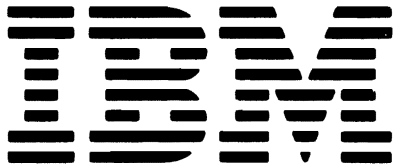
GC21-7726-8

File No. S38-20

IBM System/38

IBM System/38
Guide to Publications
Publication Lists and Abstracts
Master Index
Glossary



GC21-7726-8

File No. S38-20

IBM System/38

IBM System/38
Guide to Publications
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Ninth Edition (November 1986)

This major revision makes obsolete GC21-7726-7.

This edition applies to Release 8, Modification Level 0, of the following:

- IBM System/38 Control Program Facility (Program 5714-SS1)
- IBM System/38 RPG III (Program 5714-RG1)
- IBM System/38 Interactive Data Base Utilities (Program 5714-UT1)
- IBM System/38 COBOL (Program 5714-CB1)
- IBM System/38 BASIC (Program 5714-BA1)
- IBM System/38 PL/I (Program 5714-PL1)
- IBM System/38 Advanced Printer Functions Utility (Program 5714-UT2)
- IBM System/38 Remote Job Entry Facility (Program 5714-RC1)
- IBM System/38 Conversion Reformat Utility (Program 5714-CV2)
- IBM System/38 OFFICE/38–Administrative Management (Program 5714-WP1)
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- IBM System/38 OFFICE/38–Personal Services/38 (Program 5714-WP3)
- IBM Personal Computer Support/38 (Program 5714-PC1)
- IBM System/38 Cryptographic Facility (Program 5714-CR1)
- IBM System/38 Distributed Data Management (Program 5714-DD1)

and to all subsequent releases and modifications until otherwise indicated in new editions or Technical Newsletters. Changes are periodically made to the information herein; any such changes will be reported in subsequent revisions or Technical Newsletters.

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PURPOSE OF THIS MANUAL

This guide serves three main purposes:

- The publications' lists and abstracts tell the System/38 user about the documentation available for System/38.
- The master index tells which System/38 publication answers questions or provides information about programming or operating System/38.
- The glossary defines terms that are used in the documentation for System/38.

ORGANIZATION OF THIS MANUAL

This manual is organized as follows:

Section 1. Publication Lists and Abstracts

Gives IBM System/38 users information on what documentation currently is or will be available for the System/38 licensed programs. Understanding IBM's documentation concept improves the ability to retrieve information by explaining *what* information has been provided and *where* it has been placed.

Presents information in terms of tasks (*information categories*). Information categories define IBM System/38 user requirements. The categories express these requirements in tasks that can be performed before and during availability of System/38. A description of the information categories is given in *How to Use This Section.*

Section 2. Master Index

Combines the entries from the indexes of frequently used System/38 publications. Using the master index can significantly shorten the time it takes to find the information needed to solve a problem.

Section 3. Glossary

Defines terms that are used in the customer documentation for System/38.

This glossary includes definitions developed by the American National Standards Institute (ANSI) and the International Organization for Standardization (ISO). This material is reproduced from the *American National Dictionary for Information Processing*, copyright 1977 by the Computer and Business Equipment Manufacturers Association. Copies of this dictionary may be purchased from the American National Standards Institute, 1430 Broadway, New York, New York 10018. Definitions from this dictionary are identified by (ANSI) at the beginning of the definition.

Section 1. Publication Lists and Abstracts

How to Use This Section

This section describes the customer documentation for IBM System/38 (except application program documentation). It is not intended to replace the *IBM System/38 Bibliography*, which describes all technical publications that support System/38.

The *Publication Lists and Abstracts* section is organized by the following *information categories:*

Familiarizing–information required to provide introductory and conceptual information regarding the system.

Preinstallation planning–information required to prepare for installation, use, operation, and maintenance of the component prior to initial installation.

Installing–information required to install and initialize the System/38 devices and programs.

Application programming–information needed to design and maintain applications.

Operating–information required to operate the system and to keep it operating.

Communications–information required to implement data communications functions on System/38.

Using–information required to exercise the functions and facilities of the component.

Retrieving–publications needed to find specific information on a specific subject.

Problem determination–information required to resolve problems on System/38.

Organizing–information required to select and order the binders, binder labels, and insert tabs for System/38 publications.

The user(s) who would need a particular publication is listed preceding the description of that publication. The different System/38 users are categorized by the way they use the system; that is, by user roles. These user roles do not necessarily identify job titles within an organization. They are used only to identify job functions related to the system.

The user roles and responsibilities are:

- Data Processing (DP) Manager–administrative and technical head of all processing activities of the company.
- Programmer–designs, codes, and tests the applications used in the solution of problems by using data processing equipment.
- System Operator–uses the system console to initiate single jobs, batch job processing, multiprogramming, and to handle high priority job requests not initially in the planned work load.
- Work Station User–uses the keyboard to record data for the system or request data from the system.

If a DP Manager wanted to become familiar with the concepts and functions of System/38, he would:

1. Turn to page 1-3 of this publication.
2. Find the category of information he is interested in (in this case, *Familiarizing*).
3. Find the appropriate user category (in this case, the *DP Manager*).

Note: The page numbers to the right of the publication titles indicate where a description of that publication appears in this publication. The file number, where applicable, is ordering information. The Xs in the user columns indicate which user(s) would need a particular publication.	**Page Number**	**File Number**	**Audience**			
			DP Manager	**Programmer**	**System Operator**	**Work Station User**
How to Use This Section	1-1		X	X	X	X
Familiarizing						
IBM System/38 Introduction, GC21-7728-9	1-11	S38-00	X	X	X	
IBM System/38 Control Program Facility Concepts Manual, GC21-7729-2 TNL GN21-8278	1-11	S38-36	X	X	X	
IBM System/38 Guide to Publications, GC21-7726-8	1-12	S38-20	X	X	X	
IBM System/38 Concepts for the COBOL User, GC21-7855-4	1-13	S38-24	X	X		

The Xs in the DP Manager column, for example, indicate which publication(s) the DP Manager should read in order to become familiar with the concepts and functions of System/38.

A publication may be listed in the Publications List section under several categories, according to the various tasks and audiences that the publication addresses. It is described in the Abstracts section only once (on the page indicated in the Page Number column).

List of Publications

Note: The page numbers to the right of the publication titles indicate where a description of that publication appears in this publication. The file number, where applicable, is ordering information. The Xs in the user columns indicate which user(s) would need a particular publication.	**Page Number**	**File Number**	**Audience**			
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IBM System/38 Control Program Facility Concepts Manual, GC21-7729-2, and TNL GN21-8278	1-11	S38-36	X	X	X	
IBM System/38 Guide to Publications, GC21-7726-8	1-12	S38-20	X	X	X	X
IBM System/38 Curriculum Planning Guide, GR30-0385-5	1-13	S38-00	X	X	X	X
IBM System/38 Concepts for the COBOL User, GC21-7855-4	1-13	S38-24	X	X		
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IBM System/38 Ideographic Enhancements Guide, SC21-8027-1	1-26	S38-36	X	X		X
IBM System/38 Ideographic Enhancements Guide, N:SC21-7996-1	1-26	S38-99	X	X		X
IBM System/38 Finance Support User's Guide, SC21-9099-1	1-27	S38-67		X		X
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IBM System/38 Installation Manual–Conversion Planning, GC21-7732-3	1-17	S38-34	X	X		

	Page Number	File Number	Audience			
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IBM System/38 OFFICE/38–Personal Services/38 Planning and Installation Guide and Reference, SC09-1070-1	1-17	S38-32	X	X	X	
IBM System/38 Remote Job Entry Facility Planning and Installation Guide, SC21-7924-4	1-18	S38-38	X	X		
IBM Guide to COBOL, SC21-7890-0	1-18	S38-24	X	X		
IBM System/38 Uninterruptible Power Supply Planning Guide, GC21-9421-3	1-18	S38-28	X	X		
IBM System/38 Ideographic Enhancements Guide, N:SC21-7996-1	1-26	S38-99	X	X		X
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IBM System/38 PL/I Reference Manual and Programmer's Guide, SC09-1051-2	1-22	S38-29		X		
IBM System/38 Control Language Reference Manual, SC21-7731-9	1-29	S38-38		X	X	
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IBM System/38 Source Entry Utility Reference Manual and User's Guide, SC21-7722-9	1-23	S38-32		X	X	X
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IBM System/38 Data File Utility Ideographic Reference Manual and User's Guide, N:SC18-3013-1	1-27	S38-32	X	X		X
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IBM System/38 Messages Guide and Tabs (CPF, RPG III, and IDU), SBOF-4768-0	1-43	S38-40		X	X	
IBM System/38 Messages Guide: COBOL, SC21-7823-5	1-43	S38-40		X	X	
IBM System/38 Messages Guide: BASIC, SC21-9048-3	1-44	S38-40		X	X	
IBM System/38 Messages Guide: PL/I, SC09-1052-2	1-44	S38-29		X	X	
IBM System/38 OFFICE/38–Text Management Messages Guide, SC09-1023-2	1-44	S38-40		X	X	
IBM System/38 OFFICE/38–Administrative Management Messages Guide, SC09-1041-2	1-44	S38-40		X	X	
IBM System/38 OFFICE/38–Personal Services/38 Planning and Installation Guide and Reference, SC09-1070-1	1-17	S38-32		X	X	
IBM System/38 Cryptographic Facility User's Guide, SC21-8026-1	1-27	S38-13		X		X
Organizing						
Binders, Labels, and Tabs, SX21-9411-3	1-45		X	X	X	X

Abstracts

FAMILIARIZING

DP Manager
Programmer
System Operator

IBM System/38 Introduction, GC21-7728

This publication summarizes what IBM System/38 is and how it can be used to meet an organization's data processing needs.

The objective of this publication is to help the reader achieve a general understanding of IBM System/38 and the capabilities it gives the user.

This publication contains:

- A summary of the System/38 design and highlights of its major functions
- A description of the System/38 licensed programs
- A description of possible System/38 configurations
- A description of the hardware device characteristics
- A description of the compatibility that exists between System/38 and System/3

DP Manager
Programmer
System Operator

IBM System/38 Control Program Facility Concepts Manual, GC21-7729

The IBM System/38 Control Program Facility (CPF) is a group of programs that control the operation of the system so that functions and data needed by the work station users and batch programs are available.

This publication explains the concepts that must be understood before CPF can be used. These concepts should be understood before decisions can be made about the overall design and use of a System/38 installation with CPF.

For information on how to use the functions introduced in the *CPF Concepts Manual*, see the *CPF Programmer's Guide*, which describes how to apply:

- The commands described in the *CL Reference Manual—CL*
- The data description specifications described in the *CPF Reference Manual—DDS*

DP Manager
Programmer
System Operator
Work Station User

IBM System/38 Guide to Publications, GC21-7726

This manual contains the *System/38 Publications List and Abstracts*, the *System/38 Glossary*, and the *System/38 Master Index*.

The Publication Lists and Abstracts section contains a description of each manual and a suggested reading sequence.

The glossary portion of this publication contains a collection of terms and their definitions that are used in the System/38 customer documentation. The *IBM Vocabulary for Data Processing, Telecommunications, and Office Systems*, GC20-1699, contains definitions of general data processing terms.

The index portion of this publication is used to expedite finding a publication needed to answer a question that arises while a System/38 is being programmed and operated.

The index portion of this publication brings together the topical indexes of the following System/38 publications:

- *IBM System/38 Control Program Facility Concepts Manual*, GC21-7729
- *IBM System/38 Control Program Facility Programmer's Guide*, SC21-7730
- *IBM System/38 Control Language Reference Manual*, SC21-7731
- *IBM System/38 Guide to Program Product Installation and Device Configuration*, GC21-7775
- *IBM System/38 Control Program Facility Reference Manual—Data Description Specifications*, SC21-7806
- *IBM System/38 Data File Utility Reference Manual and User's Guide*, SC21-7714
- *IBM System/38 Source Entry Utility Reference Manual and User's Guide*, SC21-7722
- *IBM System/38 Query Utility Reference Manual and User's Guide*, SC21-7724
- *IBM System/38 Screen Design Aid Reference Manual and User's Guide*, SC21-7755
- *IBM System/38 RPG III Reference Manual and Programmer's Guide*, SC21-7725

- *IBM System/38 COBOL Reference Manual and Programmer's Guide,* SC21-7718
- *IBM System/38 Operator's Guide,* SC21-7735
- *IBM System/38 Programmer's/User's Work Station Guide,* SC21-7744
- *IBM Data Communications Programmer's Guide,* SC21-7825
- *Remote Job Entry Facility Planning and Installation Guide,* SC21-7924
- *Remote Job Entry Facility User's Guide,* SC21-7914
- *IBM System/38 BASIC Reference Manual and Programmer's Guide,* SC21-9046
- *IBM System/38 PL/I Reference Manual and Programmer's Guide,* SC09-1051
- *IBM System/38 Problem Determination Guide,* SC21-7876
- *IBM System/38 Application Example I,* SC21-7881
- *IBM System/38 3270 Emulation Reference Manual and User's Guide,* SC21-7961

DP Manager
Programmer
System Operator
Work Station User

IBM System/38 Curriculum Planning Guide, GR30-0385

This publication describes the education provided by IBM National Marketing Division to support effective System/38 installation planning, programming, and efficient day-to-day operations. The book is organized according to the educational needs of the executive, programmer/implementor, and system operator/work station user. The last sections include detailed course descriptions and worksheets for planning individual training.

DP Manager
Programmer

IBM System/38 Concepts for the COBOL User, GC21-7855

This publication contains conceptual information about the System/38 data base and work station environment that pertains to COBOL. It describes how COBOL functions relate to System/38 functions and introduces the System/38 COBOL extension to the ANS-1974 standard.

DP Manager
Programmer

IBM System/38 Introduction to RPG III: External Data Description and Interactive Processing, GC21-7723

This publication is designed to help the aspiring programmer learn the basics of writing a computer program using the RPG language.

This publication describes the specifications that a programmer must write to do a particular task. It also introduces some of the RPG functions important in the System/38 environment, such as processing externally described files and work station (interactive) processing. However, this publication is not intended to introduce all of the functions provided by the RPG language. The *RPG III Reference Manual and Programmer's Guide* describes the total functions provided by the RPG language.

DP Manager
Programmer

IBM Data Communications Concepts, GC21-5169

This publication is intended for persons planning or using a data communications system with IBM small and intermediate systems. It contains general information about data communications, including System/38. The publication defines data communications, explains the benefits of data communications, and describes how data communications can be used with data processing.

DP Manager
Programmer
System Operator
Work Station User

IBM System/38 OFFICE/38–Administrative Management: Getting Started with Administrative Management, GC09-1039

This publication introduces Administrative Management. Using examples of typical office tasks, this publication tells you how to schedule and maintain appointments, how to log correspondence and maintain a correspondence log, how to send and receive brief messages, and how to search and print an Administrative Management directory.

DP Manager
Programmer
System Operator
Work Station User

IBM System/38 OFFICE/38–Text Management: Getting Started with Text Management, GC09-1021

This publication introduces Text Management. Using examples, this publication describes how to create, revise, check the spelling of, and print documents such as letters, memos, and forms.

DP Manager
Programmer
System Operator
Work Station User

IBM System/38 OFFICE/38–Personal Services/38 Introduction, GC09-1071

This publication is intended for people who are evaluating the capabilities of Personal Services/38 for use in their office. It describes the features and benefits of using Personal Services/38.

DP Manager
Programmer
System Operator
Work Station User

IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Primer, SC09-1069

This publication introduces Personal Services/38 and the Personal Services/38 learning by example books. The primer is intended to be read before the other Personal Services/38 learning by example books are used.

It describes:

- How to use your work station
- What Personal Services/38 is
- How to sign on and sign off Personal Services/38
- How to use the functions in Personal Services/38
- How to do the examples in the Personal Services/38 learning by example books
- How to use the online help information
- How to do more than one session at once

DP Manager

Introducing System/38 Graphics, GC09-1060

This publication is intended for people who wish to evaluate the capabilities of System/38 graphics for possible use in their business. It describes the features and benefits of using graphics in a business environment, focusing on the extensive functions of System/38 graphics.

PRE-INSTALLATION PLANNING

DP Manager

IBM System/38 Installation Manual–Physical Planning, GA21-9293

This publication contains information about the physical installation of the IBM System/38. It includes information about space requirements and site selection, and a brief description of the IBM System/38 units and their layouts (floor plans), with explanations of electrical and environmental requirements.

DP Manager

IBM System/38 Physical Planning Template, GX21-9294

This form is a clear acetate template containing at least one plan view of each unit that can be attached directly to System/38. (Exception: Plan views of the units of the IBM 5250 Information Display System are provided in the template for that system.)

The plan views on this template are intended to be used on a floor plan drawn at a scale of 50 millimeters equals 1 millimeter. The plan views on the template can be cut apart and moved about on the floor plan of the data processing area to arrive at an acceptable floor plan showing the arrangement of all units in the data processing area.

DP Manager
Programmer

IBM System/38 Installation Manual–Conversion Planning, GC21-7732

This publication contains a description of:

- New System/38 functions that can affect your installation plan
- The System/3 to System/38 Batch Conversion Aid
- The System/3 CCP Conversion Aid licensed program
- The System/34 to System/38 Conversion Aid licensed program
- The System/38 COBOL Conversion Aids

The appendixes in this publication contain information on converting OCL, RPG, COBOL, and data files to the System/38.

A sample plan and planning forms are provided in the back of this publication. The planning forms can be removed and used to plan the System/38 installation and record the progress of installation activities.

DP Manager
Programmer
System Operator

IBM System/38 OFFICE/38–Personal Services/38 Planning and Installation Guide and Reference Manual, SC09-1070

This publication contains information about planning for the installation of Personal Services/38. It outlines the detailed procedure to install Personal Services/38 and discusses the conversion of other computerized IBM office systems to the Personal Services/38 system. It also contains information for administrators and security officers.

DP Manager
Programmer

IBM System/38 Remote Job Entry Facility Planning and Installation Guide, SC21-7924

This publication contains information to assist the System/38 programmer and the host system programmer who are responsible for planning and installing the System/38 Remote Job Entry Facility.

This publication contains:

- A description of what remote job entry is and then introduces the System/38 Remote Job Entry Facility and the environment in which it operates
- An explanation of the preparation activities necessary before installing and creating the objects required for defining and operating the Remote Job Entry Facility
- Instructions for the Remote Job Entry Facility programmer who is installing the System/38 RJEF

DP Manager
Programmer

IBM Guide to COBOL, SC21-7890

This publication presents introductory and tutorial information and coding tips and techniques for users of COBOL compilers. This includes System/38 as well as System/34, System/36, Series/1, and 5280 COBOL compilers.

This publication helps the COBOL programmer to become familiar with all of the available COBOL tools, establish naming and formatting guidelines, and write clearly structured COBOL programs.

DP Manager
Programmer

IBM System/38 Uninterruptible Power Supply Planning Guide, GA21-9421

This publication discusses the options available to the System/38 user in order to provide uninterruptible power to System/38.

This publications contains:

- A description of the two main approaches to supplying power
- A description of the different types of uninterruptible power supplies
- A description of the System/38 Power Warning feature and how it can be used in conjunction with an uninterruptible power supply

INSTALLING

DP Manager
Programmer

IBM System/38 Guide to Program Product Installation and Device Configuration, GC21-7775

This publication explains the preparation necessary for device configuration and describes the procedure to be used for:

- Installing System/38 program products, such as the Control Program Facility and Interactive Data Base Utilities
- Configuring devices on System/38 using Control Language commands

This manual also contains worksheets to be used when configuring lines, devices, and control units.

DP Manager
Programmer

IBM System 34 to System/38 Conversion Aid Installation Guide/Runbook/Reference Guide, SB30-0447

This publication is a guide to installing and using the System/34 to System/38 Conversion Aid Licensed Program.

DP Manager
Programmer

IBM System/36 to System/38 Conversion Aid Installation Guide/Runbook/Reference Guide, SC09-1067

This publication is a guide to installing and using the System/36 to System/38 Conversion Aid Licensed Program.

DP Manager
Programmer

IBM System/3 Communications Control Program (CCP) to System/38 Conversion Aid Guide and Reference Manual, SC21-7820

The CCP Conversion Aid assists the user in converting System/3 RPG II programs, DFF specifications, and CCP SORT specifications to System/38 RPG III programs, data description specifications, and reformat control specifications. Conversion procedures for the CCP conversion aid licensed program are contained in this publication.

DP Manager
Programmer

IBM System/38 Conversion Reformat Utility Reference Manual, SC21-7780

The IBM System/38 Conversion Reformat Utility Program allows a user to run a System/3-style sort program on System/38. This program operates on data from a data base file or a device file to perform sort, merge, and copy operations. This program allows the user to:

- Sort a physical file to produce a record address file
- Sort a physical file to produce a physical file
- Sort/merge multiple files to produce a physical file
- Copy data from one or more files to produce a physical file or device file

This reference manual describes the header, record, field, and alternate collating specifications that must be coded to request the sort, merge, or copy operations.

APPLICATION PROGRAMMING

Programmer

IBM System/38 Control Program Facility Programmer's Guide, SC21-7730

This publication elaborates on the concepts presented in the *CPF Concepts Manual*. It also explains how to use commands described in the *CL Reference Manual*, and explains how to use data description specifications described in the *CPF Reference Manual—DDS*. This guide instructs the programmer in how to use the Control Program Facility functions.

Programmer

IBM System/38 Application Example I, SC21-7881

This publication explains a basic application and illustrates system usage. It describes:

- The application and its operating environment
- Different approaches to the same application, such as diskette and online solutions
- The coding that could be used to implement the application programs used in the example include Control Program Facility (CPF), RPG III, and Interactive Data Base Utilities (IDU)

This publication should be read in sequence because the information presented in one section assumes an understanding of the previous sections.

Programmer

IBM System/38 RPG III Reference Manual and Programmer's Guide, SC21-7725

The reference portion of this publication contains information about the RPG III language and the RPG III licensed program. The fundamentals of RPG III and an overview of the System/38 RPG III enhancements are provided. Descriptions and examples of the RPG specifications forms and RPG operation codes are also provided.

The programmer's portion of this publication provides detailed information needed to write, test, and maintain RPG III programs.

Programmer

IBM System/38 COBOL Reference Manual and Programmer's Guide, SC21-7718

This publication contains information about the COBOL language and the COBOL licensed program. A description of the COBOL compiler plus a number of IBM extensions supporting the ANS (American National Standards) COBOL, X3.23 1974 Standard are provided, as well as the information needed to write, test, and maintain COBOL programs.

Programmer

IBM System/38 BASIC Reference Manual and Programmer's Guide, SC21-9046

This publication contains a reference section, which provides information about the BASIC language, and a programmer's guide, which provides detailed information needed to write, test, and maintain BASIC programs.

This publication also provides descriptions and examples of how to use BASIC commands and statements.

Programmer

IBM System/38 PL/I Reference Manual and Programmer's Guide, SC09-1051

This publication provides the user with information needed to write, test, and maintain PL/I programs on System/38. It is divided into two sections. The reference section contains information on elements of the PL/I language, data types, program and block organization, statements, directives, and conditions. The programmer's guide section contains information on files, DDS, commitment control, compiling and executing programs, and testing and debugging. The appendixes contain less frequently used information, such as problem determination.

Programmer

IBM System/38 Control Program Facility Reference Manual–Data Description Specifications, SC21-7806

This publication gives detailed descriptions of the entries and keywords needed to describe data base files (both logical and physical) and certain device files (for displays and printers) external to the user's programs on the Data Description Specifications (DDS) form.

For an explanation of the concepts that must be understood to use the Control Program Facility (CPF), see the *CPF Concepts Manual.* The *CPF Programmer's Guide* describes how to apply the data description specifications described in the *CPF Reference Manual–DDS* and the commands described in the *CL Reference Manual.*

Programmer
System Operator
Work Station User

IBM System/38 Source Entry Utility Reference Manual and User's Guide, SC21-7722

The source entry utility (SEU) is part of the Interactive Data Base Utilities (IDU) licensed program. SEU aids the user in entering and maintaining control language statements, source statements for the high-level languages, data description specifications, and utility description specifications.

This publication introduces the purpose and functions of SEU, and describes how to use SEU to create and maintain source members that contain the source records.

Programmer
System Operator
Work Station User

IBM System/38 Data File Utility Reference Manual and User's Guide, SC21-7714

The data file utility (DFU) is part of the Interactive Data Base Utilities (IDU) licensed program. DFU aids the user in entry and updating of data base file records. Menu and prompt displays are available to guide a new work station user in data entry. Additional functions are available for the more experienced user.

This publication explains how to maintain data files by using predefined System/38 data base information.

DP Manager
Programmer
System Operator
Work Station User

IBM System/38 Query Utility Reference Manual and User's Guide, SC21-7724

The query utility is part of the System/38 Interactive Data Base Utilities (IDU) licensed program. Query permits the user to analyze information selected from the data base, and to specify the form in which lists and tabulations are to be displayed or printed, or both. Prompting is used to specify fields, tests, and other necessary information.

This publication introduces the purpose of query functions, and describes how to use query to create reports from information in data base files.

Programmer
System Operator
Work Station User

IBM System/38 Screen Design Aid Reference Manual and User's Guide, SC21-7755

The screen design aid is part of the Interactive Data Base Utilities (IDU) licensed program. This aid provides the application programmer with an interactive approach to designing, creating, and maintaining display record formats and menus.

This publication describes the purpose and function of the screen design aid and how to use the aid.

Programmer

IBM System/38 CPF Graphics Programmer's Guide, SC21-8006

This publication describes how to write CPF graphics application programs. The publication introduces CPF graphics and the Application Programming Interface (API) to graphics, presents Graphics Data Display Manager (GDDM) and Presentation Graphics Routines (PGR) concepts, describes programming considerations and program design, and illustrates CPF graphics with example display screens shown in color.

This manual refers to the *CPF Graphics Reference Manual* for details and specifics about GDDM and PGR.

Programmer

IBM System/38 CPF Graphics Reference Manual, SC21-8007

This publication is a reference manual to be used with the *CPF Graphics Programmer's Guide*. This reference manual includes alphabetical lists of Graphics Data Display Manager (GDDM) calls, Presentation Graphics Routines (PGR), sample programs, conversion and compatibility information, and the IBM-supplied graphics symbol sets (GSS).

In conjunction with the *CPF Graphics Programmer's Guide*, this manual describes the Application Programming Interface (API) to the graphics capabilities of CPF. The programmer should use the *CPF Graphics Programmer's Guide* to learn CPF graphics (made up of the Graphics Data Display Manager (GDDM) and Presentation Graphics Routines (PGR)) and use both of these publications to write CPF graphics application programs.

Programmer
Work Station User

IBM System/38 Advanced Printer Function Utility User's Guide, GC21-7973

The Advanced Printer Function Utility (abbreviated APF) is a tool designed to help you create and maintain customized forms. Using the printing capabilities available on the 5224 and 5225 printers, it appears as if you are using a preprinted form and a printer with a variety of special fonts.

The publication explains how to design the layout of the form, specify fields where special characteristics are to be applied, design those special characteristics, produce blank copies of a form, and merge spooled data with an already defined form. The publication also includes sections containing problem determination procedures, service information, and information on save, restore, and recovery considerations.

Programmer

IBM System/38 Functional Concepts Manual, GA21-9330

This publication is designed to provide:

- An overview of the System/38 concepts
- Definition and description of structures and objects
- A description of specific System/38 functions

The level of information contained in this publication is above that of the individual instruction operational characteristics. Individual instructions are included but only for the purpose of explaining their major function. The details for each instruction are included in the *Functional Reference Manual.*

IBM System/38 users who have CPF, RPG III, IDU and/or their equivalents, will not need this publication.

Programmer

IBM System/38 Functional Reference Manual, GA21-9331 (Volume 1) and GA21-9800 (Volume 2)

This publication is designed to describe the System/38 instruction set and contains a detailed description of each instruction. This publication also contains the specifications for objects, events, exceptions, and describes specialized instructions for source/sink devices.

IBM System/38 users who have CPF, RPG III, IDU, and/or their equivalents, will not need this publication.

For a description of the functions provided by the System/38 instructions, see the *Functional Concepts Manual*.

DP Manager
Programmer
Work Station User

IBM System/38 Ideographic Enhancements Guide, SC21-8027

This manual describes the changes made to System/38 for the ideographic version of the system. IBM has enhanced the Control Program Facility (CPF), including control language (CL) and data description specifications (DDS), so that you can use ideographic data with the system. BASIC, COBOL, and RPG III have also been enhanced so that you can write programs in these languages to process ideographic data. Source entry utility (SEU) has been added so that you can enter ideographic data. This manual provides instructions for using ideographic data with CPF, high-level languages, and SEU.

Different portions of the publication are intended for different readers. Chapter 1 is intended for all readers, as an introduction to the use of ideographic data on the system. Chapter 2 is intended for readers who will perform the configuration of the system. Chapters 3 through 6 are intended for programmers. Chapter 7 is intended for IDU users, and Appendix A is intended for all work station users.

DP Manager
Programmer
Work Station User

IBM System/38 Ideographic Enhancements Guide, N:SC21-7996

This publication describes the adaptations made to System/38 for the ideographic version of the system: support for devices that display and print ideographic characters, and additional CPF, BASIC, COBOL, PL/I, RPG III, and SEU functions for processing ideographic data. The publication also provides instructions for entering ideographic data.

Different portions of the publication are intended for different readers. Chapter 1 is intended for all readers, as an introduction to the use of ideographic data on the system. Chapter 2 is intended for readers who will perform the configuration of the system. Chapters 3 through 6 are intended for programmers. Chapter 7 is intended for IDU users, and Appendix A is intended for all work station users.

This publication is available only in Japan.

Programmer
Work Station User

IBM System/38 Finance Support User's Guide, SC21-9099

This manual describes the function and utilization of the System/38 Finance Support. It assists the programmer in using the financial support and provides reference information to the programmer.

Programmer
Work Station User

IBM System/38 Cryptographic Facility User's Guide, SC21-8026

This manual describes the data security capabilities of the System/38 Cryptographic Facility. It explains how to use the facility and provides reference information for programmers.

Programmer
System Operator
Work Station User

IBM System/38 Data File Utility Ideographic Reference Manual and User's Guide, N:SC18-3013

The data file utility (DFU) is part of the IBM System/38 Interactive Data Base Utilities (IDU) Licensed Program, Program 5714-UT1. This publication describes DFU for users who want to create DFU applications to maintain data files by using predefined data in their System/38 data base, including ideographic data.

The publication introduces the purpose, functions, and components of DFU, and describes how to request DFU, how to design a DFU application, and how to use the function control and command function keys available to DFU users.

DP Manager
Programmer
System Operator
Work Station User

IBM System/38 Query Utility Ideographic Reference Manual and User's Guide, N:SC18-3014

The query utility is part of the IBM System/38 Interactive Data Base Utilities (IDU) Licensed Program, Program 5714-UT1. This publication describes query for users who want to analyze data selected from their System/38 data base, including ideographic data.

The publication introduces the purpose, functions, and organization of query, and describes how to create a query application, how to request query, and how to use the function control and command function keys available to query users.

Coding Material

- Data Description Specifications, GX21-7754
- Data Description Specifications Debugging Template, GX21-7717
- RPG Output Specifications–RPG Telecommunications, GX09-1034
- RPG Input Specifications–RPG Extension and Line Counter Specifications, GX09-1033
- RPG Control and File Description Specifications–RPG Calculation Specifications, GX09-1035
- Translation Table and Alternate Collating Sequence Coding Sheet, GX21-9096
- RPG Debugging Template, GX21-9129
- RPG Auto Report Specifications–RPG Indicator Summary, GX09-1032
- Reformat Utility Specifications, GX21-9393
- COBOL Coding Form, GX28-1464

OPERATING

Programmer
System Operator

IBM System/38 Operator's Guide, SC21-7735

This publication provides the information needed to operate System/38. It tells you how to operate individual devices, how to operate the system as a whole, and how to analyze problems with the system.

Programmer
System Operator

IBM System/38 Operator's Guide and Tabs, SBOF-4767

Order number SBOF-4767 enables the user to order both the *IBM System/38 Operator's Guide* and the tabs for that publication. Both items can be ordered separately.

Programmer
System Operator

IBM System/38 Control Language Reference Manual, SC21-7731

This publication contains a detailed description of the IBM System/38 control language (CL), its syntax, and all its commands. The control language commands are used to request functions of the system's Control Program Facility (CPF).

For an explanation of the concepts that must be understood to use the Control Program Facility, see the *CPF Concepts Manual*. The *CPF Programmer's Guide* describes how to apply the commands described in the *CL Reference Manual* and the data description specifications described in the *CPF Reference Manual—DDS*.

System Operator

IBM System/38 Character Generator Utility User's Guide, N:SC09-1053

This publication describes the character generator utility, a utility which is available only with the ideographic version of System/38, and is intended for use by the person who is responsible for designing, entering, and maintaining the user-defined ideographic characters on such a system.

The publication describes how to define, change, and delete user-defined ideographic characters. The publication also describes how to request printouts of characters and lists messages sent by the utility.

This publication is available only in Japan.

USING

Programmer
Work Station User

IBM System/38 Programmer's/User's Work Station Guide, SC21-7744

This publication provides the information needed to use the system functions of the System/38 when you use the Control Program Facility (CPF) at an interactive work station. This publication is the best place to find a complete description of how to use the programmer and user call menus, command prompting, and system request.

For information describing the operation of the controls, indicators, and keyboards of directly connected work stations, see the *IBM 5251 Display Station Models 1 and 11, IBM 5252 Dual Display Station Operator's Guide,* GA21-9248.

For information describing the operation of the controls, indicators, and keyboards of work stations connected by communications lines, see the *IBM 5251 Display Station Models 2 and 12 Operator's Guide,* GA21-9323.

DP Manager
Programmer
System Operator
Work Station User

IBM Enhanced Keyboard Template, GX09-1038

This keyboard template fits above the top row of keys on display stations that have the IBM Enhanced Keyboard. It contains command key information for the System/38 system help, office products, utilities, communications, and BASIC help.

DP Manager
Programmer
System Operator
Work Station User

IBM System/38 Keyboard Template, GX21-7756

This template is for use with the following licensed programs:

- Control Program Facility (CPF)
- Interactive Data Base Utilities
  - Source entry utility (SEU)
  - Data file utility (DFU)
  - Query utility
  - Screen design aid utility (SDA)
- 3270 Emulation
- Advanced Printer Functions Utility (APF)

- BASIC

- OFFICE/38
  - Administrative Management
  - Text Management
  - Business Graphics Utility
  - Personal Services/38
    - CALENDARS Display
    - Text Edit Display

The template consists of panels that fit on the keyboard above the top rows of keys on the IBM 5251, 5252, 5291, or 5292 display stations. The panels contain blank spaces for user-defined command function key applications as well as noting what command function keys are used by that particular licensed program.

DP Manager
Programmer
System Operator
Work Station User

IBM 3180 Display Station Keyboard Template (System/38), GX09-1036

This template is for use with the following licensed programs:

- Control Program Facility (CPF)

- Interactive Data Base Utilities
  - Source entry utility (SEU)
  - Data file utility (DFU)
  - Query utility
  - Screen design aid utility (SDA)

- 3270 Emulation

- Advanced Printer Functions Utility (APF)

- BASIC

- OFFICE/38
  - Administrative Management
  - Text Management
  - Business Graphics Utility
  - Personal Services/38
    - CALENDARS Display
    - Text Edit Display

The template consists of panels that fit on the keyboard around the top two rows of keys on the IBM 3180 Display Station. The panels contain blank spaces for user-defined command function key applications as well as noting what command function keys are used by that particular licensed program.

DP Manager
Programmer
System Operator
Work Station User

IBM System/38 OFFICE/38–Text Management: User's Guide and Reference Manual, SC09-1022

This publication describes in detail how to use the Text Management program to create, revise, check the spelling of, and print documents such as letters, memos, and forms. This publication contains a detailed description of the functions available in the Text Management program and examples of their uses.

DP Manager
Programmer
System Operator
Work Station User

IBM System/38 OFFICE/38–Text Management Reference Card, SC09-1110

This quick reference card summarizes the function of each CF key, and outlines the print control commands used when working with System/38 OFFICE/38 Text Management.

DP Manager
System Operator
Work Station User

IBM System/38 OFFICE/38–Learning by Example: Working with Text Management, SC09-1109

This learning by example manual takes you through a series of tasks that will help you learn the functions of OFFICE/38 Text Management.

