page

The title page contains the following information:

- System type (operations systems) and name
- Document title, system index identification number, and system release number
- Bell System rating
- Page number and total number of pages
- Reason for release
- Transmittal data (T-Tran transmittal information), if applicable
- Release authorization signature.

Description

This part contains the following information:

- Concise description of the features provided by a new system or a new feature(s) and/or improvements to a previously released system
- Concise descriptions of trouble conditions being corrected
- An updated cross-reference table, which provides the relationship of the changes to the system as reflected in the various component systems.

Impact

Impact information is provided about the system release to show significant affects on the involved organizations and potential problems in the installation, use, and maintenance of the system. For example:

- Special installation and/or conversion procedures and schedules which are normally not covered in the Installation Planning guide and/or System Operations guide. Included are PSS activities which may be affected by the release.
- Training requirements.
- Coordination information (shared data bases, system interfaces, new hardware).
- Modification requests (MRs) not incorporated that modify existing system operations.
- Effect on service locations having different operating features and/or configurations.
- System releases that will be supported.

Supplementary Information

A list of all new, changed, and/or deleted documents/software, including a description of what was changed or deleted, and their respective identification issues, or refer to the Systems Index and its issue. Also included is a list of all MRs that have been incorporated.

DELIVERED

At end of trial or soak testing (Conversion Phase) for initial and subsequent system releases.

DOCUMENT USERS

- Project Management
- Installation Team
- System Management
- Data System Management.

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

5.38—System Overview—Detail Design (extracts from this component specific to the related system release).

4.08 SYSTEM ADMINISTRATION GUIDE

GENERAL

This document provides procedures and descriptive information to manage the system, and to assure effective use and operation of the system. References the local service agreement for specific information on system performance and service elements within the local operating environment.

ORGANIZATION AND CONTENT

A System Administration Guide contains the information specified in the paragraphs below. It may also contain other information that may be required by system administration personnel. The information is in recommended sequence.

General Description

This part includes a brief description of the procedures and techniques provided for system administration personnel to ensure effective use and operation of the system. A statement should be included which references the Administrator to the local service agreement for specific information on locally negotiated service. When work modules are designed, a description is provided that includes the name of the module, a statement of recommended minimum qualifications for performing the work, a brief narrative of tasks to be performed, and related documentation (eg, work module instruction, performance aids, available training courses).

Management and Coordination

A description of the system procedures and controls required and available to administer the system operations. Typical items to be included are:

(a) Identification of critical operations (scheduled report generation, disk to magnetic tape dumps, etc), which may be required by system users and/or operations personnel.

(b) Identification of data network interface (access procedures and administrative inputs/outputs).

(c) Contingency plan(s) to be followed by user and operations personnel as back up during inoperative conditions.

(d) Cautions that apply to installation and test of new and changed releases.

(e) System protection and security measures including assignment of user identification numbers and data security features.

(f) Plans for changing the system configuration to provide user alarm and message routing.

(g) Guidelines for resolving operator and user questions and complaints.

(h) Methods that will be employed to advise the OTCs of vendor initiated hardware changes.

Performance and Effectiveness

Identify system performance information which may be examined to recognize efficient system utilization and system degradation. Include probable causes of degradation and corrective actions that may be taken. Typical performance information may include:

(a) Input/output volume

(b) Throughput

(c) Response time or turnaround time

(d) System availability

(e) Acceptable error rates

(f) Acceptable equipment failure rates.

State quantity and quality performance expectations for each system work module.

Scheduling

Identify those systems activities that must be scheduled, the information that must be gathered to develop the required schedules, and how the schedule is developed, monitored, and controlled. Typical parameters which may be included are as follows:

(a) Required main memory for peak and low loads at different transaction volumes

(b) Frequency, sequence, and volume of inputs expected from user and outputs to user

(c) Frequency and dependency of system processes

(d) Estimated run times for each type of process, including type(s) of hardware configuration(s) used as a basis for the estimates.

Glossary

This information is optional and shall be the last part or section of the document. It shall contain definitions of all words, expressions, abbreviations, and acronyms of a unique nature used in the document. The order of appearance shall be alpha and then numeric in accordance with the first character.

DELIVERED

With initial system release (end of Implementation Phase) and updated, as required, for each subsequent release.

DOCUMENT USERS

- System Management.

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

6.07 — Administrative Requirements

6.26 — Operating Agreements.

4.09 SYSTEM OPERATIONS GUIDE

GENERAL

The System Operations Guide contains procedures and descriptive information required to keep the system fully operational, assuming the system is not in a failed state, and capable of processing and producing any required system outputs. Procedures associated with repair of the system can be found in the System Maintenance Guide, and procedures associated with the use of the system by personnel outside the system boundary can be found in the User Guide.

(1) Typical procedures and descriptive information in a system operation guide are: system hardware configuration, installation of new software releases, data base procedures (generation, updating, and correction), interpretation of error messages and alarms, exercising of backup/recovery procedures, input preparation, error correction, and output processing procedures.

(2) A System Operations guide must also include a complete list of system input and output messages.

(3) When operations information is covered by vendor documentation, only additional application specific information need be documented. In this case a reference to vendor documentation is also included.

(4) System operation information may be combined with system maintenance information to form a System Operations/Maintenance Guide.

ORGANIZATION AND CONTENT

A System Operations Guide contains the information specified in the paragraphs below, as applicable. A statement should be included which refers operations personnel to the local service agreement. In addition it may contain other information that may be required by system operations personnel. The information is in recommended sequence.

General Description

A brief description of the hardware/software and operations activities to be performed in operating the system. Any interfaces, limitations, cautions, etc, that apply are identified. When work modules are designed, a description is provided for each work module that includes the name of the module, a statement of recommended minimum qualifications for performing the work, a brief narrative of tasks to be performed, and related documentation (work module instruction, performance aids, available training courses).

