AS/400 Advanced Series

System/38 Migration Planning

Version 3

SC41-4153-00

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SC41-4153-00

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| **First Edition (September 1995)**

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Summary of Changes to System/38 Migration Planning

Programming Languages

The following programming languages are no longer offered as licensed programs in V3R6:

AS/400 BASIC, FORTRAN/400, AS/400 PL/I, AS/400 Pascal, and RM/COBOL-85** for the AS/400

Therefore, references to these products have been removed or adjusted in this edition.

About System/38 Migration Planning (SC41-4153)

The purpose of this book is to guide you through the complete migration planning process, including:

- Planning to install your new AS/400 system
- Planning your strategy
- Planning your migration
- Completing your planning
- Identifying some major differences between System/38 and the AS/400 system

This book is intended for people who have a basic understanding of data processing concepts and some data processing experience. Also, the person who is performing the tasks in the *System/38 to AS/400 Migration Aid User's Guide and Reference*, SC09-1165, should read this book.

While you are reading this book and performing the tasks, you will need the following manuals:

- The *Physical Planning Reference*, SA41-4109, book for directions on how to plan to install your hardware, licensed programs and cables.
- The *System/38 to AS/400 Migration Aid User's Guide and Reference*, SC09-1165, for instructions on how to migrate System/38 objects to tape or diskette, communications, the IBM 5259 Migration Data Link, how to restore these items to the AS/400 system, and for reference information for those items that require modification before use on the AS/400 system.

  Note: Instead of the IBM 5259 Migration Data Link, you may have received the Transition Data Link. For information about the Transition Data Link, see the *Transition Data Link*, SC21-8372, book. Where you see references in this book to the Migration Data Link; you can use the Transition Data Link.

- The *System/38 Environment Programming*, SC41-3735, book describes the System/38 environment and the differences between System/38 and the AS/400 system.

For information about other AS/400 publications, see either of the following:

- The *Publications Reference* book, SC41-4003, in the AS/400 Softcopy Library.
- The *AS/400 Information Directory*, a unique, multimedia interface to a searchable database containing descriptions of titles available from IBM or from selected other publishers. The *AS/400 Information Directory* is shipped with your system at no charge.

Chapter 1. Overview

Planning for Migration

Migration is the process of moving applications and data from one computer system to another. In this case, you are moving information from the System/38 to the AS/400 system.

Migration planning is a decision-making process whereby you select a strategy, prepare schedules for people and resources, and plan to install both hardware and licensed programs. For example, this could include deciding the order in which you will migrate your applications and who will be responsible for this task and others.

This publication should be reviewed before you begin your migration. The AS/400 to System/38 Migration Aid licensed program 5714-MG1 and the Operating System/400 licensed program 5716-SS1 assist you with the migration process. Additional information on migration and the Migration Aid is in the *System/38 to AS/400 Migration Aid User's Guide and Reference*, SC09-1165, and the *System/38 Environment Programming*, SC41-3735.

About Your AS/400 System

The AS/400 system, like your System/38, requires an operating system. Called the Operating System/400 (OS/400) rather than Control Program Facility (CPF), it provides many of the same functions. In order for you to use your existing applications and data without significant change, OS/400 includes a System/38 environment. This support provides a user interface similar to that of the System/38, minimizing the effect of migration on your users.

For example, most System/38 utilities and control language (CL) statements are supported in the System/38 environment. In addition, similar support is provided for high-level languages you have on System/38.