DP Manager
Programmer
System Operator
Work Station User

IBM System/38 OFFICE/38–Administrative Management: Using and Managing Administrative Management, SC09-1040

This publication can help you develop your skills using Administrative Management (ADM). Part 1 shows you how to use the full capabilities of Administrative Management: how to use Calendar Management to schedule facilities and maintain individual appointment calendars, how to use Correspondence Control to get information about documents, how to use the Message Facility to send and receive brief messages, how to update a directory, and how to administer your own enrollment record, calendars, calendar groups, and document logs using ADM Administration. Part 2 contains information for the ADM administrator, and Part 3 contains reference information.

Work Station User

IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Handling Mail, SC09-1076

This publication gives a brief introduction to Personal Services/38 and the handle mail function. The main purpose of this publication is to give examples that show how to do all the main tasks in the handle mail function.

The main tasks are viewing mail, storing mail details, (such as the date received and the subject), printing mail, filing mail, resending mail, deleting mail, viewing the status of mail that has been sent, logging hardcopy mail (mail that is not sent electronically), and handling mail on behalf of another person, who has delegated others to handle the mail.

For an introduction to Personal Services/38, including a description of the functions, how to use the online help information, and how to use the work station, read the *IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Primer*, SC09-1069.

Work Station User

IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Finding and Handling Filed Documents, SC09-1077

This publication gives a brief introduction to Personal Services/38 and the find/handle filed documents function. The main purpose of this publication is to give examples that show how to do all the main tasks in the find/handle filed documents function.

A filed document is a mail item that is filed, a text document that is filed, or a hardcopy mail item that is logged.

The main tasks involve locating documents using the stored details as search criteria, creating and maintaining lists of documents, printing documents and document lists, and sending documents.

For an introduction to Personal Services/38, including a description of the functions, how to use the online help information, and how to use the work station, read the *IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Primer*, SC09-1069.

Work Station User

IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Sending Messages and Memos, SC09-1078

This publication gives a brief introduction to Personal Services/38, the send message and the create and send memo functions. The main purpose of this publication is to give examples that show how to do all the main tasks in the send message and the create and send memo functions.

The main tasks are creating messages, sending messages, and checking the status of the delivery of messages. The main tasks for memos are the same as the tasks for messages.

For an introduction to Personal Services/38, including a description of the functions, how to use the online help information, and how to use the work station, read the *IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Primer*, SC09-1069.

Work Station User

IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Editing Text Documents, SC09-1079

This publication gives a brief introduction to Personal Services/38 and the part of the work with text documents function that involves editing text documents. The main purpose of this publication is to give examples that show how to do all the main tasks involved with editing text documents.

The main tasks are adding, changing, and deleting lines, revising the paragraph formats of text documents, and checking the spelling in text documents.

For examples of the other activities in the working with text documents function, see *IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Handling Text Documents*, SC09-1080.

For an introduction to Personal Services/38, including a description of the functions, how to use the online help information, and how to use the work station, read the *IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Primer*, SC09-1069.

Work Station User

IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Handling Text Documents, SC09-1080

This publication gives a brief introduction to Personal Services/38 and the part of the work with text documents function that involves creating and handling text documents. The main purpose of this publication is to give examples that show how to do all the main tasks involved in creating and handling text documents.

The main tasks are creating text documents, creating and completing form documents, printing text documents, and viewing the printed version of a text document on a display.

For examples of the other activities in the working with text documents function, see *IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Editing Text Documents*, SC09-1079.

For an introduction to Personal Services/38, including a description of the functions, how to use the online help information, and how to use the work station, read the *IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Primer*, SC09-1069.

Work Station User

IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Working with Calendars, SC09-1081

This publication gives a brief introduction to Personal Services/38 and the working with calendars function. The main purpose of this publication is to give examples that show how to do all the main tasks in the working with calendars function.

The main tasks are viewing the different types of calendars, scheduling appointments, printing calendars, and doing these same activities for another person.

For an introduction to Personal Services/38, including a description of the functions, how to use the online help information, and how to use the work station, read the *IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Primer*, SC09-1069.

Work Station User

IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Working with Personal Directories, SC09-1082

This publication gives a brief introduction to Personal Services/38 and the working with personal directories function. The main purpose of this publication is to give examples that show how to do all the main tasks in the working with personal directories function.

The main tasks are viewing directories, searching for a specific entry in a directory, creating directories, revising directories, and doing the above activities on behalf of another person who has authorized others to work with his directories.

For an introduction to Personal Services/38, including a description of the functions, how to use the online help information, and how to use the work station, read the *IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Primer*, SC09-1069.

Work Station User

IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Working with PC Files, SC09-1102

This publication gives a brief introduction to Personal Services/38 and the working with personal computer (PC) files function. The main purpose of this publication is to give examples that show how to do all the main tasks in the working with PC files function.

The main tasks are:

- File PC files in the document library
- Sending PC files to someone else in your office network
- Deleting PC files from a virtual disk
- Displaying a list of PC files and directories
- Displaying a list of virtual disks in a library

For an introduction to Personal Services/38, including a description of the functions, how to use the online help information, and how to use the work station, read the *IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Primer*, SC09-1069.

Work Station User

IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Creating and Maintaining Distribution Lists, SC09-1117

This publication is part of the Personal Services/38 Learning by Example library. The task oriented examples illustrate the use of the creating and maintaining distribution lists function. When sending a mail item, the recipients user ID must be specified so that Personal Services/38 knows where to send the mail. Distribution lists can be created to save time when sending mail to groups of recipients.

This publication describes the purpose and function of this option and how to maintain distribution lists once they have been created.

Work Station User

IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Administering, SC09-1083

This publication gives a brief introduction to Personal Services/38 and the administering function. The main purpose of this publication is to give examples that show how to do all the main tasks in the administering function.

The main tasks are enrolling people in Personal Services/38, creating and maintaining information related to security, and creating and maintaining objects, such as distribution lists, directories, and calendars.

For an introduction to Personal Services/38, including a description of the functions, how to use the online help information, and how to use the work station, read the *IBM System/38 OFFICE/38–Personal Services/38 Learning by Example: Primer*, SC09-1069.

Programmer
Work Station User

IBM System/38 OFFICE/38–Business Graphics Utility: User's Guide and Reference Manual, SC09-1059

This publication contains information to help you use the Business Graphics Utility (BGU). It is divided into two sections. The first section (the user's guide) has introductory material to help you become familiar with graphics and BGU. The second section (the reference manual) contains detailed reference information on how to use the functions available with BGU.

COMMUNICATIONS

Programmer
System Operator

IBM System/38 Data Communications Programmer's Guide, SC21-7825

This publication is for the programmer who is responsible for implementing data communications functions on System/38.

This guide describes the differences between a System/38 with communications functions and one without. It discusses aspects to be considered by a programmer when writing communications applications using high-level languages and using different configurations (remote work stations, switched/nonswitched lines, and so on).

This publication also describes the level of communications support for the following:

- System/38 as a logical unit type 1 device (LU1) communicating with CICS/VS and IMS/VS using synchronous data link control (SDLC) and systems network architecture (SNA)
- System/38 in a BSC network (as a host or terminal, or on a program-to-program basis)
- System/38 as a peer device in an advanced program-to-program communications (APPC) network

This guide also contains error recovery information.

Programmer
Work Station User

IBM System/38 Remote Job Entry Facility User's Guide, SC21-7914

This publication contains information for the Remote Job Entry Facility programmer on how to specify Control Program Facility and Remote Job Entry Facility options and define the characteristics of the System/38 data processing resources to the Remote Job Entry Facility.

This publication:

- Instructs the RJEF user who is starting, controlling, and terminating a remote job entry session through the functions of the Remote Job Entry Facility
- Explains the Remote Job Entry Facility command and display support

Programmer

IBM System/38 Distributed Data Management User's Guide, SC21-8036

This manual is intended for users of the System/38 Distributed Data management (DDM) licensed product. It contains System/38 DDM concepts, information about preparing for DDM communications, and all the DDM-related programming information needed by the System/38 programmer to prepare the system to access data in remote files, and control access to local files by remote systems.

Programmer

IBM System/38 Implementation of IBM Communications Architectures, SC21-8033-0

This document serves as a reference for the System/38 implementation of the communications architectures. It simply states the subset or superset of the architecture base that is implemented on the System/38.

This manual should be used with the appropriate architecture manuals. Using this information, the system programmer/designer can:

- Determine how the System/38 can be used with other systems and LU types in a communications network.
- Determine the communications function supported by the System/38 that can be used in a communications network.
- Make modifications to existing networks to allow other systems and devices to take advantage of System/38 communications functions and programs.

This communication architectures discussed in this publication are:

- System Network Architecture Logical Unit 6.2 (LU6.2)
- System Network Architecture Distribution Services (SNADS)
- Document Interchange Architecture (DIA)
- Distributed Data Management Version 1.0 (DDM)

Programmer
System Operator

IBM System/38 Communications Administrator's Guide, SC21-8035

This publication is intended for the network administrator or system operator who is responsible for implementing and administering data communications applications on a System/38. This publication may also be useful to a programmer who works with data communications functions on the System/38. The reader is expected to use applicable System/38 CL (control language) commands.

The purpose of this publication is to describe:

- The function and administration of an SNA Distribution Services (SNADS) application and the system tables to set up the distribution function
- The purpose and use of a system distribution directory and related distribution lists
- The function and administration of document interchange
- The function and administration of object distribution
- The function and administration of terminal nodes

Programmer
Work Station User

IBM System/38 3270 Emulation Reference Manual and User's Guide, SC21-7961

This publication tells programmers how to configure lines, control units and devices for use with 3270 device emulation, and tells work station users how to operate a System/38 work station that is emulating a 3270 device. One section of the manual describes how to use 3270 device emulation with the BSC (binary synchronous communications) protocol. This section also describes how to use the program interface to communicate with a host system on a BSC network. Another section of the manual describes how to use 3270 device emulation using the SDLC (synchronous data link control) protocol in an SNA (systems network architecture) communications network.

DP Manager
Programmer
System Operator
Work Station User

IBM System/38 Bibliography, GH30-0233

This publication describes technical publications in support of System/38 machine components, system programming, application programming, and other supplemental information (for example, forms and program listings).

For information about System/38 education courses, contact your local IBM representative.

Programmer
System Operator

IBM System/38 Programming Reference Summary, SC21-7734

This publication is designed to help the programmer who needs a quick reference when working with System/38.

This publication contains summaries (no explanations) of information (commands, summary charts, system-supplied objects) from the System/38 licensed programs.

Programmer
System Operator

IBM System/38 COBOL Reference Summary, SC21-7781

This pocket size publication provides a convenient reference of all the formats of COBOL clauses and statements. These formats are arranged by COBOL division, as used in a program. Several other items that are frequently referenced by an experienced COBOL programmer are also included.

Programmer
System Operator

IBM System/38 BASIC Reference Summary, SC21-9047

This pocket size publication provides a convenient reference of all the formats of BASIC commands and statements. Command and statement formats are listed alphabetically in separate sections. This publication includes frequently referenced information such as the syntax for the control language commands used for BASIC, and the BASIC intrinsic functions and reserved functions.

Programmer
System Operator

IBM System/38 PL/I Reference Summary, SX09-1026

This publication contains syntax and summary information for System/38 PL/I.

Programmer
System Operator

IBM System/38 Problem Determination Guide, SC21-7876

This publication contains procedures for resolving system problems that are indicated by error messages, operator/service panel lights, interactive/batch jobs or spooling functions that do not work as expected, or devices that do not work as expected. The publication also describes CSNAP and online test procedures for analyzing communications problems.

Programmer
System Operator

IBM System/38 Messages Guide: CPF, RPG III, and IDU, SC21-7736

This publication contains information about CPF, RPG III, and IDU messages issued on System/38. It lists and explains the messages and contains recovery procedures for messages that require an action.

Programmer
System Operator

IBM System/38 Messages Guide and Tabs, SBOF-4768

Order number SBOF-4738 enables the user to order both the *IBM System/38 Messages Guide: CPF, RPG III, and IDU* and the tabs for that publication at the same time. Both items can be ordered separately.

Programmer
System Operator

IBM System/38 Messages Guide: COBOL, SC21-7823

This publication contains additional information about the COBOL messages issued on System/38. It lists and explains the messages and contains recovery procedures for messages that require an action.

Programmer
System Operator

IBM System/38 Messages Guide: BASIC, SC21-9048

This publication contains additional information about the BASIC messages issued on System/38. It lists and explains the messages and contains recovery procedures for messages that require an action.

Programmer
System Operator

IBM System/38 Messages Guide: PL/I, SC09-1052

This publication lists all PL/I messages and gives recovery procedures for messages requiring an action.

Programmer
System Operator

IBM System/38 OFFICE/38–Text Management Messages, SC09-1023

This publication provides information about Text Management messages. It contains a list of all Text Management messages and gives recovery procedures for messages requiring an action.

Programmer
System Operator

IBM System/38 OFFICE/38–Administrative Management Messages Guide, SC09-1041

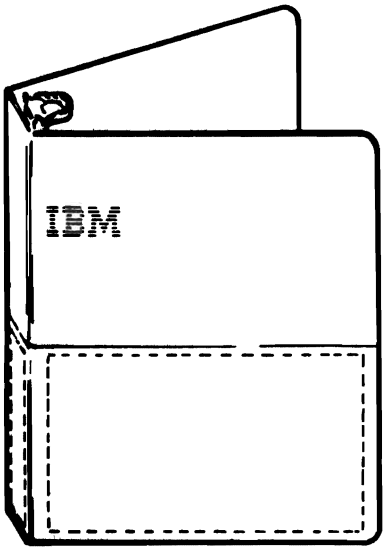
This publication provides information about Text Management messages. It contains a list of all Administrative Management messages and gives recovery procedures for messages requiring an action.

ORGANIZING

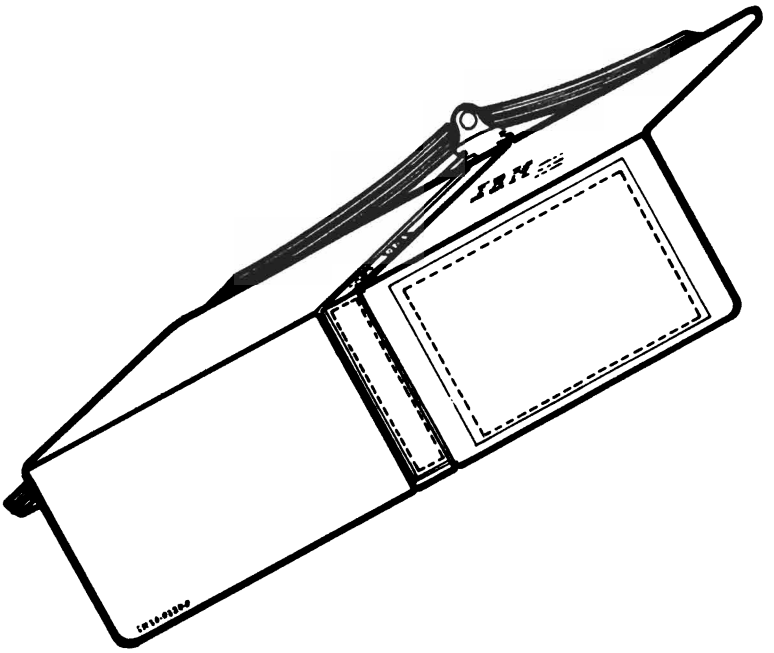
Binders, Labels, and Tabs

Binders

Two types of binders are available for System/38 publications; the universal 3-ring binder is available in 1-inch, 1 1/2-inch, and 2-inch size, and the 3-ring universal easel binder is available in 1-inch and 2-inch size.



Universal 3-Ring Binder



Universal Easel Binder

Order Number	Type of Binder	Size in Inches
SR30-0329	Universal 3-ring binder	1
SR30-0330	Universal 3-ring binder	1 1/2
SR30-0331	Universal 3-ring binder	2
SR30-0324	Universal easel binder	1
SR30-0327	Universal easel binder	2

Binder recommendations for the following System/38 publications are:

Note: The recommended binders listed are the universal 3-ring binders. If you desire the universal easel binder shown on page 1-42, you can substitute the recommended binder with the appropriate sized universal easel binder.

Guide to Publications

SR30-0329 – 1-inch 3-ring universal

CPF Programmer's Guide (This publication requires three binders.)

SR30-0331 – 2-inch 3-ring universal

Communications Administrator's Guide

SR30-0329 – 1-inch 3-ring universal

CL Reference Manual (This publication requires three binders.)

SR30-0331 – 2-inch 3-ring universal

CPF Reference–DDS

SR30-0331 – 2-inch 3-ring universal

System/38 Operator's Guide

SR30-0330 – 2-inch 3-ring universal

Programmer's/User's Work Station Guide

SR30-0329 – 1-inch 3-ring universal

Guide to Program Product Installation and Device Configuration

SR30-0330 – 1 1/2-inch 3-ring universal

RPG III Reference Manual and Programmer's Guide (This publication requires two binders.)

SR30-0330 – 1 1/2-inch 3-ring universal

IDU Reference Manuals–SEU, SDA

SR30-0331 – 2-inch 3-ring universal

IDU Reference Manuals–DFU, Query

SR30-0331 – 2-inch 3-ring universal

Functional Reference Manual (This publication requires two binders.)

SR30-0330 – 1 1/2-inch 3-ring universal

Functional Reference Manual–Volume 2

SR30-0331 – 2-inch 3-ring universal

Problem Determination Guide (This publication requires two binders.)

SR30-0330 – 1 1/2-inch 3-ring universal

Data Communications Programmer's Guide (This publication requires two binders.)

SR30-0330 – 1 1/2-inch 3-ring universal

COBOL Reference Manual and Programmer's Guide

SR30-0331 – 2-inch 3-ring universal

Application Example I

SR30-0329 – 1-inch 3-ring universal

RJEF Planning and Installation and User's Guide

SR30-0330 – 1 1/2-inch 3-ring universal

BASIC Reference Manual and Programmer's Guide

SR30-0330 – 1 1/2-inch 3-ring universal

OFFICE/38 Text Management: Getting Started, User's Guide, and Messages

SR30-0331 – 1 1/2-inch 3-ring universal

OFFICE/38 Administrative Management: Getting Started, User's Guide, and Messages

SR30-0331 – 1 1/2-inch 3-ring universal

PL/I Reference Manual and Programmer's Guide

SR30-0331 – 2-inch 3-ring universal

CPF Graphics Programmer's Guide and Reference Manual

SR30-0331 – 2-inch 3-ring universal

Business Graphics Utility User's Guide and Reference Manual

SR30-0329 – 1-inch 3-ring universal

Finance Support User's Guide

SR30-0329 – 1-inch 3-ring universal

Distributed Data Management User's Guide

SR30-0329 – 1-inch 3-ring universal

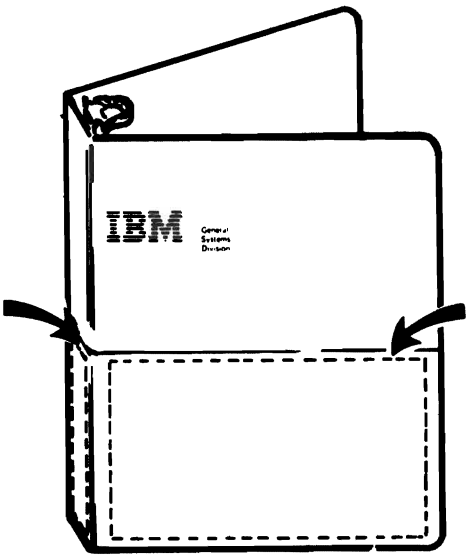
3270 Device Emulation Guide

SR30-0329 – 1-inch 3-ring universal

Labels

Labels are available to insert in the clear pockets on the binders for System/38 publications. The order number for the labels is SX21-9411.

Binder Label



Binder labels are provided for the System/38 publications listed previously under *Binders*.

Tabs

Prelabeled insert tabs are available to separate the sections of the following publications:

- *IBM System/38 Operator's Guide* (Tab Order Number SX21-9319)
- *IBM System/38 Messages Guide: CPF, RPG III, and IDU* (Tab Order Number SX21-9320)

Device-Related Publications

The following publications are related to System/38 use, but are not part of the System/38 library:

- *IBM Input/Output Equipment Installation Manual*, GC22-7064
- *IBM 3180 Display Station Model 2 User's Guide*, GA21-9469
- *IBM 3203 Printer Model 5 Component Description and Operator's Guide*, GA33-1529
- *IBM 3262 Printer Models A1 and B1 Component Description and Operator's Guide*, GA33-1530
- *IBM 3410/3411 Component Summary*, GA32-0022
- *IBM 3430 Magnetic Tape Subsystem Introduction*, GA32-0069
- *IBM 3430 Magnetic Tape Subsystem Description*, GA32-0076
- *IBM 3430 Operator's Guide*, GA32-0079
- *IBM 4214 Printer Model 2 Operating Guide*, GC31-2581
- *IBM 4245 Printer, Models 12, 20, Information Manual*, GA33-1579
- *IBM 5211 Printer Models 1 and 2 Component Description and Operator's Guide*, GA21-3658
- *IBM 5219 Printer Operator's Guide*, GA23-1009
- *IBM 5224 Printer Operator's Guide*, GA34-0092
- *IBM 5225 Models 1, 2, 3, and 4 Printer Operator's Guide*, GA34-0054
- *IBM 5225 Models 11 and 12 Operator's Guide*, GA34-0089
- *IBM 5250 Information Display System Planning and Site Preparation Guide*, GA21-9337
- *IBM 5251 Display Station Models 1 and 11, IBM 5252 Dual Display Station Operator's Guide*, GA21-9248
- *IBM 5251 Display Station Models 2 and 12 Operator's Guide*, GA21-9323
- *IBM 5251 Display Station Models 1 and 11, IBM 5252 Dual Display Station Keyboard Template*, GX21-9266
- *IBM 5251 Display Station Models 2 and 12 Keyboard Template*, GX21-9327
- *IBM 5256 Printer Operator's Guide*, GA21-9260
- *IBM 5262 Printer Model 1 Operator Guide*, GA24-3976

- *IBM 5291 Models 1 and 2 Operator's Guide*, GA21-9409
- *IBM 5292 Color Display Station Operator's Information Guide*, GA21-9416
- *IBM 5292 Color Display Station Programmer's Guide to Using Color*, GA21-9413
- *IBM 5294 Control Unit Operator's Guide and Operating Procedures*, GA21-9370
- *IBM 5424 and 5425 Multi-Function Card Units Operator's Guide and Programmer's Reference Manual*, GA21-9167
- *IBM 7372 Color Plotter Guide to Publications*, GA23-0157

Section 2. Master Index

The master index combines the entries from the indexes of frequently used System/38 publications. Using the master index can significantly shorten the time it takes to find information needed to solve a problem.

For example, if you want to know more about a particular topic, you should use the master index to find out which System/38 publication(s) contain information about that topic.

The master index contains entries from the following publications:

1. *IBM System/38 Guide to Program Product Installation and Device Configuration*, GC21-7775-7
2. *IBM System/38 Control Program Facility Concepts Manual*, GC21-7729-2 and TNL GN21-8278
3. *IBM System/38 Control Program Facility Programmer's Guide*, SC21-7730-9
4. *IBM System/38 Control Language Reference Manual*, SC21-7731-9
5. *IBM System/38 Control Program Facility Reference Manual–Data Description Specifications*, SC21-7806-8
6. *IBM System/38 RPG III Reference Manual and Programmer's Guide*, SC21-7725-8
7. *IBM System/38 Data File Utility Reference Manual and User's Guide*, SC21-7714-8
8. *IBM System/38 Source Entry Utility Reference Manual and User's Guide*, SC21-7722-8
9. *IBM System/38 Query Utility Reference Manual and User's Guide*, SC21-7724-9
10. *IBM System/38 Screen Design Aid Reference Manual and User's Guide*, SC21-7755-5
11. *IBM System/38 Operator's Guide*, SC21-7735-7
12. *IBM System/38 Programmer's/User's Work Station Guide*, SC21-7744-6
13. *IBM System/38 COBOL Reference Manual and Programmer's Guide*, SC21-7718-7
14. *IBM System/38 Data Communications Programmer's Guide*, SC21-7825-6
15. *IBM System/38 Problem Determination Guide*, SC21-7876-6
16. *IBM System/38 Application Example I*, SC21-7881-2
17. *IBM System/38 Remote Job Entry Facility Planning and Installation Guide*, SC21-7924-4
18. *IBM System/38 Remote Job Entry Facility User's Guide*, SC21-7914-3
19. *IBM System/38 BASIC Reference Manual and Programmer's Guide*, SC21-9046-3
20. *IBM System/38 3270 Emulation Reference Manual and User's Guide*, SC21-7961-2
21. *IBM System/38 PL/I Reference Manual and Programmer's Guide*, SC09-1051-2
22. *IBM System/38 Distributed Data Management User's Guide*, SC21-8036-0
23. *IBM System/38 Communications Administrator's Guide*, SC21-8035-0

HOW TO USE THE MASTER INDEX

Each entry in the master index is followed by a number or numbers. Each number corresponds to one of the publications listed on page 2-1. A *key* (with a shortened version of the publication title) at the bottom of each odd-numbered page indicates which publication is associated with which number.

For example, to find information about spooling, find the spooling entry in the master index:

```
spooling
    command list  3
    commands  4
    description  3
    device emulation  20
    information for a device file  3
```

The numbers that follow the spooling entries correspond to the numbers of the publications listed in the *key*:

Key

1. Installation and Device Configuration
2. CPF Concepts
3. CPF Programmer's Guide
4. CPF Reference–CL
5. CPF Reference–DDS
6. RPG III Reference
7. DFU Reference
8. SEU Reference
9. Query Reference
10. SDA Reference
11. Operator's Guide
12. Programmer's/User's WS Guide
13. COBOL Reference
14. Data Communications Guide
15. Problem Determination Guide
16. Application Example I
17. RJEF Installation Planning Guide
18. RJEF Programmer's Guide
19. BASIC Reference
20. 3270 Emulation
21. PL/I Reference
22. DDM User's Guide
23. Communications Admin. Guide

Once you have determined which publication contains the spooling information you need, use the index of that publication to find the information.

- (see continuation, hyphen, minus sign)
/ (see slash)
//DATA (Data command)
  description 4, 16
  examples 3
//ENDJOB (End Job command)
  description 4
  example 11, 16
//JOB (Job command)
  description 4
  example 3, 11, 16
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-RSP, return data 14
. (see decimal point, period)
  powering off and on 11
... (see ellipsis)
< (see delete, function, less-than sign)
((see left parenthesis)
( ) (see parentheses)
+ (see add after, continuation, plus sign)
+++ (additional parameter displays) 12
| (see logical OR operator; see statement)
|| (see concatenation operator)
| % (see exclamation point)
| % % (see double exclamation point)
& (see ampersand)
$ (see currency symbol, dollar sign, fixed currency symbol)
* (see asterisk)
** (see double asterisk)
*** (see triple asterisk)
*ANY default parameter 23
*ANY *ANY default parameter 23
*DESCEND (see JDUPSEQ)
) (see right parenthesis)
¬ (see logical NOT operator)
, (see comma)
% (see percent sign)
%SUBSTRING (see substring built-in function)
%SWITCH 3
_ (see underscore)
> (see greater-than sign, insert function)
: (see colon)
:: (see entry symbol)
(see blank)
(see number sign, pound sign)
@ (see at sign)
' (see apostrophe)
= (see equal sign)
== (see pseudo-text delimiter)
· (see braces)
[ ] (see brackets)

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Section 3. Glossary

The System/38 glossary defines terms that are used in the customer documentation for System/38. The *IBM Vocabulary for Data Processing, Telecommunications, and Office Systems*, GC20-1699, contains definitions of general data processing terms.

The System/38 glossary includes definitions developed by the American National Standards Institute (ANSI) and the International Organization for Standardization (ISO). This material is reproduced from the *American National Dictionary for Information Processing*, copyright 1977 by the Computer and Business Equipment Manufacturers Association. Copies of this dictionary may be purchased from the American National Standards Institute, 1430 Broadway, New York, New York 10018. Definitions from this dictionary are identified by (ANSI) at the beginning of the definition.

abbreviated combined relation condition. In COBOL, the combined condition that results from the explicit omission of a common subject or a common subject and common relational operator in a consecutive sequence of relation conditions.

abbreviated install. A process in which the object verification and damage correction part of CPF installation is done without replacing the previously installed version of CPF. Contrast with *normal install.*

abnormal termination. System termination by a means other than the successful execution of the Power Down System (PWRDWNSYS) command. See also *system termination* and *normal termination.*

absolute value. The numeric value of a real number regardless of its sign.

access code. A 4-digit decimal number, assigned to a document by the primary owner when the document is filed, that determines which users other than the primary and secondary owners are to be allowed to access the document.

access mode. In COBOL, the manner in which files are referenced by the computer. Access can be sequential (records are referred to one after another in the order in which they appear on the file), it can be random (the individual records can be referred to in a nonsequential manner), or it can be dynamic (records can be accessed sequentially or randomly, depending on the form of the specific input/output request).

access path. The means by which CPF provides a logical organization to the data in a data base file so that the data can be processed by a program. See also *arrival sequence access path* and *keyed sequence access path.*

access path journaling. A journaling process that protects access paths from having to be rebuilt following an abnormal termination of the system.

accounting code. A 15-character field, assigned to a job when it enters the system, that is used to record system resource usage for the job when job accounting is active.

accounting entry. An entry made in journal QACGJRN.QSYS that contains job resource or printer resource usage statistics for job accounting purposes.

accounting level. A system value indicating the type of data to be journaled when job accounting is active.

accounting segment. The period of time during which an accounting entry's statistics were gathered, beginning when the job starts or when the job's accounting code was last changed, and ending at the next change of the job's accounting code or when the job ends.

accumulating. The process of totaling the value of a particular field as records are being processed.

ACF. See *Advanced Communications Function.*

acknowledgment character. (1) In BSC, a transmission control character that is sent as a positive response to a data transmission. (2) In System/38 RJEF, a transmission control character *sequence* that is sent as a positive response to a data transmission.

ACK0. In BSC, the even-numbered positive acknowledgment character. The ACK0 character indicates that text was received without transmission errors. See *acknowledgment character.*

ACK1. In BSC, the odd-numbered positive acknowledgment character. The ACK1 character indicates that text was received without transmission errors. See *acknowledgment character.*

acquire program device operation. An operation that makes a program device eligible for I/O operations. Contrast with *release program device operation.*

action item. In Personal Services/38, a piece of mail that requires an action or an answer (that is, has a due date) but has not yet been answered.

active file. A diskette file, or tape file whose expiration date is greater than the system date.

active group job. A group job that has not been suspended by the Transfer to Group Job (TFRGRPJOB) command.

active record. Any record format that is currently displayed or an active subfile record.

active subfile. A subfile in which a put operation has been issued to the subfile record format or to the subfile control record format with the DDS keyword SFLINZ in effect.

active subfile record. A record that has been added to the subfile by a put operation, or a record that was initialized as active by the DDS keyword SFLINZ.

activity level. An attribute of a storage pool or the system that specifies the maximum number of jobs that can execute concurrently in the storage pool or in the system.

activity trail. A record of operations that is used to identify what activities have been done, the order in which they were done, and who performed the activities.

ACTLU. An SNA command used to activate the logical unit.

ACTPU. An SNA command used to activate the physical unit.

actual decimal point. In COBOL and BASIC, the physical representation—using either of the decimal point characters (. or ,)—of the decimal point position in a data item. The actual decimal point appears in printed reports and requires a storage position in a data item. Contrast with *assumed decimal point.*

actuator arm. The mechanism within an auxiliary storage device which provides access to a unit of the auxiliary storage device. Also see *unit.*

add rights. The authority to add an entry to an object. Contrast with *delete rights*; see also *read rights*, and *update rights.*

additive attribute. In PL/I, a file description attribute that must be stated explicitly or implied by another explicitly stated attribute. Contrast with *alternative attribute.*

address. (1) The location in the storage of a computer where particular data is stored. Also, the digits that identify such a location. (2) In data communications, the unique code assigned to each device or system work station connected to a network.

address regeneration. The process of restoring internal storage addresses when available storage addresses have been used.

addressability. The ability to locate an object in online storage.

addressee. A name, which identifies an individual, that is used when distributing documents or mail. See also *user ID.*

adjust. To move text so that it fits between the defined left and right margins.

ADM. See *administrative management.*

ADM administrator. An administrator for OFFICE/38 Text Management.

administrative management. An IBM-supplied OFFICE/38 program that facilitates such common office tasks as the creation and maintenance of document logs, calendar, message-processing, and dictionary functions. Abbreviated ADM.

administrator. Any user who has administrator's special authority in the user profile. The administrator enrolls users in the system distribution directory. For office products such as Personal Services/38, the administrator also has other duties, such as saving and restoring documents in the document library, assigning document authority, and managing access codes and access code authority.

adopted authority. Object rights available to a user profile for the duration of the execution of a program that was created with the USRPRF(*OWNER) option.

Advanced Communications Function. A group of IBM products that use the concepts of SNA, including distribution of function and resource sharing. Abbreviated ACF.

Advanced Peer-to-Peer Networking. A communications feature that routes data in a network between two or more APPC systems that are not directly attached. Abbreviated APPN.

advanced program-to-program communications. Data communications support that allows a System/38 to communicate with other systems having compatible communications support. APPC is the System/38 implementation of the SNA/SDLC LU6.2 protocol. Using APPC, System/38 can start programs on another system, or another system can start programs on the System/38.

after-image. The image of a record in a physical file member after the data has been modified by a write or an update operation. Contrast with *before-image.*

AID. See *attention identifier.*

AIPL. See *alternative initial program load.*

alert. An SNA architected error message that the System/38 sends to the System Services Control Point (SSCP) at the host system.

alert control unit. The host control unit name specified within the CHGNETA command by the ALRCTLU (SYSMILW) parameter.

alert focal point. The node of a network that has been specified to act for the other nodes as the forwarding agent to the System Services Control Point (SSCP) at the host system.

allocate. To assign a resource for use in performing a specific task. Contrast with *deallocate.*

allocated variable. In PL/I, a variable to which storage has been assigned.

allowable resources. Attributes of a process that identify which resources the process is allowed to allocate. Some of these attributes are obtained at process creation time from the user profile (maximum resources).

alphabet-name. In COBOL, a user-defined word, in the SPECIAL-NAMES paragraph of the Environment Division, that names a character set and/or collating sequence.

alphabetic character. (1) Any one of the letters A through Z (uppercase and lowercase) or one of the characters #, $, or @. (2) In COBOL, a character that is one of the 26 uppercase letters of the alphabet, or a space. (3) In BASIC, a character that is one of the 26 uppercase or lowercase letters of the alphabet.

alphameric. See *alphanumeric characters.*

alphameric character. Any one of the alphabetic characters, one of the digits 0 through 9, or the character _ (underscore) as defined in CPF.

alphanumeric character. In COBOL, any character in the computer's character set.

alphanumeric edited item. In COBOL, an alphanumeric data item whose PICTURE character string contains at least one B, 0, or /.

Alt IMPL. See *alternative initial microprogram load.*

Alt IMPL Abbr. See *alternative initial microprogram load abbreviated.*

alternate collating sequence. A collating sequence that differs from the normal collating sequence or that allows two or more characters to be considered equal. See *collating sequence.*

alternating array or table. In RPG, two arrays or two tables that are loaded together.

alternative attribute. In PL/I, a file description attribute that is chosen from a group of attributes. Contrast with *additive attribute.*

alternative initial microprogram load. The process of loading the System/38 microprogramming code from diskettes (rather than auxiliary storage) and then activating the code. Abbreviated Alt IMPL on the operator/service panel.

alternative initial microprogram load abbreviated. The process of loading the System/38 microprogramming code from a diskette (rather than auxiliary storage) and then activating the code to perform system startup, bypassing certain hardware tests. Abbreviated Alt IMPL Abbr on the operator/service panel.

alternative initial program load. A process, when combined with the IMPL sequence, that prepares the system for operation and installs CPF from diskette magazine or tape drive. Abbreviated AIPL on the operator/service panel.

American National Standard Code for Information Interchange. The standard code used for information interchange between data processing systems, data communications systems, and associated equipment. The code uses a coded character set consisting of 7-bit coded characters (8 bits including parity check). The set consists of control characters and graphic characters. Abbreviated ASCII.