Hardware/Software Operations

Details on all operations activities that pertain to keeping the system fully operational. Typical operations activities that should be covered are specified in paragraphs (a) through (e). For each activity, any hardware/software features that aid in carrying out the activity and any messages associated with the activity are included.

(a) ***Initialization***—Procedures and information necessary to ready (booting, configuring) the system for operations. Details on the following:

(1) Hardware: computer, peripherals, telemetry, multiplex units, etc

(2) Software: tapes, disks, data sets, etc

(3) Parameters: memory addresses, terminal assignments, space allocations, security codes, etc. (Details of the foregoing shall identify those parameters that are to be supplied by the OTCs.)

(4) Commands, control statements, setting of switches, etc.

(b) ***Software Installation***—Information and procedures necessary for installation of new and changed software releases.

(c) ***System Restarts/Reruns***—Information and procedures necessary to restart the system.

(d) ***Backup Data/Recovery***—Procedures for the creation and maintenance of backup data. Data retention requirements unique to the application are also identified. Procedures for recovering the system.

(e) ***Monitoring***—A description of system functions (browsing, alerting, filtering, etc) that enable the system to be operated effectively in its

application. All information that aids operations personnel to ensure that the functions are operating satisfactorily is included. Also included are procedures and information necessary to identify marginally operating computer and peripheral hardware, other equipment, and software. Details on the types of indicators (alarms, messages, lights, etc) indicating marginal or trouble conditions are also provided along with trouble reporting procedures.

Processing Operations

Details on all operations activities that pertain to processing of system data are provided. This includes only the information that is unique to a specific process. If information about a process has been included as part of hardware/software operations it should not be repeated.

For each system process, as applicable, the information in paragraphs (a) through (e) below is specified and includes any hardware/software features, utilities, and messages that will aid in carrying out the process.

(a) ***Process Description***—A brief description of the system processing including inputs, outputs, interfaces, dependencies, load modules, normal end-of-job conditions, etc.

(b) ***Setup Procedures***—The information in the four following paragraphs is required in the setup of a process.

(1) Hardware/Software Requirements—Required hardware/software used for the process. Typical requirements are as follows:

- Computer model, eg, DEC PCP 11/70, IBM 370/168
- Peripherals: disk device, card reader, line printer, etc
- Operating system, eg, OS/VS, VM/CMS
- Data set/file identification and file names
- Source of mountable data sets and procs and destination, eg, data set VS120210 derived from VS120231 and VS12345, VS120210 returned to peripheral (tape/disk) library
- Form number or code of output paper and description of paper, eg, linepaper, multiple part paper, etc
- Carriage tape information including tape number, channel, and line number punching instructions
- File organization: sequential, random, direct access.

(2) Scheduling—Information necessary to enable scheduling of processes, such as:

- Frequency: daily, weekly, etc
- Content: one or more computer runs
- Sequence and dependencies (eg, concurrent, required sequence, priorities)
- Device types and quantity
- Estimated execution time, eg, CPU minutes by base processor for a given number of messages or transactions, input files, or activity
- Estimated storage requirements
- Estimated number of print lines generated.

(3) Preprocessing Requirements—Instructions for handling all variable conditions (those conditions that change from process to process) that must be considered in setting up the control requirements in order to initiate a specific process. Typical variable conditions to be identified and described are as follows:

- Setting of control switches
- Site dependent variables: central office codes
- Device assignments, data definition statements, priorities, etc
- Preceding job dependencies: information that must be passed from preceding processes.

(4) Control Statements—All control statements (eg, job control language) necessary to initiate and execute a process, and their sequence are specified. Those statements that were prepared or modified under preprocessing requirements, and where the statements should be inserted. Also provided is an explanation for

all symbolic parameters, commands, or default values.

(c) ***Restarts/Reruns***—The following information required to restart or rerun a process is provided:

(1) Description of the conditions under which a process should be restarted or rerun

(2) Identification and description of checkpoint information: program and step, frequency of check points, etc

(3) Identification and description of control statements and parameters needed to be changed

(4) Description of procedures to be used in the restart, including "clean-up" activities.

(d) ***Output Control***—An identification of any verification checks and instructions necessary to verify the accuracy of the output, eg, volume limits, totals to be checked, posting methods, etc. Also the necessary actions to be taken if the proper or expected output is not obtained.

(e) ***Media Disposition***—All media (tapes, printouts) produced by the system, and the instructions for their disposition including any security checks for authorized recipients, restrictive markings, etc.

Data Related Procedures

Detailed information on generating, updating, and if a DBA guide is not provided, the reorganizing of system data base(s). Sources of data, data collection techniques, work sheet preparation, etc. Typical procedures may include:

- Preparation of data in machine usable form
- Correcting errors and reinputting data.

Messages

All messages should be grouped and a description included of all input and output messages (commands, informational, warning, abend) intended for operations personnel. For each input message, the format and the conditions under which the message is used. For each output message, the format, message display media (console, printer, channel, etc), and the cause and action to be taken is specified, eg, data recovery/system restart procedures.

Glossary

This information is optional and will be the last part or section of the document. It contains definitions of all words, expressions, abbreviations, and acronyms of a unique nature used in the document. The order of appearance is alpha and then numeric in accordance with the first character.

DELIVERED

With initial system release (end of Implementation Phase) and updated, as required, for subsequent releases.

DOCUMENT USERS

- Data Systems Management
- Position (Work Module) Supervision
- Computer Center Supervision
- Position (Work Module) Operations
- Computer Center Operations.

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

5.17 — Messages and codes

5.32 — System controls descriptions

6.05 — Position Procedures

6.08 — DPC Scheduling Requirements

6.09 — DPC Job Preprocessing Requirements

6.10 — DPC Job Media Distribution

6.11 — DPC Job Set-up Information

6.12 — DPC Job Restart Procedures

6.13 — DPC Job Output Control

6.14 — Job Control Language

6.15 — Recovery Procedures.