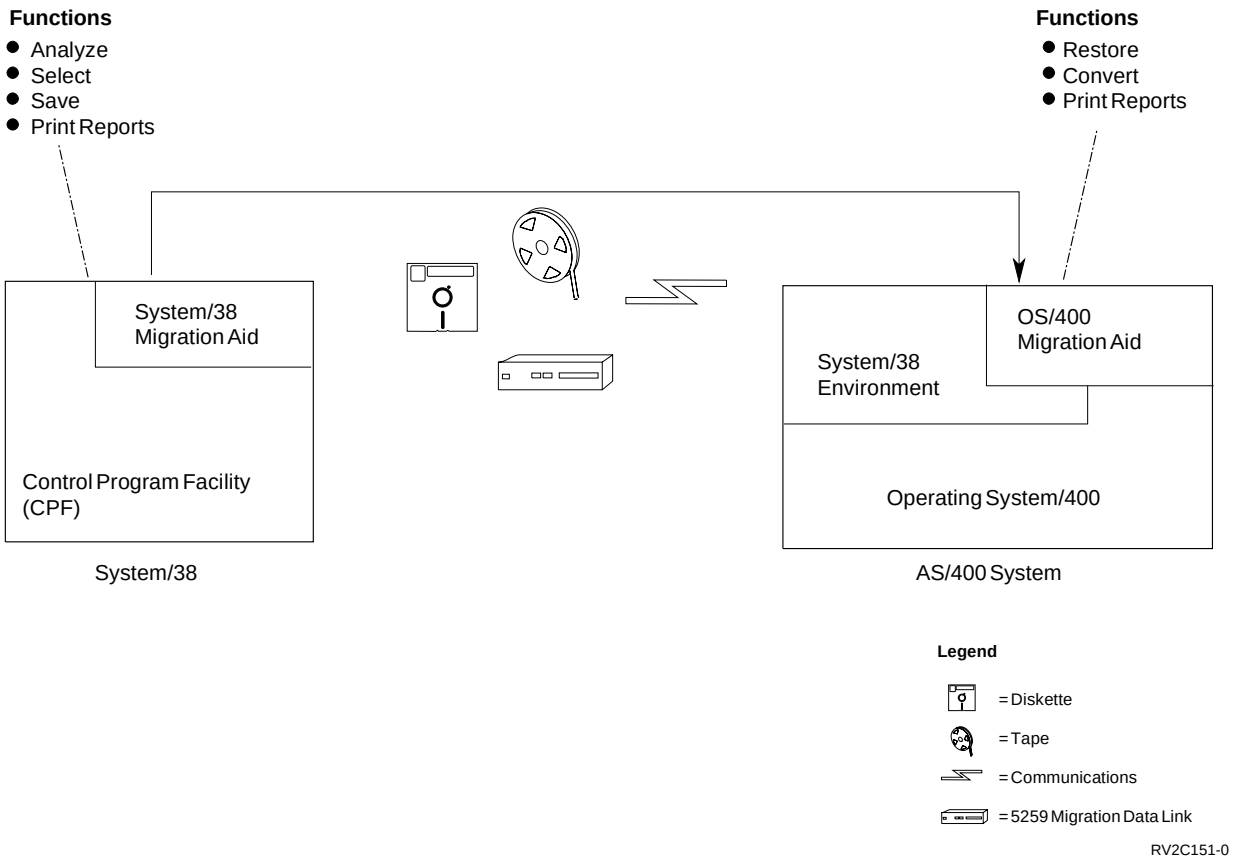
Although you can always use the System/38 environment, you may decide at some point to use some of the enhanced features of the AS/400 system. Gradually, you can make changes to your system and applications to take advantage of the new features.

The *System/38 Environment Programming*, SC41-3735, book has more detailed information about the System/38 environment.

What Is the System/38 to AS/400 Migration Aid?

The System/38 to AS/400 Migration Aid is a licensed program that moves the information on your System/38 to the AS/400 system either by using tape or diskette, the 5259 Migration Data Link, or through user-written data communications. The Migration Aid provides a menu path, making it easy to use. The intent of the Migration Aid is to help you plan, organize, and do your migration.

The following diagram shows you how the Migration Aid works:



The System/38 to AS/400 Migration Aid consists of two parts. The first part, System/38 Migration Aid, runs on the System/38, providing an easy method of identifying and saving your libraries and other system objects. It also identifies functions where differences exist between the System/38 and the AS/400 system so you can make the necessary changes to your objects before and after migration. The second part, the OS/400 Migration Aid, runs on the AS/400 system and assists you in restoring your saved System/38 objects.

Several reports are created by the Migration Aid that allow you to track your progress as you migrate from one system to the next. For example, you can run a report that lists all the libraries and system objects that can be moved from your System/38. Or, if you migrate in stages, you can run a status report that identifies the objects that have been migrated to the AS/400 system as well as those that have not yet been migrated from your System/38.