American National Standards Institute. An organization sponsored by the Computer and Business Equipment Manufacturers Association for the purpose of establishing voluntary industry standards. Abbreviated ANSI.

AND relationship. The specification of conditioning indicators so that the operation is performed only when all conditions are met.

ANSI. See *American National Standards Institute.*

APAR. See *authorized program analysis report.*

API. See *application program interface.*

APPC. See *advanced program-to-program communication.*

application. (1) A particular data processing task, such as an inventory control application or a payroll application. (2) In IDU, specialized program created by IDU from user input.

application program. A program used to perform a particular data processing task such as inventory control or payroll.

application program interface. A functional interface that allows an application program written in a high-level language to access specific data or functions. Abbreviated API.

apply. In journaling, to place after-images of records into a physical file member. The after-images are recorded as entries in a journal. Contrast with *remove*.

APPN. See *Advanced Peer-to-Peer Networking*.

appointment alarm. An audible alarm that reminds a user about an appointment.

archive. A collection of backup copies of documents on tape or diskette. When storing documents on diskette or tape, the user can remove all document information, remove only the document, or leave the document information on the system. Contrast with *document library*.

area fill. In System/38 graphics, the filling in of an enclosed area with a pattern.

argument. In BASIC, an expression that is passed to a function or subroutine for evaluation.

arithmetic comparison. In PL/I, a comparison of signed numeric values. See also *bit comparison, character comparison*.

arithmetic expression. A statement containing any combination of data items joined together by one or more arithmetic operators in such a way that the statement as a whole can be reduced to a single numeric value.

arithmetic instruction. An instruction that specifies an arithmetic operation.

arithmetic operation. An operation such as addition, subtraction, multiplication, division, or exponentiation that is performed only on numeric fields.

arithmetic operator. A symbol used to represent an arithmetic operation, such as a + or - used to indicate addition or subtraction.

array. (1) In RPG, a series of elements with like characteristics. An array can be searched for a uniquely identified element, or elements in an array can be accessed by their position relative to other elements. Contrast with *table*. (2) In BASIC, a named set of data items, all of which are of the same type, arranged in a pattern (for example, rows and columns). An array can be implicitly declared through usage or explicitly declared in a DIM statement. Contrast with *scalar item*. (3) In PL/I, a collection of one or more elements with identical attributes, grouped into one or more dimensions.

array element. In RPG, BASIC, and PL/I, a data item in an array.

array file. An input file containing array elements.

array index. The actual number of an element in an array, or the field containing the number or relative position of an element in an array.

array of structures. In PL/I, an array whose elements are structures that have identical names, levels, and element attributes.

array variable. In PL/I, a variable that represents an aggregate of data items that must have identical attributes. Contrast with *structure variable*.

arrival sequence access path. An access path that is based on the order in which records are stored in a physical file. See also *keyed sequence access path* and *access path*.

ascending key. The values by which data is ordered from the lowest value to the highest value of the key in accordance with the rules for comparing data items. Contrast with *descending key*.

ascending key sequence. The arrangement of data in an order from the lowest value of the key field to the highest value of the key field. Contrast with *descending key sequence*.

ascending sequence. The arrangement of data in an order from low to high based on the contents of a specific field or fields. Contrast with *descending sequence*.

ASCII. See *American National Standard Code for Information Interchange*.

ASP. See *auxiliary storage pool*.

aspect ratio. In System/38 graphics, the width-to-height ratio of a rectangular area.

assign. (1) On the edit display of a document in Personal Services/38, to put text into a paragraph format (Px or PPx/PP, where x is the paragraph format identifier). (2) In the mail function of Personal Services/38, to designate a person who may take action on a mail item.

assignment-name. In COBOL, a word that associates a file-name with an external device.

assignment statement. In PL/I, a statement that gives a value to a variable. It always contains the assignment symbol (=).

assumed decimal point. A logical decimal point position that does not occupy a storage position in a data item. It is used by a compiler to align a value properly for calculation or input/output operations. Contrast with *actual decimal point.*

asynchronous processing. A series of operations that are done separately from the job in which they were requested; for example, submitting a batch job from an interactive job at a work station. Contrast with *synchronous processing.*

AT END condition. In COBOL, a condition that occurs at the following times: during the execution of a READ statement for a sequentially accessed file; during the execution of a RETURN statement when no next logical record exists for the associated sort or merge file; during the execution of a SEARCH statement when the search operation terminates without satisfying the condition specified in any of the associated WHEN phrases.

attach header. In advanced program-to-program communications, control information that identifies the program that is to be activated at the remote system.

attached. Pertaining to a journal receiver that is connected to a journal and is receiving journal entries for that journal. Contrast with *detached.*

attention identifier. A character in a data stream indicating that the user has pressed a key (such as the Enter key) that requests an action by the system. Abbreviated AID.

Attention key handling program. A user-defined program that is called when the work station user presses the Attention (Attn) key.

attribute. A characteristic; for example, attributes of a field include its length and data type, and attributes of a job include its user name and job date.

attribute character. A character associated with a field in a display file that defines how the field is displayed.

author. The person who sent the message, document, or hardcopy mail item.

authority. The right to access objects, resources, or functions. For example, in Personal Services/38, the authority to view or work with another user's calendar.

authorization. The process of giving a user either complete or restricted access to an object, resource, or function.

authorized program analysis report. A request for correction of a problem caused by a defect in a current unaltered release of a program. Abbreviated APAR.

auto dup feature. In DFU, a function that duplicates certain types of information from predetermined fields in a previous record into the current record.

auto report. A function of the RPG III licensed program that uses simplified specifications and standard RPG specifications to generate a complete RPG source program. See also *auto report program.*

auto report option specifications. An RPG coding form that the programmer uses to specify options for an auto report program.

auto report program. A set of instructions (program) that use the RPG auto report function. See also *auto report.*

autoanswer. See *automatic answer.*

autocall. See *automatic call.*

automatic answer. A machine feature that permits a station to respond to a call it receives over a switched line without operator action. Abbreviated autoanswer.

automatic call. A machine feature that permits a station to initiate a connection with another station over a switched line without operator action. Abbreviated autocall.

automatic field duplication. Same as *auto dup feature.*

automatic hyphenation. In Personal Services/38 and text management, an option available when setting up a text document, in which the paragraph format option allows the user to specify that the paragraph format will automatically hyphenate a paragraph.

automatic line adjust. In Personal Services/38 and text management, the fitting of lines between the defined left and right margins automatically when text is inserted or deleted and when the left, right, or temporary margin is changed.

automatic microcode completion. A function that automatically attempts to complete interrupted Machine Interface (MI) instructions following an abnormal termination of the system.

automatic teller machine. See *consumer transaction facility.*

automatic variable. A variable that is allocated during the invocation of the program containing the variable. Every time a program is invoked a new copy of the variable is placed in storage. Contrast with *static variable.*

autoprompting. In System/38 CL programs, a function that provides the automatic prompting of a CL command. Contrast with *selective prompting.*

autoranging. In System/38 graphics, the use of system defaults to determine the intervals on a chart so that the

maximum and minimum data values can be represented on the graphics display station or plotter.

autostart job. A job that is automatically initiated when a subsystem is started.

autostart job entry. A work entry in a subsystem description that specifies a job to be automatically initiated each time the subsystem is started.

auxiliary storage. All addressable storage other than main storage. Auxiliary storage is located in the system's nonremovable disk enclosures.

auxiliary storage pool. A group of disk device units defined from those that comprise the auxiliary storage. Abbreviated ASP. See also *system ASP* and *user ASP*.

axis. One of the intersecting horizontal and vertical straight reference lines relative to which data values are plotted on a chart. The axes are commonly referred to as the X axis and the Y axis.

axis grid lines. In System/38 graphics, straight lines extending perpendicular to either axis at each major tick mark.

axis translation line. See *translated axis line*.

back out. To remove changes from a physical file member in the inverse chronological order from which the changes were originally made.

backspace. To move the cursor backward one character at a time.

base. The number system in which an arithmetic value is represented.

base storage pool. A storage pool that contains all unassigned main storage on the system and whose minimum size is specified in the system value QBASPOOL. The system-recognized identifier is *BASE.

based variable. In PL/I, a variable that provides attributes for data (such as data located in a buffer) for which the storage address is provided by a pointer. It does not identify a fixed location in storage.

baseline angle. In System/38 graphics, the angle of a mode-3 graphics symbol or string of such symbols relative to a horizontal line.

basic authority. In Personal Services/38, the authority which allows a Personal Services/38 user to view another user's object. In the Work with calendars function, it allows the Personal Services/38 user to schedule tentative appointments on another user's calendar. Contrast with *full authority*.

basic data exchange. A format for exchanging data on diskettes between systems or devices.

basic information unit. In SNA, the unit of data and control information passed between the transmission control and path control layers. It consists of a request/response header followed by a request/response unit. Abbreviated BIU.

basic information unit segment. In SNA, the unit of data and control information passed between the transmission control and path control layers. It consists of either a request/response header followed by a segment of a request/response unit or a request/response header alone. Abbreviated BIU segment.

basic link unit. In SNA, the unit of data and control information transmitted over a link by data link control. Abbreviated BLU.

BASIC procedure. See *procedure*.

basic telecommunications access method. A non-System/38 access method that permits read/write communications with remote devices. Abbreviated BTAM.

basic working display. The display that serves as the base from which you make requests of the system at a work station. When the request is completed, you return to the display. It is usually the display you receive when you sign on.

batch accumulator. In DFU, an accumulator in which subtotals for a field are stored. Contrast with *total accumulator*.

batch device. Any device that can read serial input or write serial output, or both, but cannot communicate interactively with the system. Examples of batch devices are card devices, printers, and diskette units.

batch job. A group of processing actions submitted as a predefined series of actions to be performed with little or no interaction between the user and the system. Contrast with *interactive job*.

batch processing. A method of executing a program or a series of programs in which one or more records (a batch) is processed with little or no interaction with the user or operator. Contrast with *interactive processing*.

batch subsystem. A subsystem in which batch jobs are to be processed. IBM supplies one batch subsystem: QBATCH.

BCB. See *block control byte*.

BCC. See *block-check character*.

before-image. The image of a record in a physical file member before the data has been modified by a write, an update, or a delete operation. Contrast with *after-image.*

begin-block. In PL/I, a block that is activated by error-handling on-conditions or through the normal flow of control.

beginning attribute character. For a display file, the character that precedes the first position in a field and that defines the displayed field.

BGU. See *business graphics utility.*

BID. (1) An SNA command used to request permission to start a bracket. (2) A BSC protocol exchange in preparation for transmitting and receiving data. The transmitting station sends an ENQ character and the receiving station acknowledges receipt of the ENQ character by sending an ACK0 control character.

binary. Relating to, being, or belonging to a numbering system with a base of 2. Valid digits are 0 and 1.

binary fixed-point value. In PL/I, an integer consisting of binary digits and having an optional binary point. Contrast with *decimal fixed-point value.*

binary floating-point number. The conceptual form of a numeric value that contains a significand and a signed exponent. The number's numeric value is the signed product of the number's significand and 2 raised to the power of the number's exponent.

binary floating-point value. In PL/I, an approximation of a real number in the form of a significand, which can be considered as a binary fraction, and an exponent, which can be considered as an integer exponent to the base of 2. Contrast with *decimal floating-point value.*

binary format. Representation of a decimal value in which each field must be 2 or 4 bytes long. The sign (+ or -) is in the leftmost bit of the field, and the integer value is in the remaining bits of the field. Positive numbers have a 0 in the sign bit and are in true form. Negative numbers have a 1 in the sign bit and are in twos complement form.

binary item. A numeric data item that is represented internally in binary notation (that is, as a number in the base 2); internally, each bit of the item is a binary digit with the sign as the leftmost bit.

binary operator. A symbol representing an operation to be performed on two data items, arrays, or expressions. The four types of binary operators are numeric, character, logical, and relational.

binary synchronous communications. A form of communications line control that uses transmission control characters to control the transfer of data over a communications line. Abbreviated BSC. Contrast with *synchronous data link control.*

BIND. An SNA command used to define the protocols for a session.

bit comparison. In PL/I, a left-to-right, bit-by-bit comparison of binary digits. See also *arithmetic comparison, character comparison.*

bit constant. In PL/I, either a series of binary digits enclosed in apostrophes and followed immediately by B or B1, or a series of hexadecimal digits enclosed in apostrophes and followed immediately by B4. Contrast with *character constant.*

bit string. A string consisting of the bit values 0 and 1.

bit value. In PL/I, a sequence of binary digits stored in consecutive bits. Contrast with *character value.*

blank after. In RPG, an output specification that changes the contents of a field so that it contains only zeros (if it is a numeric field) or blanks (if it is a character field) after that field has been written to the output record.

block. (1) A set of adjacent logical records recorded as a unit on a diskette or magnetic tape. (2) In COBOL, a unit of data that is moved into or out of the computer. (3) In PL/I, a sequence of statements, executed as a unit, that specifies the scope of names and the allocation of storage for names declared within it. Contrast with *do group.* (4) In Personal Services/38 and text management, a sequential string of text (defined using command function keys or the cursor movement keys and line commands) that is treated as a unit. (5) In Personal Services/38 and text management, a portion of a text document that is preserved as a string of characters (that is unformatted).

block control byte. In System/38 (RJEF) MTAM, a control character used for transmission block status and sequence count. Abbreviated BCB.

block copy. To duplicate a block of text from one part of a source member or document to another.

block delete. To delete a block of text.

block move. To take a block of text from one part of a document and put it in another part of the document.

block-check character. In BSC, a transmission control character that is used to determine whether all the bits transmitted are also received. Abbreviated BCC.

BLU. See *basic link unit.*

Boolean data type. In COBOL, a category of data items that are limited to a value of 1 or 0.

Boolean literal. In COBOL, a literal composed of a Boolean character enclosed in double quotes and preceded by a B; for example, B "1".

both field. See *output/input field.*

bottom margin. In COBOL, a blank area that follows the page body.

boundary violation. In COBOL, an attempt to write beyond the externally defined boundaries of a sequential file.

bps. Bits per second.

BPS. Bytes per second.

bracket. In SNA, one or more chains of request units and their responses, representing a transaction, exchanged between two LU half-sessions. See also *RU chain.*

bracket protocol. In SNA, a data flow control protocol in which exchanges between the two LU half-sessions are achieved through the use of brackets, with one LU designated at session activation as the first speaker and the other LU as the bidder. The bracket protocol involves bracket initiation and termination rules. See also *first speaker.*

branching. The technique of bypassing specific instructions or operations to alter the sequential execution of instructions in a program.

branching instruction. An instruction that changes the sequence of program execution.

break character. In PL/I, the underscore symbol (_). It can be used to improve the readability of identifiers. For instance, a variable could be called OLD_INVENTORY_TOTAL instead of OLDINVENTORYTOTAL.

break delivery. The method of delivering messages to a message queue in which the job associated with that message queue is interrupted as soon as the message arrives.

break mode. In 3270 emulation, the method of operation in effect when a program is interrupted.

breakpoint. A place in a program (specified by a command or a condition) where the system halts execution and gives control to the work station user or to a specified program.

breakpoint program. For a batch job, a user program that can be invoked when a breakpoint is reached.

broadcast message. A message sent to all work stations.

browse. In SEU, to look at records in a source member or in a spooled output file by using the record-positioning operations, the scan operation, and the roll keys.

browse display. The SEU display for browsing a member. This display can be called from the member list display.

browse member. The member displayed in the lower part of the split-edit display. Records from the browse member can be copied, but no changes can be made to records in the browse member.

BSC. See *binary synchronous communications.*

BSC file. A device file created by the user to support BSC. Contrast with *communications file.*

BSC 3270 device emulation. A System/38 control program that allows a System/38 to appear to a BSC host system as a 3271 control unit.

BTAM. See *basic telecommunications access method.*

buffer. A portion of main storage into which data is read or from which it is written.

built-in function. In PL/I, a predefined function, such as a commonly used arithmetic function or a function necessary to language facilities (for example, a function for manipulating strings or converting data). It is invoked by a built-in function reference.

built-in function reference. In PL/I, a built-in function name, having an optional and possibly empty argument list, that represents the value returned by the built-in function.

business graphics. See *graphics.*

business graphics utility. An IBM-supplied OFFICE/38 utility that provides a menu-driven means of using the System/38 chart functions without programming knowledge. Abbreviated BGU.

byte. A group of eight adjacent binary digits that represents one EBCDIC character.

calculation specifications. An RPG coding form on which the programmer describes the processing to be done by the program.

calendar. A list or schedule of appointments or reminders.

calendar group. In Personal Services/38, a list of existing calendars used to schedule appointments for a group of users in a single operation.

calendar owner. In Personal Services/38, the user who controls a calendar, and who receives any messages sent by the system as notification of an event on the calendar.

call. (1) To instruct that a program is to begin execution. (2) An instruction to a program to begin execution. (3) In data communications, the action necessary to make a connection between two stations on a switched line.

called program. A program whose execution is requested by another program (a calling program) or by a command.

calling program. A program that requests the execution of another program (a called program).

CANCEL. An SNA command used to cancel a partially transmitted RU chain in the network.

card file. A device file created by the user to support a card device.

card hopper. The part of a card device that holds the cards to be processed and makes them available to a card feed mechanism. Contrast with *card stacker.*

card stacker. The part of a card device that receives the cards after they have been processed. Contrast with *card hopper.*

carrier return. In text management, an indication to continue printing a document at the left margin of the next line.

CCP. See *Communications Control Program.*

center alignment. In Personal Services/38 and text management, a character (C) on the scale line of a display that marks the center of the default paragraph.

central processing unit. Abbreviated CPU. See *processor.*

CF key. See *command function key.*

chain. (1) In DFU, a method of changing from one display format to another after the user signals that the first display format has been completed. (2) In BASIC, an operation in which a program passes control to another program and ends. (3) In RPG, an operation code that reads input records identified by specified relative record numbers or keys. (4) See also *RU chain.*

chain field. In query, when file chaining is specified, a field in the primary record format that links the primary record format to the secondary record format. A chain field corresponds in length and attributes to a key field in the secondary record format.

chaining. A method of storing records in which each record belongs to a list or group of records and has a linking field for tracing the chain.

change bar. In text management, a character used to indicate any document line that has been changed.

change-direction protocol. In data communications, a data flow control protocol in which the sending LU stops sending normal flow requests, signals this fact to the receiving LU using the change-direction indicator (in the request/response header of the last-sent request), and prepares to receive requests.

changed record. An active subfile record to which a put or update operation has been issued with the DDS keyword SFLNXTCHG in effect, or an active subfile record that has been changed by the work station user.

character. Any letter, digit, or other symbol in the data character set that is part of the organization, control, or representation of data.

character array. A named list or matrix of character data items.

character box. In System/38 graphics, the imaginary parallelogram whose boundaries govern the size, orientation, and spacing of individual characters to be displayed on a graphics display device.

character comparison. In PL/I, a left-to-right, character-by-character comparison according to the collating sequence. See also *arithmetic comparison, bit comparison.*

character constant. (1) A constant within a character value. It is always enclosed by apostrophes. (2) In PL/I, a sequence of characters enclosed in apostrophes; for example, 'CONSTANT'.

character expression. In BASIC, a character constant, a simple character variable, an element of a character array, a character-valued function reference, a substring reference, or a sequence of the above separated by the concatentation operator (&) and parentheses.

character field. An area that is reserved for a particular unit of information and that can contain any of the characters in the data character set. Contrast with *numeric field.*

character grid. In System/38 graphics, a variably sized invisible network of uniformly spaced horizontal and vertical lines, covering the chart area, used by BGU to determine the physical dimensions of the chart and the placement on it of the chart notes.

character grid unit. In System/38 graphics, the unit of measure between two adjacent horizontal or vertical lines on a character grid.

character literal. A symbol, quantity, or constant in a source program that is itself data, instead of a reference to data. Contrast with *numeric literal.*

character operator. A symbol representing an operation to be performed upon character data, such as concatenation in CL or BASIC.

character set. (1) All the valid characters for a programming language or for a computer system. (2) A particular set of graphic characters in a code page.

character string. (1) A string consisting of any of the 256 EBCDIC characters that are used as a value. (2) (ANSI) In COBOL, a sequence of characters that form a COBOL word, a literal, a PICTURE character-string, or a comment-entry.

character variable. The name of a character data item whose value is assigned or changed, or both, during program execution.

chart format. In System/38 graphics, a format that describes the design characteristics of the chart, such as the chart type and the chart attributes; the chart format does not include the data values to be plotted. Its object type is *CHTFMT.

chart layout. In System/38 graphics, the arrangement of the various components in the chart area and surrounding margins.

CHASE. An SNA command used by the host to determine when the secondary logical unit has finished processing all previously sent RUs.

checksum protection. A function that protects permanent objects stored in the system auxiliary storage pool against data loss caused by a single disk device media failure. When checksum protection is in effect and a disk device media failure occurs, the system automatically reconstructs the data during the IMPL after the device is repaired.

checksum set. Units of auxiliary storage grouped into sets to provide protection against loss of data if a disk device media failure occurs when checksum protection is in effect.

CICS/VS. See *Customer Information Control System for Virtual Storage.*

CL. See *control language.*

class. An object that contains the execution parameters for a routing step. The system-recognized identifier for the object type is *CLS.

class condition. In COBOL, a logical condition that states that the content of an item is all alphabetic or all numeric.

clause. An ordered set of consecutive COBOL character-strings whose purpose is to specify an attribute of an entry. There are three types of clauses: data, environment, and file.

CLEAR. An SNA command used to purge all requests and responses related to the active session.

clipping. In System/38 graphics, the process of cutting off the picture at the edge of the window but allowing the lines to be constructed on world coordinates that extend outside the window.

clocking. A method of controlling the number of data bits sent on a data communications line in a given time.

close. A data manipulation function that ends the connection between a file and a program. Contrast with *open.*

closure line. In System/38 graphics, a line added by GDDM to enclose an area being filled with a pattern, in instances when the routines that precede the GSENDA routine fail to form an enclosed area.

CMS. See *conversational monitor system.*

CNP. See *communications statistical network analysis procedure.*

COBOL character. Any of the 51 characters of the COBOL character set.

code page. A particular assignment of graphic characters to code points.

code page ID. A 5-digit registered identifier used to specify a particular assignment of graphic characters to code points. On System/38, the code page ID is the second part of the QCHRID system value or the CHRID parameter value. See also *graphic character set ID.*

code point. One of the 256 values that can be assigned a graphic or control character in a character set. On the System/38, a code point is represented by a 2-digit hexadecimal number. For example, in code page 256 (EBCDIC), character "e" is assigned a code point of hex 85.

coded arithmetic data. In PL/I, data items that represent numeric values and are characterized by their base (decimal or binary), scale (fixed-point or floating-point), and precision (the number of digits each can have).

coded graphic character set ID. A 10-digit identifier (two 5-part identifiers separated by a space) that is the combination of graphic character set ID and code page ID. See also *graphic character set ID* and *code page ID.*

cold start. A process in which all noninstalled objects (CPF objects created by CPF after installation) are deleted and re-created as a group.

collating sequence. The order each character holds in relation to other characters according to the bit structure.

color table. In System/38 graphics, a compilation of eight entries, each defining a color to be used in System/38 graphics, from which individual colors are selected. Many color tables can be defined, but only one can be current.

column. A character position horizontally within a print line. The columns are numbered from 1, by 1, starting at the leftmost character position of the print line and extending to the rightmost position of the print line.

combined condition. (ANSI) In COBOL, a condition that is the result of connecting two or more conditions with the AND or the OR logical operator.

combined file. A data file that is used as both an input file and an output file. The output file contains only those fields described for the output file (that is, the output record does not necessarily contain the same fields as the input record).

command. (1) A statement used to request a function of the system. A command consists of the command name, which identifies the requested function, and parameters. (2) In SNA, any field set in the transmission header (TH), request header (RH), and sometimes portions of a request unit that initiates an action or that begins a protocol.

command analyzer. An IBM-supplied program that processes commands. Command processing includes validity checking, transferring control to a command processing program (CPP), and returning to the caller of the command analyzer.

command definition. An object that contains the definition of a command (including the command name, parameter definitions, and validity checking information) and identifies the program that performs the function requested by the command. The system-recognized identifier for the object type is *CMD.

command definition statement. A source statement used in creating a command definition. Command definition statements define keywords and parameter values, qualified names, elements in a list, parameter dependencies and interrelationships, and prompt text for a command.

command file. In System/38 RJEF, a remote job input stream that can contain host system commands and job control language (JCL), data, and RJEF control statements (READFILE or EOF). Contrast with *data file*.

command function key. At a work station, a keyboard key that is used with the command (CMD) function control key to request preassigned functions. At the system console, a keyboard key, called a CF key, that is used to request preassigned functions.

command key indicator. In RPG, an indicator that is set on when a system operator or work station user presses a valid corresponding command key. Valid command key indicators are KA through KN and KP through KY.

command level. Pertaining to an operation that is performed for a specific command in a program. For example, a Monitor Message (MONMSG) command that immediately follows a specific command in a CL program is a command-level MONMSG command. Contrast with *program level*.

command processing program. A program that processes a command. This program performs some validity checking and executes the command so that the requested function is performed. Abbreviated CPP.

comment. A word or statement in a program, command, or file, that serves as documentation instead of as instructions. A comment is ignored by the system.

comment line. A source program line that is not translated by the compiler. The comment line can be used to document the program.

comment-entry. In COBOL, an entry in the Identification Division that is not translated by the compiler.

comments. Words or statements in a program, command, or file that serve as documentation instead of as instructions. Comments are ignored by a compiler.

commit. To cause all changes that have been made to the data base file since the last commitment operation to become permanent and the records to be unlocked so they are available to other users.

commit cycle. The sequence of changes made between commitment boundaries.

commit cycle identifier. The journal sequence number associated with the start commitment entry that is used to identify the journal entries in a particular commit cycle.

commit identifier. The information specified in the CL COMMIT command or the RPG COMIT operation code that associates the commitment operation with a specific set of data base changes. The commit ID is placed in the notify object if an abnormal system or routing step failure occurs or if uncommitted changes exist when a routing step is terminated normally. See also *notify object*.

commitment boundary. In a commitment control environment, the point in time at which a commitment operation is successfully executed or at which the file is opened if no commitment operation has been executed.

commitment control. A means of grouping file operations that allows the processing of a group of data base changes as a single unit through the COMMIT statement or the removal of a group of data base changes as a single unit through the ROLLBACK statement.

commitment definition. Information used by the system to maintain the commitment control environment throughout a routing step and, in the case of a system failure, throughout an IMPL (initial microprogram load). This information is obtained from the Begin Commitment Control command, which establishes the commitment control environment, and the file open information in a routing step.

common carrier. A government or private company that furnishes the general public with telecommunication facilities. Examples are: the government-regulated telephone and telegraph companies in the USA, the General Post Office in the United Kingdom, the Bundespost in Germany, and Nippon Telephone and Telegraph Public Corporation (NTT) in Japan.

common key. In COBOL, the key fields that are common to all record formats in the file starting with the first key field (the most significant) and ending with the last key field (the least significant).

communications adapter. A hardware feature that enables System/38 to become part of a data communications network.

Communications Control Program. A non-System/38 program product that can be used in a communications network.

communications file. A device file created by the user to support LU1 or advanced program-to-program communications. Contrast with *BSC file.*

communications line. The physical link (such as a wire or a telephone circuit) that connects one or more work stations to a communications control unit, or connects one control unit to another. Contrast with *data link.*

communications queue. A list used for mail that keeps track of documents to be sent to users from other systems.

communications statistical network analysis procedure. A procedure that allows the service personnel to obtain statistics on communications line activity. Abbreviated CSNAP or CNP.

comparison operator. In PL/I, an operator that can be used in an arithmetic, string, or logical relation to indicate the comparison to be performed between the terms in the relation. The comparison operators are = (equal to), > (greater than), < (less than), >= (greater than or equal to), <= (less than or equal to), ¬= (not equal to), ¬> (not greater than), and ¬< (not less than). For CL, COBOL, and BASIC, see *relational operator.*

compilation. Translation of a source program (such as RPG or COBOL specifications) into an executable program.

compile. To translate a source program into an executable program (an object).

compile time. The time during which a source program is translated by a compiler into an executable program.

compile-time array or table. An array or table in which the data is compiled with the source program and becomes a permanent part of the program. Contrast with *execution-time array* and *preexecution-time array or table.*

compiler. A program that translates a source program into an executable program.

compiler listing. A printout that is produced by compiling a program or creating a file and that optionally includes, for example, a line-by-line source listing, a cross-reference list, diagnostic information, and for programs, the description of externally described files. See also *source listing.*

compiler-directing statement. A COBOL statement that causes the compiler to take a specific action during compilation, rather than causing the program to take a particular action during execution.

compiler-directive statement. In RPG, an instruction that causes the compiler to take a specific action during compile time. Directive statements generally occur in compiler source input.

completion message. A message that conveys completion status of work.

complex condition. (ANSI) In COBOL, a condition in which one or more logical operators (AND, OR, or NOT) act upon one or more conditions. Complex conditions include negated simple conditions, combined conditions, and negated combined conditions.

component. In System/38 graphics, the representation of a data group on a chart.

composite calendar. In Personal Services/38, a 5-day calendar showing the appointment times for as many as ten people at a time. Information about the individual appointments cannot be viewed when executing this command.

composite key. A key for a file or record format that is composed of more than one key field.

composite symbol. In PL/I, a symbol that consists of more than one special character; for example, <=, **, ->, and /*.

compound condition. In COBOL, a statement that tests two or more relational expressions. It may be true or false.

compress. To save storage space by eliminating gaps, empty fields, redundancies, or unnecessary data to shorten the length of records or files.

compression. A function that removes redundant data from the data block being processed, thereby reducing the amount of storage required for it. See also *decompression.*

computer-name. In COBOL, a system-name that identifies the computer upon which the program is to be compiled or run.

concatenate. (1) To link together. (2) To join two character strings.

concatenated field. Two or more fields from a physical file record format that have been combined to make one field in a logical file record format.

concatenation operator. The symbol used to concatenate, or join, two character data items. In CL, the concatenation operator is two vertical bars (| |); in BASIC, the concatenation operator is the ampersand (&).

condition. (1) In COBOL, an expression in a program for which a truth value can be determined at execution time. Conditions include the simple conditions (relation condition, class condition, condition-name condition, switch-status condition, sign condition) and the complex conditions (negated simple conditions, combined conditions, negated combined conditions). (2) In PL/I, an exceptional situation, either an error (such as an overflow), or an expected situation (such as the end of an input file). When a condition is raised (detected), the action established for it is executed. See also *established action* and *implicit action.*

condition indicators. Lights numbered 0 through 15 on the operator/service panel that come on to indicate (1) specific machine conditions during the IMPL process or (2) an unusual condition that prevents normal system operation from continuing. See also *status indicators* and *system indicators.*

condition name. For display files, a name used to control the selection of DDS keywords and display locations based on the screen size associated with the display file.

condition-name. (1) In COBOL, a name assigned to a specific value, set of values, or range of values within the complete set of values that a conditional variable can have. (2) The name assigned to a status of a user-defined switch.

condition-name condition. In COBOL, a condition that states that the value of a conditional variable is a member of the set of values assigned to a condition-name associated with the conditional variable.

conditional expression. (ANSI) In COBOL, a simple condition or a complex condition specified in an IF, PERFORM, or SEARCH statement. See also *simple condition* and *complex condition.*

conditional force. For the Conversion Reformat Utility, a function that replaces the specified control field character before the record is resequenced only if the control field in the input record contains a particular entry.

conditional statement. In COBOL, a statement that causes the truth value of a condition to be determined and that controls program execution depending on this truth value.

conditional variable. (ANSI) In COBOL, a data item for which one or more values have a condition-name assigned to them.

conditioning. (1) In a file, the use of indicators or condition names to control when certain functions or operations are to be performed. For example, in a display file, indicators can select fields to be displayed. (2) In an RPG program, the use of indicators to control when certain functions or operations are to be done. For example, in an RPG program indicators can control calculation or output operations.

configuration. The arrangement of the machines, devices, and programs that make up a computer system.

CONFIGURATION SECTION. A section of the Environment Division of the COBOL program. It describes the overall specifications of the source and object computers.

confirm. In the calendar function of Personal Services/38, the act of changing the status of a tentative appointment. A confirmed appointment can be changed or deleted only by the calendar owner or by a person with full authority over that calendar.

confirmation of delivery. The automatic notification to the sender of a message, memo, or document when the message, memo, or document has been received by the recipient. Confirmation of delivery must be requested by the sender. Abbreviated COD.

connective. In COBOL, a word or a punctuation character that associates a data-name, paragraph-name, condition-name, or text-name with its qualifier; links two or more operands in a series; or forms a conditional expression.

consecutive processing. A method of file processing in which records are read in the order in which they exist in the file.

CONSOLE. A COBOL function-name associated with the operator's keyboard/display.

constant. Data that has an unchanging, predefined value to be used in processing. A constant does not change

during the execution of a program, but the contents of a field or variable can. See also *literal.*

constant field. In an externally described display or printer file, an unnamed field that contains actual data that is passed to the display or printer but is unknown to the program passing it.

consumer transaction facility (CTF). A stand-alone finance device used to handle transactions for banking customers. Also called an automatic teller machine (ATM).

contention. For BSC, the state that exists after the EOT character has been received or sent and before a BID command is complete.

contention state. In data communications, a type of half-duplex line or link control in which either user may transmit any time the line/link is available. In the event that both users attempt to transmit a request simultaneously, the protocols or the hardware determines who wins the contention.

context. A system object that contains addressability to system objects by name. It is used in system pointer resolution to obtain system pointers to system objects. See also *system object.*

context search. In Personal Services/38, a type of search used for searching in filed documents or personal directories. It allows the user to find smaller text strings that are embedded in larger search fields. See also *exact search*, *generic search*, and *rerun search.*

contiguous items. In COBOL, consecutive elementary or group items in the Data Division that are contained in a single data hierarchy.

continuation lines. (1) Additional lines required to continue the coding of a CL command or a DDS keyword and its value. (2) In RPG, additional lines specified on the file description specifications to provide more information about the file being defined.

control break. In RPG, a change in the contents of a control field that indicates all records from a particular control group have been read and a new control group is starting.

control character. A character whose occurrence in a particular context initiates, modifies, or stops any operation that affects the recording, processing, transmission, or interpretation of data (such as carriage return, font change, and end of transmission). Contrast with *graphic character.*

control field. (1) In RPG, one or more fields that are compared from record to record to determine when the information in the fields changes. When the information changes, the control level indicator (L1 through L9) assigned to a control field is set on. (2) For the conversion reformat utility, one or more specified fields that are compared to determine the record sequence in the output file.

control language. The set of all commands with which a user requests functions. Abbreviated CL.

control language program. An executable object that is created from source consisting entirely of control language commands.

control language variable. A program variable that is declared in a control language program and is available only to the program.

control level indicator. In RPG, an indicator (L1 through L9) used to identify certain fields as control fields and then used to condition which operations are to be performed at detail or total calculation or output time.

Control Program Facility. The system support licensed program for System/38. It provides many functions that are fully integrated in the system such as work management, data base data management, job control, message handling, security, programming aids, and service. Abbreviated CPF.

control specification. (1) In RPG, a coding form on which the programmer provides information that affects program generation and execution. (2) In BASIC, any of the specifications POS, CUR, SKIP, or X, used in the FORM statement to format records or to control printing.

control statement. In RPG, entries on a control specification.

control station. The primary or controlling system on a multipoint line. The control station controls the sending and receiving of data.

control storage. High-speed memory containing microcode. This storage can be implemented as read only or direct access.

Control Supply indicator. A light on the operator/service panel that comes on when the main line circuit breaker is closed and the control supply power for the power controller is on.

control unit. Circuitry or a device that coordinates and controls the operation of one or more input/output devices (such as work stations) and synchronizes the operation of such devices with the operation of the system as a whole. Same as *controller.* Abbreviated CTL or CTLU.

control unit description. An object that contains a description of the features of a control unit that is either directly attached to the system or attached to a

communications line. The system-recognized identifier for the object type is *CUD. Abbreviated CUD.

control variable. In PL/I, a variable that is used to control the execution of a program, as in a DO statement.

controller. See *control unit.*

controlling subsystem. An interactive subsystem that is started automatically when the system is started and through which the system operator controls the system. IBM supplies one controlling subsystem: QCTL.

conversation. (1) The interaction between a computer and a user through a keyboard. (2) A temporary connection between an application program and an APPC session.

conversational monitor system. A virtual machine operating system that provides general interactive time sharing, problem solving, and program development capabilities, and operates only under the control of the VM/370 control program. Abbreviated CMS.