4.10 USER GUIDE

GENERAL

Procedures and descriptive information including input preparation and output/report usage, which enables a user to utilize the system effectively. System capabilities, functions, and control features for the user are included.

This document is prepared for all operations systems except when a system is part of an operation center/bureau. In this case, availability of center/bureau documentation obviates the need for a User Guide for a system. To make the necessary determination and to ensure incorporation of system level user information in center/bureau documentation, there must be close interaction between systems developers and center/bureau designers.

ORGANIZATION AND CONTENT

A User Guide contains the information specified in the paragraphs below as applicable. In addition, it may contain other information that may be required by user personnel. The information is in recommended sequence.

General Description

This part provides a brief description of system capabilities and functions as they relate to the user. It includes a summary of interfaces with the system (eg, terminals, system operations personnel) and any unique information processing procedures.

When work modules are designed, a description is provided for each work module that includes the name of the module, a statement of recommended minimum qualifications for performing the work, a brief narrative of tasks to be performed, and related documentation (work module instruction, performance aids, available training courses).

System Functions

This part contains a detailed description of each system function (filtering, browsing, sorting) available to the user, how and when it can be used, its capabilities and constraints, and precautions for the user. The description of each function should include both input and output descriptions as indicated in the following text.

Inclusion of actual or sample forms, work sheets, and masks, is used to augment the description of the function.

(a) ***Input Description***—For each user provided input, the following is provided as applicable:

(1) Title and purpose of input.

(2) Procedures for accessing the system.

(3) Format of input, which consists of the layout of data fields, including field names, their definition and codes, labels, and symbols representing the data to be supplied. Each code, label, and symbol shall be explained.

(4) Format of input messages and the condition under which messages are used.

(5) Cautions or restrictions such as those pertaining to the sequence, frequency, and volume of input to be processed.

(6) Related corrective procedures.

(b) ***Output Description***—For each output to the user, the following is provided as applicable:

(1) Title and user of output.

(2) Procedures for accessing the system and the formatting of retrieval messages.

(3) An explanation of the action required and when to generate the output (manually requested or automatically generated, scheduled or nonscheduled).

(4) Priority of output. The relative importance of all output should be fully specified.

(5) Format and content of the output, including codes and labels. Describe these in sufficient detail so that the output can be interpreted by the user.

(6) Format of output messages in sufficient detail so that the messages can be interpreted by the user. Also describe the conditions that cause the message to be generated and the action to be taken.

(7) Disposition of output.

(8) Related corrective procedures.

Glossary

This information is optional and will be the last part or section of the document. It contains definitions of all words, expressions, abbreviations, and acronyms of a unique nature used in the document. The order of appearance is alpha and then numeric in accordance with the first character.

DELIVERED

With initial system release (end of Implementation Phase) and updated, as required, for subsequent releases.

DOCUMENT USERS

- System User.

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310).

4.02 — System Output Specifications

4.03 — System Input Specifications

4.14 — PSS/CSS Interface Specifications

5.17 — Messages and codes.

4.11 SYSTEM MAINTENANCE GUIDE

GENERAL

The System Maintenance Guide provides information on maintenance strategies for the system and procedures and data for performing scheduled (preventive) and unscheduled maintenance. It will include information on performance monitoring, recovery and reconstruction, software and utilities, data base, and data network.

When maintenance information is covered by vendor documentation, only additional application specific information need be documented. In this case, a reference to vendor documentation is included.

ORGANIZATION AND CONTENT

A System Maintenance Guide contains the information as specified in the following paragraphs as applicable. In addition, it may contain other information that may be required by system maintenance personnel. The information is in recommended sequence.

General Description

A description of the maintenance strategies and the activities performed in maintaining the system. When work modules are designed, provide for each work module a statement of recommended minimum qualifications for doing the work, a brief narrative of tasks to be done, and related documentation (work module instructions, performance aids, available training courses).

System Availability

A statement of overall system availability (objective hours/day, days/week). Downtime required for scheduled maintenance (preventive maintenance, hardware modifications or replacements, growth, etc) is specified and anticipated frequency of system failures. Reference should be made to the local service agreement for additional specifics.

Information is included on all hardware and software design features (for example, duplex processor) available to provide continuous system operation in the presence of failures and maintenance activities directed at locating and clearing troubles.

Scheduled Maintenance

Information on recommended schedules and procedures for preventive maintenance.

Unscheduled Maintenance

Information on the strategies employed by the system for failure detection and how maintenance personnel will be alerted to failures. Included are the strategies (eg, how to employ available hardware and/or software features) that should be followed to offset the failure in order to continue system operations. Also included are the procedures necessary to restore the system to full service.

Information on strategies for diagnosing problems. Included are the use of diagnostic programs and the process that should be followed (for example, "Run disk diagnostic program").

Detailed procedures for verifying that repair has been made and that the equipment will function satisfactorily are also provided.

Recovery and Reconstruction

The following information is provided in text, flow diagram, or tabular form:

(a) A cross-reference of system or program failures to recovery and reconstruction procedures and where necessary, provide a brief description of those types of failures.

(b) Back-up files required to recover and reconstruct the system.

(c) A description and application of each recovery and reconstruction procedure and/or utility (which may also be used with back-up tapes/disks) and any other information such as machine commands or special code required to recover and reconstruct the system.

(d) If any of the previously mentioned procedures contain options to be taken, each option is described (restart procedures—normal and emergency).

(e) Any modifications and/or exceptions to vendor software, hardware, procedures, or documentation.

Data Base Description

When required for system maintenance, the information specified in paragraphs (a) through (c) should be provided.