Using the Migration Aid, you can do the following:

- Run the System Summary Report of objects on System/38
- Run analysis reports for unsupported functions
- Select objects to migrate to the AS/400 system
- Save objects to migrate from the System/38
- Restore objects to the AS/400 system
- Run migration status reports

Because the Migration Aid is flexible, you can migrate the whole system in one migration step, or you can migrate selected objects in separate steps. This allows you to tailor the migration to your needs and schedules. Migration strategies are discussed in Chapter 2, which assists you in developing an overall migration plan.

Some of the objects the Migration Aid moves are:

- Source files and programs in COBOL, RPG III, PL/I, CL, and BASIC
- Document Interchange Architecture/Systems Network Architecture Distribution Services (SNADs) directories
- Message files
- Most user-defined CL commands
- Files
- Libraries
- User profiles and users' private authority to objects
- Many system values
- Device configuration objects
- Ideographic Character (IGC) tables

Note: Some of the above objects may require some change before they can be used.

The Migration Aid also moves the objects used by the System/38 CPF and licensed programs, such as:

- Business Graphics Utility (BGU)
- Remote Job Entry Facility (RJEF)
- PC Support/38
- Personal Services/38
- Interactive Data Utility (IDU) composed of Data File Utility (DFU) and Query
- Conversion Reformat Utility

The Migration Aid does not move the following objects:

- IBM-supplied licensed program libraries, except for QGPL
- Auxiliary storage pools (ASP)
- Most network attributes
- Job accounting journal
- SNADS configuration
- Certain system values
- Non-obseverable programs

The Migration Aid provides some sample source programs to help you move the following:

- Network attributes
- Job accounting journals
- Edit descriptions
- User-defined message queues
- Finance tables

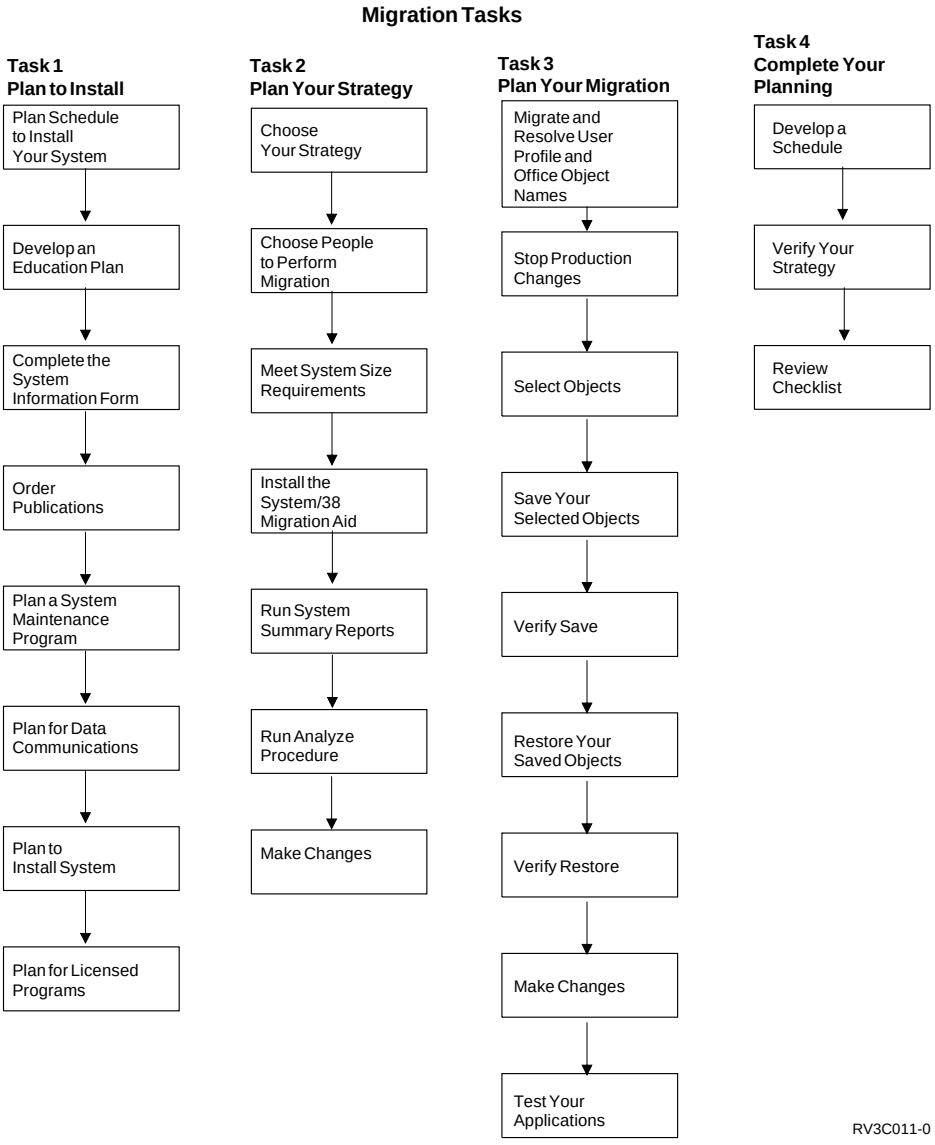
See Appendix A for a general list of differences between System/38 and the AS/400 system.