Conversion Reformat Utility. A System/38 licensed program that allows a user to run System/3-style sort programs on System/38.

converted journal entry. The version of a journal entry that can be displayed, printed, or written to a data base output file.

CPF. See *Control Program Facility.*

CPP. See *command processing program.*

CPU. Central processing unit. See *processor.*

create. (1) The function used to bring an object into existence in the system. (2) To bring an object into existence in the system.

cross-reference listing. The portion of the compiler listing that contains information on where files, fields, and indicators are defined, referenced, and modified in a program.

CSNAP. See *communications statistical network analysis procedure.*

CTF. See *consumer transaction facility.*

CTL. See *control unit.*

CTLU. See *control unit.*

CUD. See *control unit description.*

currency sign. In COBOL, the character $.

currency symbol. (1) A character such as the dollar sign ($) used to identify monetary values. (2) (ANSI) In COBOL, the character defined by the CURRENCY SIGN clause in the SPECIAL-NAMES paragraph. If no CURRENCY SIGN clause is present, the currency sign is used. See *currency sign.*

current device. In System/38 graphics, the current output device for the application program, usually a display screen.

current mode. In System/38 graphics, the state of GDDM with respect to attributes and controls. When an attribute or control is set, that setting is the current mode of the attribute or control. Therefore, the attribute or control is used in any situation that occurs to which the attribute or control applies. For example, when a color is defined, everything the program draws uses that color until the color is changed.

current position. In System/38 graphics, the position, in user coordinates, that becomes the starting point for the next graphics routine, if that routine does not explicitly specify a starting point.

current queue depth. In SNADS, the number of distribution queue entries currently waiting on a next system queue.

current record. (ANSI) In COBOL, the record that is available in the record area associated with the file.

current record pointer. In COBOL, a conceptual entity that is used in sequential retrieval of the next record.

cursor. A movable spot of light that shows where the next character will appear on the work station screen when a key on the keyboard is pressed.

customer engineer user profile. The CPF-supplied user profile that has the authority necessary for the customer engineer to perform diagnostics and service the machine, and the special authority of job control rights. Named QCE.

Customer Information Control System for Virtual Storage. A non-System/38 program product that can be used in a communications network. Abbreviated CICS/VS.

cylinder. The tracks on a diskette that can be accessed without repositioning the read/write head.

DACTLU. An SNA command used to deactivate the logical unit.

DACTPU. An SNA command used to deactivate the physical unit.

DAF. See *destination address field.*

damaged mail. A mail item that Personal Services/38 cannot access but for which it displays the entry details.

data aggregate. In PL/I, a group of data items that can be referred to either individually or collectively. There are two types of aggregates: arrays and structures.

data area. An object that is used to communicate data such as CL variable values between the programs within a job and between jobs. The system-recognized identifier for the object type is *DTAARA.

data area data structure. A data structure that is used to retrieve data from a data area.

data base. The collection of all data base files stored in the system.

data base file. An object that contains descriptions of how input data is to be presented to a program from internal storage and how output data is to be presented to internal storage from a program. See also *physical file* and *logical file.*

data base join. See *join.*

data character set. The 256 EBCDIC characters.

data circuit-terminating equipment. The equipment installed at the user's premises that provides all the functions required to establish, maintain, and terminate a connection, and the signal conversion and coding between the data terminal equipment and the line. Abbreviated DCE. See also *data terminal equipment.*

data clause. (ANSI) In COBOL, a clause that appears in a data description entry in the Data Division and provides information describing a particular attribute of a data item.

data communications. The transmission of data between systems and/or remote devices over a communications line.

data communications file. In COBOL, a generic term for a communications file or a BSC file. See also *communications file* and *BSC file.*

data description entry. In COBOL, a Data Division entry that describes the characteristics of a data item.

data description specifications. A description of the user's data base or device files that is entered into the system using a fixed-form syntax. The description is then used to create files. Abbreviated DDS.

DATA DIVISION. One of the four main parts of a COBOL program. The Data Division describes the files to be used in the program and the records contained within the files. It also describes any internal Working-Storage records that will be needed.

data file. (1) Any nonsource file. A data file is created by the specification of FILETYPE(*DATA) on a create file command. (2) In System/38 RJEF, a remote job input stream that can contain host system commands and job control language (JCL) as well as data. Contrast with *command file.*

data file utility. The utility of the Interactive Data Base Utilities licensed program that is used to maintain and display records in a data base file. Abbreviated DFU.

data flow control layer. In SNA, the layer within a half-session that regulates the user's send/receive flow and the request/response flows and ensures flow integrity.

data group. In System/38 graphics, a collection of data values displayed, for example, as a pie chart or as the plotted points on a line of a line graph. More than one data group may be displayed on a chart.

data item. (1) A unit of data, either a constant or a variable, to be processed. (2) (ANSI) In COBOL, a character or a set of contiguous characters (excluding literals) defined as a unit of data by the COBOL program.

data link. The communications lines, modems, control units, work stations, and other communications equipment used for the transmission of data between a receiving station and a transmitting station in a data network. Contrast with *communications line.*

data link control layer. In SNA and X.25, the layer that consists of the link stations that schedule data transfer over a link between two nodes and perform error control for the link.

data list. In PL/I stream-oriented data transmission, a list of the data items used in GET EDIT and PUT EDIT statements. Contrast with *format list.*

data mode. (1) A time at which BSC is transmitting or receiving characters on the line. (2) In BASIC, the entry mode in which the user can enter any data from a display station. The data is not syntax checked. Contrast with *program mode.*

data object. In PL/I, a program object (variable) that provides operational and possibly representational characteristics to byte strings in spaces. Contrast with *machine object.*

data pointer. In PL/I, a pointer that provides addressability and scalar representational attributes to a byte string in a space.

data queue. A CPF object that is used to communicate and store data used by several programs in a job or between jobs. The system-recognized identifier for the object type is *DTAQ.

data rights. The authority to read, add, update (modify), or delete data contained in an object. See also *add rights, delete rights, read rights,* and *update rights.*

data stream. (1) In BSC, all data transmitted over a data link in a single read or write operation. (2) For System/38 RJEF, see *input stream* and *output stream*. See also *intelligent printer data stream.*

data structure. An area in storage that is composed of one or more subfields. A data structure can be either program-described or externally described.

data terminal equipment. That part of a data station that enters data into a data link, receives data from a data link, and provides for the data communication control function according to protocols. Abbreviated DTE.

data transformation. The process of changing the form of data according to specific rules as data is moved by means of a logical file between the data base and the using program. Data transformation includes changing the data type and length.

data type. (1) An attribute used for defining data as numeric or character. (2) In BASIC, a category that identifies the mathematical qualities and internal representation of data.

data value. In System/38 graphics, a single data item entered as an X-axis or Y-axis amount.

data-link-escape character. A BSC transmission control character that is used exclusively to provide supplementary line-control signals such as control character sequences or data link escape sequences. Abbreviated DLE.

data-name. In COBOL, a user-defined word that names a data item. When used in the general formats, data-name represents a word that can be neither subscripted, indexed, nor qualified unless specifically permitted by the rules of that format. An index-name is not a data-name. See also *identifier.*

data/text merge. In Personal Services/38 and text management, to combine data from a file (such as names and addresses) with the text of a particular document (such as a form letter).

date field. In SEU, the field in source records that contains the date of the last change.

date received. The date that a mail item arrived in a recipient's mail log.

datum line. In System/38 graphics, a straight reference line drawn from either axis that helps the user see the exact data values on the chart.

DCE. See *data circuit-terminating equipment.*

DDM. See *Distributed Data Management.*

DDM conversation. A conversation between the source DDM server and the target DDM server using APPC. The System/38 uses one conversation for each unique device-and-mode combination within a job.

DDM file. A System/38 file that is associated with a remote file that is to be accessed using DDM. The DDM file provides the information needed for a local (source) system to locate a remote (target) system and to access the file at the target system where the requested data is stored.

DDM reply. The response from a target DDM server to a source DDM server after the source DDM server issues a DDM request.

DDM request. The response from a source system program or user that is sent by a source DDM server to a target DDM server.

DDS. See *data description specifications.*

deadlock. An impasse that occurs when multiple processes are each waiting for the availability of a resource that will not become available because it is being held by another process that is in a similar wait state.

deallocate. To release a resource that is assigned to a specific task. Contrast with *allocate.*

debug mode. An environment in which programs can be tested.

debugging line. A COBOL statement executed only when the WITH DEBUGGING MODE clause is specified. Debugging lines can be used to help determine the cause of an error.

debugging section. In COBOL, a declaratives section that receives control when an identifier, file-name, or procedure-name is encountered in the Procedure Division.

decimal fixed-point constant. In PL/I, a constant consisting of one or more decimal digits with an optional decimal point.

decimal fixed-point value. In PL/I, a rational number consisting of a sequence of decimal digits with an assumed position of the decimal point. Contrast with *binary fixed-point value.*

decimal floating-point constant. In PL/I, a value made up of a significand that consists of a decimal fixed-point constant, and an exponent that consists of the letter E followed by an optionally signed integer constant not exceeding three digits.

decimal floating-point value. In PL/I, an approximation of a real number, in the form of a significand, which can be considered as a decimal fraction, and an exponent, which can be considered as an integer exponent to the base of 10. Contrast with *binary floating-point value.*

declarative-sentence. In COBOL, a compiler-directing sentence that specifies when a debugging section or an exception/error procedure is to be executed.

Declaratives. In COBOL, a set of one or more special-purpose sections, written at the beginning of the Procedure Division that can be used for input/output error checking or debugging.

decompression. A function that expands the data to the length that preceded its compression. See also *compression*.

default delivery. The method of delivering messages to a message queue in which messages are placed on the queue without interrupting the job, and the default reply is sent for any messages requiring a reply.

default error handler. The portion of the RPG logic cycle that handles program or file exception/errors when program or file exception/errors are not controlled by the programmer.

default network message queue. A message queue to which messages related to network activity are sent when either the user profile does not have a message queue specified or the message queue named in the user profile cannot be accessed.

default network output queue. An output queue to which spooled files sent with the Send Network Spooled File (SNDNETSPLF) command are directed when either the user profile does not have an output queue specified or the output queue name in the user profile cannot be accessed.

default program. A user-specified program that is assumed when no other program is specifically named on a debug command, or a special program defined for handling error messages.

default record. A record in which numeric fields are initialized with zeros and character fields are initialized with blanks.

default reply. A system-assigned reply to an inquiry or notify message that is used when the message queue at which the message arrives is in default delivery mode.

default routing entry. In SNADS, the routing table entry specifying the route to be used by a distribution queue entry when the table contains no explicit entry for the combination of destination DSU and distribution service level specified by the distribution.

default user name. A CPF-provided name for user identification for an installation that does not want to require separate user identifications.

default value. A value given by the system when no value has been specified.

definite response. In SNA, a value in the form-of-response-requested field of the request header (RH). The value directs the receiver of the request to return a response unconditionally, whether positive or negative to that request. Contrast with *exception response*.

delay maintenance. A method of maintaining keyed access paths for data base files. This method does not update an access path when the file is closed, but it retains updates in a *delayed* form so that they can be quickly applied at the next open, avoiding a complete rebuild. Contrast with *rebuild maintenance* and *immediate maintenance*.

delegate. A user who is authorized to work for another user. The authorization can be made by a user or by the Personal Services/38 administrator.

delete. (1) To remove an object or a unit of data (such as character, a field, or a record). (2) The SEU operation in which existing records can be removed from a source member.

delete rights. The authority to delete an entry from an object or to delete the object itself. Contrast with *add rights, read rights*, and *update rights*.

deleted record. A record that has been initialized or removed so that it is not eligible for access. A deleted record holds a place in a physical file member and can be replaced with a data record by an update operation.

delimiter. A character or a sequence of contiguous characters that identifies the end of a string of characters. A delimiter separates a string of characters from the following string of characters. A delimiter is not part of the string of characters that it delimits.

descending key. The values by which data is ordered from the highest value to the lowest value of the key, in accordance with the rules for comparing data items. Contrast with *ascending key*.

descending key sequence. The arrangement of data in order from the highest value of the key field to the lowest value of the key field. Contrast with *ascending key sequence*.

descending sequence. The arrangement of data in an order from high to low based on the contents of a specific field. Contrast with *ascending sequence*.

description. (1) Informational text that explains items on the system, such as objects and members. (2) A required field that further identifies an entry in the system distribution directory.

destination address field. In SNA, a field in a FID0 or FID1 transmission header that contains the network address of the destination. In a FID2 header, the field is

called destination address field prime (DAF'). Abbreviated DAF. Contrast with *origin address field.*

destination node. The node at which a recipient of a distribution is located.

destination system. In SNADS, a system to which distribution queue entries can be routed.

detached. Pertaining to a journal receiver that is not connected to a journal and is not receiving journal entries for that journal. Contrast with *attached.*

detail calculation. In RPG, specified calculation operations that are performed for every record read.

detail line. In RPG, a detail record in an output file.

detail output. In RPG, specified output operations that are performed for every record read.

detail record. In RPG, an output record produced during the detail output operation of the RPG program cycle. Contrast with *total record.*

detail time. That part of the RPG program cycle in which calculation and output operations are performed for each record read. Contrast with *total time.*

determinant. A value resulting from a mathematical operation on an array.

DEVD. See *device description.*

device class. The generic name for a group of device types. For example, all display stations belong to the same device class. Contrast with *device type.*

device description. An object that contains information describing a particular device that is attached to the system. The system-recognized identifier for the object type is *DEVD. Abbreviated DEVD.

device emulation. The programming that allows one device to appear to the user or to a system as another device. See also *display emulation, printer emulation,* and *3270 emulation.*

device file. An object that contains a description of how input data is to be presented to a program from an external device and/or how output data is to be presented to the external device from the program. External devices can be display stations, card devices, printers, diskette magazine drives, tape drives, or a communications line.

device name. The symbolic name of an individual device. The name is specified when the device is defined to the system by the Create Device Description (CRTDEVD) command.

device selection character. In BSC, the control character that is sent to a receiving system or device to select which BSC subdevice is to receive the subsequent output.

device table. A list of valid finance devices to be acquired by a System/38 finance job.

device token. In System/38 graphics, an 8-byte code, required for device initialization, that corresponds to a predefined set of device hardware characteristics.

device type. The generic name for a group of devices. For example, 5219 for IBM 5219 Printers. Contrast with *device class.*

DFU. See *data file utility.*

DFU application. See *application.*

DHCF. See *distributed host command facility.*

DIA. See *document interchange architecture.*

DIA document distribution services. The set of services that enables office users to send and receive electronic mail.

diagnostic message. A message that contains information about errors in the execution of an application program or a system function.

dictionary. See *permanent dictionary, system dictionary,* and *temporary dictionary.*

digit. Any of the numerals from 0 through 9.

digits-only keyboard shift. A function for display files that allows entry only of digits zero through nine.

dimension attribute. In PL/I, an attribute that specifies the number of dimensions of an array and indicates the bounds of each dimension.

dimension specification. In BASIC, the specification of the size of an array and the arrangement of its elements. Up to seven dimensions can be specified.

direct file. See *relative file.*

direction. In System/38 graphics, the orientation of a string of mode-2 or mode-3 graphics symbols. Direction can dictate that the string reads left to right, right to left, top to bottom, or bottom to top.

directive. In PL/I, a statement that directs the operation of the compiler.

directory. See *system distribution directory* and *personal directory.*

directory entry. (1) In the system distribution directory, an entry representing a user or distribution list. A user can have more than one entry in the system distribution directory. (2) In a personal directory, an entry made up of one or more fields. For example, one entry may contain an individual's name, address, and telephone number.

directory record. See *directory entry.*

DISC. The BSC transmission control sequence for disconnect on a switched line.

disconnect. To break a connection, either physically or electrically.

disconnect time-out. A time-out that indicates a loss of communications with the BSC device or work station.

disk device. A physical enclosure containing one or more units.

diskette drive. The mechanism used to seek, read, and write data on diskettes. See also *diskette magazine drive.*

diskette file. A device file created by the user to support a diskette device.

diskette location. The slot into which the diskette is inserted before being read or written.

diskette magazine drive. A diskette drive that can hold two magazines, each containing 10 diskettes, plus individual diskettes in three separate slots. It is used to transfer information between system internal storage and removable diskettes.

display. A visual presentation of information on a work station screen, usually in a specific format. Display is often used as a shortened version of information display. Sometimes called a screen.

display emulation. The part of 3270 emulation support that converts 3270 data streams into 5250 data streams and 5250 data streams into 3270 data streams, thereby allowing a 52xx display station to appear to the host as a 3277 display device.

display file. (1) A device file created by the user to support a display work station or console. (2) In BASIC, any file that has the keyword DISPLAY specified in the OPEN statement for the file.

display format. The name of the device file and the name of the record format to be used when the subsystem obtains routing data from the user.

display image. In 3270 emulation, the 1920-character block that contains data in the sequence in which it would appear on the display screen or the printer. The user can specify the screen image with or without field definitions, such as position, length, and other attributes, when creating the BSC file. Sometimes called a screen image.

display point. In System/38 graphics, a picture element that represents the finest degree of resolution. Sometimes called a pel or a pixel.

display screen. An electronic display tube, similar to a TV picture tube, used to display information entered or received at the system console or a work station.

display station. An input/output device containing a display screen and an attached keyboard that lets a user send information to or receive information from the system.

display station pass-through. A communications feature that allows a user to sign on to one system (either a System/38 or System/36) from another system (either a System/38 or System/36) and access that remote system's resources. Sometimes called pass-through.

Displaywriter user. A person who operates a Displaywriter with the Electronic Document Distribution licensed program to communicate with other office products.

Distributed Data Management (DDM). A program product that allows an application program or user on a source system to access data files on remote systems connected by a communications network that also uses DDM.

distributed host command facility. That part of a System/38 that helps to create the communications link between a System/370 terminal and a System/38 application. Abbreviated DHCF.

distribution. The sending of an item (such as a message, document, file, or job stream) from an originator to one or more recipients.

distribution description. A description (1 through 44 characters long) assigned to a document being distributed. It is made by the originator of the distribution and usually describes the item that is being distributed.

distribution list. A list, which includes users who are enrolled in the system distribution directory for SNA Distribution Services, that allows users to send messages, memos, and documents to a group of users in one step.

distribution queue. In document distribution services, a list that keeps track of documents to be distributed.

distribution queue entry. In SNADS, an entry on the distribution queue indicating that an item has been passed to SNADS for distribution to one or more recipients in the SNADS network.

distribution request. See *distribution queue entry.*

distribution service level. In SNADS, the combination of priority, capacity, and protection requirements that must be satisfied to receive or route a distribution. SNADS has service levels of fast, status, data high, and data low. Items distributed with a service level of fast, status, or data high are put on the priority queue. Items distributed with a service level of data low are put on the normal queue.

distribution service unit. In SNADS, any of the nodes in a SNADS network. Abbreviated DSU.

distribution services. The support provided by CPF to receive, route, and send distributions in a SNADS network.

division. One of the four major parts in a COBOL program: Identification, Environment, Data, and Procedure.

division header. The COBOL reserved words and punctuation that indicate the beginning of one of the four divisions of a COBOL program.

DLE. See *data-link-escape character.*

do group. (1) A set of commands in a control language program delimited by a DO command and an ENDDO command that is conditionally executed as a group. (2) In RPG, a group of calculations that are executed one or more times based on the results of comparing factor 1 and factor 2 of certain calculation operations (for example, DOUxx). A DO operation and an END operation are the delimiters for a do group. (3) In PL/I, a sequence of statements, executed as a unit, that may be a non-iterative do group (executed once or possibly not at all) or an iterative do group (executed several times, once, or not at all). Contrast with *block.*

document. (1) A collection of one or more lines of text that can be named and filed in the document library (QDOC). The system-recognized object type of a filed document is *DOC. (2) Any item that is distributed (such as a document or a message). (3) In Personal Services/38, a text document (a draft that can still be edited), a filed document (a document that cannot be edited), or a final form document (a document that can be displayed in its printed form and that cannot be edited).

document authority. A relationship between two users that allows one user to access the document interchange architecture resources of another user.

document class. A user-defined character string, 1 through 16 characters long, that characterizes a document. It can be used to search for a filed document. For example, a document class memo, report, or letter. A document class becomes part of the interchange document profile (IDP) of a document. See also *interchange document profile.*

document description. See *interchange document profile.*

document details. Attributes with which a document is filed. Document details concerning the name, subject, class, primary and secondary owners, particulars regarding writing and sending, access, and access codes are all assigned, and most may be changed after the document is filed.

document distribution. See *DIA document distribution services.*

document format. The selected arrangement of text for a specific document. See also *text document* and *final form document.*

Document Interchange Architecture. The specification of rules and a data structure that is necessary for the predictable, coherent exchange of information between application processes. Document interchange architecture includes document library services and document distribution services. Abbreviated DIA.

document interchange session. In document interchange, the environment that allows an office system node to process requests.

document library. The system repository for filed documents and related information. Documents can be filed and retrieved by office users. On System/38, the document library is library QDOC. Contrast with *archive* and *text library.*

document library services. The set of services that enables office users to manage the contents of a document library.

document list. (1) In working with text documents, a display that lists the names of the documents contained in a particular file and allows the Personal Services/38 user to select a document to process. (2) A logical grouping of filed documents that have common document attributes. The document list identifies which documents satisfy search criteria specified by an office user at the time the search is executed. The system-recognized identifier for the object type is *DOCL.

document name. The 1- through 44-character name of a document, assigned by the user when filing the document. Contrast with *library-assigned document name* and *document object name.*

document number. The number Personal Services/38 assigns to a hardcopy document when a user logs that document. The first two digits of the document number are the year of logging, and the last five are in sequence, with the most recent documents having the highest number. For example, the fifth hardcopy document filed in 1985 would have the number 85-00005.

document object name. The 10-character name of a document assigned by the system when a user files the document. Contrast with *library-assigned document name* and *document name*.

document password. See *personal document password*.

document profile. See *interchange document profile*.

document spelling check function. A text function used for proofreading documents that allows a user to do the following: verify that a word is spelled correctly by checking for it in one or more online dictionaries; replace a misspelled word by choosing the correctly spelled version from a list of similarly spelled words provided by the dictionary or dictionaries; or replace a given word with one having a similar meaning from a list of synonyms provided by the dictionary.

double precision. The specification that causes a floating-point value to be stored (internally) in the long format. See also *precision*; contrast with *single precision*.

download. To send program code from a host system to an attached device. For example, transmitting a font over a communications line to a 6670 printer.

DR. See *definite response*.

draft copy. A printed copy of a document that is not yet a finished version. For easy reference you can choose special features such as printing sequence, or line numbers and a special flag character to indicate changed lines.

drawer. A paper-supply drawer on a printer such as the IBM 5219 Printer. If the printer has more than one drawer, a user can specify the drawer from which the printer takes the paper.

DSU. See *distribution service unit*.

DTE. See *data terminal equipment*.

due date. The date by which a response is required for an action item. Applies to action items only.

dummy device. In System/38 graphics, an imaginary output device for which GDDM does all the normal processing but for which no actual output is generated.

dummy variable. In BASIC, a simple variable enclosed in parentheses and placed after the name of a user-written function in a DEF statement. When the program is executed, the function performs its defined calculation on the expression value substituted for each dummy variable.

dump. To copy data in a readable format from main or auxiliary storage onto an external medium such as tape, diskette, or printer.

duplex. A data communications network that permits concurrent transmission and reception of data. Same as full duplex. Contrast with *half duplex*.

duplicate key value. The occurrence of the same value in a key field or in a composite key in more than one record in a file.

dynamic. Occurring at execution time.

dynamic access. In COBOL, an access mode in which records can be read from or written to a file in a nonsequential manner (see *random access*) and read from a file in a sequential manner (see *sequential access*) during the scope of the same OPEN statement.

dynamic select/omit. Selection and omission of logical file records performed at execution time, instead of when the access path (if any) is maintained. Dynamic select/omit may also be used when no keyed access path exists.

EBCDIC. Extended binary-coded decimal interchange code. A coded character set consisting of 8-bit coded characters.

EC log. See *engineering change log*.

EDD. See *electronic document distribution*.

edit. (1) To modify a numeric field for output by suppressing zeros and inserting commas, periods, currency symbols, the sign status, or other constant information. (2) To make changes to a document or source member on the system.

edit code. A letter or number indicating what kind of editing should be done before a field is displayed or printed.

edit description. An object that contains a description of a user-defined edit code. The system-recognized identifier for the object type is *EDTD.

edit display. The display used to make changes to a source member or document by adding, changing, or removing text.

edit word. A user-defined word with a specific format that indicates how editing should be done.

editable document. See *text document*.

editing character. In COBOL, a single character or a fixed 2-character combination used to format output.

electronic document distribution. The name of an IBM program product that implements DIA on the Displaywriter system.

electronic mail. Mail, messages, memos, or documents sent from one user to another user through the system.

element. (1) A parameter value in a list of parameter values. (2) In RPG and BASIC, the smallest addressable unit of an array or table.

elementary item. In COBOL, a data item that is described as not being further logically subdivided.

ELLC. See *enhanced logical link control.*

embedded blank. A blank that appears between characters.

embedded command. A command that is specified as a value in a parameter of another command.

emulation program. A non-System/38 control program that allows a local 3704 or 3705 Communications Controller to emulate the function of an IBM 2701 Data Adapter Unit, an IBM 2702 Transmission Control, or an IBM 2703 Transmission Control. Abbreviated EP. See also *network control program.*

end position. In RPG, an entry in the output specifications that indicates where the end position of a field or constant is to be placed in the output record.

end-of-file delay. A specified interval between attempts to get a record added after the normal end of the file has been reached.

end-of-text character. In BSC, the transmission control character that is used to end a logical set of records that began with the start-of-text character. Abbreviated ETX. Contrast with *end-of-transmission-block character.*

end-of-transmission character. In BSC, the transmission control character that is usually used to end transmission with the remote system. Abbreviated EOT.

end-of-transmission-block character. In BSC, the transmission control character used to end a block of records. Abbreviated ETB. Contrast with *end-of-text character.*

ending attribute character. For a display file, the attribute character following the last position in a field.

engineering change log. A list of engineering changes that have been installed in the machine; the list is useful for preparing APARs. Abbreviated EC log.

enhanced logical link control. An SNA logical link control protocol that allows the transfer of data link control information between two adjacent SNA nodes that are connected through an X.25-based packet-switched data network. This protocol provides enhanced error detection and recovery. Contrast with *physical services header* and *qualified logical link control.* Abbreviated ELLC.

ENQ. See *enquiry character.*

enquiry character. In BSC, a transmission control character used to indicate control of transmission on a point-to-point channel and to indicate a request for a station to repeat its response. Abbreviated ENQ.

enrollment. The registration of a user in the system distribution directory. The user can be a local user on your system or a remote user on another system that communicates with your system. See also *system enrollment* and *Personal Services/38 enrollment.*

enrollment record. A record used to register a user to Personal Services/38. Every Personal Services/38 user must have an enrollment record to use Personal Services/38.

enter. To press the Enter/Rec Adv key (on a work station keyboard) or the Enter key (on the system console) or a command function key to transfer keyed-in information to the system for processing. See also *key in.*

entry. (ANSI) In COBOL, any descriptive set of consecutive clauses terminated by a period and written in the Identification, Environment, or Data Division of a COBOL source program.

entry constant. In PL/I, the label prefix of a PROCEDURE statement.

entry data item. In PL/I, a data item that represents an entry point to a procedure.

entry format. A set of fields that can be displayed and modified (entered) on the display.

entry reference. In PL/I, an entry constant, an entry variable reference, or a function reference that returns an entry value.

entry structures. The description of a personal directory entry. Each entry of a personal directory has an identical structure. The entry structures determines the type and size of each field in a personal directory entry.

entry variable. In PL/I, a variable to which an entry value can be assigned.

ENVIRONMENT DIVISION. One of the four main parts of a COBOL program. The Environment Division describes the computers upon which the source program is compiled and those on which the object program is executed; it also provides a linkage between the logical concept of files and their records, and the physical aspects of the devices on which files are stored.

EOT. See *end-of-transmission character.*

EP. See *emulation program.*

error log. A record of machine checks, device errors, and volume statistical data.

Error Reset key. A key that allows the user to unlock the keyboard when the system locks it due to an error. When in Insert mode, pressing this key will return the user to edit mode. It does not unlock the keyboard during an interactive print.

escape message. A message that can be monitored for and that describes a condition for which a program terminates without completing the requested function.

established action. In PL/I, the action to be taken when a condition is raised. See also *implicit action* and *ON-statement action.*

ETB. See *end-of-transmission-block character.*

ETX. See *end-of-text character.*

EX. See *exception response.*

exact end position. An entry on the output specifications that indicates where the end position of a field or constant is to be placed in the output record. Contrast with *relative end position.*

exact search. A search type used in searching filed documents or personal directories. When you specify a search criterion using an exact search, Personal Services/38 searches for all filed documents (or personal directories) accessible to you for which the corresponding document detail (or directory entry) is exactly that criterion.

exception. (1) An abnormal machine condition that is detected during the execution of a particular function. (2) In COBOL, the occurrence of a machine or user-defined condition that can be monitored for and that is directly associated with the execution of a particular function within a program. Exceptions generally represent an abnormality detected by the machine or by a program.

exception request. In SNA, a request that replaces another request in which an error has been detected. Abbreviated EXR. **Note:** The exception request contains a 4-byte sense field that identifies the error in the original request and, except for some path errors, is sent to the destination of the original request; if possible, the sense data is returned in a negative response to the originator of the replaced request.

exception response. In SNA, a value in the form-of-response-requested field of a request header. The value requests the receiver to return a response only if the request is unacceptable as received or cannot be processed; that is, only a negative response can be returned. Contrast with *definite response.*

exception/error handling. In RPG, programmer-written code that handles program or file exceptions/errors. If the program or file exceptions/errors are not controlled by the programmer, the RPG default error handler receives control.

exclusive lock state. The allocation that a routing step has for an object in which no other routing steps can use the object. The predefined value for this lock state is *EXCL.

exclusive-allow-read lock state. The allocation that a routing step has for an object in which other routing steps can read the object if they request a shared for read lock state for the same object. The predefined value for this lock state is *EXCLRD.

executable program. The set of machine language instructions that is the output from the compilation of a source program. The actual processing of data is done by the executable program.

execute. To cause a program, command, utility, or other machine function to be performed.

execution. The carrying out of the instructions of a computer program by a processing unit.

execution time. The time during which the instructions of a computer program are executed by a processing unit.

execution-time array. In RPG, an array that is loaded or created by input or calculation specifications after actual execution begins. Contrast with *compile-time array or table* and *preexecution-time array or table.*

exit program. A user-written program that is given control during the operation of some system function. For example, an exit program may receive the journal entries passed to it by the RCVJRNE (Receive Journal Entry) command and write them onto tape or onto another system for backup.

expanded communications buffer. A special feature of the 3741 device that allows multiple records to be transmitted or received in one block of data.

explicit declaration. In PL/I, a DECLARE statement that specifies the attributes of a name. A procedure's name is declared by the PROCEDURE statement: the statement's label is declared as the name of the procedure. Contrast with *implicit declaration.*

explicit dimensioning. In BASIC, the use of a DIM statement to specify the number of elements in an array, the number of dimensions in an array, or the length of a character variable.

exponent. (1) A number, indicating to which power another number (the base) is to be raised. In COBOL and PL/I, exponentiation is indicated with the symbol **

followed by an exponent. (2) In floating-point format, an integer constant specifying the power of ten by which the base of the decimal floating-point number is to be multiplied.

expression. (1) A group of constants or variables separated by operators that results in a single value. An expression can be arithmetic, relational, logical, or a character string. (2) In PL/I, a representation of a value; it can consist of constants, variables, and function references, along with operators or parentheses or both.

EXTEND mode. In COBOL, an open mode in which records are added to the end of a sequential file.

extension and line counter specifications. An RPG coding form on which the programmer provides information about record address files, arrays, and tables and their associated files used by a program and about the number of lines to be printed on the printer forms that are used.

extent. (1) The space occupied by or reserved for a particular data file. (2) In PL/I, the number of integers between and including the lower and upper bounds of an array.

external decimal item. See *zoned decimal item.*

external indicators. In RPG, indicators that can be set by another program prior to execution of a program or altered during execution of a program. Valid external indicators are U1 through U8.

external message queue. A message queue that is part of the job message queue and is used to send messages between an interactive job and the work station user. For batch jobs, messages sent to the external message queue only appear in the job log.

external object. An object that has a defined object type (such as *FILE or *PGM). In general, external objects can be displayed by a user. For example, you can use a display command (like the Display Library (DSPLIB) command) to display internal objects. See also *object.* Contrast with *internal object.*

external procedure. A procedure that is not contained in another block. Contrast with *internal procedure.*

external storage. Data storage other than main or auxiliary storage.

externally described data. Data contained in a file for which the fields in the records are described to CPF, by using data description specifications, when the file is created. The field descriptions can be used by the program when the file is processed. Contrast with *program-described data.*

externally described file. A file for which the fields in the records are described to CPF, through data description specifications, when the file is created. The field descriptions can be used by the program when the file is processed. Contrast with *program-described file.*

extralingual character. In PL/I, any EBCDIC code that is not an alphabetic character, a special character, or a digit.

factor. In RPG, an entry (for example, a field name, file name, literal, or data structure) that identifies the data to be used in a calculation operation.

FCFC. See *first-character forms control.*

FCS. See *function control sequence.*

FCT. See *forms control table.*

fetch overflow. In RPG, a routine that allows the user to alter the basic RPG overflow logic to prevent printing over the perforation and to allow the user to use as much of the page as possible.

FID field. See *format identification field.*

field. An area that is reserved and used for a particular item of information.

field help. Information about the fields on a display.

field indicator. In RPG, an indicator used to indicate whether a given field in an input record is plus, minus, zero, or blank.

field level specifications. In DDS, specifications coded on the same line as a field name or on lines immediately following a field name. See also *file level specifications, key field level specifications, record level specifications,* and *select/omit level specifications.*

field record relation indicator. In RPG, an indicator used to associate fields in an input record with a particular record type. The field record relation indicator is normally used when the record type is one of several in an OR relationship.

field reference file. A physical file that contains no members and whose record format describes the fields used by a group of files.

field selection. (1) The function of using option indicators on fields in a display file to display different data on different output operations rather than defining a record format for each combination of fields. (2) In System/38 graphics, the selection of fields from a data base file for use as data values.

field-replaceable unit. Hardware or microcode that is exchanged completely when any one of its parts or modules fails. Abbreviated FRU.

figurative constant. (1) In COBOL, a reserved word that represents a numeric or character value, or a string of repeated values. The word can be used instead of a literal to represent the value. (2) In RPG, an implied literal that is specified in the calculation specifications without a length definition because the implied length and decimal positions are the same as those of the receiver field.

file. A generic term for the object type that refers to a data base file, a device file, or a set of related records treated as a unit. The system-recognized identifier for the object type is *FILE.

file chaining. In query, a function that allows a query application to use data from two data base files. The query application views the two chained files as if they were one file. The first file referenced by the query application is the primary file; the record format(s) of the primary file is the primary record format(s). The second file referenced by the query application is the secondary file; the record format(s) of the secondary file is the secondary record format(s).

file constant. In PL/I, a name declared for a file and for which a complete set of file description attributes exists during the time that the file is open, and with which each file must be associated.

file description. (1) The information contained in the file that describes the file and its contents. (2) In COBOL, an entry in the File Section of the Data Division that provides information about the identification and physical structure of a file.

file description attribute. In PL/I, a keyword that describes the characteristics of a file. See also *alternative attribute* and *additive attribute*.

file description specifications. An RPG coding form on which the programmer identifies and describes all files used in a program.

file exception/error subroutine. In RPG, a user-written subroutine that may receive control following file exceptions/errors.

file information data structure. In RPG, a data structure that can be defined for each file to make file exception/error information available to the program. A file information data structure must be unique for each file.

file key. In RPG, all the key fields defined for a file.

file level specifications. In DDS, specifications coded on the lines before the first record format name. See also *field level specifications, key field level specifications, record level specifications*, and *select/omit level specifications*.

file list. A list of names of files contained in a library from which you can select a file.

file maintenance. Adding, changing, or deleting records in a file to keep the information in the file current.

file operation code. In RPG, an operation code (for example, CHAIN) that lets the user control the input/output operations to a file.

file organization. In COBOL, the permanent file structure established at the time that a file is created.

file overrides. The file attributes specified at execution time that will override the attributes specified in the file description or in the program.

file reference. In BASIC, a numeric expression preceded by a pound sign (#) that is used to specify the file of the device being accessed in an input/output statement.

file reference function. A CPF function that lets the user track file usage on the system.