(a) A description of each file, which should include but is not limited to items such as the following:

(1) Name

(2) Purpose and application

(3) Physical or logical organization and/or method of access (random or sequential)

(4) Type of storage device (disk, tape)

(5) Block size or space allocation criteria (space estimation formula for disks).

(b) A description of each record/segment, which can be in narrative, diagrammatic, or tabular form (record layout, COBOL Data Division, etc). The information should include but is not limited to items such as the following:

(1) Name

(2) Purpose and application

(3) Layout and size of record/segment and its fields containing:

- Name and description of each field including definitions of codes, qualifying information, indication of privacy and/or security status, etc
- Class of data (numerical, alphabetical, alphanumerical)
- Accessing criteria (accessible to read only, write only, or both).

(c) Cross-reference information, including the relationship of files and records/segments (files to data bases, files or records/segments to programs, etc), program module cross references, data base interrelationships, and identification of programs/transactions which access them.

Supplementary Information

Vendor documentation is identified, which should be available to maintain the system with adequate cross reference to the maintenance activities applicable to each document. Includes all drawings, manuals, diagnostic programs, etc.

Glossary

This information is optional and will be the last part or section of the document. It contains definitions of all words, expressions, abbreviations, and acronyms of a unique nature used in the document. The order of appearance is alpha and then numeric in accordance with the first character.

DELIVERED

With initial system release (end of Implementation Phase) and updated, as required, for subsequent releases.

DOCUMENT USERS

- CSS Maintenance
- Application Specialist
- PSS Maintenance
- Computer Center Technical Support
- Network (Data Communications) Control.

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

5.13 — Physical Data Base Specification

5.17 — Messages and Codes

5.34 — Performance Monitoring Capabilities

6.15 — Recovery Procedures.

4.12 PROGRAM LISTING

GENERAL

The Program Listing provides detailed sequence of coded instructions used to achieve a functional objective (analyzing digits for lines, disconnecting a talking connection, updating transaction file). It also provides descriptive information at all levels of the program structure, negating the need for a separate program level description and flowchart document.

When vendor software is used without modification, the vendor's documentation (listings) will be used for Bell System purposes. When vendor software is modified by project development, the modified software is documented in accordance with this standard.

The intent of this standard is to specify the types of information that should be included in the Program Listing and the general format of the document. However, it is recognized that specific projects may have unique requirements and/or constraints (differences in language, assemblers, and/or compilers), which may alter the content and format.

Definitions

Definitions of terms used in this document description are shown in the following text. Where more than one term is considered to have accepted usage, each is specified.

(a) Individual Code Line: An instruction written in assembly or higher-level language.

(b) Block: A group of contiguous instructions (usually no more than ten) that performs an operation.

(c) Program Unit, Subroutine, Subpident, or Section: A group of contiguous instructions (individual code line or blocks) that performs a well defined task.

(d) Assembly Unit, Module, Pident, or Subprogram: A group of instructions that is assembled or compiled as one entity and that performs a function. The unit comprises one or more program units.

(e) Program or Load Module: One or more assembly units, the collection of which performs a function. The assembly unit(s) listings are issued as a single Program Listing document.

(f) Entry Point: A point within a program unit that can receive control or be entered from another program unit.

(g) Exit Point: A point within a program unit that can relinquish control, either temporarily or permanently, to another program unit.

(h) Reentry Point: An entry point within a program unit that can receive control after a prior exit from that unit.

Format

A Program Listing is formatted as described in the following text.

(a) ***Index, Configuration List, or Cover Page:*** The first page(s) of a Program Listing will provide a list of the assembly units (load modules, pidents, etc) by symbolic name and version, issue, title, and any additional build details that are required.

Assembly units may be used in more than one program. If the function of the unit is performed in exactly the same way in each program, the assembly unit version number should remain the same (XMAP01) for each program. However, if the function is performed differently in two or more programs, a version number should be assigned to each variation (XMAP01 for the first, XMAP02 for the second, etc).

(b) ***Listings:*** Subsequent pages of the Program Listing (which consist of one or more assembly units listings) will provide the following information for each assembly unit.

- Symbolic name and version
- Issue
- Title
- Page number
- Program Listing document number (see note).

Note: The document number should not include the suffix since these assembly unit pages

may apply to more than one program listing as indicated in paragraph (a) above.

ORGANIZATION AND CONTENT

The Program Listing contains the information specified in the following paragraphs, as applicable, to adequately describe the operation of the program.

Assembly Unit

A unit program and a list of all program units that make up an assembly unit is provided. Also included is other information with suitable headings for items such as reference documents, symbol definitions, file definitions, macro definitions, etc, which may be necessary following the prologue.

(a) Assembly Unit Prologue: A general description that defines the purpose or function of the collection of code assembled or compiled as a functional entity. When more than one assembly unit comprises a program, each prologue should provide informational connectivity.

(b) A heading that identifies the information (***Assembly Unit Prologue, Module*** **Description,** or other appropriate identifier). Also provide identification of the assembly unit by symbolic name, which includes wherever possible the version (XMAP01), title (Auxiliary Mapping of Data), and a list of all program units included in the assembly unit.

Program Unit

A unit prologue is provided which includes all entry and exit points from or to other program units, and the code within the unit. The code may be segmented in blocks and/or individual lines of code.

(a) Program Unit Prologue: A detailed description that defines the purpose of the program unit. When more than one program unit comprises an assembly unit, each prologue should provide informational connectivity.

Note: The program unit prologues and the assembly unit prologue(s) should adequately describe the total function of the program and effectively become a program description.

A heading that identifies the information (***Program Unit Prologue, Subroutine*** **Description,** or other appropriate identifier) is provided. Also identification of the program unit by title (Mapping Control Routine) and optionally by symbolic name (MAPCONT) is included.