Chapter 2. The Migration Process

The migration planning process consists of four major tasks:

Task 1. Planning to Install Your AS/400 System
Task 2. Planning Your Strategy
Task 3. Planning Your Migration
Task 4. Completing Your Planning

Shown are the steps performed within each task. Steps can be repeated, if necessary.



Task 1. Planning to Install Your AS/400 System

The *Physical Planning Reference*, SA41-4109, book helps you plan for your new AS/400 hardware, licensed programs, and communications. The guide contains electrical and cabling requirements and physical planning considerations. You can also find specific information for new devices you might have ordered.

If you performed the planning tasks for your System/38, most of the information may be familiar to you. However, before you migrate or before you restore your data to the AS/400 system, you should perform the following AS/400 planning tasks from the *Physical Planning Reference* book:

1. Plan a schedule.
2. Develop an education plan.
3. Complete the System Information Form.

   Notes:

   a. You can get the information you need to fill in this form from your System/38 System Information Form or, if you have ordered new products, from the order forms or from your marketing representative.
   b. If you are using both System/38 and the AS/400 system, you need to complete a System Information Form for both systems. If you are operating several systems, a form for every system is needed.
4. Order publications.
5. Plan a system maintenance program.
6. Plan for support using data communications.
7. Plan to install your system.
8. Plan for licensed programs and applications.

Additional Hardware Considerations

There are physical differences between System/38 and the AS/400 system, such as plug type. In addition, the AS/400 system requires a tape unit and a CD-ROM device. The tape unit is used in place of (or in addition to) diskettes for saving and moving objects to other systems.

Your AS/400 system comes with a communications port for use with support using data communications. To use this port, you need to order a communications line, if you do not already have one, from your telecommunications supplier. You can also order the Migration Data Link. For details on how to configure communications on the AS/400 system, see the *System/38 to AS/400 Migration Aid User's Guide and Reference*, SC09-1165, and the *Physical Planning Reference*, SA41-4109.

Ensure you have ordered enough disk space on your AS/400 system to accommodate your licensed programs as well as your applications and data. See Task 2 (Step 3) for system requirements.

If at any time you plan to run your System/38 and the AS/400 system at the same time, such as when you test an application on both your System/38 and the AS/400 system simultaneously, you need to consider that you should have more physical space, power, and air conditioning.

Additional Licensed Program Considerations

You need to install licensed programs to process information on the AS/400 system. Listed below are the System/38 program products along with the AS/400 licensed programs which replaced them.