FILE SECTION. In COBOL, a section of the Data Division that contains descriptions of all externally stored data (or files) used in a program. Such information is given in one or more file description entries.

file separator. The pages or cards to be produced at the beginning of each output file to separate the file from the other files being spooled to an output device.

file server. The function that stores and retrieves the data associated with an item being distributed.

file translation. In RPG, a function that is used to change any of the 256 EBCDIC characters into another EBCDIC character.

FILE-CONTROL. In COBOL, the name and header of an Environment Division paragraph in which the data files for a given source program are named and assigned to specific input/output devices.

file-name. In COBOL, a name, associated with a file, defined in a file description entry or in a sort-merge file description entry.

filed document. A document that has been stored in library QDOC. In Personal Services/38, a mail item that has been filed, a hardcopy mail item that has been logged, or a text document that has been filed.

fillet. In System/38 graphics, a curve that is tangent to the end points of two connected lines. See also *polyfillet*.

final form document. A document in a fixed format that cannot be edited. Personal Services/38 displays a final form document as it appears when printed and you can see the results of any print control commands that you used.

A final form document can be viewed on any system that supports DIA. Also known as final form text.

final form text. See *final form document.*

finance device. A device used for performing functions specifically related to the finance industry, such as the 4700 Finance Communications System devices and the 3694 Document Processor. The 3180, 3270, and 5250 work stations are not finance devices.

finance support. The System/38 program support that allows a System/38 to be used as a host to which finance devices can be attached.

first speaker. In SNA, the logical unit (LU) half-session defined at session activation as (1) able to begin a bracket without requesting permission from the other LU half-session to do so, and (2) winning contention if both half-sessions attempt to begin a bracket simultaneously. See also *bracket protocol.*

first-character forms control. A method for controlling the format of printed output. The first character of each record determines the format. Abbreviated FCFC.

first-level message. The initial message that is presented to the user. The initial message contains general information or designates an error. Contrast with *second-level message.*

first-page indicator. In RPG, an indicator used to specify which records (such as headings) should be written on the first cycle only. Abbreviated 1P.

fixed currency symbol. A currency symbol that appears in a specified position of an edited field. Contrast with *floating currency symbol.*

fixed-point format. (1) The external representation of a decimal value, consisting of an optional sign followed by one or more digits, a decimal point, and zero or more digits. (2) The internal storage format used to represent a fixed-point value that can be stored either in zoned or packed decimal format.

fixed-point number. A value in fixed-point format.

flag character. A character that you designate to mark changed lines in a document. The % character is often used for this purpose.

floating currency symbol. A currency symbol that appears immediately to the left of the leftmost position in an edited field. Contrast with *fixed currency symbol.*

floating-point format. (1) In CPF and PL/I, the representation of a number that consists of an optional sign, a decimal number with a decimal point, followed by the letter E, followed by an optional sign and a 1- to 3-digit integer. For example, 3.0E-2, is 3 times 10 to the -2 power or 0.03. (2) In BASIC, the representation of a number that consists of an optional sign followed by an integer or fixed-point constant, followed by the letter E, followed by an integer constant with up to 3 significant digits. (3) In binary floating-point representation, the storage format used to represent a binary floating-point value. See also *long format* and *short format.*

floating-point literal. A literal, expressed in floating-point format, that consists of a decimal value (including a decimal point and a sign), followed by the letter E, followed by an integer exponent (with an optional sign).

floating-point number. A value in floating-point format.

flow control. In SNA, the process of managing the rate at which data traffic passes between components of the network.

fold. To continue data for a line on the following printed or displayed line. Contrast with *truncate.*

font. A family or assortment of characters of a given size and type style.

footer. Text that appears at the bottom of the printed pages of a document.

force time. The time at which all distribution queue entries on a next system queue will be sent regardless of send depth.

forced control field. For the conversion reformat utility, a one-position control field that results from replacing the value of the field or adding a value to the field.

forced microcode completion. A function that allows the user to force the shutdown of a deadlocked system and to complete any interrupted microcode instructions by using rotary switches on the system console.

form. The area between perforations on continuous printer paper.

form document. A report, letter, or memo, some of which is prewritten and needs only a portion to be individually customized. An example is a form letter into which you add the recipient's name, address, and personal salutation.

form field. A field defined in a form document to accept input. You can assign different characteristics to the field such as prompting information, highlighting, and underlining.

format. (1) A specified arrangement of such things as characters, fields, and lines, usually used for displays, printouts, or files. (2) To arrange such things as characters, fields, and lines. See also *record format.*

format identification field. In SNA, a field in each transmission header that indicates the format of the

transmission header; that is, the presence or absence of certain fields. Abbreviated FID field.

format line. In SEU, the abbreviated names of the fields in the source line that are displayed directly above the source line. The format line is displayed when the F (format) line command is executed.

format list. In PL/I stream-oriented data transmission, a list specifying the format of the data item on the external medium. Contrast with *data list.*

format selector. A user-defined program (either a CL or an HLL program) that determines where a record should be placed in the data base when an application program does not pass a record name for a record being added to a logical file member.

formatted document. A document arranged in paragraphs and pages.

formatted program interface. The part of 3270 emulation support that converts 3270 data streams into a 1920-character image format that is presented to user-written programs. Contrast with *unformatted program interface.*

forms control table. An object that designates the special processing requirements for specific printer or punch output streams received by an RJEF session from a host system. The system-recognized identifier for the object type is *FCT. Abbreviated FCT.

forward recovery. The process of reconstructing a file from a particular point by restoring a saved version of the file and then applying changes to that file in the same order in which they were originally made.

frame. In SDLC, the name of the basic link unit.

FRU. See *field-replaceable unit.*

full authority. A type of authority used in calendars and personal directories. This gives the user the same authority over a calendar or directory as the owner. Contrast with *basic authority.*

full duplex. See *duplex.*

full procedural file. In RPG, a file for which the input operations are controlled by programmer-specified operation codes instead of by the program cycle. Contrast with *primary file.*

full user name. A field in the Personal Services/38 enrollment record describing the user. Usually the given name and surname of the user.

function. (1) In PL/I, a procedure that has a RETURNS option in the PROCEDURE statement. A function terminates by executing a RETURNS (expression) statement and returning a scalar value to the point of invocation. Contrast with *subroutine.* (2) A task or related set of tasks performed by the system.

function check. A notification (by a message) that an unexpected condition has stopped the execution of a program.

function check, machine. A notification of the malfunction of a machine instruction.

function code. In Personal Services/38 and administrative management, a 1 through 3-character code that a user enters and that instructs the system to perform a specific action in the calendar function.

function control sequence. In System/38 (RJEF) MTAM, a control character used to control the flow of individual function streams. Abbreviated FCS.

function field. In the calendar function of Personal Services/38, the field into which a user keys a function code of from one to three alphanumeric characters to request a calendar function.

function key. A keyboard key that is used to request a specific system function. See also *command function key.*

function reference. In PL/I, an entry constant or an entry variable, either of which must represent a function, followed by a possibly empty argument list. Contrast with *subroutine call.*

function-name. In COBOL, a name, defined by IBM, that identifies system logical units, system-supplied information, printer and card punch control characters, or program switches.

GDDM. See *graphical data display manager.*

GDF. See *graphics data file.*

general poll. See *polling list.*

general-purpose library. The library provided by CPF to contain user-oriented, IBM-provided objects and user-created objects that are not explicitly placed in a different library when they are created. Named QGPL.

generic name. The initial characters common to object names that can be used to identify a group of objects. A generic name ends with an * (asterisk). For example, ORD* identifies all objects whose names begin with the characters ORD.

generic search. A search type used in searching filed documents or personal directories. When you specify a search criterion using a generic search, Personal Services/38 searches for all filed documents (or personal directories) accessible to you for which the corresponding

document detail (or directory entry) begins with that criterion.

get operation. An input operation that obtains a record from an input file and passes it to a program. Also called input operation or read operation.

GFT. See *grant functional transmission.*

grant functional transmission. In System/38 (RJEF) MTAM, a control character indicating that the host system grants permission to System/38 to send reader data, or that System/38 grants permission to the host system to send writer data. Abbreviated GFT. Contrast with *request functional transmission.*

graphic character. A character in a character set that can be displayed or printed. Contrast with *control character.*

graphic character set. A particular set of graphic characters in a code page.

graphic character set ID. A 5-digit registered identifier used to specify a graphic character set. On System/38, the code page ID is the first part of the QCHRID system value or the CHRID parameter value. See also *code page ID.*

graphical data display manager. A group of routines with API that allows pictures to be defined and displayed procedurally through graphics routines that correspond to graphics primitives. Abbreviated GDDM. Contrast with *presentation graphics routines.*

graphics. (1) The making of charts and pictures. (2) Pertaining to charts, tables, and their creation.

graphics data file. In System/38 graphics, a picture definition in a coded format used internally by GDDM and optionally providing the user with a lower level programming interface than the GDDM API.

graphics field. In System/38 graphics, that part of the display screen or the paper that is used for pictures and graphics text.

graphics hierarchy. In System/38 graphics, an ordered division of parts of the graphics program, of which the device is the highest level and parts of the picture are the lowest.

graphics primitive. In System/38 graphics, a single item of graphics operation, such as drawing a line or a string of graphics text.

graphics segment. In System/38 graphics, a group of graphics operations that have a common window and a common viewport and associated attributes.

graphics symbol set. In System/38 graphics, an object that can contain either a vector symbol set or an image symbol set. The system-recognized identifier for the object type is *GSS.

graphics text. In System/38 graphics, text that can be shown by an application program using a graphics symbol set. Contrast with *externally described data.*

grid lines. In System/38 graphics, uniformly spaced horizontal and vertical reference lines on a chart. See also *axis grid lines.*

group. A list of calendar names that is handled by a single name for group appointment scheduling.

group appointment. An appointment made using the group scheduling function in the Work with calendars function.

group authority. The rights given to a group profile to access objects, resources, or functions.

group calendar. A calendar that displays a specific day from the calendars of up to five people. All normal calendar functions are available.

group data area. A data area that is automatically created when an interactive job becomes a group job. This data area is shared by all jobs in the group but cannot be accessed by jobs outside the group.

group item. In COBOL, a named set of contiguous elementary or group items.

group job. One of up to sixteen interactive jobs that are associated in a group with the same work station device and user. These jobs can be manipulated using the Change Group Attributes (CHGGRPA), Retrieve Group Attributes (RTVGRPA), Transfer to Group Job (TFRGRPJOB), and Terminate Group Job (TRMGRPJOB) commands.

group job name. A name that is assigned to an interactive job when it is changed into a group job using the Change Group Attributes (CHGGRPA) command or when a group job is started using the Transfer to Group Job (TFRGRPJOB) command. This name is used within the group to identify the job.

group job transfer. An operation performed by the Transfer to Group Job (TFRGRPJOB) command that will either start a new group job or resume an existing group job. In both cases, control is passed to the specified group job.

group meeting. In Personal Services/38, an appointment that has been scheduled by a user on several calendars in a single operation in the calendar function. A group meeting exists independently of the calendars on which it is scheduled. Only the user who scheduled the meeting can delete all records of the meeting.

group message queue. A message queue that is associated with a group of jobs using the Change Group Attributes (CHGGRPA) command. When the message queue is set to break or notify mode in the active group job, it will be set to the same mode in any job in the group that is transferred to using the Transfer to Group Job (TFRGRPJOB) command or that gains control when the active group job is cancelled.

group profile. A user profile that provides identical authority to a group of users.

GSS. See *graphics symbol set.*

guide-in window. An opening through which a diskette is moved to the read/write position in the diskette magazine drive.

half adjust. A method of rounding off a number by adjusting the last digit to be kept. When the number to the right of the last digit to be retained is 5 or greater, 1 is added to the last retained digit. For example, 2.475 half-adjusted to two decimal places becomes 2.48, but 2.474 becomes 2.47.

half duplex. Permitting data communications in opposite directions, but not at the same time. Contrast with *duplex.*

half-session. In SNA, a component that provides function management data services, data flow control, and transmission control for one of the sessions of a network addressable unit (NAU). See also *session.*

halt indicators. In RPG, an indicator used to terminate the program when an unacceptable condition occurs. Valid halt indicators are H1 through H9.

handset. A telephone receiver and transmitter mounted in a handle.

hardcopy. A printed copy of machine output in a visually readable form; for example, printed reports, listings, documents, and summaries.

hardcopy mail. Mail that is not sent electronically. For example, letters sent through conventional mail services.

hardware character. In System/38 graphics, an alphameric character provided by the device, usually from a DDS display file. See also *mode-2 character* and *mode-3 character.*

HASP. See *Houston automatic spooling program.*

HCF. See *host command facility.*

header. Text that appears at the top of the printed pages of a document.

heading. A constant, or field, usually at the top of a page or display, that identifies the information on the page or display.

heading record. In RPG, output records that are generally printed at the top of a report and include report titles, column headings, or any other data needed to identify the information in the report.

help text. Information that is associated with an information display, a menu, or a prompt that explains options or values displayed. Help text is requested by pressing the Help key.

hexadecimal. Pertaining to a numbering system with a base of 16. Valid numbers are the digits 0 through 9 and the characters A through F, where A represents 10 and F represents 15.

hexadecimal number. The 1-byte hexadecimal equivalent of an EBCDIC character.

hidden field. A field in a display file that is passed from and to the program but is not sent to the display.

hierarchy. In COBOL, a hierarchy is a set of entries that includes all subordinate entries to the next equal or higher level number.

high-level language. A programming language that relieves the programmer from the rigors of machine level or assembler level programming; for example, RPG III, CL, BASIC, PL/I, and COBOL. Abbreviated HLL.

high-level message. A message that is sent to the program message queue of the program receiving the request. The message is displayed or provided for the user who entered the request. Contrast with *low-level message.*

high-speed line. A feature that allows a System/38 to communicate at speeds of up to 56 000 bits per second.

highlight. To define text as bold when printed. You can define words, parts of words, or information keyed into a form field using the text definition function of Personal Services/38.

history log. A log of information about system status and events. Named QHST.

HLL. See *high-level language.*

HLL pointer. A pointer that is declared by the programmer in the source of a high-level language (HLL) program.

hold delivery. The method of delivering messages to a message queue that holds the messages until the user requests them. The user is not notified when a message arrives at a message queue that is in hold delivery.

hopper. See *card hopper.*

horizontally displayed records. Subfile records that are grouped in a display so that more than one record of the same record format is displayed on each display line.

host command facility. An IBM program product on a System/370 host system that enables a user on the System/370 to access applications on a System/38 or other systems. Abbreviated HCF.

host system. The controlling or highest level system in a data communications configuration. For example, a System/38 is the host system for the work stations connected to it.

Houston automatic spooling program. A non-System/38 computer program that provides supplementary job management, data management, and task management functions such as control of job flow, ordering of tasks, and spooling. Abbreviated HASP.

hue. A particular color as distinct from other colors. See also *lightness* and *saturation.*

hyphenate. To separate a word by inserting a hyphen after a syllable to end a line and moving the remainder of the word to the start of the next line.

IDENTIFICATION DIVISION. One of the four main parts of a COBOL program. The Identification Division identifies the source program and the object program and, in addition, may include such documentation as the author's name, the installation where written, the date written, and so on.

identifier. (1) In COBOL, a data-name that is unique or is made unique by a combination of qualifiers, subscripts, and/or indexes. (2) In PL/I, a single alphabetic character or a string of alphabetic characters, digits, and break characters that starts with an alphabetic character.

IDP. See *interchange document profile.*

IDU. See *Interactive Data Base Utilities.*

image symbol set. In System/38 graphics, a graphics symbol set in which each character is treated as a small image and is described by a rectangular array of display points. Characters in an image symbol set are always drawn in a fixed size. Abbreviated ISS. Contrast with *vector symbol set*; see also *graphics symbol set.*

imaginary line. In System/38 graphics, a construction line used to build a fillet. The beginning and ending points of imaginary lines are defined, but the lines themselves do not appear as part of the picture.

immediate maintenance. A method of maintaining keyed access paths for data base files. This method updates the access path whenever changes are made to the data in the access path. Contrast with *rebuild maintenance* and *delay maintenance.*

imperative statement. In COBOL, a statement that specifies that an action is to be taken unconditionally. An imperative statement can consist of a series of imperative statements.

IMPL. See *initial microprogram load.*

IMPL Abbr. See *initial microprogram load abbreviated.*

implementor-name. In COBOL, an IBM-defined name that includes assignment-names, computer-names, function-names, and language-names.

implicit action. In PL/I, the action established for a condition when the program is activated and that remains established unless overridden by the execution of an ON statement for the same condition. Contrast with *ON-statement action.*

implicit dimensioning. (BASIC) (1) The specification of the number of elements in an array or the number of dimensions in an array, either by a reference to a member of an array or by context (without the array being explicitly specified in a DIM statement). (2) The specification of the length of a character variable by context (without the variable being explicitly defined in a DIM statement).

impromptu message. A message that is created when it is sent. Contrast with *predefined message.*

IMS/VS. See *Information Management System for Virtual Storage.*

inactive record. A subfile record that has not been added to a subfile by a put operation or that was initialized as inactive by the DDS keywords SFLINZ and SFLRNA.

independent work station. A work station that can operate independently of a host system, but that can also communicate with a host system. A Displaywriter is an example of an independent work station.

index. In COBOL, A computer storage position or register, the contents of which identify a particular element in a table.

index data item. In COBOL, a data item in which the contents of an index can be saved.

index-name. In COBOL, a user-defined word that names an index associated with a specific table.

indexed data-name. In COBOL, a data-name followed by one or more index-names, enclosed in parentheses, which is used to reference an element in a table.

indexed file. A data base file whose access path is built on key values. Each record in the file is identified by a key field.

indexed organization. In COBOL, the file structure in which each record is identified by the value of one or more keys within that record.

indicator. (1) A 2-character entry on a specification form that is used to test a field or record or to tell when certain operations are to be performed. (2) An internal switch used by a program to remember when a certain event occurs and what to do when the event occurs.

infinity. In binary floating-point concepts, a value with an associated sign that is mathematically greater in magnitude than any binary floating-point number.

information display. A display that presents information such as the status of the system to a user, but that rarely requests a response.

Information Management System for Virtual Storage. A non-System/38 program product that can be used in a communications network. Abbreviated IMS/VS.

informational message. A message that conveys information about the normal condition of a function.

initial group program. A program specified on the Transfer to Group Job (TFRGRPJOB) command that is to be the first user program called in a group job.

initial microprogram load. The process that loads the system microprogram code from the system auxiliary storage, then checks system hardware and prepares system programming for user operations. Abbreviated IMPL.

initial microprogram load abbreviated. A shorter version of the IMPL sequence that bypasses certain hardware tests. Abbreviated IMPL Abbr.

initial procedure. In PL/I, an external procedure, invoked by a calling program, that activates a PL/I program.

initial program. A program, specified in a user profile, that is to be executed when the user signs on and the command processor program QCL is invoked. QCL invokes the initial program.

initialize. To set to a starting position or value.

initialize graphics. In System/38 graphics, to enter the graphics environment. The graphics environment is the state in which calls to GDDM and PGR routines can occur. Contrast with *terminate graphics*.

inline data file. A file described by a //DATA command that is included as part of a job when the job is read from an input device by a reader program.

input. Information (or data) to be processed.

input field. A field in a display file or data base file that is used for input operations. A work station user can key data into an input field in a display file.

input file. (1) A data base or device file that has been opened with the option to allow records to be read. (2) (ANSI) In COBOL, a file that is opened in the input mode.

input inhibited indicator. A spot of light that appears on the display to indicate that you cannot use the keyboard. This indicator appears when an error message is waiting, or when the system is executing a command.

input list. In BASIC, a list of variables to which values are assigned from input data.

input mode. In COBOL, an open mode in which records can be read from the file.

INPUT PROCEDURE. In COBOL, a procedure that provides special processing of records when they are released to the sort function.

input specifications. An RPG coding form on which the programmer describes the records and their fields in a program-described input file, adds RPG functions to an externally described input file, or defines a data structure and its subfields.

input stream. (1) A group of records submitted to the system as batch input that contains CL commands for one or more jobs and/or the data records for one or more inline data files. (2) In RJEF, data sent to the host system. Contrast with *output stream*.

input-capable field. Any field in a display file that can receive input from a user.

input-output file. (ANSI) In COBOL, a file that is opened in the I-O mode.

input-output processor. Any processor specialized for controlling input/output devices. Abbreviated IOP.

INPUT-OUTPUT SECTION. In COBOL, in the Environment Division, the section that names the files and external media needed by an object program. It also provides information required for the transmission and handling of data during the execution of an object program.

inquiry. A request for information from a data file usually made against one record.

inquiry message. A message that conveys information and that requests a reply.

insert. The SEU operation during which source statements are keyed in and added as new records in a source member.

insertion characters. Characters that are inserted in the value of a field when it is displayed or printed, in order to make it easier to read.

instruction. A statement that specifies an operation to be performed by the system and that identifies the data, if any, involved in that operation.

instruction pointer. A pointer that provides addressability for an MI instruction in a program.

integer. (1) A positive or negative whole number (that is, an optional sign followed by a number that does not contain a decimal place, or zero). (2) In COBOL, a numeric data item or literal that does not include any character positions to the right of the decimal point. Where the term integer appears in formats, integer must be an unsigned numeric literal and must be nonzero unless the rules for that format explicitly state otherwise.

integral boundary. In PL/I, the multiple of any 8-bit unit of information on which data can be aligned.

integrity. The protection of data and programs from inadvertent destruction or alteration.

intelligent printer data stream. An all-points-addressable data stream that allows users to position text, images, and graphics at any defined point on a printed page. Abbreviated IPDS.

intelligent work station. See *independent work station.*

interactive. Pertaining to a program or system that alternately accepts input and then responds. An interactive system is conversational; that is, a continuous dialog exists between the user and the system.

Interactive Data Base Utilities. A System/38 licensed program that consists of DFU, SEU, query, and SDA. Abbreviated IDU.

interactive job. A job in which the processing actions are performed in response to input provided by a work station user. During a job, a dialog exists between the user and the system. Contrast with *batch job.*

interactive processing. Pertaining to a program or procedure that alternately accepts input and then responds to the input. Contrast with *batch processing.*

interactive subsystem. A subsystem in which interactive jobs are to be processed. IBM supplies three interactive subsystems: QCTL, QINTER, and QPGMR.

interchange document profile. In document distribution services, information that externally describes the document or data being processed. Abbreviated IDP.

intermediate block check. For BSC, a parity check, caused by the ITB character, that checks each record (rather than the contents of the total buffer) when large blocks of text are received.

intermediate-block-check character. In BSC, a transmission control character that is used to divide a block of text into smaller groups of text; this division causes an intermediate block check. Abbreviated ITB.

internal DATA file. In BASIC, the table containing the values from the DATA statements of a program.

internal decimal item. See *packed decimal item.*

internal object. An object that is used by CPF to store the information needed to perform some system functions. Internal objects cannot be displayed by a user. For example, you cannot use a display command (like the Display Library (DSPLIB) command) to display internal objects. Contrast with *external object.*

internal procedure. In PL/I, a procedure that is contained in another block. Contrast with *external procedure.*

internal storage. All main and auxiliary storage in the system.

interrecord-separator character. In BSC, a transmission control character that is used to separate records within a block of data. Abbreviated IRS.

interval. The time period into which a displayed calendar day is divided.

intrinsic function. In BASIC, a function supplied by BASIC. Contrast with *user-defined function.*

INVALID KEY condition. In COBOL, an execution-time condition in which the value of a key for an indexed or relative file does not give a correct reference to the file.

inverse. A square array that results from a mathematical operation on a square array such that the two arrays can be multiplied together to obtain a square array with a determinant of one.

invite program device operation. An input/output operation that invites an acquired program device to send input to a program and returns control to the program without waiting for the input to arrive.

invocation. An instance of the execution of a program.

invocation level. Identifies the occurrence of the same program in the job's invocation stack. An invocation level

is used in debug mode only. The first occurrence of a program in a job has an invocation level of 1.

invocation nesting. The situation in which more than one invocation of the same program exists in an invocation stack.

invocation number. The number that identifies each program invocation in an invocation stack. The highest level program has an invocation number of 1.

invocation stack. A series of invocations linked together as a result of programs invoking other programs.

invoke. To instruct a specific program to start executing. Same as *call.*

I-O mode. In COBOL, an open mode where records can be read from, written to, or deleted from the file.

I-O-CONTROL. In COBOL, the name and the header for an Environment Division paragraph in which program requirements for specific input/output techniques are specified. These techniques include rerun checkpoints, the sharing of same areas by several data files, and multiple file storage on a single input/output device.

I/O indicator. A light on the operator/service panel that comes on when any input/output device other than the SCA (system control adapter) is operating.

I/O port. System hardware that supports the attachment of I/O devices.

I/O slot. One of three locations in the diskette magazine drive where individual diskettes can be inserted for input/output operations. Same as *manual slot.*

IOP. See *input-output processor.*

IPDS. See *intelligent printer data stream.*

IRS. See *interrecord-separator character.*

ITB. See *intermediate-block-check character.*

JES. See *Job Entry Subsystem.*

job. A single identifiable sequence of processing actions that represents a single use of the system. A job is the basic unit by which work is identified on the system. An example of a job is a user's interactive session.

job accounting. A function that collects information pertaining to a job's use of system resources and sends that information to the QACGJRN.QSYS journal.

job action. The network attribute that controls job submission from remote locations through the SNADS network. It can contain one of the following three values: *SEARCH – specifies that the network job table value for the sending user is used to determine the disposition of the received job; *FILE – specifies that the received job stream is placed on the network queue for the received user; *REJECT – specifies that the received job stream is discarded.

job control rights. The authority to change, cancel, display, hold, and release all jobs and, optionally, job and output queues and entries on them.

job date. The date associated with a job. The job date usually defaults to the system date.

job description. An object that contains information defining the attributes of a job. The system-recognized identifier for the object type is *JOBD.

Job Entry Subsystem. A host system (non-System/38) subsystem that receives jobs into the system and processes all output data produced by the jobs. Abbreviated JES.

job log. A record of requests submitted to the system by a job, the messages related to the requests, and the actions performed by the system on the job. The job log is maintained by CPF.

job message queue. A message queue that is created for each job. A job message queue is used for receiving requests to be processed (such as commands) and for sending messages that result from processing the requests. A job message queue consists of an external message queue and a set of program message queues. See also *external message queue* and *program message queue.*

job name. The name of a job as identified to the system. For an interactive job, the job name is the name of the work station at which the job was initiated; for a batch job, the job name is specified in the command used to submit the job. Contrast with *qualified job name.*

job number. A number assigned to a job as it enters the system to distinguish the job from other jobs.

job priority. The order in which batch jobs on a job queue are selected for execution by CPF. More than one job can have the same priority.

job queue. An object that contains a list of batch jobs submitted to the system for execution and from which the batch jobs are selected for execution by CPF. The system-recognized identifier for the object type is *JOBQ.

job queue entry. A work entry in a subsystem description that specifies the job queue from which the subsystem can accept batch jobs and transferred jobs.

job separator. The pages or cards placed at the beginning of the output for each job that has spooled file entries on the output queue. Each separator contains information that identifies the job such as its name, the job user's

name, the job number, and the time and date the job was executed.

job stream. See *input stream.*

join. The process of combining fields from two or more physical files in a join logical file, based on equal field values in the join field or fields.

join field. A field specified on the JFLD keyword. Join fields are used to connect two different physical file records in a single record in a join logical file.

join level. In join logical files, a level of DDS between record level and field level.

join logical file. A logical file that combines (in one record format) fields from two or more physical files. In the record format, not all the fields need to exist in all the physical files.

join duplicate sequencing field. A field on the JDUPSEQ keyword that describes the order of duplicate records in a join operation.

join specification. In a join logical file, DDS that define how to join two based-on physical files.

journal. (1) An object through which entries are placed in a journal receiver when a change is made to a data base file or its access path. The system uses the journal to record information about the journal receivers and data base files or its access path that are associated with the journal. The system-recognized identifier for the object type is *JRN. See also *journal entry* and *journal receiver.* (2) To place entries in a journal.

journal code. A 1-character code in a journal entry that identifies the primary category of the journal entry; for example, F identifies a file-level entry.

journal entry. A record in a journal receiver that contains information about data base files being journaled. See also *journal code, journal entry identifier, journal entry qualifier, journal entry type,* and *journal entry-specific data.*

journal entry identifier. The portion of a journal entry that identifies the category of the journal entry, the type of journal entry, the date and time of the entry, the job name, the user name, and the program name.

journal entry qualifier. The portion of a journal entry that identifies the name of the object for which the journal entry was generated.

journal entry type. A 2-character field in a journal entry that identifies the type of user-generated or system-generated journal entry; for example, PT is the entry type for a put operation.

journal entry-specific data. The user-generated or system-generated data in a journal entry. This data is unique to the operation that generated the journal entry.

journal receiver. An object that contains journal entries that are generated when a change is made to a data base file being journaled. The system-recognized identifier for the object type is *JRNRCV. See also *journal.*

journaling. The process of recording changes made to a physical file member in a journal. Journaling allows the programmer to reconstruct a physical member by applying the changes in the journal to a saved version of the physical file member.

Julian date. A date format that contains the year in positions 1 and 2, and the day in positions 3 through 5. The day is represented as 1 through 366, right-adjusted, with zeros in the unused high-order positions.

justify. To print a document with even right and left margins.

K. The primary unit of measure for storage capacity; 1 K = 1024 bytes.

K bytes. A unit of measure for bytes; 1 K byte = 1024 bytes.

key. (1) The value used to identify a record in a keyed file. (2) In COBOL, a data item that identifies the location of a record, or a set of data items that is used to place data in ascending or descending sequence.

key field. A field in a record whose contents are used to sequence the records of a particular type within a file member.

key field level specifications. In DDS, specifications coded on the lines following the last field specification. Key field level specifications are permitted only for physical files or logical files. See also *field level specifications, file level specifications, record level specifications,* and *select/omit level specifications.*

key in. The action of pressing keys on a keyboard to specify information that is to be processed. See also *enter.*

key word. In COBOL, a reserved word that is required by the syntax of a COBOL statement or entry.

keyboard shift indicator. A spot of light that appears on the display to indicate that you are using uppercase.

keyed sequence. The order in which records appear in an access path. The access path is based on the contents of one or more key fields contained in the records.

keyed sequence access path. An access path to a data base file that is ordered according to the contents of key fields

contained in the individual records. See also *arrival sequence access path* and *access path*.

keyword. (1) A name that identifies a parameter. Keywords are used in CL commands and in DDS. (2) In RPG, a word whose use is essential to the meaning and structure of a statement in a programming language. (3) In PL/I, an identifier that when used in a defined context takes on a specific meaning, such as an action to be taken or the attributes of data. (4) One of the significant and informative words in a title or document that describe the content of that document. Office users can use a keyword to retrieve a filed document.

keyword statement. In PL/I, a simple statement that begins with a keyword indicating the function of the statement.

kilobyte. See *K* or *K bytes*.

label. (1) The name of a file on a diskette or tape. (2) An identifier of a command generally used for branching. (3) In RPG, a symbolic name that represents a specific location in a program. A label can serve as the destination point for one or more branching operations. (4) In BASIC, the name that identifies a BASIC program line. (5) In PL/I, an identifier that names a statement so that it can be referred to at some other point in the program. Sometimes called a label prefix.

label constant. In PL/I, a name written as the label prefix of any statement other than PROCEDURE. Contrast with *label variable*.

label prefix. See *label*.

label value. In PL/I, an attribute that identifies a statement in the executing program.

label variable. In PL/I, an identifier that contains the label of a statement so that the label can be referred to at some other point in the program. Contrast with *label constant*.

LADN. See *library-assigned document name*.

language character. In PL/I, any one of the alphabetic characters, the digits 0 through 9, and 20 special characters.

language-name. In COBOL, a system-name that specifies a particular programming language.

last record indicator. In RPG, an indicator that signals when the last data record is processed. This indicator can then be used to condition calculation and output operations that are to be done at end of program. Abbreviated LR.

layer. In SNA, a grouping of related functions that are logically separate from the functions in other layers; the implementation of the functions in one layer can be changed without affecting functions in the other layers. See also *data flow control layer, path control layer*, and *transmission control layer*.

left-adjust. To place an entry in a field or to move the contents of a field so that the leftmost character of the data is in the leftmost position of the field.

left-justify. To print a document with even left margins.

legend. In System/38 graphics, an explanatory list of the symbols, lines, and shaded areas on a chart.

level checking. A function that compares the record format level identifiers of a file to be opened with the file description that is part of a compiled program to determine if the file record format has changed since the program was compiled.

level indicator. In COBOL, two alphabetic characters, FD or SD, that identify the type of file description entry.

level zero entry. In RPG, an entry on calculation specifications indicating operations that are to be done during total time for each program cycle when no control break has occurred. Abbreviated L0.

level-number. (1) In COBOL, a numeric character (1 through 9) or a 2-character set (01 through 49, 66, 77, 88) that begins a data description entry, and establishes its level in a data hierarchy. Level-numbers 66, 77, and 88 identify special properties of a data description entry. (2) In PL/I, a number that precedes a name in a DECLARE statement and specifies the organization of the structure in that statement.

library. An object that serves as a directory to other objects. A library is used to group related objects and to find objects by name when they are used. The system-recognized identifier for the object type is *LIB. See also *text library*, *document library*, *archive*, and *filed document*.

library list. An ordered list of library names used to find an object. The library list indicates which libraries are to be searched and the order in which they are to be searched. The system-recognized identifier is *LIBL. *LIBL specifies to the system that a job's current library list is to be used to find the object.

library-assigned document name. The unique name assigned by an office system node to a document when it is filed in the document library. It consists of a time stamp along with the node ID of the office system node. On System/38, this the time-stamp portion of the library-assigned document name is mapped into a 10-character name that becomes the document object name. Abbreviated LADN. See also *document name* and *document object name*.

library-name. In COBOL, a user-defined word that names a library.

licensed program. An IBM-written program that performs functions related to processing user data.

lightness. The paleness or darkness of a hue. See also *hue* and *saturation.*

limits file. In RPG, a record address file containing limits records when the sequential-within-limits processing method is used.

limits record. In RPG, a record that consists of the lowest record key and the highest record key of the records in the keyed file that are to be read.

LIND. See *line description.*

line. See *communications line, multipoint line, nonswitched line, point-to-point line*, and *switched line.*

line command. Editing commands keyed in the sequence number field of the line or lines affected. For example, C for Copy or M for Move.

line control characters. See *transmission control characters.*

line counter specifications. An RPG coding form on which the programmer indicates or overrides the system defaults for the length of the printer form and the number of lines to print on a page. Line counter specifications can be used for each printer file in a program.

line description. An object that contains a description of a communications line to the system. The system-recognized identifier for the object type is *LIND. Abbreviated LIND.

line number. The number that prefaces a line. This number can be up to five digits long, from 00001 through 99999. See also *sequence number.*

line reference. In BASIC, a label or line number that specifies where control should be transferred if certain conditions exist when the line executes.

line traffic. The number of transmissions, and the amount of data sent and received on a communications line.