(b) Entry and Exit Points: A heading that identifies all entry and exit points (***Entry Point List, Exit Point List***) is provided immediately following the program unit prologue and includes each entry and exit point under the appropriate heading. Where applicable, each exit point should provide the reentry point back to the program unit (if SY1 is the exit point and SY9 is the reentry point, this can be typically conveyed as SY1/SY9). Regardless of the method used, consistency shall be followed throughout the project.

(c) Block: Program unit(s) may be segmented into blocks of code (contiguous instructions). Since a block of code normally performs an operation on nameable date, the operation should be described as a header comment to the lines of code.

(d) Individual Code Line: Comments at least for all key instructions, such as entry or exit points, and for instructions that are not self-explanatory to explain the action of the code within the context of the block or program unit are provided.

Supplementary Information

Supplementary information as required by the individual projects may be included. Such information should be appropriately labeled and presented in a consistent manner.

DELIVERED

Centrally developed system, only upon request and with appropriate level signature (reference Section 007-203-110 to be issued).

DOCUMENT USERS

- Application Specialist
- CSS Maintenance
- Computer Center Technical Support.

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

6.17—Module Listing.

4.13 PROGRAM MAP

GENERAL

A Program Map provides information on the assigned areas of storage and the specific memory locations into which the programs and other data, which comprise system software, are loaded.

This document is prepared to supplement the program listing or when project management determines that the operating system will not provide complete or adequate mapping information.

ORGANIZATION AND CONTENT

A Program Map contains the information as specified in the paragraphs below, as applicable. In addition, it may contain other information that may be required by OTC personnel. The information is in recommended sequence.

General Description

A brief statement of the overall structure of memory is provided, which includes the types of software (program, library, etc), work storage areas (SWAP), and storage facilities used (main memory, disk, etc).

Memory Assignments

This part identifies and provides the detailed assignments for specific programs, libraries, etc, in terms of octal, hexadecimal, etc, addresses, and/or cylinders and track locations. Included are the starting and terminating addresses for each.

The mapping information may be arranged by sequential address, by software type, etc. In any case, appropriate headings are used to identify the information.

DELIVERED

Centrally developed system, only upon request and with appropriate level signature (reference Section 007-203-110 to be issued).

DOCUMENT USERS

- Application Specialist
- CSS Maintenance
- Computer Center Technical Support.

PREREQUISITE DEVELOPMENTAL COMPONENTS

- None

4.14 WORK MODULE INSTRUCTIONS

GENERAL

This document provides performance information for a designed unit of work called a work module. Work modules are to be performed by one person and not split among two or more people. A Work Module Instruction may contain guidelines or specific step-by-step procedures, along with sample forms or other exhibits, for performing the tasks. This type document would be used for designed work modules for system administration, system operations, users, or system maintenance.

ORGANIZATION AND CONTENT

The organization and content of a Work Module Instruction is a function of personnel subsystem design. Variables such as task complexity, frequency of task execution, expected entry skill of the incumbent, and operating environment will determine which of the following three levels of detail is the most appropriate documentation choice.

(1) ***Level A***—the descriptive level—can be used to identify and describe the following:

- Capabilities and features of associated hardware/software interfaces, human/machine interfaces, etc
- Input and output messages.

This level—which does not describe the work to be done in detail—could be an appropriate choice when the incumbent is familiar with the detailed operation through experience, training, or documentation.

(2) ***Level B***—the guide level—covers the information described above and in addition, contains a narrative description of one or more of the tasks to be performed. This description can cover the relationships of the work module to other work modules, associated performance aids, tools, and training courses and supportive information such as dependencies, criticalities, alternative courses of action, decision criteria, and caution statements.

(3) ***Level C***—the procedural level—covers tasks and procedural units within tasks, in order of their expected execution sequence. This level describes the work to be done in detailed procedures and references related performance aids.

Regardless of the level selected, additional items may be added to amplify or supplement the text. These may be included in the text or attached as references (tables, figures, or sample forms).

A glossary may be optionally provided as the last part or section of the document. It shall contain definitions of all words, expressions, abbreviations, and acronyms of a unique nature used in the document. The order of appearance shall be alpha and then numeric in accordance with the first character.

DELIVERED

With initial system release and updated, as required, for subsequent releases.

DOCUMENT USERS

Any of the functional roles within operations and maintenance.

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

4.17 — Messages and Codes

6.05 — Position (Work Module) Procedures

6.06 — Support Position (Work Module) Information

6.07 — Administrative Requirements

6.08 — DPC Scheduling Requirements

6.09 — DPC Job Preprocessing Requirements

6.10 — DPC Job Media Distribution

6.11 — DPC Job Set-up Procedures

6.12 — DPC Job Restart Procedures

6.13 — DPC Job Output Control

6.14 — Job Control Language

6.15 — Recovery Procedures.

4.15 DATA BASE ADMINISTRATION GUIDE

GENERAL

A Data Base Administration Guide provides criteria and techniques that are unique to the management of the specific system data base(s).

A Data Base Administration Guide is prepared for systems that have large and complex or critical data base(s) (eg, TIRKS, LMOS, AMARC) and which may be under control of data management software (IMS, etc).

> ***Note:*** When the above criteria are not met, data base management information for a system should be covered in the System Operations Guide.

When the criteria and techniques are covered by vendor documentation, only additional application specific information need be documented. In this case, a reference to vendor documentation is also included.

ORGANIZATION AND CONTENT

A Data Base Administration Guide contains as a minimum the information as specified in the following paragraphs. The required information is in recommended sequence. Reference Section 007-300-100, Rules for Data Base Administration Interface for Deliverable Centrally Developed Systems, for additional information.

General Description

This part provides a brief overview of the data management concepts employed in the system and the criteria and techniques necessary to maintain the operational capabilities of the data base(s).

It may also include the purpose, scope, use of the document, and a list of references cited within the document or considered useful to the subject.