System/38 Program Products	Program Number	AS/400 Licensed Programs	Program Number
Control Program Facility (CPF)	5714-SS1	Operating System/400	5716-SS1
Distributed Data Management (DDM)	5714-DD1	Operating System/400	5716-SS1
RPG III	5714-RG1	ILE RPG/400	5716-RG1
COBOL	5714-CB1	ILE COBOL/400	5716-CB1
BASIC	5714-BA1	AS/400 BASIC	5799-FPW
Pascal	5799-CPK	N/A	
PL/I	5714-PLI	AS/400 PL/I	5799-FPJ
PC Support/38	5714-PC1	Client Access for OS/400 Family	5716-XA1
Business Graphics Utility	5714-GP1	AS/400 Business Graphics Utility	5716-DS1
Personal Services/38	5714-WP3	OfficeVision for OS/400	5716-WP1
Advanced Printer Function	5714-UT2	AS/400 Application Development ToolSet/400	5716-PW1
Character Generator Utility	5714-UT1	AS/400 Application Development ToolSet/400	5716-PW1
Interactive Data Utility (IDU)	5714-UT1	AS/400 Application Development ToolSet/400	5716-PW1
Screen Design Aid (SDA)	5714-UT1	AS/400 Application Development ToolSet/400	5716-PW1
Source Entry Utility (SEU)	5714-UT1	AS/400 Application Development ToolSet/400	5716-PW1
Data File Utility (DFU)	5714-UT1	AS/400 Application Development ToolSet/400	5716-PW1
Query	5714-UT1	Query for OS/400	5716-QU1
Cryptographic Facility	5714-CR1	Cryptographic Support for OS/400	5716-CR1

Task 2. Planning Your Strategy

This task is designed to help you determine a strategy for migrating and to plan for analyzing your system for objects that are not supported or supported differently.

Step 1. Choose Your Strategy

To make migration easier, you should choose a strategy. Your choice should be based primarily on the number of application programs on your System/38, and how many you will be migrating, discarding, replacing, or changing.

Two basic approaches can be followed when you perform migration. You can migrate everything at once or you can migrate in stages. If you know exactly what is on your system, you can make this decision now. If you do not know what is on your system, you might want to wait until you run the system summary and analysis reports using the Migration Aid before completing your plans. The system summary report lists all the libraries and system objects that are on your system, while the analysis reports identify objects and source statements not supported or supported differently on the AS/400 system. At the end of the planning tasks, you can verify your strategy.

Migrating Everything at Once

This means you can migrate everything on the System/38 in one migration step. If you use this method, your migration is essentially very easy. When you use this method, you need to consider the length of time your system would not be available. You need to consider time for both the save and restore of objects. Also consider that migrating in one step does not work well for large systems with many applications.

Note: Your system is not available for data processing during the entire migration process. If this is a problem for you, consider migrating in stages.

Migrating in Stages

To migrate in stages most efficiently, consider the type of information on your system. Some information usually stays the same, such as user profiles, system values, and programs and source members; this is the information you would migrate first. Other information often changes, such as physical and logical files. By migrating in stages, you have more control over when your system is not available. You are also able to choose the order you want applications to be working on the AS/400 system.

If you choose to migrate in stages, you do need to have both your System/38 and your AS/400 system operating at the same time, especially when using data communications or the 5259 Migration Data Link. You can migrate in just two stages, or in many stages. Whichever way you choose to migrate, the following shows the recommended order for migrating your objects:

1. User profiles

   Note: Before migrating, user profiles and objects should be collected on the System/38 and resolved on the AS/400 system.

2. System values
3. Configuration objects
4. User libraries
5. IGC tables
6. Personal Services/38 objects

In Two Stages: You can migrate all information that changes infrequently (for example, application programs) at the same time and then migrate all your changing information (for example, data files) at the same time.

You should use this method when you have applications that are dependent on one another, such as inventory applications that receive information from order entry, shipping and receiving, and production control.

In Many Stages: For a single application, you can migrate infrequently changed information and then the changing information. You can then verify that this application works before migrating another application. You can also migrate:

- Applications only
- User profiles and office users only
- Selected user profiles
- Selected Personal Services/38 users and applications
- Combinations of these

If you carefully plan your migration, you may be able to migrate when you have little production activity.

Step 2. Choose People to Perform Migration

To perform migration, you should be familiar with:

- Your application programs and user profiles.
- Operating your System/38.
- Any communications installed.
- Personal Services/38, if it is installed.
- PC Support/38, if it is installed.

Step 3. Ensure You Have Met All System Requirements

To migrate, you must have the following hardware and licensed programs installed on your System/38 and your AS/400 system.