LINKAGE SECTION. In COBOL, a section of the Data Division that describes data made available from another program.

list element. One of several values specified in a list parameter.

list ID. A two-part name by which a System/38 distribution list is known. The two-part name has the same characteristics as a user ID and thus allows for distributions to be sent to both local and remote office system nodes.

list parameter. A parameter defined to accept a list of multiple like values or unlike values.

listing. A printout usually containing the input and output of the compilation of a program, the creation (compilation) of an object, or the execution of a program. See also *compiler listing.*

literal. A character string whose value is given by the characters themselves. For example, the numeric literal 7 has the value 7, and the character literal 'CHARACTERS' has the value CHARACTERS. See also *character literal, constant*, and *numeric literal.*

LLC. See *logical link control.*

load. To move data or programs into storage.

local address. In SNA, an address used in a peripheral node in place of a network address and transformed to or from a network address by the boundary function in a subarea node.

local data area. A 512-byte area associated with the job; it can be used to pass information between jobs and routing steps. A separate local data area exists for each job.

local session identification. In SNA, a field in a FID3 transmission header that contains an indication of the type of session and the local address of the peripheral logical unit (LU) or physical unit (PU). Abbreviated LSID.

local system. For interactive jobs, the system to which the display device is attached. For batch jobs, the system on which the job is being processed.

local work station. A work station that is connected directly to System/38 without need for data transmission facilities. Contrast with *remote work station.*

lock state. The definition of how an object is allocated, how it is used (read or update), and whether the object can be shared (used by more than one job).

locked keyboard. A state of the keyboard in which the display device accepts no input. The input inhibited indicator is usually on.

log. See *error log, history log, job log, programming change log*, and *service log.*

log-year. The year that the item was filed. Used to generate a hardcopy document number. For example, 85-0001, where 85 is the log-year and 0001 is the sequence number. All documents filed in 1985 have a log-year of 85.

logical expression. An expression composed of logical operators and/or relational operators that can be reduced to a value of either true or false.

logical file. A description of how data is to be presented to or received from a program. This type of data base file contains no data, but it provides an ordering and format for one or more physical files. See also *join logical file.* Contrast with *physical file.*

logical file member. A named logical grouping of data records from one or more physical file members. See also *member.*

logical link control. See also *exhanced logical link control, qualified logical link control,* and *physical services header.*

logical operator. A COBOL reserved word that defines the logical connection between conditions or negates a condition: OR (logical connective—either or both), AND (logical connective—both), and NOT (logical negation).

logical record. (ANSI) In COBOL, the most inclusive data item. The level number for a logical record is 01.

logical unit. In SNA, one of three types of network addressable units. It is a port through which a user accesses the SNA network in order to communicate with another user and through which the user accesses the functions provided by the system services control point. Abbreviated LU. See also *physical unit, system services control point, primary logical unit,* and *secondary logical unit.*

logical unit description. An MI object that is created as the result of executing the Create Device Description (CRTDEVD) command. Abbreviated LUD.

long format. In binary floating-point storage formats, the 64-bit representation of a binary floating-point number, not-a-number, or infinity. Contrast with *short format.*

long precision. An option in BASIC that specifies that the values printed in integer and fixed-point format have a maximum of 14 significant digits, and values printed in floating-point format have a maximum of 15 significant digits. Contrast with *short precision.*

long wait. An interruption of a job or routing step that removes the job from the active state, allowing another job to enter the active state so that the activity level remains at its maximum. A long wait can occur when the job or routing step is waiting for work station input, a message to arrive, a device to be allocated, a file to be opened, or a record to be unlocked.

look-ahead field. A field that allows the program to look at information in a field on the next record that is available for processing in an input or update file.

loop. A sequence of instructions that is performed repeatedly.

low-level message. A message that is sent to the program message queue of the lower-level program invocation. A low-level message is normally not displayed. Contrast with *high-level message.*

LSID. See *local session identification.*

LU. See *logical unit.*

LUD. See *logical unit description.*

LUSTAT. An SNA command used to send logical unit status information.

M. See *megabyte.*

machine attribute. Information stored below the machine interface pertaining to the overall system (such as system date, system time, current system name, and pending system name). In many cases these are copies of values stored above the machine interface by CPF (for example, as system values and network attributes).

Machine Check indicator. A light on the operator/service panel that comes on when a machine failure that caused the machine to stop is detected.

machine configuration record. A series of data fields, modifiable only by the customer service representative, that describes the System/38 hardware.

machine execution priority. The priority of a routing step when competing with other routing steps for machine resources.

machine interface. The instruction set and interface to the machine. The instruction set is called the System/38 instruction set. Abbreviated MI.

machine object. A program object that has no defined storage form (representational characteristic); it is defined internally to the machine. The location of a machine object cannot be specified because it is located by the machine. Contrast with *data object.*

machine space pointer. See *space pointer machine object.*

machine storage pool. A storage pool used by the machine and certain highly shared CPF programs and whose size is specified in the system value QMCHPOOL.

magazine. A container that holds up to 10 diskettes and is inserted into a diskette magazine drive.

mail details. Information related to a mail item, such as the date received, authors, and due date.

mail item. A message, memo, or document that is sent electronically, as well as hardcopy mail sent through conventional mail services. For hardcopy mail, Personal Services/38 stores only details (such as date and subject). For mail sent electronically, Personal Services/38 stores all details and content.

mail log. A record of all the mail that an office user has sent or received.

mail report. A mail report lists some details about each mail item, but does not list the contents. Personal Services/38 can generate several types of mail reports. For example, mail items sorted by date, mail items received between two dates, and action items sorted by date or assignee.

mail subset. A set of mail selected from the entire mail log. For example, new mail.

main program. In COBOL, the first program in a run unit.

main storage. All storage in a computer from which instructions can be executed directly.

main storage dump space. A section of storage reserved on the 62PC Unit 1 disk device that is used as a place to save main storage for recovery and debug purposes.

major class field. In the query utility, the field whose contents determine the major, or only, record class in which the query utility processes a record during preparation of a table. Contrast with *minor class field.*

major tick mark. In System/38 graphics, a mark on an axis that denotes character grid units on a chart. Sometimes called a *major tick*. See also *minor tick mark*.

manual answer. Operator actions to make a station ready when a station receives a call on a switched line.

manual call. Operator actions to make a connection with a station on a switched line.

Manual indicator. A light on the operator/service panel that comes on when processing has been stopped.

manual slot. See *I/O slot.*

mapped conversation. In advanced program-to-program communications, a temporary connection between an application program and an APPC session in which the System/38 provides all the protocol information. Contrast with *unmapped conversation.*

match fields. In RPG, in primary or secondary multifile processing, fields within a record type that are to be used for sequence checking of a single file, or for matching records of one file with those of another file.

match level. In RPG, the value (M1 through M9) assigned to the match field. The match level identifies fields by which records are matched during primary or secondary multifile processing.

matching record indicator. An indicator used in calculation or output specifications to indicate operations that are to be performed only when records match in primary and secondary files. Abbreviated MR.

mathematical. Pertaining to the science of numbers and their properties, relations, and combinations of spatial shapes and their structure and measurements.

matrix. In BASIC, a two-dimensional array.

maximum hops. The number of systems that a distribution can traverse before it is terminated.

MB. See *megabyte.*

MDT. See *modified data tag.*

medium. The tape or diskette used to store information in a save or restore operation.

megabyte. A unit of measure for bytes.
1 megabyte = 1 048 576 bytes = 1K K bytes.

member. A description of a named subset of records in a physical or logical file. Each member conforms to the characteristics of the file and has its own access path. All I/O requests are directed to a specific member of a data base file.

member list display. A display that lists the names of the members in a file and allows you to select a member to process.

memo. An informal document used to communicate with other users within the computer network.

menu. A display in which a list of options is shown.

merge. (1) To intersperse records throughout a single output file. (2) To combine overrides for a file from the first invocation number up to and including a larger invocation number, producing the override to be applied when the file is used.

merge file. In COBOL, the temporary file that contains all the records to be merged by a MERGE statement. The merge file is created and can be used only by the merge function.

message. (1) A communication sent from one person or program to another person or program. (2) In Personal Services/38, a short note sent immediately from one user to other users.

message description. The information describing a particular message. A message description is stored in a message file.

message field. In a display file, an output field that is treated as a message.

message file. An object that contains message descriptions. The system-recognized identifier for the object type is *MSGF.

message identifier. A 7-character code that identifies a predefined message and is used to retrieve its message description from a message file.

message notification. The alerting of a user that there is a message. This can be done with an audible alarm or by interrupting the user and displaying the message queue every time a message is received.

message queue. An object on which messages are placed when they are sent to a person or program. The system-recognized identifier for the object type is *MSGQ.

message reference key. A key assigned to every message on a message queue. This key is used to remove a message from a message queue, to receive a message, and to reply to a message.

message subfile. A subfile in which the subfile records are messages.

message transfer state. In BSC, a state in which a bid exchange has been completed and data can be transmitted.

message waiting indicator. A spot of light that appears on the display to indicate that there is a message waiting.

MI. See *machine interface.*

microcode. The instructions that provide the basic machine functions and support the machine interface.

minor class field. In the query utility, the field whose contents determine the minor record class in which the query utility processes a record during preparation of a table. Contrast with *major class field.*

minor tick mark. In System/38 graphics, one of the marks on an axis that lies between two major tick marks. Sometimes called a *minor tick.* See also *major tick mark.*

mixed file. A device file created by the user to support one or any combination of one or more of the following: display stations, communications devices, or BSC devices.

mixed list. A series of unlike values for a parameter that accepts a set of separately defined values. Contrast with *simple list.*

mixing. In System/38 graphics, the result of the intersection of two or more colors.

mnemonic-name. In COBOL, a user-defined word associated with a function-name in the Environment Division.

mode. See *access mode* and *current mode.*

mode-2 character. In System/38 graphics, a graphics character (symbol) characterized by an unchanging size, constructed from display points. Mode-2 characters are the default graphics symbols for the display screen. Contrast with *mode-3 character*; see also *hardware character.*

mode-3 character. In System/38 graphics, a graphics character (symbol) characterized by a variable size and shape, constructed from lines and curves. Mode-3 characters are the default graphics symbols for the plotter. Contrast with *mode-2 character*; see also *hardware character.*

modem. A mechanism that modulates and demodulates signals transmitted over data communications facilities.

modified data tag. An indicator, associated with each input or output/input field in a displayed record, that is set on when data is keyed into the field. The modified data tag is maintained by the display device and can be used by the program using the file. Abbreviated MDT.

modified subfile record. A subfile record into which the work station user has entered data, or a subfile record for which a put or update operation has been issued with the DDS keyword SFLNXTCHG or DSPATR(MDT) in effect.

modular program design. A design in which multiple programs do a function (normally one program per function). Modular program design applies to both batch and interactive processing.

modulo. Pertaining to a modulus. For example, 9 is equivalent to 4 modulo 5.

modulus. A number, such as a positive integer, in a relationship that divides the difference between two related numbers without leaving a remainder. For example, 9 and 4 have a modulus of 5 (9 - 4 = 5; 4 - 9 = -5; and 5 divides both 5 and -5 without leaving a remainder).

modulus 10 checking/modulus 11 checking. A technique for validity checking that involves the association of digits with data. It is used in entering or updating fields in a data record.

monitor mode. The mode during which the communications adapter is looking for BSC synchronization characters.

move. The SEU operation in which records can be moved to a new location in a member.

MRJE. See *multi-leaving remote job entry.*

MTAM. See *multi-leaving telecommunications access method.*

multi-leaving remote job entry. The fully synchronized, two-directional transmission of a variable number of data streams between two computers using BSC facilities.

multi-leaving telecommunications access method. An access method that supports System/38 MRJE functions.

multifunction rotary switches. Two switches on the operator/service panel, each of which can be set to one of 16 different positions by rotating them in either a clockwise or counterclockwise direction.

multiple device file. A device file that was created such that the maximum number of program devices is greater than one. It can be either a display file or a mixed file. Contrast with *single device file.*

multiple occurrence data structure. In RPG, a data structure that has more than one copy of the data structure contained in a program.

Multiple Virtual Storage. An alternative name for OS/VS2. Abbreviated MVS. See also *operating system* and *virtual storage.*

multipoint line. A line or circuit interconnecting several stations. Contrast with *point-to-point line.*

multivolume file. A file that is contained on more than one diskette or tape.

MVS. See *Multiple Virtual Storage.*

NAK. See *negative acknowledgment character.*

name. (1) In COBOL, a word that defines a COBOL operand. A name is composed of not more than 30 characters. (2) In PL/I, any identifier that the user assigns to a variable or to a constant. Sometimes called a user-defined name.

NaN. See *not-a-number.*

native character set. In COBOL, the default character set associated with the computer specified in the OBJECT-COMPUTER paragraph.

native collating sequence. In COBOL, the default collating sequence associated with the computer specified in the OBJECT-COMPUTER paragraph.

NAU. See *network addressable unit.*

NCCF. See *Network Communications Control Facility.*

NCP. See *network control program.*

negated combined condition. In COBOL, the NOT logical operator immediately followed by a parenthesized combined condition.

negated simple condition. In COBOL, the NOT logical operator immediately followed by a simple condition.

negative acknowledgment character. In BSC, a transmission control character that indicates a not-ready condition; indicates that an error occurred; or is sent as a negative response to enquiry. Abbreviated NAK.

negative response. In SNA, a response indicating that a request did not arrive successfully or was not processed successfully by the receiver. Contrast with *positive response.* See also *exception response.*

neither field. In join logical files, a field that can be used for neither input nor output. Neither fields do not appear in records returned through the logical file.

nest. (ANSI) In COBOL, to incorporate a structure or structures of some kind into a structure of the same kind. For example, to nest one loop (the nested loop) within another loop (the nesting loop); to nest one subroutine (the nested subroutine) within another subroutine (the nesting subroutine).

nested command. A command or group of commands whose execution is conditioned on the evaluation of a preceding or associated command. Nesting is a structured form of branching. In CL programs, the nested command is embedded in an associated command. If the nested command is a DO command, the entire do group is nested.

nested do group. A do group that is contained within another do group.

network. Two or more systems that are connected via communication lines.

network addressable unit. In SNA, a logical unit, a physical unit, or a system services control point. It is the origin or the destination of information transmitted by the path control network. Abbreviated NAU. See also *logical unit, physical unit,* and *system services control point.*

Network Communications Control Facility. A program product for command processors that can monitor, control, and improve the operation of a network. Abbreviated NCCF.

network control program. A non-System/38 program transmitted to and stored in a communications controller (such as the IBM 3704/3705) that controls the operations of that controller. Abbreviated NCP. See also *emulation program.*

network file. In object distribution, a file (either a physical file or an online save file) sent by one user to one or more users. A network file is placed on the recipient's network file queue when it arrives at the destination system.

network file queue. In object distribution, a queue containing all network files sent to an individual user.

network job. In object distribution, a batch job stream sent by one user to one or more users in the system distribution directory.

network job entry. In object distribution, an entry in the network job table that specifies the system action to be taken for incoming network jobs sent by a particular user or group of users. Each entry is identified by the user ID of the originating user.

network job table. In object distribution, a table containing entries that control the action taken for incoming network jobs.

network message. In object distribution, a message sent by one user to one or more users in the system distribution directory with the SNDNETMSG (Send Network Message) command.

Network Problem Determination Application. A program product that assists the user in identifying network problems from a central control point using interactive display techniques. Abbreviated NPDA.

next executable sentence. In COBOL, the sentence to which control is transferred after execution of the current statement is complete.

next executable statement. In COBOL, the statement to which control is transferred after execution of the current statement is complete.

next record. In COBOL, the record that logically follows the current record of a file.

next system. In SNADS, a node in the SNADS network that is physically connected to the local system and through which distribution queue entries can be routed.

next system queue. In SNADS, a queue that is used to hold distribution queue entries that are being routed to a next system. See also *normal queue* and *priority queue.*

next system table. In SNADS, a table identifying all the next systems connected to the local system.

node. One of the systems or devices in a network.

node ID. (1) In communications, a unique string of characters that identifies a node to your system. (2) In SNADS, a two-part name by which a node is known within a SNADS network.

node ID qualifier. In SNADS, the second part of a node ID.

noncontiguous item. In COBOL, a data item in the Working-Storage and Linkage Sections of the Data Division that bears no relationship with other data items.

nonnumeric item. In COBOL, a data item that is alphanumeric, alphabetic, or Boolean.

nonnumeric literal. In COBOL, a character string bounded by quotation marks, which literally means itself. See also *literal.*

nonpaired data. In System/38 graphics, data that is specified such that each X value has a set of Y values associated with it. Contrast with *paired data.*

nonprint character. A character that you designate and use in your text so that Personal Services/38 inserts a space where you want it. During paragraph adjustment, Personal Services/38 inserts the space. The character appears in the online text but does not print in the document.

nonswitched line. A connection between systems or devices that does not have to be made by dialing. Contrast with *switched line.*

normal control field. For the conversion reformat utility, any control field that is specified by an N in column 7 of the field sequence specification.

normal install. A process in which the CPF contained on diskettes is installed in auxiliary storage, replacing the CPF (if any) that is currently in the system. Contrast with *abbreviated install.*

normal queue. In SNADS, a queue that contains distribution queue entries for a next system (one normal queue for each next system). The normal queue contains distribution queue entries for distributions with a service level of data low. When send times and queue depths are satisfied for both the priority and normal queues, the priority queue is serviced first. Contrast with *priority queue.*

normal termination. System termination that results from the successful execution of the Power Down System (PWRDWNSYS) command. See also *abnormal termination* and *system termination.*

not-a-number. In binary floating-point concepts, a value, not interpreted as a mathematical value, which contains a mask state and a sequence of binary digits. Abbreviated NaN.

note. In Personal Services/38, a note is similar to a message, but is attached to a document or memo.

notify delivery. The method of delivering messages to a message queue in which the work station user is notified that a message is on the queue. The notification is by means of an attention light or an audible alarm.

notify message. A message that describes a condition for which a program requires a reply from its caller, or a default reply is sent to the program.

notify object. A message queue, a data area, or a data base file that can be used to contain information identifying the last successful commitment operation. This information can be used by the programmer to establish a restarting point for an application following an abnormal system or routing step termination. See also *commit identifier.*

| **NPDA.** See *Network Problem Determination Application.*

null. The name for an EBCDIC character that represents hex 00.

null statement. In PL/I, a statement that contains only the semicolon symbol (;).

null string. In PL/I, a character or bit string with a length of zero.

null value. A parameter position for which no value is specified.

numeric array. In BASIC, a named table of data items. BASIC allows up to seven dimensions in a numeric array.

numeric character. Any one of the digits 0 through 9.

numeric constant. A constant with a numeric value. In BASIC, the three allowable forms of numeric constants are integer, fixed-point, and floating-point.

numeric edited item. In COBOL, a numeric item whose PICTURE character-string contains valid editing characters.

numeric expression. A numeric constant, a simple numeric variable, a scalar reference to a numeric array, a numeric-valued function reference, or a sequence of the above separated by numeric operators and parentheses.

numeric field. An area that is reserved for a particular unit of information and that can contain only the digits 0 through 9. Contrast with *character field.*

numeric item. In COBOL, a data item that must be numeric. If signed, the item can also contain a representation of an operational sign.

numeric literal. The actual numeric value to be used in processing, instead of the name of a field containing the data. A numeric literal can contain any of the numeric digits 0 through 9, a sign (plus or minus), and a decimal point. Contrast with *character literal.*

numeric operator. A symbol representing an operation to be performed on numeric data, such as + or - to indicate addition or subtraction.

numeric variable. The name of a numeric data item whose value is assigned or changed during program execution.

OAF. See *origin address field.*

object. A named unit that consists of a set of attributes (that describe the object) and, in some cases, data. An object is anything that exists in and occupies space in storage and on which operations can be performed. Some examples of objects are programs, files, and libraries.

object authority. The right to use or control an object. See *object rights* and *data rights.*

object definition table. A part of the definition of a program that defines the program objects associated with the instructions in its instruction stream. Operands of an instruction refer to entries in this table. Abbreviated ODT.

object description. The attributes (such as name, type, and owner name) that describe an object.

object distribution. A function that allows a user to send source and data files, online save files, job streams, spooled files, and messages to another user, either locally or on a SNADS network.

object existence rights. The authority to delete, save, free the storage of, restore, and transfer ownership of an object.

object management rights. The authority to move, rename, grant authority to, revoke authority from, and change the attributes of an object.

object name. The name of an object. Contrast with *qualified object name.*

object owner. A user who creates an object or to whom the ownership of an object has been transferred. The object owner has complete control over the object.

object rights. The authority that controls what a system user can do to an entire object. For example, object rights include deleting, moving, or renaming an object. There

are three types of object rights: object existence, object management, and operational.

object type. The attributes that define the purpose of an object within the system. Each object type has associated with it a set of commands with which to process that type of object.

object user. A user who has been authorized by the object owner, the security officer, or a user with object existence rights to perform certain functions on an object.

OBJECT-COMPUTER. In COBOL, the name of an Environment Division paragraph in which the computer upon which the program will be run is described.

observable program. A program that contains certain information that is additional to the information necessary to execute the program.

ODP. See *open data path.*

ODT. See *object definition table.*

office product. An office-oriented program product that supports DIA. See also *OFFICE/38 Personal Services/38* and *electronic document distribution.*

office system node. In document distribution services, the DIA process that provides the services required to exchange information between nodes within a distribution system. Abbreviated OSN.

office user. A user of an office product on a system or device attached to the System/38. An office user must be enrolled in the system distribution directory.

OFFICE/38 Personal Services/38. An office-oriented program product written for the IBM System/38 that includes calendar scheduling, user directory/list support, document distribution, electronic mail, document retrieval, text editing, and administration. Abbreviated Personal Services/38.

offline. Pertaining to the operation of a functional unit that is not under the continual control of the system. Contrast with *online.*

offset. (1) The distance from the beginning of an object to the beginning of a particular field. (2) In System/38 graphics, the number of character grid units from a reference point. (3) In Personal Services/38, to have the first page of each copy from a 6670 printer protrude from the balance of the paper to give physical identification.

omit function. A CPF function that determines which records from a physical file are to be omitted from a logical file's access path. Contrast with *select function.*

ON-statement action. In PL/I, the action explicitly established for a condition when the condition is raised. The ON-statement action overrides or suspends any previously established action unless it is overridden by a further ON-statement for the same condition or until the block it was executed in terminates. Contrast with *implicit action.*

online. Pertaining to the operation of a functional unit that is under the continual control of the system. Contrast with *offline.*

online backup. The method of using the Copy File (CPYF) command to internally copy a data base file to another data base file for backup.

online save file. An object that contains a description of save/restore data, and can be used to store this data online (without requiring diskettes or tapes). An online save file can be used as the target of save and restore commands, and can also be accessed using I/O operations from an HLL program.

online test. A standardized set of tests for BSC. The tests are used to ensure the proper operation and integrity of the communications link (lines and modems) portion of the total system.

open. The function that connects a file to a program for processing. Contrast with *close.*

open data path. The path through which all I/O operations for the file are performed. Abbreviated ODP.

open mode. (ANSI) In COBOL, the state of a file after execution of an OPEN statement for that file and before the execution of a CLOSE statement for that file. The particular open mode is specified in the OPEN statement as either INPUT, OUTPUT, I-O, or EXTEND.

operand. (1) A quantity of data that is operated on. (2) In COBOL, the object of a verb or an operator; that is, an operand is the data or equipment governed or directed by a verb or operator.

operating system. Non-System/38 computer programs that control the execution of programs; an operating system may provide services such as resource allocation, scheduling, input/output control, and data management. Abbreviated OS.

operation. A defined action performed on one or more data items, such as adding, multiplying, comparing, or moving information.

operation code. In RPG, a word or abbreviation, specified in the calculation specifications, that identifies an operation.

operational expression. In PL/I, an expression that consists of one or more operations.

operational rights. The authority to use an object and to look at its description.

operational sign. In COBOL, an algebraic sign associated with a numeric data item or a numeric literal that indicates whether the item is positive or negative.

operational unit number. The number that corresponds to the line connector, located on the back of the system unit, to which a line is attached. Abbreviated OU number.

operator. (1) See *system operator.* (2) A symbol that represents an operation to be done. See also *arithmetic operator, binary operator, character operator, comparison operator, concatenation operator, logical operator, numeric operator, relational operator*, and *unary operator.*

operator/service panel. A panel located adjacent to the system console on the system unit. This panel contains lights and switches that are used primarily when the system is started or serviced.

opposite control field. Any control field that is specified by an O in column 7 of the field sequence specification.

option indicator. A 1-character field that is passed with an output data record from a program to CPF and that is used to control the output function, such as controlling which fields in the record are displayed.

optional word. In COBOL, a reserved word included in a specific format only to improve the readability of a COBOL statement or entry.

OR relationship. The specification of conditioning indicators such that the conditioned operation is done when any one of the conditions is met.

origin address field. In SNA, a field in a FID0 or FID1 transmission header that contains the address of the origination network addressable unit. In a FID2 header, the field is called origin address field prime (OAF'). Abbreviated OAF. Contrast with *destination address field.*

originator. The user, identified by a unique user ID, who initiates a distribution request.

OS. See *operating system.*

OSN. See *office system node.*

OU number. See *operational unit number.*

output. (1) Data that has been processed. (2) Data transferred from storage to an output device.

output field. A field in a display file or data base file that is used only for output operations.

output file. (1) A data base or device file that has been opened to allow records to be written. (2) In COBOL, a file that is opened in either output mode or extend mode.

output indicator. In RPG, an indicator used to define the conditions under which an output record or an output field in the output specifications is written. An output indicator must be previously defined before it is used in the output specifications.

output list. In BASIC, a list of variables from which values are written into a file.

output mode. In COBOL, an open mode in which records can be written to a file.

output priority. The priority used to determine the order in which spooled output files produced by the job are to be written. More than one file can have the same priority.

OUTPUT PROCEDURE. In COBOL, a procedure that provides special processing of records when they are returned from the sort or merge function.

output queue. An object that contains a list of output files to be written to an output device by a writer. The system-recognized identifier for the object type is *OUTQ.

output specifications. An RPG coding form on which the programmer describes the records and their fields in a program-described output file or adds RPG functions to an externally described output file.

output stream. In RJEF, data received from the host system (for example, control characters, data files, and messages). Contrast with *input stream.*

output/input field. A field in a display file or data base file that is used for both output and input operations.

overflow. The condition that occurs when the last line specified as the overflow line to be printed on a page has been passed.

overflow condition. (1) The condition that occurs when the overflow line on a page has been printed or passed. (2) In COBOL and BASIC, a condition that occurs when a portion of the result of an operation exceeds the capacity of the intended unit of storage.

overflow handling. The method of advancing from one printer page to the next.

overflow indicator. An indicator that signals when the overflow line on a page has been printed or passed. The indicator can be used to specify which lines are to be printed on the next page.

overflow line. The line specified as the last line to be printed on a page.

overflow page. The new page created when overflow occurs.

overlapping fields. Fields in the same display or printer record that occupy the same positions on the display or page. Option indicators can be used to select which of the overlapping fields is to be displayed or printed.

overlay. To write over existing data in storage.

overpaint. In System/38 graphics, the default result of the intersection of two or more colors, in which the color of the first graphics primitive to appear is given the color of the graphics primitive that intersects it, at the point of intersection.

overstrike. To place a character on a space occupied by another character.

owner. The user who creates an entity (or is named the owner of an entity).

pacing. In SNA, a technique by which a receiving component controls the rate of transmission of a sending component to prevent overrun or congestion.

packed decimal format. Representation of a decimal value in which each byte within a field represents two numeric digits except the rightmost byte, which contains one digit in bits 0 through 3 and the sign in bits 4 through 7. For all other bytes, bits 0 through 3 represent one digit; bits 4 through 7 represent one digit. For example, the decimal value +123 is represented as 0001 0010 0011 1111. Contrast with *zoned decimal format.*

packed decimal item. In COBOL, a numeric data item that is represented internally in packed decimal format.

packed field. A field that contains data in the packed decimal format.

packed key. A key in the packed decimal format.

PAG. See *process access group.*

page. (1) A 512-byte block of information that can be transferred between auxiliary storage and main storage. (2) Each group of records in a subfile that are displayed concurrently. (3) One printer form. (4) In System/38 graphics, the main unit of input and output (the picture or chart). All specified graphics are added to the current page. An output statement always transmits the current page to the device.

page fault. A program notification that occurs when a page that is marked as not in main storage is referred to by an active page.

page frame. A 512-byte block of main storage that contains a page.

page-in. The process of transferring a page from auxiliary storage to main storage.

page-out. The process of transferring a page from main storage to auxiliary storage.

paired data. In System/38 graphics, data that is specified such that every X value has only one Y value associated with it. Contrast with *nonpaired data.* See also *data group.*

paragraph. (ANSI) In COBOL, in the Procedure Division, a paragraph-name followed by a period and a space and by zero, one, or more sentences. In the Identification and Environment Divisions, a paragraph header followed by zero, one, or more entries.

paragraph format identifier. The means by which Personal Services/38 identifies paragraphs. When the sequence numbers are turned on, the number of the format identifier appears as a highlighted number in the two places to the right of the decimal in the sequence number field. When the sequence numbers are turned off, the format identifier appears on the left of the display and additional lines in the paragraph are indicated by quotation marks below the format identifier.

paragraph header. (ANSI) In COBOL, a reserved word, followed by a period and a space that indicates the beginning of a paragraph in the Identification and Environment Divisions.

paragraph-name. (ANSI) In COBOL, a user-defined word that identifies and begins a paragraph in the Procedure Division.

parameter. (1) Data passed to or received from another program. (2) In CPF, an argument that identifies an individual value or group of values to be used by a command to tailor a function requested through the command.

parameter list. A list of values that provides a means of associating addressability of data defined in a called program with data in the calling program. It contains parameter names and the order in which they are to be associated in the calling and called program.

partial journal receiver. A journal receiver that was saved while it was attached to a journal. Therefore, the saved version of a partial journal receiver does not contain all the journal entries that are in the attached journal receiver.

partitioned emulation programming. A function of a non-System/38 network control program that enables a communications controller to operate some data communications lines in network control mode, while simultaneously operating others in emulation mode. Abbreviated PEP.

pass-through. See *display station pass-through.*

password. A unique string of characters that a system user enters to identify himself to the system. See also *personal document password.*

path control layer. In SNA, the layer that routes all messages to data links and half-sessions.

path information unit. In SNA, the lowest-level block of data that the system sends out on a communications line, consisting of a transmission header followed by a basic information unit of a basic information unit segment. Abbreviated PIU.

PC. See *programming change.*

PDIR. See *peripheral data set information record.*

pending operation. An operation for which the required line commands are not yet all entered.

PEP. See *partitioned emulation programming.*

peripheral data set information record. A special control record sent from the host to SRJE that describes the printer data set that is to follow. Abbreviated PDIP.

peripheral node. In data communications, a node that uses local addresses for routing and, therefore, is not affected by changes in network addresses. A peripheral node requires boundary function assistance from an adjacent subarea node. See also *subarea node.*

permanent dictionary. A dictionary created by the user and included in the dictionary search list. This dictionary can be used for all documents. Contrast with *system dictionary* and *temporary dictionary.*

permanent objects. Objects, such as data base files or program objects, that stay in the system until a user chooses to delete them.

permanent user dictionary. A spelling aid dictionary created by the user with the CRTSPADCT (Create Spelling Aid Dictionary) command. Contrast with *temporary dictionary.*

personal appointment. An appointment that a user can schedule on a calendar, the details of which can be viewed only by the calendar owner.

personal directory. A user-defined directory. For example, a personal directory can be a distribution list, telephone directory, or inventory report.

personal document. A document in a document library or electronic mail that cannot be accessed by people working on behalf of others. Contrast with *restricted document* and *public document.*

personal document password. In document distribution services, a character string used to allow a user working for another user to gain access to the first user's personal documents.

personal mail. Mail that can be accessed only by the recipient but not by someone working on behalf of the recipient. When mail is sent, it can be assigned the classification personal.

PGR. See *presentation graphics routines.*

phrase. In COBOL, an ordered set of one or more consecutive COBOL character-strings that forms part of a clause or a Procedure Division statement.

physical file. A description of how data is to be presented to or received from a program and how data is actually stored in the data base. A physical file contains one record format and one or more members. Contrast with *logical file.*

physical file member. A named subset of the data records in a physical file. See also *member.*

physical record. In COBOL, a unit of data that is moved into or out of the computer. Same as *block.*

physical services header. One of three logical link control protocols used by IBM SNA DTEs. Physical services header provides adjacent node services. Contrast with *enhanced logical link control* and *qualified logical link control.* Abbreviated PSH.

physical unit. In SNA, one of three types of network addressable units. A physical unit exists in each node of an SNA network to manage and monitor the resources (such as attached links and adjacent link stations) of a node, as requested by an SSCP-LU session. Abbreviated PU.

physical unit type. In SNA, the classification of a physical unit according to the type of node in which it resides. The physical unit type is the same as its node type; that is, a type 1 physical unit resides in a type 1 node, and so on.

picture data. In PL/I, arithmetic data represented in character form.

picture space. In System/38 graphics, an area of the page that is located within the graphics field and defines the part of the graphics field in which graphics will be drawn.

picture specification. In PL/I, a data item that has a numeric value but that can also be represented as a character value according to the editing characters specified in the item's declaration.

pitch. The number of characters per horizontal inch or positioning interval of characters in a line of text. For example, 10 pitch, 12 pitch, or proportionally spaced characters.

PIU. See *path information unit.*

plot. In System/38 graphics, to represent graphically on paper.