Performance Monitoring

Criteria for monitoring the performance of the data base management system and for data base reorganization (when reorganization is required). Should include information on data set/data base placement for efficient performance.

Protection

Information relating to the physical protection of the data base including backup and special data retention requirements.

The controls and procedures designed to establish and maintain the integrity of the data base are also included.

Security

Sensitive information and transactions requiring the implementation of privacy keys and privacy locks is also identified (reference Section 007-301-201).

Glossary

This information is optional and will be the last part or section of the document. It contains definitions of all words, expressions, abbreviations, and acronyms of a unique nature used in the document. The order of appearance is alpha and then numeric in accordance with the first character.

DELIVERED

With initial system release (end of Implementation Phase) and updated, as required, for subsequent releases.

DOCUMENT USERS

- Data Base Administration
- Operational Data Base.

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 001-227-310)

5.13 — Physical Data Base Specification

5.32 — System Controls Description

5.34 — System Performance Monitoring Capabilities.

4.16 SYSTEM CONTROLS AND EXAMINATION GUIDE

GENERAL

This guide provides summary information on system controls and examination capabilities designed into the system, plus test packages available to examine system operation. General approaches for examining the system during installation and operation are described. The guide provides assistance to system management and audit personnel in planning and conducting reviews of the system's operation.

ORGANIZATION AND CONTENT

The following paragraphs specify the content of the Guide. The information is in the recommended sequence. Other system documents (eg, System Description, Installation Planning Guide, etc) should be referred to as appropriate.

General Description

This part includes the purpose and scope of the guide, the examination tools available and an itemized list of reference documentation.

System Controls and Examination Capabilities

(a) ***Controls:*** All controls (protective mechanisms) designed in the system and their interrelationships are described in terms of diagrams, flowcharts, and/or narratives. (See Section 007-209-201, System Controls Standards and Section 007-209-302, System Control Guidelines.)

(b) ***Test Packages:*** Information on test packages that have been made available and identification of critical areas requiring special test treatment.

(c) ***System Examination Capabilities:*** Information of examination capabilities designed into the system, operable through manual procedures or through software. Also provides a detailed description of the management trail capabilities built into the system.

Installation Examinations

This part contains guidance in identifying subjects for examination and in performing examinations of the system during system installation.

Subjects for examination shall be listed and described. Detailed procedures, measurement criteria, and examination techniques shall be provided for each subject. Some of the subjects that may be considered are:

(a) The computer programs locally written to support the data conversion process.

(b) Instructions written for personnel at all levels concerning conversion activities.

(c) The status of data which will become system input including procedures for keeping this data current through interim update operations.

(d) Control techniques to be used during conversion with respect to the handling of data during processing.

(e) The operation of the conversion subsystem during actual cutover with emphasis on the errors which it identifies that must be corrected and reentered.

(f) The analysis of conversion control totals to see that all data is converted and properly accounted for.

Operational System Examinations

This part shall include a listing of suggested subjects that managers might pursue if they want to examine the operational system. A detailed description, detailed procedures, measurement criteria, and examination techniques shall be provided for each subject. Subjects should be included that stress the use of the system's management trail capabilities.

Factors that should be considered when selecting subjects include the following:

(a) The practical value of a subject; the value of the expected results of the examination compared to the costs of the examination.

(b) The nature of the system's mission; for example, subjects with the following characteristics typically receive considerable attention:

- Subjects that offer opportunities for personal gain.
- Procedures that directly affect the books of the company.
- Subjects that produce measurements of work from reported actions which can be examined for accuracy.

(c) Complexity; subjects that require extensive preparation and lots of subject matter experience are generally broken into several smaller subjects.

(d) Subjects that will affect system reliability and the impact of system breakdown on company operations.

(e) Potential problem areas.

(f) Related subjects that are beyond the boundaries of the system but impact the operation of the system.

Glossary

This information is optional and will be the last part or section of the Guide. It contains definitions of all words, expressions, abbreviations, and acronyms of a unique nature used in the audit guide. The order of appearance is alpha and then numeric in accordance with the first character.

DELIVERED

With initial system release (end of Implementation Phase) and updated, as required, for subsequent releases.

DOCUMENT USERS

- System Management
- Data System Management
- Audit.

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

5.32 — System Controls Description

5.33 — System Reliability Measures Description

5.34 — System Performance Monitoring Capabilities

4.17 TRAINING ADMINISTRATION GUIDE

GENERAL

This Guide provides the information needed to plan, establish, execute, and maintain a training program or curriculum. It shall not contain course instructional or student material.

ORGANIZATION AND CONTENT

A Training Administration Guide contains the information specified in the following paragraphs. The information is in recommended sequence. One Guide will be provided per system; however, it may be sectionalized based on identified training programs or curriculums.

General Description

This part contains a brief description of the content, purpose, scope, organization, and usefulness of the document.

Training Plan

The training plan is a sequence of training activities for system installation, operation, and maintenance. The plan addresses, but is not limited to, the following planning responsibilities and shall provide the information as appropriate:

(a) ***Instructors***—The number of instructors, their relevant education and experience background, and any additional training they should receive before presenting the course

(b) ***Prerequisites***—Courses assumed to be available

(c) ***Recommended Sequence of Courses***—A plan for course scheduling addressing course sequence, duration, place, instructor, and recommended number of students for each course

(d) ***Physical Facilities***—Facilities required for each course, including room size, electrical requirements, lighting, desks, and chairs

(e) ***Material and Equipment Ordering***—Procedures for ordering centrally developed instructional materials and equipment for courses

(f) ***Optional***—Course descriptions for course announcement purposes.

Training Course Information

The following information is provided for each course:

(a) Course title

(b) Course description

(c) Course prerequisites (courses or relevant work experience that would benefit the student)

(d) Course objective(s)

(e) Local modifications required (if any)

(f) Document numbers and names for the required instructor and student materials, including scoring keys

(g) Listing of classroom equipment required; eg, pads of paper, rulers, slide projectors, tape recorders, TV monitors.