PLU. See *primary logical unit.*

point-to-point line. A data link that connects a single remote station to a data processing system; it can be either switched or nonswitched. Contrast with *multipoint line.*

pointer. In PL/I, a type of variable that identifies a location in storage. See also *data pointer, instruction pointer, space pointer, system pointer, HLL pointer*, and *machine space pointer.*

pointer value. In PL/I, a value that identifies the location of data in storage.

poll. To determine if any remote device on a communications line is ready to transmit data.

polling list. A list of addresses that the host system uses to control the polling of control units or devices on a BSC or SDLC multipoint line. A general polling list contains the addresses of the control units only; a specific polling list contains the addresses of the devices, which include the addresses of the control units.

polyfillet. In System/38 graphics, a sequence of adjoining curves tangential to the inside of an imaginary polygon. See also *fillet.*

polygon. In System/38 graphics, a sequence of adjoining straight lines that enclose an area.

polyline. In System/38 graphics, a sequence of adjoining lines.

port. See *I/O port.*

positional parameter. A parameter that must appear in a specified location, relative to other parameters.

positive response. In SNA, a response indicating that a request arrived and was successfully received and processed. Contrast with *negative response.* See also *definite response.*

Power Check indicator. A light on the operator/service panel that comes on when a fault is detected in the power controller.

precision. (1) In BASIC, the number of digits that are printed or displayed. (2) In CPF, the internal storage format of a floating-point number. (3) In PL/I, the number of digits to be contained in a fixed-point data item, or the minimum number of significant digits (excluding the exponent) to be maintained for a floating-point data item. See also *short precision* and *long precision, double precision* and *single precision.*

predefined message. A message whose description is created independently when it is sent and is stored in a message file. Contrast with *impromptu message.*

predefined value. An IBM-defined fixed value that has a special use in the control language and is reserved in CPF. A predefined value has an asterisk (*) as the first character in the value.

preexecution-time array or table. In RPG, an array or table that is loaded at the same time as the source program, before actual execution of the program begins. See also *compile-time array or table* and *execution-time array.*

presentation graphics routines. A group of routines within API that allows business charts to be defined and displayed procedurally through function routines. Abbreviated PGR. Contrast with *Graphical Data Display Manager.*

primary file. (1) In RPG, if specified, the main file from which RPG first reads a record in the program cycle. In multifile processing, the primary file is used to determine whether the MR indicator is set on. Contrast with *full procedural file.* (2) In query, when file chaining is specified, the first data base file referenced by a query application. Contrast with *secondary file.* (3) In a join logical file, the first physical file specified on the JFILE keyword. Contrast with *secondary file.*

primary logical unit. In SNA, the logical unit that contains the primary half-session for a particular LU-LU session. Abbreviated PLU. See also *logical unit.* Contrast with *secondary logical unit.*

primary node ID. In SNADS, the system name of a System/38. Contrast with *secondary node ID.*

primary owner. The user who files a document in the document library. Contrast with *secondary owner.*

primary record format. In query, when file chaining is specified, a record format in the primary file. Contrast with *secondary record format.*

print control commands. Commands that you insert in the document to format the document when Personal Services/38 prints it. You can see the results of these commands when you display a document in final form.

print image. An object that contains a description of the print belt or train on a printer. The system-recognized identifier for the object type is *PRTIMG.

print text. A job and print file attribute that allows the user to specify the printing of a line of text at the bottom of a listing.

print zone. In BASIC, the area in which characters are printed during unformatted printing. This area is 16 positions when short precision is specified, 26 positions when long precision is specified. The maximum is 80 and the minimum is 1.

printer. A device that writes output data from a system on paper.

printer emulation. The part of 3270 emulation support that converts 3270 and SCS data streams intended for a 328x printer into data streams that can be recognized by a System/38 printer.

printer file. A device file created by the user to support a printer device.

printer/display layout. A coding form on which the programmer can design the format for a printed report or a display.

priority. (1) The relative significance of one job to other jobs in competing for allocation of resources. (2) In SNADS, a distribution class of service that puts the distributions into priority such that information of a higher priority is delivered before information of a lower priority. In Personal Services/38, high priority is indicated by a highlighted entry in the mail log.

priority queue. In SNADS, a queue that contains distribution queue entries for distributions with a service level of fast, status, or data high. When send times and queue depths are satisfied for both the priority and normal queues, the priority queue is serviced first. Contrast with *normal queue.*

problem determination. The process of determining the source of a problem as a component problem, a machine failure, a common carrier link, a user-supplied element, or a user error.

problem determination procedure. A prescribed sequence of steps taken to identify the source of a problem.

procedural programming. In RPG, a programming technique in which the input and output operations are controlled by programmer-specified operation codes instead of by the program cycle.

procedure. (1) In COBOL, one or more successive paragraphs or sections within the Procedure Division, which direct the computer to perform some action or series of related actions. (2) A set of BASIC commands, BASIC statements, input data, and/or comments that causes a specific set of functions to be performed. (3) In PL/I, a block that can be activated from various points within a program by use of a CALL statement and can process data passed to it from the block in which it was invoked. See also *external procedure* and *internal procedure.*

PROCEDURE DIVISION. One of the four main component parts of a COBOL program. The Procedure Division contains instructions for solving a problem. The Procedure Division may contain imperative-statements, conditional statements, paragraphs, procedures, and sections.

procedure invocation level. In PL/I, the invocation level that is incremented when an internal procedure is called recursively. The procedure invocation level cannot be specified on the CPF debug commands, and only the last (most recent) procedure invocation level is available for debugging. Contrast with *program invocation level.*

procedure level. In BASIC, the relative position of a procedure within nested procedures. For example, if procedure A calls procedure B, and procedure B in turn calls procedure C, then procedure C is a third-level procedure.

procedure-name. In COBOL, a paragraph-name or a section-name in the Procedure Division.

process. (1) An MI object consisting of a group of interdependent programs (activations and associated invocations) and the environment required for their execution. A process can be totally independent of other processes, or it can be dependent on and communicate with other processes. (2) In COBOL, any operation or combination of operations on data. (3) In document interchange, a program that uses the DIA rules and data structures to exchange information.

process access group. A group of objects that is primarily paged in and out of storage in a single operation when a job (process) enters a long wait. Abbreviated PAG.

processing. The action of performing operations on input data.

processing unit. See *processor.*

processor. The functional unit that interprets and executes instructions. Same as *CPU* and *processing unit.*

production library. A library containing objects needed for normal processing. Contrast with *test library.*

program. An object that contains a set of instructions that tell a computer where to get input, how to process it, and where to put the results. A program is created as a result of a compilation. The system-recognized identifier for the object type is *PGM.

program control data. In PL/I, pointer, label, entry, and file data that is used to control the execution of a PL/I program.

program cycle. In RPG, a series of steps performed by a compiled RPG program in a specific order for each primary or secondary record that is read.

program data. The data associated with a program.

program device. A symbolic mechanism that a program uses instead of a real device (identified by the device name) to access the devices in a file. When the program uses a program device, the system redirects the operation to the appropriate real device. With the exception of mixed files, the name of the program device is the same as the name of the real device; for mixed files, the name of the program device may differ from the name of the real device.

program ID. A one- to eight-character string input from a finance device and associated with a System/38 finance transaction program. Listings of valid program IDs and their associated applications programs are maintained in program tables.

program interface. See *formatted program interface* and *unformatted program interface.*

program invocation level. In PL/I, the invocation level incremented when a program or external procedure is called recursively. The program invocation level can be specified on the CPF debug commands through the INVLVL parameter. Contrast with *procedure invocation level.*

program level. Pertaining to an operation that is performed for an entire program. For example, a Monitor Message (MONMSG) command that immediately follows the last declare command in a CL program is a program-level MONMSG command. Contrast with *command level.*

program message queue. A message queue used to hold messages that are sent between program invocations of a routing step. The program message queue is part of the job message queue.

program mode. In BASIC, the entry mode in which the user can enter BASIC statements and commands into the system from the display station. The formats of the statements are checked as they are entered. Contrast with *data mode.*

program-name. (ANSI) In COBOL, a user-defined word that identifies a COBOL source program.

program object. One of two MI object classifications. It includes those objects used in programs that get their definition from ODT entries. Program objects are used as the operands of MI instructions. Contrast with *system object.*

program patch. A method of repairing a program at the MI program template level.

program table. A list of System/38 finance applications for use in a System/38 finance job. Each table entry consists of a program ID and the program name and library associated with that ID. Program IDs received in data streams from finance devices are located in the program table to determine which System/38 finance application should be called.

program variable. A named changeable value that can exist only within programs. Its value cannot be obtained or used when the program that contains it is no longer invoked.

program-described data. Data contained in a file for which the fields in the records are described in the program that processes the file. Contrast with *externally described data.*

program-described file. A file for which the fields in the records are described only in the program that processes the file. To CPF, the record is viewed as a character string. Contrast with *externally described file.*

programmer subsystem. An interactive subsystem in which programmers can perform online programming through 5250 Display Stations. IBM supplies one programmer subsystem: QPGMR.

programmer user profile. The CPF-supplied user profile that has the authority necessary for system and application programmers and the special authorities of save system rights and job control rights. Named QPGMR.

programming change. A modification to an IBM-supplied program. Abbreviated PC.

programming change log. A log of information about the application of program changes and patches to IBM products. Named QCHG.

programming service representative user profile. The CPF-supplied user profile that has the authority necessary for the programming service representative to service the system's programming and the special authorities of save system rights and job control rights. Named QPSR.

prompt. A displayed request for information or user action. The user must respond to allow the program to proceed.

prompting section. In SEU, the part of the SEU edit display that can contain one record separated into fields that have labels.

proportional spacing. The spacing of characters according to their natural width.

protected field. A field in a display file in which data cannot be keyed, changed, or erased.

protected storage. The part of the system ASP that is reserved for the creation of permanent objects, such as

libraries and files. It only applies to the system ASP when checksum protection is in affect.

protocol. The meaning of, and the sequencing rules for, requests and responses used for managing a network, transferring data, and synchronizing the states of network components.

pseudo-text. (ANSI) In COBOL, a sequence of character-strings and/or separators bounded by, but not including, pseudo-text delimiters. Pseudo-text is used in the COPY REPLACING statement for replacing text strings.

pseudo-text delimiter. (ANSI) In COBOL, two contiguous equal signs (==) used to delimit pseudo-text.

PSH. See *physical services header.*

Personal Services/38. See *OFFICE/38 Personal Services/38.*

Personal Services/38 administrator. An administrator for Personal Services/38.

Personal Services/38 enrollment. The process of identifying a user of OFFICE/38 Personal Services/38 to your system, done using the OFFICE/38 Personal Services/38 program product. Contrast with *system enrollment.*

PU. See *physical unit.*

public. The collection of all system users.

public authority. The authority to an object granted to all users.

public document. A filed document that can be accessed by any office user. A public document cannot have access codes assigned. Contrast with *personal document* and *restricted document.*

punctuation character. A character used to separate COBOL elements or to identify a particular type of COBOL element: a comma, semicolon, period, quotation mark, left or right parenthesis, space, or equal sign.

purge. An attribute that specifies whether the job is to be marked eligible to be moved out of main storage and put into auxiliary storage at the end of a time slice or upon entering a long wait.

put operation. An output operation that writes a record to an output file. Also called an output operation or a write operation.

put-get operation. A combination of an output operation (put) followed by an input operation (get) to the same record format.

QCL. The IBM-supplied control language processor that accepts CL commands so that they can be interpreted and executed by the system.

QGPL. See *general-purpose library.*

QLLC. See *qualified logical link control.*

qualified data-name. In COBOL, an identifier that is composed of a data-name followed by one or more sets of either of the connectives OF or IN followed by a data-name qualifier.

qualified job name. A job name and its associated user name and a system-assigned job number. Contrast with *job name.*

qualified logical link control. A logical link control protocol that allows the transfer of data link control information between two adjacent SNA nodes that are connected through an X.25-based packet-switched data network. Contrast with *enhanced logical link control* and *qualified logical link control.* Abbreviated QLLC.

qualified object name. An object name and the name of the library containing the object. Contrast with *object name.*

qualifier. A name used to uniquely identify another name. In CPF, for example, a library name can be used to qualify an object name. In COBOL, group data-names, section-names, and library-names can be used as qualifiers to form qualified names.

query. (1) A utility that is part of the Interactive Data Base Utilities licensed program. (2) A request to extract, from a file, one or more records based upon some combination of data.

query application. See *application.*

queue. A line or list formed by items in the system waiting for service; for example, work to be performed or messages to be displayed. See also *output queue* or *message queue.*

queue depth. See *send queue depth* and *current queue depth.*

radius. In System/38 graphics, the length of a line that extends from the center of a circle or ellipse to a point on the curve of the circle or ellipse. Plural is radii.

random access. In COBOL, an access mode in which specific records can be read from, written to, or deleted from a file in a nonsequential manner.

random processing. A method of file processing in which a program does not read records from a file in any prespecified order. Instead, the program uses a key field or a relative record number to access a specific record.

random-by-key processing. In RPG, a method of processing a full procedural file by using the CHAIN operation code. Records to be processed are identified by record keys.

random-by-relative-record-number processing. In RPG, a method of processing a full procedural file by using the CHAIN operation codes. Records to be processed are identified by relative record numbers.

RCB. See *record control byte.*

read rights. The authority to read the entries in an object. Contrast with *add rights, delete rights*, and *update rights.*

read-from-invited-program-devices operation. An input operation that waits for input from any one of the invited program devices for a user-specified time. Contrast with *read-from-one-program-device operation.*

read-from-one-program-device operation. An input operation that will not complete until the specified device has responded with input. Contrast with *read-from-invited-program-devices operation.*

read/write head. The data sensing and recording unit of the diskette magazine drive or tape drive.

reader. (1) A program that reads jobs from an input device or a data base file and places them on a job queue. (2) In RJEF, a program that reads jobs from a data base file and sends them to the host system.

rebuild maintenance. A method of maintaining keyed access paths for data base files. This method updates the access path only while the file is open, not when the file is closed; the access path is rebuilt when the file is opened. Contrast with *immediate maintenance* and *delay maintenance.*

receive mode. A time during which the BSC adapter looks for synchronization characters and then stores the data characters in main storage.

receive time-out. For BSC, an indication that no data has been received by this communications adapter in a given period of time.

receiver. See *journal receiver.*

receiver directory. A display that contains summary information about the journal receivers that are or were attached to the specified journal and that are still known to the system.

recipient. The end user to whom a document is sent.

recipient list. In SNADS, a list of recipients built before sending the distribution.

recipient node. In SNADS, a node that provides services on behalf of recipients.

record. (1) An ordered set of fields that make up a single occurrence of the basic unit of data transferred between a file and a program. (2) In COBOL, a set of one or more related data items that are grouped for processing. Records can be defined for an input/output device or for internal processing. See also *logical record.*

record address file. (1) In RPG, an input file that indicates which records are to be read from another file, and the order in which the records are to be read from the file. (2) For the conversion reformat utility, an output file that indicates which records are to be read from another file, and the order in which the records are to be read from the file.

record area. In COBOL, a storage area in which a record described in a record description entry in the File Section is processed.

record class. In the query utility, one of the distinct groups into which the query utility classifies records during the preparation of a table.

record control byte. In System/38 (RJEF) MTAM, a control character used to identify each record type within a transmission block. Abbreviated RCB.

record description entry. In COBOL, the total set of data description entries associated with a particular record.

record format. The definition of how data is structured in the records contained in, or processed by, a file. The definition includes the record name, field names, and field descriptions (such as length and data type). The record formats used in a file are contained in the file's description.

record format level identifier. An identifier placed on a record format that uniquely identifies the record description. See also *level checking.*

record identification code. In RPG, characters placed in a record to identify that record type.

record identifying indicator. In RPG, an indicator that identifies the record just read.

record key. (1) In COBOL, a key whose contents identify a record within an indexed file. (2) In RPG, all the key fields defined for the record type.

record level specifications. In DDS, specifications coded on the same line as a record format name or on lines immediately following a record format name (until the first field is specified). See also *field level specifications, file level specifications, key field level specifications*, and *select/omit level specifications.*

record data transmission. In PL/I, the transmission of data in the form of separate records. Contrast with *stream data transmission.*

record type. In RPG, the classification of records in a file. Records of the same type have the same fields in the same order. For program-described files, these records have record identification codes; for externally described files, the records have the same record format name.

record-name. In COBOL, a data-name for a record described in a record description entry.

recovery. The act of resetting the system, or data stored in the system, to an operable state following damage.

recovery library. The library containing information related to recovery of data base operations from system failures. Named QRECOVERY.

recursive procedure. In PL/I, an active procedure that can be invoked from within itself or from within another active procedure.

reference line. In System/38 graphics, any of the straight lines drawn on the chart area that aid in determining or visualizing where the data values are plotted on the chart. Reference lines may be the following: *axes, datum lines, grid lines*, and *translated axis lines.*

reference number. A number on the mail item for a hardcopy document. Allows the user to organize hardcopy documents.

reformat specification statement. A single line of reformat specifications.

reformat specification statement set. The reformat specification statements that make up a complete job.

relation character. In COBOL, one of the characters that express a relationship between two operands: = (equal to), > (greater than), < (less than).

relation condition. In COBOL, a condition that relates two arithmetic expressions and/or data items.

relational checking. (1) The evaluation of the operands in a relational expression, based on the relational operator used. (2) In RPG, diagnostics performed against two statements in a source program to ensure that the statements are valid (for example, a GOTO operation must have an associated TAG operation). This type of checking is done only by the compiler as opposed to single-statement syntax checking that is done by the SEU syntax checker.

relational expression. A logical statement that describes the relationship (such as greater than or equal to) of two arithmetic expressions or data items.

relational operator. (1) In CL, an operator that can be used in an arithmetic, character, or logical relation to indicate the comparison to be performed between the terms in the relation. The relational operators are *EQ or = (equal to), *GT or > (greater than), *LT or < (less than), *GE or >= (greater than or equal to), *LE or <= (less than or equal to), *NE or ¬= (not equal to), *NG or ¬> (not greater than), *NL or ¬< (not less than). (2) In COBOL, a reserved word, a relation character, a group of consecutive reserved words, or a group of consecutive reserved words and relation characters used to construct a relation condition. (3) In BASIC, the definition and operations are the same as those in CL, but the symbols are the following: =, >< or <>, <, >, >= or =>, and <= or =<. (4) For PL/I, see *comparison operator.* (5) In Personal Services/38, An operator that can be used in an arithmetic, character, or logical relation to indicate the comparison to be performed between the terms in the relation. For example, RG for Range, GT for Greater than, LS for list, LT for Less than, GE for Greater than or equal to, and LE for Less than or equal to.

relative end position. In RPG, an entry on the output specifications that indicates the number of blank positions that are to appear between a field or constant and the field or constant defined on the preceding specification line. Contrast with *exact end position.*

relative file. (ANSI) In COBOL, a file with a relative organization. Same as *direct file.*

relative file number. In a join logical file, a sequential number assigned to a physical file based on the position of that file on the JFILE keyword specification.

relative key. In COBOL, an unsigned integer data item that can be used directly by the system to locate a record in a file. Same as *relative record number.*

relative organization. In COBOL, the file structure in which each record is uniquely identified by a positive integer value that specifies the record's ordinal position in the file.

relative record number. A number that specifies the location of a record in relation to the beginning of a data base file member or subfile. For example, the first record in a data base file member or subfile has a relative record number of 1.

release program device operation. An operation that makes a program device ineligible for input/output operations. Contrast with *acquire program device operation.*

remote device. A device whose control unit is connected to a System/38 through a data link.

remote entry. A system distribution directory entry of a user located on another system that is part of the computer network.

remote entry services. In OS/VS1, the set of functions added to the Job Entry Subsystem (JES) that allows jobs and their associated data to be entered from remote devices (System/38), processed at the central system, and then transmitted back to the remote devices. Abbreviated RES.

remote equipment. The modem and control unit equipment that provides the communications connection between a communications line and a remote device or station. This remote equipment is at the other end of a data link from the host System/38. For System/38, the remote equipment could be partially or totally contained within a 5251 Model 2 or Model 12 work station/control unit.

remote file. A data file on the DDM target system that contains the data being accessed by a program or user on the source system through a DDM file.

Remote Job Entry Facility. A System/38 licensed program that provides a data link with a remote host system. Abbreviated RJEF.

Remote Spooling Communications Subsystem. The component of VM/370 that transfers spooled files between VM/370 users, remote stations (System/38), and remote and local batch stations through HASP-compatible telecommunications facilities. Abbreviated RSCS.

remote terminal access method. A non-System/38 facility that controls operations between the Job Entry Subsystems (JES2 and JES3) and remote work stations (System/38). Abbreviated RTAM.

remote work station. A work station whose connection to the processing system uses modems and common carrier or private data transmission facilities. Contrast with *local work station.*

remove. In journaling, to remove the after-images of records from a physical file member. The file then contains the before-images of the records that are recorded in a journal. Contrast with *apply.*

reply. (1) In SNA, a request unit sent only in reaction to a received request unit. Same as *reply request.* (2) A command that is used to respond to a previously received request.

reply message. A message that is sent as a response to a received inquiry or notify message.

reply request. See *reply.*

request. (1) A CL command, the selection of an option on a menu, or the entering of data that instructs the system to perform a function. A CL command can be entered interactively or in a batch job. A request is identified as RQS on the job log. (2) In document interchange, a command that specifies a function to be performed.

request data. Data to be put in a job message queue that is used by a job. For example, a single command or group of commands.

request for test. In BSC, a request to perform an online test function. Abbreviated RFT.

request functional transmission. In System/38 (RJEF) MTAM, a control character indicating a request for permission to send reader data or writer data. Abbreviated RFT. Contrast with *grant functional transmission.*

request header. In SNA, a request unit header preceding a request unit. Abbreviated RH.

request message. A message that requests a function from the receiving program.

request unit. In SNA, a message unit that contains control information such as request code, user data, or both. Abbreviated RU.

request/response header. In SNA, control information preceding a request/response unit that specifies the type of request/response unit and contains control information associated with that request/response unit. Abbreviated RH.

request/response unit. In SNA, a generic term for a request unit or a response unit. Abbreviated RU.

required hyphen. In word processing, a grammatical hyphen that is not dropped when other hyphens are dropped. Contrast with *syllable hyphen.*

required space. A space or blank that cannot be removed by Personal Services/38 when adjusting a line or paragraph of text. Contrast with *nonprint character.*

reroute. In SNADS, a function that allows a distribution queue entry to be removed from the next system queue and routed again by the SNADS router.

rerun search. In a rerun search, Personal Services/38 searches for all filed documents accessible to you for which the corresponding document details match your search criteria. A rerun search may change the contents of your document list.

RES. See *remote entry services.*

reserved word. (1) A word in the RPG language (such as *PRINT or UDATE) that is associated with a specific language function. A reserved word cannot be used as a programmer-defined symbolic name. (2) A special word that has a specific meaning to the system as defined in a

programming language. (3) A predefined word used in a source program for syntactical purposes. It must not appear in a program as a user-defined name or system-name.

response. In SNA, a message unit that acknowledges receipt of a request; a response consists of a response header and possibly a response unit. See *response header.*

response header. In SNA, a header, optionally followed by a response unit, that indicates whether the response is positive or negative and that may contain a pacing response. Abbreviated RH. See also *negative response* and *positive response.*

response indicator. A 1-character field passed with an input record from CPF to a program to provide information about the data record or actions taken by the work station user.

response unit. In SNA, a message unit that may contain prefix information received in a request unit and (a) if positive, may contain additional information (such as session parameters in response to BIND SESSION) or (b) if negative, contains sense data defining the exception condition. Abbreviated RU.

restore. To transfer data from tape or diskette to online storage. Contrast with *save.*

restricted document. A filed document that has one or more access codes assigned. A restricted document can be accessed by the primary owner, the secondary owner, and the delegate of an owner. Contrast with *personal document* and *public document.*

restricted state. The mode in which the system or controlling subsystem can be placed in order for special commands or limited functions to be performed. To place the system in the restricted state, use the Terminate Subsystem (TRMSBS) command with SBS(*ALL) specified or use the Terminate CPF (TRMCPF) command.

result field. (1) In RPG, a field specified on a calculation operation that contains the result of that operation. (2) In the query utility, a temporary field created by the query utility to contain the results of computations specified in a query application.

resulting indicator. In RPG, an indicator that signals the result of a calculation, such as whether the result is plus, minus, or zero; whether a given field is greater than, less than, or equal to another field; or whether an operation was successfully completed.

retained data. In System/38 graphics, graphics data that is associated with a graphics segment. Retained data is kept by the system and is capable of being displayed again within the same graphics environment. Contrast with *temporary data.*

return indicator. In RPG, an indicator used to indicate to the internal RPG logic that control should be returned to the calling program. Abbreviated RT.

reverse image. Text that appears on the display in a negative form (for example, black on green instead of the green on black).

reverse-interrupt character. In BSC, a transmission control character that is sent as a request by the receiving station to the sending station to stop transmitting in order to receive a message. Abbreviated RVI.

revisable form text. In document content architecture, text that can be edited. Revisable form text must be processed to become final form document text before they can be printed. Contrast with *final form text.*

RFT. (1) See *request for test.* (2) See *request functional transmission.*

RH. See *request/response header* and *response header.*

right-adjust. To place an entry in a field or to move the contents of a field so that the rightmost character of the data is in the rightmost position of the field.

right-justified. To print a document with even right margins.

RJEF. See *Remote Job Entry Facility.*

roll. To move the display in an upward or downward direction.

roll back. To remove changes that have been made to files under commitment control since the last commitment boundary.

routine. In COBOL, a set of statements in a program that causes the computer to perform an operation or series of related operations.

routing. The list of users who are to receive an item when it is distributed, including all users named specifically by the originator and those on distribution lists named by the originator.

routing data. A character string that CPF compares with character strings in the subsystem description routing entries to select the routing entry that is to be used to initiate a routing step. Routing data can be provided by a work station user, specified in a command, or provided through the job description for the job.

routing entry. An entry in a subsystem description that specifies the program to be invoked to control a routing step that executes in the subsystem.

routing step. The processing performed as a result of invoking a program specified in a routing entry.

routing table. In SNADS, a table containing entries for all the destination nodes in the SNADS network to which distribution queue entries can be routed.

RQS. See *request.*

RSCS. See *Remote Spooling Communications Subsystem.*

RSHUTD. An SNA command used to request an orderly session shutdown.

RSP. See *response.*

RTAM. See *remote terminal access method.*

RU. See *request unit*, *response unit*, and *request/response unit.*

RU chain. In SNA, a set of related request/response units that are consecutively transmitted on a particular normal or expedited data flow. The request RU chain is the unit of recovery; if one of the RUs in the chain cannot be processed, the entire chain is discarded. **Note:** Each request unit belongs to only one chain, which has a beginning and an end indicated through control bits in request/response headers within the RU chain. Each request unit can be designated as first RU of chain, last RU of chain, middle RU of chain, or only RU of chain. Response units and expedited-flow request units are always sent as only request unit of chain. See also *bracket.*

Run indicator. A light on the operator/service panel that comes on when the processor is executing.

run unit. (1) In COBOL, a set of one or more programs that function as a unit at execution time to provide a problem solution. A run unit starts with the first COBOL program in the invocation stack and includes all programs (COBOL and non-COBOL) that are below it in the invocation stack. (2) In PL/I, a set of PL/I programs, each of which is invoked by some other PL/I program within the set, except for the initially invoked program, which is invoked from outside the set. A PL/I run unit is suspended when a program in the run unit invokes a non-PL/I program and is resumed when the invoked program returns control to the PL/I program that invoked it. A PL/I run unit is terminated when the initially invoked PL/I program returns control to the non-PL/I program that originally invoked the initial program and so initiated the run unit.

RVI. See *reverse-interrupt character.*

saturation. The amounts of color and gray in a hue that affect its vividness; that is, a hue with high saturation contains more color and less gray than a hue with low saturation. See also *hue* and *lightness.*

save. To duplicate specific objects or libraries by transferring them from internal storage to magnetic media such as diskettes or tape. Contrast with *restore.*

save file. See *online save file.*

save system rights. The authority to save all objects.

SBA order. See *set buffer address order.*

SC. See *session control.*

SCA (system control adapter) Check indicator. A light on the operator/service panel that comes on when a check is detected in the machine subsystem containing the system control adapter.

scalar. (1) Pertaining to a single data item (as opposed to an array of data items). (2) A type of program object that contains either string or numeric data. It provides the byte string it is mapped to with representation and operational characteristics. Contrast with *pointer.*

scalar expression. An expression that represents a single value rather than an array of values.

scalar item. A single data item. Contrast with *array.*

scalar variable. In PL/I, a variable that represents a single data item.

scale. (1) In System/38 graphics, the number of and progression of tick marks along an axis. (2) In System/38 graphics, to enlarge an image or marker.

scale line. A line on the display showing margins, character positions, and . the center of a paragraph format.

scan. To search for a specified character string (the scan string).

scan field. A field on a display into which you can key a character or group of characters that you want to locate.

scan string. A user-specified character or group of characters that the system is to search for.

SCB. See *string control byte.*

scope. In PL/I, the part of the program in which a data item can be referenced.

screen. See *display* and *display screen.*

screen design aid. The utility of the Interactive Data Base Utilities licensed program that is used to interactively design, create, and maintain display record formats and menus. Abbreviated SDA.

screen image. See *display image.*

screen indicator. A spot of light that appears on the display to indicate a stat or condition of the display station. See also *input inhibited indicator, system available indicator, message waiting indicator, keyboard shift indicator,* and *insert mode indicator.*

SCS. See *SNA character string.*

SDA. See *screen design aid.*

SDDM. See *source DDM server.*

SDLC. See *synchronous data link control.*

SDT. An SNA command used to start data traffic.

search. To examine a set of items for one or more specified criteria or characters. For example, to find all filed documents to which a given keyword is assigned. See also *context search, exact search, generic search,* and *rerun search.*

search argument. (1) In RPG, a literal or field name specified in factor 1 of certain file operations (such as CHAIN) that identifies the record to be processed. (2) In RPG, data for which you want to find a match or a greater than or less than quantity in a table or array. The search argument is specified in the lookup statement.

search criterion. User-defined information that is used to either generate a list of filed documents with similar document details or find a directory entry.

search result list. A user-named object that identifies filed documents selected by a search.

search terms. Information about a filed document, such as author, document name, and document owners, that an office user can use to search for the document.

second-level message. A message that provides additional information to that already provided in a first-level message. See also *second-level message display.*

second-level message display. A display containing the second-level message text (if any) and additional message information. This display is obtained by pressing the Help key while a first-level message is displayed.

secondary file. (1) In RPG multifile logic, any input file other than the primary file. (2) In query, when file chaining is specified, the second data base file referenced by a query application. The secondary file must be key accessed and the name of the key fields can be floating-point fields. (3) In a join logical file, any physical file, other than the first physical file, that is specified on the JFILE keyword. Contrast with *primary file.*

secondary logical unit. In SNA, the logical unit that contains the secondary half-session for a particular LU-LU session. Abbreviated SLU. See also *logical unit.* Contrast with *primary logical unit.*

secondary node ID. In SNADS, an alternative node ID that can be used to identify a System/38 in a SNADS network. See also *secondary node ID table.* Contrast with *primary node ID.*

secondary node ID table. In SNADS, the table containing all the node IDs that can be used to identify the local system for distributions arriving on the system.

secondary owner. In document library services, a specific user assigned access to a specific document in the document library. The primary owner assigns the secondary owner when filing the document.

secondary record format. In query, when file chaining is specified, a record format in the secondary file. Contrast with *primary record format.*

section. (ANSI) In COBOL, a set of zero, one, or more paragraphs or entries, called a section body, preceded by a section header. Each section consists of the section header and the related section body.

section header. (ANSI) In COBOL, a combination of words, followed by a period and a space, that indicates the beginning of a *section* in the Environment, Data, or Procedure Division.

section-name. In COBOL, a user-defined word that names a section in the Procedure Division.

sector. The addressable unit into which each track on a diskette is divided.

sector label. In System/38 graphics, the alphameric label that a user can assign to each sector on a pie chart.

secured file. A file that is protected from being overridden by an override file command.

security. The control of access to, or use of, data or functions.

security officer. The individual at an installation who is designated to control the authorization of functions and data in System/38.

security officer user profile. The CPF-supplied user profile that has authority to control the authorization of functions and data used in the installation. Named QSECOFR.

select function. A CPF function that determines which records from a physical file are to be selected for a logical file's access path. Contrast with *omit function.*

select/omit field. A field in a logical file record format whose value is tested to determine if records including the field are to be returned to the program reading the logical file. The test is a comparison with a constant, the contents of another field, a range of values, or a list of values, and the record is either selected or omitted as a result of the test. See also *omit function*, *select function*, and *dynamic select/omit*.

select/omit level specifications. In DDS, specifications coded on the lines following the last key field specification. These specifications are permitted only in a logical file. See also *field level specifications, file level specifications, key field level specifications*, and *record level specifications*.

selection criterion. See *search criterion*.

selective prompting. In System/38 CL programs, a function that allows the user to tailor his command prompts at a keyword level.

self-check digit. In DFU and DDS, the rightmost digit of a self-check field.

self-check field. In DFU and DDS, a field such as an account number, consisting of a base number and a self-check digit. For data entry applications, the operator-entered self-check digit is compared with the self-check digit computed by the system.

send queue depth. In SNADS, the number of distribution queue entries that must be on a next system queue before any can be sent to the next system.

send time. In SNADS, the values that specify at what time(s) it is valid for a SNADS sender to transmit distributions to other nodes in a network. The from and to times inclusively specify the range during which distributions can be transmitted. The force time identifies the time at which distributions are to be transmitted regardless of the send queue depth condition.

sender. See *recipient* and *SNADS sender*.

sending. In SNADS, the state of a distribution queue entry when it is being transmitted to the next system. Also, the state of a next system queue that is in the process of transmitting a distribution queue entry.

sentence. In COBOL, a sequence of one or more statements; the last statement ends with a period followed by a space.

separator. A punctuation character used to delimit character strings. See also *file separator* and *job separator*.

sequence checking. An RPG function that checks the sequence of records in input, update, or combined files used as primary and secondary files.

sequence number. (1) The number of a record that identifies the record within the source member. (2) A field in a journal entry that contains a number assigned by journal management. This number is initially 1 and is incremented by 1 until the journal is deleted or the sequence number is reset by the user. See also *line number*.

sequential access. In COBOL, an access mode in which records are read from or written to a file based on the order of the records in the file.

sequential file. A file in which records are processed in the order that they are stored in the file.

sequential processing. In COBOL, the processing of logical records in the order in which records are accessed.

sequential-by-key processing. A method of file processing that reads records from a keyed sequence file in the order in which the keys are arranged in the access path.

sequential-within-limits processing. In RPG, a method of file processing in which a limits record address file specifies the keys of the records to be read from a keyed file.

serial search. In COBOL, a search in which the members of a set are consecutively examined, beginning with the first member and ending with the last member.

service level. See *distribution service level*.

service library. The library provided in CPF that is used temporarily for loading IBM-supplied programming changes and assembling data for APAR submission. Named QSRV.

service log. A log of information about errors detected in IBM program products. Named QSRV.

service order table. A sequence defined for an SNA multipoint line that specifies the order in which the physical units are to be serviced.

services display. The SEU display from which scan/substitute, date, browse, and syntax checking operations are requested.

session. (1) In SNA, a logical connection between two network addressable units that can be activated, tailored to provide various connection protocols, and deactivated, as requested. The session activation request and response can determine connection options relating to such things as the rate and concurrency of data exchange, the control of contention and error recovery, and the characteristics of the data stream. Sessions compete for network resources such as the class of service within the path control network. See also *half-session*. **Note:** Each session is uniquely identified in a TH by a pair of network addresses,

identifying the origin and destination NAUs of any transmissions exchanged during the session. (2) In RJEF, the activity of all tasks within a single System/38 RJEF subsystem communicating with a single host system. (3) In BASIC, the length of time that starts when a user signs on to BASIC and ends when the user signs off from BASIC. (4) In 3270 emulation, the activity that occurs on the communications line between the time that the user enters the command to start emulation and the time the emulation job is terminated. (5) The amount of time that a user uses the work station at any one time (between signing on and signing off).

session control. In SNA, an RU category used for requests and responses exchanged between the session control components of a session. Abbreviated SC.

session description. An object that contains a description of the operating characteristics of an RJEF session. The system-recognized identifier for the object type is *SSND.

set buffer address order. An instruction in a data stream that specifies a new buffer address from which write operations are to start or continue.

SEU. See *source entry utility.*

severity code. A code that indicates how important a message is. The higher the code, the more serious the condition is.

SF order. See *start field order.*

shared access path. An access path used by more than one file to provide access to data common to the files.

shared file. A file whose open data path can be shared between two or more programs executing in the same routing step.

shared-for-read lock state. The allocation that a routing step has for an object in which the object can be shared with another routing step if the routing step does not request exclusive use of the object. The predefined value for this lock state is *SHRRD.

shared-for-update lock state. The allocation that a routing step has for an object in which the object can be shared either for update or for read with another routing step. The predefined value for this lock state is *SHRUPD.

shared-no-update lock state. The allocation that a routing step has for an object in which the object can be shared with another routing step if the routing step requests either a shared-no-update lock state or a shared-for-read lock state. The predefined value for this lock state is *SHRNUP.

shared record format. A record format that is used in more than one externally described file.

shear. In System/38 graphics, the forward or backward slant of a mode-3 graphics symbol or string of such symbols relative to a line perpendicular to the baseline of the symbol.

shift. A line command to move data to the right or left. See also *Shift key.*

short format. In binary floating-point storage formats, the 32-bit representation of a binary floating-point number, not-a-number, or infinity. Contrast with *long format.*

short precision. An option in BASIC that specifies that the values printed in integer and fixed-point format have a maximum of 6 significant digits, and values printed in floating-point format have a maximum of 7 significant digits. Contrast with *long precision.*

SHUTC. An SNA command used to complete session shutdown.

SHUTD. An SNA command used to begin an orderly session shutdown.

sign condition. In COBOL, a condition that states that the algebraic value of a data item or an arithmetic expression is less than, equal to, or greater than zero.

SIGNAL. An SNA command used to request a break in data flow.

sign off. To enter a command or to select an option from a menu at a work station that instructs the system to end an interactive job.

sign on. To enter a password that identifies the user to the system and instructs the system to establish an interactive job at a work station.

significand. In binary floating-point format, the part of a number that contains the integer and fraction.

simple condition. (ANSI) In COBOL, any single condition chosen from the set: relation condition, class condition, condition-name condition, switch-status condition, and sign condition.

simple list. A list of like values; for example, a list of user names. Contrast with *mixed list.*

simple object name. Same as *object name.*

simple variable. In BASIC, a scalar variable (but not an array element).

single device file. A device file that was created with only one program device defined for it. Printer files, card files, diskette files, tape files, communications files, and BSC files are single device files. Display files and mixed files created with a maximum number of one program device

are also single device files. Contrast with *multiple device file.*

single-level sign-on. A method to gain access to the System/38 requiring a password. Contrast with *two-level sign-on.*

single precision. The specification that causes the floating-point value to be stored (internally) in the short format. See also *precision*; contrast with *double precision.*

single program design. In RPG, a design in which all functions are done within one program.

single value. A value that can be specified in place of multiple values for a list parameter in a CL command.

single-level storage. The technique of addressing multiple levels of storage through a single addressing structure.

skeleton line. A line used as a pattern for other lines.

skip. To cause the printer to move the paper to a specified line before or after it prints a line.

slot. See *I/O slot.*

SLU. See *secondary logical unit.*

smoothness of curve. In System/38 graphics, the connection of the plotted points in a data group by a continuous curve. On System/370 GDDM, called curve fitting.