Course Evaluation and Maintenance

The following information is provided:

(a) Procedures for evaluating the comments written on both the Trainee Feedback Form and the Instructor Feedback Form

(b) Method for conducting on-site evaluations

(c) Procedures for course maintenance.

Optional Sections

Other supportive information, such as references, glossaries, and exhibits, may be included as appropriate.

DELIVERED

With initial system release (no later than end of Implementation Phase) and updated, as required, for subsequent releases.

DOCUMENT USERS

- Training Administration.

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

5.25 — Course Evaluation and Maintenance

6.19 — Training Course Description

6.22 — Training Administration Requirements

4.18 INSTRUCTOR GUIDE

GENERAL

The Instructor Guide provides information and guidelines necessary to prepare to teach or present course content and to review course effectiveness.

ORGANIZATION AND CONTENT

An Instructor Guide contains the information specified in the following paragraphs required by the instructor to administer a course. The Guide does not contain a complete set of student materials; however, excerpts from student materials may be provided to facilitate instruction and for reference purposes.

General Description

This section contains a brief description of the organization of the guide, a brief summary of the course, and an explanation of instructional strategies used.

Course Information

This section states the following (the order shown is recommended):

(a) Course organization and objectives

(b) Course length

(c) Instructor prerequisites and preparation

(d) Trainee prerequisite courses

(e) Instructor/trainee ratio (optional)

(f) Facility requirements

(g) Local requirements

(h) Course materials and equipment

(i) Plan of instruction, including training strategies to be employed

(j) Instructor and trainee course evaluation feedback method (optional).

Course Units

Each course is subdivided into teaching segments called course units.

(a) ***Introduction to Course:*** This unit cues the instructor to give course orientation information to the students. It also suggests topics to be covered, such as review of course prerequisites, course objectives, course organization, course length, course relevance to job, and other administrative details, eg, breaks, materials checklist.

(b) ***Content of Course Unit:***

(1) The objectives of each course unit are provided. The objectives should be stated in terms that:

- Relate the objectives to previous instruction
- Specify the product or end results to be achieved
- Are relevant to post-training job performance.

(2) Course Unit materials and equipment required for student performance are identified at appropriate places within each unit.

(3) The body of each course unit specifies what the instructional events in the unit should be and in what sequence they should occur. These events are identified in terms of instructor inputs (lecture, film, discussion, exercises) and the responses students are to make. The directions the instructor uses during the course may be an outline, a detailed script, or a combination of the two.

(4) A unit test is provided for each course unit. This unit test may be a written or a performance test (or a combination) as appropriate. Solutions, answers, scoring keys, and performance measurement criteria shall be included. The test includes one or more test items measuring student performance for each unit objective.

Final Test

A final test is provided for each training course.

(a) ***Final Test Type:*** The final test may be a written examination, a performance test, or a combination of both, as appropriate. Solutions, answers, scoring keys, and performance measurement criteria shall be included.

(b) ***Test Items:*** One or more test items are included in the final test to measure student performance on each end-of-course training objective.

(1) Test items will require the same inputs (eg, equipment, triggering event, and student performance) as the objectives they are intended to measure.

(2) Test items will require students to demonstrate learning that is relevant to their jobs.

(3) Test items include scoring criteria that describe completely what characteristics the student's performance must have and how the test item is to be scored.

(c) ***Test Administration:*** The Instructor Guide provides instructions for the instructor and students to follow in administering and taking the test.

Optional Sections

Other supportive information, such as references and exhibits, may be provided as appropriate.

DELIVERED

With initial system release (no later than end of Implementation Phase) and updated, as required, for subsequent releases.

DOCUMENT USERS

- Course Instructor.

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

5.23 — Training Specifications

5.25 — Course Evaluation and Maintenance

6.20 — Student Course Material

6.21 — Instructor Course Material

4.19 STUDENT GUIDE

GENERAL

Provides training matter to supplemental guides (eg, System Administration Guide) or work module (position) documents, and/or other training documents. May contain, as appropriate, course objectives, special instructions, course progress checklists, work sheets, exhibits, exercises, and tests.

ORGANIZATION AND CONTENT

The organization and content of each student guide will vary with the complexity of the course and the type of instructional strategy, eg, instructor-led class or self-instructional. Also self-instructional course may be supported in various ways, such as audio tapes, video tapes, and computer assisted instruction.

The following paragraphs identify the information that will normally be provided to a student for either instructor-led or self-instructional course.

General Description

(a) For both instructor-led and self-instructional courses, this part briefly states the general course objectives. It also provides a summary of the content and form of the course and the organization and use of the guide.

(b) For self-instructional courses, this part may further provide the student with a brief description of course materials, media, and equipment, and how to locate instructions, practice exercises, and testing. It may also provide a description of the role of the instructor and how the student may contact the instructor during training or an example of a self-instructional sequence.

General Content

(a) ***Instructor-Led Course:*** Materials in the Student Guide are to be provided on an as required basis. these materials will be organized into instructional units and may include textual materials, worksheets, practice exercises, forms, and selected copies of viewgraphs, slides, and charts.

(b) ***Self-Instructional Course:*** The course should be divided into teaching segments called course units. The course content identified below is provided in the Student Guide and/or in the associated course media, ie, videotape, slides, audiotape, film, computer assisted instruction sequences.

(1) Each course unit contains a statement of the unit objectives and content.

(2) Throughout these units, course content is followed directly by student practice, with instructor feedback provided to the student.

(3) Skill mastery should be measured by exercises at the end of units or subunits. The exercises should call for student performance of all skills learned, with instructor feedback provided to the student.