SNA. See *systems network architecture.*

SNA character string. In SNA, a data stream composed of EBCDIC controls, optionally intermixed with end-user data, which is carried within a request/response unit. Abbreviated SCS.

SNA distribution services. An IBM architecture that defines a set of rules and protocols used to receive, route, and send distributions in a network of systems. Abbreviated SNADS.

SNA network. In SNA, the part of the user application network that conforms to the formats and protocols of SNA. The SNA network consists of network addressable units, boundary function components, and the path control network.

SNA remote job entry. The portion of RJEF that allows the user to communicate with a host system in an SNA environment.

SNA 3270 device emulation. A System/38 control program that allows a System/38 to appear as an SNA 3274 Control Unit.

SNADS. See *SNA distribution services.*

SNADS log. The journal used by SNADS to record successful operations, errors, routing table changes, and next system table changes.

SNADS network. A communications network connecting two or more systems that communicate with each other using SNA distribution services (SNADS).

SNADS receiver. In SNADS, the process that is responsible for receiving distributions from other nodes in the SNADS network. It runs under the subsystem designated on the ADDCMNE command and is initiated by an APPC evoke from a SNADS sender.

SNADS router. In SNADS, the process that performs the routing functions needed to distribute requests in the SNADS network.

SNADS sender. In SNADS, the process that is responsible for sending distributions to other nodes in the SNADS network when the send time condition and the queue depth condition are met. This process runs under the SNADS subsystem QSNADS and is initiated when the SNADS subsystem QSNADS is started. See also *recipient.*

SOH. See *start-of-header character.*

sort file. In COBOL, a temporary file that contains all the records to be sorted by a SORT statement. The sort file is created and can be used by the sort function only.

sort-merge file description entry. In COBOL, an entry in the File Section that describes a sort file or a merge file.

source. In advanced program-to-program communications, the system or program that starts jobs on another system. In distributed data management (DDM), the local system that requests data from a remote (target) system.

source DDM server. The support in a source system job that initiates a target DDM server, sends file access requests to the target system, and handles the subsequent responses. Abbreviated SDDM.

source DDM support. Programming support that translates local data management requests for remote files into a DDM request, establishes communications to the remote system where the data file is located, and routes the request to the remote (target) system for processing.

source document. A document that stores information from a data base member. This information can then be copied into other text documents.

source entry utility. The utility of the Interactive Data Base Utilities licensed program that is used to create and change source members. Abbreviated SEU.

source file. A file created by the specification of FILETYPE(*SRC). A source file can contain source statements for such items as high-level language programs and data description specifications.

source listing. A portion of a compiler listing that contains source statements and, optionally, diagnostics. See also *compiler listing.*

source member. A member of a data base source file that contains source statements such as RPG, COBOL, BASIC, PL/I, or DDS specifications. See also *member.*

source node. An office system node that provides services for an office user.

source program. A set of instructions, written in a programming language such as RPG or COBOL, that represents a particular job as defined by a programmer. A source program is used as input to the compiler to create an executable program.

source statement. A statement written in symbols of a programming language. For example, RPG, COBOL, BASIC, PL/I, or DDS specifications are source statements.

SOURCE-COMPUTER. In COBOL, the name of an Environment Division paragraph describing the computer upon which the source program will be compiled.

space. To cause the printer to move the paper a specified number of lines before or after it prints a line.

space pointer. A pointer that contains addressability to a byte string in the space part of an MI object.

space pointer machine object. A space pointer that has no defined storage form (representational characteristic). It is contained in internal machine storage rather than a space. It exists only within the invocation of the program that defines it. Also referred to as *machine space pointer.*

spanned record. A logical record stored in more than one block on a diskette.

special authority. The right to perform certain system control operations, such as save system, job control operations, and administrator's authority.

special character. (1) A character other than a digit, a letter, or #, $, or @. For example, *, +, and % are special characters. (2) In COBOL and BASIC, a character that is neither numeric nor alphabetic.

special registers. In COBOL, compiler-generated data items used to store information produced by specific COBOL features (for example, the DEBUG-ITEM special register).

special value. A value that can be specified in a CL command or in a message and that does not have to satisfy validity checking criteria.

special-character word. (ANSI) In COBOL, a reserved word that is an arithmetic operator or a relation character.

SPECIAL-NAMES. In COBOL, the name of an Environment Division paragraph and the paragraph itself in which names supplied by IBM are related to mnemonic-names specified by the programmer. In addition, this paragraph can be used to exchange the functions of the comma and the period or to specify a substitution character for the currency sign in the PICTURE string.

specific poll. See *polling list.*

spell aid. A document proofreading function that replaces a misspelled word when the correctly spelled version is chosen from a list of similarly spelled words provided by the dictionary or dictionaries.

spell check. A document proofreading function that verifies that a word is spelled correctly by checking for it in one or more online dictionaries.

spell mode. A document proofreading function that allows a user to do the following: verify that a word is spelled correctly by checking for it in one or more online dictionaries (CF3); replace a misspelled word by choosing the correctly spelled version from a list of similarly spelled words provided by one or more online dictionaries (CF19); or replace a given word with one having a similar meaning from a list of synonyms provided by one or more online dictionaries (CF20).

spelling aid dictionary. A list of words used to verify word choice and verify and correct spelling when the document spelling check function is invoked, and to provide hyphenation points for words when the automatic hyphenation function is used. A number or dictionaries are available with the system, such as United States English and United Kingdom English, but users may create their own permanent user dictionary using the CRTSPADCT (Create Spelling Aid Dictionary) command.

split display. In SEU and Personal Services/38, a display that allows a user to work with two source members or documents at the same time.

split-browse display. The SEU display that has records from a member being browsed on the top part of the display and records from another browse member or from a spooled output file on the bottom part of the display.

split-edit display. The SEU display that has records from the member being edited on the top part of the display and records from the browse member or spooled output file on the bottom part of the display.

spooled file. A generic term for three types of files: a device file that provides access to an inline data file or that creates a spooled output file, an inline data file, or a spooled output file.

spooled input file. See *inline data file.*

spooled output file. A device file that causes output data to be saved for later processing by a writer.

spooling. The CPF-provided execution-time support that reads and writes input and output streams on an intermediate device in a format convenient for later processing or output.

spooling subsystem. A subsystem that provides the operating environment needed by the CPF programs that read jobs onto job queues and write files from the output queues. IBM supplies one spooling subsystem: QSPL.

SRCB. See *subrecord control byte.*

SRJE. See *SNA remote job entry.*

SSCP. See *system services control point.*

SSCP ID. In SNA, a number uniquely identifying a system services control point. The SSCP ID is used in activation requests sent to physical units and other system services control points.

stacker. See *card stacker.*

stand-alone dump. A dump, done separately from normal system operations, that does not require the system to be in a condition for normal operations.

standard data format. In COBOL, the format in which data is described as to how it appears when it is printed, rather than how it is stored by the computer.

standby line. A modem feature that allows a point-to-point nonswitched line modem to also function on a point-to-point switched line.

start field order. An instruction in the data stream of a write operation that indicates that the next byte is an attribute character.

start-of-header character. In BSC, a transmission control character that indicates the beginning of the header information for a message. Abbreviated SOH.

start-of-text character. In BSC, a transmission control character that is used to begin a logical set of records that will be ended by the end-of-text character. Abbreviated STX.

statement. (1) (ANSI) (ISO) In a programming language, a meaningful expression that may describe or specify operations and is usually complete in the context of that programming language. (2) (ANSI) In COBOL, a syntactically valid combination of words and symbols, beginning with a verb, that is written in the Procedure Division. A statement combines COBOL reserved words and programmer-defined operands. (3) In PL/I, a grouping of identifiers, constants, and delimiters that makes up do groups and blocks. The end of a statement is indicated by a semicolon (;). See also *keyword statement, assignment statement,* and *null statement.*

static variable. A variable that is allocated when a program is first invoked in a routing step and exists in storage for subsequent invocations of the same program until the program is deactivated. Contrast with *automatic variable.*

station. A system or device that can send or receive data over a communications line.

status indicators. Lights on the operator/service panel, each with a label such as Run or Machine Check, that indicate the current machine status. See also *condition indicators* and *system indicators.*

status line. In the working with text documents function of Personal Services/38, the first line or two lines on the display containing information about the document on that display, and the Scan field. For example, the paragraph format, mode, or the first column in the display window.

status message. A message that describes the status of the work done by a program.

storage pool. A logical segment of main storage reserved for executing a group of jobs.

stream data transmission. In PL/I, the transmission of data in which the organization of the data into records is ignored and the data is treated as though it were a continuous stream of individual data values in character form. Contrast with *record data transmission.*

stream file. In BASIC, a file in which data items are read and written consecutively.

string. (1) A series of things, such as characters, in a line. (2) In PL/I, a contiguous sequence of characters or bits that is treated as a single data item. (3) A group of auxiliary storage devices connected to a system. The order and location in which each device is connected to the system determines the physical address of the device.

string control byte. In System/38 (RJEF) MTAM, a control character indicating a control field for data character strings that are used for compression. Abbreviated SCB.

structure. In PL/I, a collection of data items that need not have identical attributes. Contrast with *array.*

structure variable. In PL/I, a variable that represents an aggregate of data items that might not have identical attributes. Contrast with *array variable* and *scalar variable.*

STX. See *start-of-text character.*

subarea node. In data communications, a node that uses network addresses for routing and whose routing tables are, therefore, affected by changes in the configuration of the network. Subarea nodes can provide boundary function support for peripheral nodes. See also *peripheral node.*

subdevice. In BSC, a device at the receiving system to which output is to be directed, such as a printer or display.

subfield. In RPG, a field within a data structure.

subfile. A group of records of the same record format that can be displayed concurrently at a work station. The system sends the entire group of records to the work station in a single operation and receives the group in another operation.

subfile control record format. One of two record formats required to define a subfile in DDS. The subfile control record format describes the size of the subfile and the size of the subfile page, and is used by the program to write the subfile to and read the subfile from the display. See also *subfile record format.*

subfile record. A record in a subfile.

subfile record format. One of two record formats required to define a subfile in DDS. The subfile record format defines the fields in a subfile record and is used by the program to perform input, output, and update operations to the subfile.

subject. A description of the contents of a document.

subject of entry. In COBOL, a data-name or reserved word that appears immediately after a level indicator or level-number in a Data Division entry. It serves to reference the entry.

subprogram. In COBOL, a called program. A subprogram is combined with the calling program at execution time to produce a run unit and is below the calling program in the invocation stack.

subrecord control byte. In System/38 (RJEF) MTAM, a control character used to provide supplemental information about a record. Abbreviated SRCB.

subroutine. (1) In data communications, a group of statements in a program that can be executed several times in that program. (2) In RPG, a group of calculation specification statements in a program that can be executed several times in that program. (3) In BASIC, a group of statements in a program executed by a GOSUB statement, or a separately compiled program executed by the CALL statement. (4) In PL/I, a procedure that has no RETURNS option in the PROCEDURE statement. Contrast with *function.*

subroutine call. In PL/I, an entry reference that must represent a subroutine, followed by an optional and possibly empty argument list that appears in a CALL statement. Contrast with *function reference.*

subscript. (1) In COBOL and PL/I, a positive integer whose value identifies or refers to a particular element in a table. (2) In BASIC, an integer or variable whose value refers to a particular element in an array.

subscripted data-name. In COBOL, a data-name that has been made unique through the use of a subscript.

substitute. The SEU operation in which a specified string of characters replaces a string of characters that has been located by a scan operation.

substitution string. A specified string of characters that replaces a string of characters that have been located by a scan operation.

substitution variable. A variable used to pass information such as a file name for use in a message.

substring. A part of a character string.

subsystem. An operating environment, defined by a subsystem description, through which CPF coordinates work flow and resource usage.

subsystem attributes. Specifications in a subsystem description that specify the amount of main storage available to the subsystem and the number of jobs that can execute concurrently in the subsystem.

subsystem description. An object that contains information defining a subsystem and that CPF uses to control the subsystem. The system-recognized identifier for the object type is *SBSD.

suspended group job. A group job that the work station user has transferred from using the Transfer to Group Job (TFRGRPJOB) command.

sweep. In System/38 graphics, the movement along an arc around the center point of the arc.

switch-status condition. In COBOL, a condition that states that a switch is currently on or off.

switched line. A connection between two stations that is established by dialing. Contrast with *nonswitched line.*

syllable hyphen. A hyphen used to temporarily divide a word at the end of a line. Contrast with *required hyphen.*

symbolic name. In RPG, a unique name used to define an entity such as a field, file, data structure, or label within an RPG program.

SYN. See *synchronization character.*

synchronization character. In BSC, a transmission control character that is used to establish and maintain synchronization between stations. Abbreviated SYN.

synchronize. (1) To occur at the same time. (2) To ensure that two objects contain exactly the same information.

synchronous data link control. A discipline conforming to subsets of the Advanced Data Communication Control Procedures (ADCCP) of the American National Standards Institute (ANSI) and High-level Data Link Control (HDLC) of the International Standards Organization (ISO), for managing synchronous, code-transparent, serial-by-bit information transfer over a link connection. Transmission exchanges may be duplex or half-duplex over switched or nonswitched links. The configuration of the link connection may be point-to-point, multipoint, or loop. Abbreviated SDLC. Contrast with *binary synchronous communications.*

synchronous processing. A series of operations that are done as part of the job in which they were requested; for example, calling a program in an interactive job at a work station. Contrast with *asynchronous processing.*

synonym aid. A document proofreading function that replaces a given word with one having a similar meaning chosen from a list of synonyms provided by the dictionary.

syntax checking. A function of the command analyzer, a compiler, the BASIC interpreter, or SEU that checks single statements for violations of the rules governing the structure of the statement.

system arbiter. A system job that provides overall control of the work being done on the system.

system ASP. The auxiliary storage pool where system programs and data reside. Serves as the default storage pool. See also *auxiliary storage pool* and *user ASP.*

system available indicator. A spot of light that appears on the display to indicate that you can use the system.

system console. The keyboard and display screen on the system unit that serve as a work station for communicating with and controlling the system. See also *operator/service panel* and *work station.*

system date. The date established for the system when it is started.

system dictionary. An IBM dictionary (or dictionaries) installed on your system. For example, American (US) or British (UK). Used for all documents and included on the dictionary search list. See also *permanent dictionary* and *temporary dictionary.*

system directory. A list of entries containing names, addresses, telephone numbers, and other identifying information, used with a two-part user ID to send distribution lists and other objects by specifying the user ID.

system enrollment. The process of identifying an office or object distribution user to your system, done using the Manage Directory (MNGDIR) command. Contrast with *Personal Services/38 enrollment.*

system indicators. The three rows of lights at the top of the operator/service panel that indicate the current operating condition of the system. System indicators are subdivided into status indicators and condition indicators. See also *condition indicators* and *status indicators.*

system library. The library provided by CPF to contain system-oriented objects provided as part of CPF. Named QSYS.

system log message queue. A message queue used for sending information to the system history log, service log, or programming change log, from any job in the system.

system object. One of two MI object classifications. It includes those MI objects whose formats are not visible above MI and all objects that are defined during execution time from attribute template operands on create instructions. These objects are referred to through system pointers. Contrast with *program object.*

system operator. The person who operates the system and looks after the peripheral equipment necessary to initiate computer runs or finalize the computer output in the form of completed reports and documents.

system operator message queue. The message queue used by the system operator to receive and reply to messages from the system, work station users, and application programs. Named QSYSOPR.

system operator user profile. The CPF-supplied user profile that has the authority necessary for the system operator and the special authorities of save system rights and job control rights. Named QSYSOPR.

system pointer. A pointer that contains addressability to an MI system object.

system reference code. An 8-character code that identifies the failing FRU (field-replaceable unit). The system reference code either appears on the system console display, is derived from the code displayed by the indicators on the operator/service panel, or is the first eight characters of the error log number in the first-level

message text. The system reference code (if any) should be reported during a service call.

system resources. Those items owned by the system and allocated or deallocated for use in jobs.

system services control point. In SNA, a network addressable unit that provides configuration, maintenance management, and session services through sessions with physical units, logical units, and other system services control points. Abbreviated SSCP.

system termination. The state in which all processing on the system is stopped. Depending on the cause of the termination, system power could be shut off (such as by a power interruption or by entering the Power Down System (PWRDWNSYS) command) or could remain on (such as caused by a machine error condition). See also *abnormal termination* and *normal termination.*

system time. The elapsed time from the point where the system was started to the current time. If the system time is changed to the local time when the system is started, the current system time is the local time of day.

system unit. The main unit of the system, which contains the processing unit, the system console keyboard/display, the operator/service panel, the diskette magazine drive, main storage, auxiliary storage, the work station controller, and the communications subsystem.

system value. A value that contains control information for the operation of certain parts of the system. A user can change the system default value to tailor the system to his working environment. System date and library list are examples of system values.

system-name. In COBOL, an IBM-defined name that has a predefined meaning to the COBOL compiler. System-names include computer-names, language-names, device-names, and function-names.

systems network architecture. The description of the logical structure, formats, protocols, and operational sequences for transmitting information units through and controlling the configuration and operation of Systems Network Architecture networks. Abbreviated SNA. **Note:** The layered structure of SNA allows the ultimate origins and destinations of information (that is, the end users) to be independent of, and unaffected by, the specific SNA network services and facilities used for information exchange.

| **system network architecture distribution services.** See *SNA distribution services.*

| **system services control point identifier.** See *SSCP ID.*

tab. A point in a document for aligning text.

table. (1) See *translate table.* (2) In RPG, a series of elements with like characteristics. A table can be searched for a uniquely identified element, but elements in a table cannot be accessed by their position relative to other elements. Contrast with *array.* (3) (ANSI) In COBOL, a set of logically consecutive data items that are defined in the Data Division by means of the OCCURS clause.

table element. In COBOL, a data item that can be referenced in a table.

table file. In RPG, an input file that contains a table.

tag. One or more characters, attached to a set of data, that contains information about the set, including its identification.

tangent. In System/38 graphics, the single point at which a straight line meets a curve or surface.

tape file. A device file created by the user to support a tape device.

target. (1) In advanced program-to-program communications, the program or system to which a request for processing is directed. (2) In SEU and Personal Services/38, a line command indicating where the system should execute an operation.

| **target DDM server.** A job initiated on a target system by a source DDM server on the source system that handles requests for remote file data, generates the appropriate responses, and sends them to the source system. Abbreviated TDDM.

| **target DDM support.** Programming support that translates the DDM requests received from a source system into System/38 data management requests on the target system.

task help. Information on the system that describes how to do different functions.

TCAM. See *telecommunications access method.*

| **TDDM.** See *target DDM server.*

telecommunications access method. A non-System/38 access method used to transfer data between main storage and terminals (local or remote). Abbreviated TCAM.

template. A contiguous string of bytes that defines the attributes or values of an MI object.

temporary data. In System/38 graphics, graphics data that is not associated with a graphics segment. Temporary data is lost once it is sent to the display. Contrast with *retained data.*

temporary dictionary. A list of words from a text document that have been accepted by the user, via a CF

key, for recognition by the document spell check function as validly spelled words. The list may or may not be saved with the document. Contrast with *permanent dictionary* and *system dictionary.*

temporary group. A list of calendars assembled by a user under a group name for the purpose of scheduling an appointment or appointments for all members of the group. The list can be used in the current session only, after which the list is dissolved.

temporary library. A library that is automatically created for each job to contain temporary objects that are created by that job. The objects in the temporary library are deleted when the job ends. Named QTEMP.

temporary objects. Objects, such as file open data paths or compiler work areas, that are automatically deleted by the system during an IMPL.

temporary-text-delay character. In BSC, a transmission control character that is used to maintain the data link when no text is being transmitted. Abbreviated TTD.

tentative appointment. In the Calendar function, an appointment that is still uncertain or unconfirmed. a person who has basic authority over someone else's calendar is able to schedule only tentative appointments on that calendar.

terminal. In data communications, same as *work station.*

terminal node user. In DIA, a user of a system or device that gives the user access to document interchange services on a host system. For example, a Displaywriter user.

terminate graphics. In System/38 graphics, to end the graphics environment. The graphics environment is the state in which calls to GDDM and PGR routines can occur. Contrast with *initialize graphics.*

termination. The act of putting the system or an element of the system (such as CPF or a subsystem) in the state where it no longer performs its normal function. See also *system termination.*

test condition. In COBOL, a statement that, taken as a whole, may be either true or false, depending on the circumstances existing at the time the expression is evaluated.

test library. A library to be used in debug mode and that does not contain objects needed for normal processing. Contrast with *production library.*

text. The displayed or printed information of a document.

text box. In System/38 graphics, the imaginary rectangle that encloses a string of mode-2 or mode-3 graphics symbols.

text document. A document that can be edited, not formatted in final form. That is, a document stored in the text library. Text documents can be sent only to Personal Services/38 users. See also *final form text* and *revisable form text.*

text document list. A list of documents contained in a particular file.

text files. Files containing editable text documents.

text library. Any library where editable text documents are stored.

text transparency. A provision that allows BSC to send and receive messages containing any or all of the 256 character combinations in EBCDIC, including transmission control characters. Transmission control characters sent in a message are treated as data, unless they are preceded by the DLE control character.

text-name. (ANSI) In COBOL, a user-defined word that identifies library text.

text-word. In COBOL, any character-string or separator, except the space, in copied COBOL source or in pseudo-text.

TH. See *transmission header.*

Thermal Check indicator. A light on the operator/service panel that comes on when a thermal switch trips, indicating that the safe operating temperature has been exceeded.

threshold. In System/38 graphics, a level of error message severity at which an error-handling program is called.

tick mark. In System/38 graphics, a reference point on either axis of some chart types that represents the location of certain data values. Sometimes called a tick. See also *major tick mark* and *minor tick mark.*

time. The time that a recipient received a mail item.

time slice. The quantity of processor time (specified in milliseconds) allowed for a routing step before other waiting routing steps are given the opportunity to execute.

time stamp. (1) To apply the current system time. (2) The value on an object that is an indication of the system time at some critical point in the object's history. (3) In query, the identification of the day and time a query report was created that query automatically provides on each report.

time-sharing option. An option on the operating system for a System/370 that provides interactive time sharing from remote terminals.

total accumulator. In DFU, a storage area where final totals for a field are kept. Contrast with *batch accumulator.*

total operations. In RPG, operations (calculation or output) performed only after a control group of records has been processed or at end of program.

total record. In RPG, an output record written after a group of detail records. Total records generally contain data that is the result of calculations performed on the information in a group of detail records. Contrast with *detail record.*

total time. That part of the RPG program cycle in which calculation or output operations specified for a group of records are done. Total time operations are conditioned by control level indicators (L1 through L9 or LR). Contrast with *detail time.*

trace. The process of recording the sequence in which the statements in a program are executed and, optionally, the values of the program variables used in the statements.

track. That portion of the diskette recording surface available to one read/write head at each access position.

transaction. (1) In a batch or remote batch entry, a job or job step. (2) An exchange between a work station and another device that accomplishes a particular action or result; for example, the entry of a customer's deposit and the updating of the customer's balance. (3) A specific set of input data that triggers the execution of a specific processor job; a message destined for an application program. (4) A unit of processing (consisting of one or more application programs) initiated by a single request. In many cases, the request will originate at a work station. (5) For commitment control, a group of changes made to data base files that appear to the work station user to be a single change but that require multiple operations by the application program.

TRANSACTION file. In COBOL, an input/output file used to communicate with work stations and/or for intersystems communications.

translate table. An object that contains a set of hexadecimal characters used to translate one or more characters of data. For example, unprintable characters can be translated to blanks, and lowercase alphabetic characters can be translated to uppercase characters. The system-recognized identifier for the object type is *TBL.

translated axis line. In System/38 graphics, a straight reference line parallel to either axis relative to which data values are plotted on a chart. Sometimes called a translated line; on System/370 called a reference line.

transmission control characters. Special BSC characters that are included in a message to control communications over a data link.

transmission control layer. In SNA, the layer within a half-session that synchronizes and paces session-level data traffic, checks session sequence numbers of requests, and enciphers and deciphers end-user data.

transmission header. In SNA, control information, optionally followed by a basic information unit or a basic information unit segment, that is created and used by path control to route message units and to control their flow within the network. Abbreviated TH.

transmission services profile. In SNA, a specification in a session activation request of transmission control protocols (such as session-level pacing and the usage of session-control requests) to be supported by a particular session. Each defined transmission services profile is identified by a number. Abbreviated TS profile.

transparency. See *transparent text mode.*

transparent text mode. A method of binary synchronous transmission in which only transmission control characters preceded by the DLE control character are processed as transmission control characters.

tributary station. A secondary device on a multipoint line.

truncate. To drop data that cannot be printed or displayed in the line width specified or available. Contrast with *fold.*

TS. See *transmission services.*

TSO. See *time-sharing option.*

TTD. See *temporary-text-delay character.*

two-level sign-on. A method to gain access to the System/38 that requires a password and a user ID (user profile name). Contrast with *single-level sign-on.*

type style. The form of characters within a set of the same font. For example, bold or italic.

typematic key. A key that repeats its function when pressed and held down.

UDS. See *utility definition specifications.*

unary operator. (ANSI) In COBOL, a plus sign (+) or a minus sign (-), which precedes a variable or a left parenthesis in an arithmetic expression and which has the effect of multiplying the expression by +1 or -1, respectively.

UNBIND. An SNA command used to go out of a session.

underflow. In BASIC, a condition that occurs when a value is so small that accuracy is lost during computation.

unformatted. A document, or portion of a document, that is a string of characters being preserved as such by a block-format instruction.

unformatted program interface. The part of 3270 emulation support that allows user-written programs to access the 3270 data stream in the form that it is sent from the host system. Contrast with *formatted program interface.*

unformatted record. In BASIC, a record accessed without a FORM or IMAGE statement that is transmitted with a one-to-one relationship between storage locations (bytes) and positions in the record.

unformatted system services. In data communications, a facility that translates a character-coded command, such as a LOGON or LOGOFF command, into a field-formatted command for processing by formatted system services. Abbreviated USS.

unit. For auxiliary storage devices, the actuator arm and the auxiliary storage media it can access. Also see *actuator arm.*

unit number. The unique identifier of the physical location of an actuator arm within the system determined by device type and the order in which it is connected to the system.

uninterruptible power supply. A buffer between the utility power (or other power source) and machine that requires uninterrupted, precise power. Abbreviated UPS.

unit-of-work. In advanced program-to-program communications, the amount of processing that is initiated directly or indirectly by a source program.

unit-of-work identifier. In advanced program-to-program communications, a unique label assigned to the unit-of-work. The ID is established when the source program is started and is carried through to each of the target jobs as they are started. The unit-of-work identifier provides an end-to-end audit trail within an APPC network.

unmapped conversation. In advanced program-to-program communications, a temporary connection between an application program and an APPC session in which the user has to provide all the information on how the data is formatted. Contrast with *mapped conversation.*

unordered. In binary floating-point concepts, the relationship that can exist between two values that indicates that they cannot be ordered according to relative value. The relationship between two values is unordered either when a not-a-number is compared to any value or when infinity is compared to any value other than infinity.

unprotected storage. The part of the system ASP that is not checksum-protected; the storage reserved for temporary objects and internal machine data while a job is running.

update file. In RPG, a file that is used as both an input file and an output file. If the program alters the data in one or more fields of an input record and then writes the altered fields and the unaltered fields back to the same positions in the same record, the file is an update file.

update operation. An I/O operation that modifies the information in a file.

update rights. The authority to change the entries in an object. Contrast with *add rights, delete rights,* and *read rights.*

UPS. See *uninterruptible power supply.*

UPSI switch. In COBOL, a program switch that performs the functions of a hardware switch. Eight switches are provided: UPSI-0 through UPSI-7.

user. The ultimate source or recipient of information flowing through a distribution system.

user ASP. One or more auxiliary storage pools used to separate journals, journal receivers, and save files from system ASP. See also *auxiliary storage pool* and *system ASP.*

user coordinates. Same as *world coordinates.*

user ID. (1) A two-part name by which a user is known within a distribution network. Each part can be 1 to 8 characters long. (2) In finance support, a one- to ten-character string that is entered from a finance device, sent to the System/38, and validated as a security precaution by a System/38 finance job. Listings of valid finance user IDs are maintained in user tables.

user ID qualifier. The second part of a user ID.

user identification. System recognition of a system user so that only the facilities and data he is authorized to use are made available to him.

user message queue. A user-created message queue used to send messages to system users and between application programs.

user name. The name by which a particular user is known to Personal Services/38. See *user profile name.*

user password. A unique string of characters that a system user enters to identify himself to the system.

user profile. An object that contains a description of a particular user or group of users. A user profile contains a list of authorizations to objects and functions. The system-recognized identifier for the object type is *USRPRF.

user profile name. A name that uniquely identifies a System/38 user profile.

user program. A program developed by a user of the system, not by IBM.

user table. A list of finance user IDs authorized to a System/38 finance job.

user-defined edit code. A number (5 through 9) indicating that editing should be done on a numeric output field according to a pattern predefined to CPF. User-defined edit codes can take the place of edit words, so that repetitive coding of the same edit word is not necessary.

user-defined function. In BASIC, a function defined by the user in a single-line or multiline function definition (in the DEF statement).

user-defined name. See *name*.

user-defined word. In COBOL, a word, required by a clause or a statement, that must be supplied by the user in a clause or statement.

USS. See *unformatted system services*.

utility definition specification. A group of source statements, which have the same syntax as CL commands, from which a DFU or query application is created. Abbreviated UDS.

validity checker. A user-written program that tests commands for errors in the parameter values. Validity checking is done in addition to the checking done by the command analyzer.

validity checking. Operations performed against a field value to ensure that the field contains appropriate data. Checking can be done on a single field (for example, the field must be plus) or on multiple fields (for example, if FLDA contains a 1, FLDB can contain only a 2 or 3).

variable. A name used to represent a data item whose value can be changed while the program is running by referring to the name of the variable.

vary off. To make a device, control unit, or line unavailable for its normal intended use.

vary on. To make a device, control unit, or line available for its normal intended use.

vector. In BASIC, a one-dimensional array.

vector array. In System/38 graphics, an array used by a GDDM routine to construct a vector line.

vector line. In System/38 graphics, a series of lines constructed by one GDDM routine.

vector symbol set. In System/38 graphics, a graphics symbol set in which each character is treated as a small picture and is described by a sequence of lines and arcs. Characters in a vector symbol set can be drawn to scale, rotated, and positioned precisely. Abbreviated VSS. Contrast with *image symbol set*; see also *graphics symbol set*.

verb. (ANSI) A COBOL reserved word that expresses an action to be taken by a COBOL compiler or an object program.

verify. In DFU, a method of checking the accuracy of entered data by entering it twice and comparing the second entry with the first.

vertical microcode. System/38 microcode that defines logical operations on data. The microcode is primarily sequential in execution and supports the System/38 machine instruction set. Abbreviated VMC.

vertically displayed records. Subfile records that are grouped in a display so that more than one record of the same record format is displayed concurrently. Each record begins in the first position of a line and occupies one or more adjoining lines.

view display. A display that allows you to look at a document but does not allow you to make any changes to the document. You can move the display to the left and right or up and down.

viewport. In System/38 graphics, a rectangular area within the picture space that defines where the output of the current page will appear on the display device.

virtual address translation. The conversion of virtual storage addresses to real storage addresses.

virtual device. A device description that does not have physical hardware associated with it. It is used to form a connection between a user and a physical work station attached to a remote system. A virtual device can be a virtual work station or a virtual work station printer. See also *virtual work station controller*.

virtual machine. A functional simulation of a computer and its associated devices. Each virtual machine is controlled by a suitable operating system (see, for example, *conversational monitor system*). VM/370 controls the concurrent execution of multiple virtual machines on a single System/370.

virtual storage. The combination of main storage and auxiliary storage, treated as a single addressable unit. Abbreviated VS.

virtual telecommunications access method. A set of programs that control communications between terminals and application programs running under the DOS/VS, OS/VS1, and OS/VS2 operating systems. Abbreviated VTAM.

virtual work station controller. A work station controller that has the property of a locally attached work station controller but does not occupy an operational unit number on the hardware. See also *virtual device.*

VMC. See *vertical microcode.*

volume. A storage medium that is mounted and demounted as a unit; for example, magnetic tape or diskette.

VS. See *virtual storage.*

VTAM. See *virtual telecommunications access method.*

WACK. See *wait-before-transmitting-acknowledgment character.*

wait-before-transmitting-acknowledgment character. In BSC, a transmission control character that indicates to the transmitting station a positive acknowledgment and a temporary not-ready condition.

WCC. See *write control character.*

window. (1) To move the display of a document or source member larger than the display to the left or right so that you can see the sections that do not fit on the display. (2) In System/38 graphics, the user-defined set of coordinates that are mapped on the viewport, from which the scale is drawn. (3) In Personal Services/38, an aid panel of alternative choices displayed by synonym aid and spell aid from which a selection can be made.

word. In COBOL, a character-string of not more than 30 characters, which forms a user-defined word, a system-name, or a reserved word.

work area. For the conversion reformat utility, an area reserved in storage for temporary storage of the data being resequenced.

work entry. An entry in a subsystem description that specifies a source from which jobs can be accepted to be executed in the subsystem.

work space. In BASIC, the area in storage that a BASIC program or BASIC procedure occupies when it is loaded from a source file.

work station. A device that lets a person transmit information to or receive information from a computer as needed to perform his job.

work station controller. A device in the system unit that provides for a direct connection of local work stations to the system.

work station entry. A work entry in a subsystem description that specifies the work stations from which users can sign on to the subsystem or from which interactive jobs can transfer to the subsystem.

work station message queue. A message queue that is associated with a particular work station and that is used for sending and receiving messages sent to the work station. The name of the message queue is the same as the name of the work station.

work station user. A person who uses a work station to communicate with System/38.

work station user profile. The CPF-supplied user profile that has the authority necessary for work station users. Named QUSER.

working display. See *basic working display.*

WORKING-STORAGE SECTION. In COBOL, a section-name (and the section itself) in the Data Division. The section describes records and noncontiguous data items that are not part of external files but are developed and processed internally. It also defines data items whose values are assigned in the source program.

world coordinates. In System/38 graphics, the coordinates, used as reference points, of which the window forms a part. Also called *user coordinates.*

wrap test. For BSC, a test that checks attachment or control unit circuitry (without checking the mechanism itself) by returning the output of the mechanism as input. For example, when unrecoverable communications adapter or machine errors occur, the wrap test can transmit a specific character pattern to or through the modem in a loop and then compare the character pattern received to what was transmitted.

write control character. A character used in conjunction with a write-type command to specify that a particular operation, or combination of operations, is to be performed at a display station or printer. Abbreviated WCC.

writer. (1) A CPF program that writes spooled output files from an output queue to an external device, such as a printer. (2) In RJEF, a program that receives output data (files) from the host system.

x axis. See *axis.*

X.25. In data communications, a specification of the CCITT that defines the interface to an X.25 (packet-switching) network.

X.25 feature. The feature that allows System/38 to connect to an X.25 network.

XIOM. X.25 input-output manager

y axis. See *axis*.

zero suppression. The substitution of blanks for leading zeros in a number. For example, 00057, when zero suppressed, becomes VVV57 (V represents one blank space).

zone width. In Personal Services/38, the number of positions to the left of the right margin in which to end words.

zoned decimal format. Representation of a decimal value by 1 byte per digit. Bits 0 through 3 of the rightmost byte represent the sign; bits 0 through 3 of all other bytes represent the zone portion; bits 4 through 7 of all bytes represent the numeric portion. For example, in zoned decimal format, decimal value of +123 is represented as 1111 0001 1111 0010 1111 0011. Contrast with *packed decimal format*.

zoned decimal item. In COBOL, a numeric data item that is represented internally in zoned decimal format.

zoned field. A field that contains data in the zoned decimal format.

3180 display station. Any display station that is a member of the IBM 3180 Information Display System.

3270 display station. Any display station that is a member of the IBM 3270 Information Display System.

3270 emulation. The System/38 program support that allows a System/38 to appear as a 3271 Control Unit in a BSC multipoint network or as a 3274 Control Unit in an SDLC/SNA network. See also *device emulation, display emulation*, and *printer emulation*.

5250 display station. Any display station that is a member of the IBM 5250 Information Display System, or the 3180 Information Display System. The system console is not a 5250 display station, and a 3270 display station is not a 5250 display station.

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