(4) Each course unit should conclude with a test measuring accomplishment of all unit objectives. The Student Guide provides information regarding time limits and the use of forms.

Note: Unit testing is not required for an overview course.

(5) Each Student Guide provides a Course Progress Checklist in a suitable format. This checklist identifies the purpose of the checklist, the major unit objectives, and the topics covered in the course.

Final Test

Each course includes a mastery test for the course as a whole. Time limits, use of forms, and use of references are appropriately specified.

Note: A final test is not required for an overview course.

Trainee Feedback Form

Each Student Guide contains a trainee feedback form. The form contains instructions stating that it is to be filled out by the student at the completion of the course and returned to the person identified, ie, instructor, training clerk, etc.

Optional Sections

Other supportive information, such as references and exhibits, may be provided as appropriate.

DELIVERED

With initial system release (no later than end of Implementation Phase) and updated, as required, for subsequent releases.

DOCUMENT USERS

- Course Instructor
- Student.

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

5.23 — Training Specifications

6.20 — Student Course Material.

4.20 FORMS/DISPLAYS CATALOG

GENERAL

This Catalog includes information and samples of all forms and displays designed to be utilized by system personnel. It is to be used as an information resource and for control. Forms ordering and retention information will be included as applicable.

ORGANIZATION AND CONTENT

A Forms/Display Catalog will have a Forms Section and/or Display Section as applicable. The general information contained in each section, as appropriate, is as follows:

(a) Each preprinted form and display whose design is controlled by the system development and utilized by the system is identified.

(b) The application of each form and display is described.

(c) References to other deliverable documents that explain the form or display in more detail is provided.

(d) Form ordering information is provided.

(e) Form retention information is included.

General Description

This section of the Catalog contains a brief description of the contents, purpose, scope, organization, and use of the Forms and/or Display sections of the Catalog.

Forms Section

The following information is provided:

(a) ***Form Title Index***—An alphabetical listing of forms by title, corresponding form number, and issue date.

(b) ***Form Number Index***—Contains the same information as the alphabetical index but listed in ascending form number sequence.

(c) ***Functional Index (as appropriate)***—Functional groupings of forms, eg, Error Correction Forms, Input Control Forms are provided so that a form used for a specific purpose can be found in the catalog. A functional index is listed alphabetically.

(d) ***Form Description***—A 1-page narrative description of each form. This description indicates the size of the form and identifies the form by title, form number, issue date, issue number, and related system release number. The body of the description defines the purpose and application of the form and cites references to work modules (positions) and other appropriate documents that mention the form. Ordering and retention information for each form should follow the description.

(e) ***Exhibits***—The use of sample forms is strongly recommended; they should be located on the page facing their description. Oversized forms may be reduced.

Display Section

(a) ***Display Title Index***—An alphabetical listing of displays by title, corresponding display number (is used), and effective date.

(b) ***Display Number Index***—If displays are numbered, they are listed with the same information as the alphabetical index but listed in ascending display number sequence.

(c) ***Functional Index (as appropriate)***—Can be provided so that a display used for a specific purpose can be found in the catalog. A functional index is listed alphabetically.

(d) ***Display Description***—A 1-page narrative description of each display. This description identifies the display by title, number (if used), effective date, and revision number (if appropriate). The body of the description defines the purpose and application of the display and cites references to work modules (positions) and other appropriate documents that mention the display. If hard copies of a display are produced, then retention information for such copies should follow the description.

(e) ***Exhibits***—The use of sample displays is strongly recommended; they should be located on the page facing their description.

DELIVERED

With initial system release (no later than end of Implementation Phase) and updated, as required, for subsequent releases.

DOCUMENT USERS

- Installation Team
- Position (Work Module) Supervisor
- PSS Maintenance
- Course Instructor.

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

4.14 — PSS/CSS Interface Specification

5.07 — Forms Specification

4.21 PERFORMANCE AIDS CATALOG

GENERAL

This Catalog includes samples or representations of all performance aids designed to be utilized by system personnel. It is to be used as an information resource and for performance aids control.

ORGANIZATION AND CONTENT

The basic information contained in a Performance Aids Catalog is as follows:

(a) Each performance aid whose design is controlled by the system development organization

(b) The application of each performance aid

(c) References to deliverable documents that mention the performance aid

(d) Performance aid ordering information.

General Description

This section of the Catalog contains a brief description of the contents, purpose, scope, organization, and use of the Catalog.

Performance Aids Listings

The following information is provided:

(a) ***Performance Aids Title Index***—An alphabetical listing of performance aids by title, corresponding aids number, and issue date.

(b) ***Performance Aids Number Index***—Contains the same information as the alphabetical index but is listed in ascending aids number sequence.

(c) ***Functional Index (as appropriate)***—Functional Groupings of performance aids, eg, error correction, input coding. This can be provided so that a performance aid used for a specific purpose can be found in the Catalog. This index is listed alphabetically.

(d) ***Performance Aids Description***—A 1-page narrative of each aid. This description indicates the size, general construction, and layout of the aid and identifies the aid by title, number issue date, issue number, and revision number. The body of the description defines the purpose and application of the aid and cites reference to work modules (positions) and other appropriate documents that mention the aid. Ordering information for each aid should follow the description.

(e) ***Exhibits***—The use of sample performance aids or pictures of aids which are not flat page is strongly recommended; they should be located on the page facing the description.

DELIVERED

With initial system release (no later than end of Implementation Phase) and updated, as required, for subsequent releases.

DOCUMENT USERS

- Installation Team
- Position (Work Module) Supervisor
- PSS/Maintenance
- Course Instructor

PREREQUISITE DEVELOPMENTAL COMPONENTS

(Reference Section 007-227-310)

5.01 or 6.05 — Position (Work Module) Specification or Procedures

5.02 or 6.06 — Support Position (Work Module) Specification or Information.