System/38

Hardware

- Storage
  - 3.3 megabytes of storage for the System/38 Migration Aid
- Media (choose one of the following):
  - Tape unit
    - 3410/11 (1600 bits per inch (bpi))
    - 3430 (6250 bpi)
    - 3422 (6250 bpi)
  - 8-inch diskette magazine
  - 5259 Migration Data Link
  - Communications
- Printer, to print your system summary, analysis reports, and status reports

Licensed Programs

- CPF, Release 8, Modification Level 0
- System/38 Migration Aid

AS/400 System

Hardware

- Storage device
  - Enough storage to hold the operating system, licensed programs and all the System/38 objects you are migrating. (System/38 objects are about the same size on the AS/400 system.)
- Media (choose one of the following):
  - Tape unit
    - If you chose the 3410 or 3411 Tape Unit on System/38, use the 9347 Tape Unit on the AS/400 system.
    - If you chose the 3422 or 3430 on System/38, use the 2440, 3422, or 3430 Tape Unit on the AS/400 system.
  - Diskette
    - 9331 Diskette Unit Model 001
  - 5259 Migration Data Link
  - Communications
- Display station
  - At least one 24-line by 80-column display station
- Printer, to print status reports

Licensed Programs

- Operating System/400
- System/38 environment and the OS/400 Migration Aid
- AS/400 licensed programs such as:
  - OfficeVision for OS/400, if Personal Services/38 users are being migrated
  - BGU, if business graphics utilities objects are being migrated from your System/38
  - Client Access for OS/400 if you are migrating PC Support information

Before You Choose Your Media

You can choose diskette, tape, the 5259 Migration Data Link, or communications.

If you use diskettes, you need to handle each one individually for the AS/400 single diskette drive. You can use the diskette magazine to save on System/38, but you must restore the diskettes on the AS/400 system using the single diskette drive. Single diskettes can read/write at approximately 35 megabytes per hour including operational time.

Tapes are easier to handle because they hold approximately 40 megabytes of data on a 2400-foot reel.

Note: Number your tapes or diskettes to ensure you migrate in sequence.

If you use the 5259 Migration Data Link, the migration will be faster than when using diskettes or tape.

If you choose to use communications, the Migration Aid creates temporary save files that are accessed by communications programs you write yourself.

Step 4. Plan to Install the System/38 Migration Aid

To install the Migration Aid on the System/38, see the *System/38 to AS/400 Migration Aid User's Guide and Reference*, SC09-1165.

Step 5. Plan to Run the System Summary Report

First, create the System Summary Report to show objects on the system. This report gives you the summary of libraries, system values, user profiles, Personal Services/38 objects, configuration descriptions, and IGC tables.

Source files, objects in user libraries, documents, and data stored offline are not included in the system summary report.

Step 6. Plan to Use the Analysis Reports for Unsupported Function

The analysis reports help you identify objects not supported or supported differently on the AS/400 system. The following is a list of objects that are analyzed:

- CL source in specified libraries for unsupported CL statements, which consist of:
  - CL commands, keywords, and keyword values
  - References to unsupported message queues, system values, system logs, system-supplied user profiles, objects, and object types
- Configuration descriptions, which consist of:
  - Line descriptions (LINDs)
  - Control unit descriptions (CUDs)

  - Device descriptions (DEVDs)
- Specified libraries and device files for unsupported functions, which consist of:
  - Card files (*FILE CRD)
  - Communications (CMN) and mixed (MXD) files with SECURITY(2*PASSWORD) keywords
  - Display (DSP) or mixed (MXD) files that specify only display sizes of a 12- by 80-character screen (*DS2) or 16- by 64-character screen (*DS1)
  - Display files that specify unsupported display devices
  - Tape files that specify unsupported tape devices
  - Diskette files that specify unsupported diskette devices
  - Printer files that specify unsupported printer devices
- Program observability
  - Programs with deleted observability cannot be restored on the AS/400 system.

Detailed reports identify the objects that require changes before you migrate. Review these reports and remove or change unsupported statements.

The *System/38 to AS/400 Migration Aid User's Guide and Reference*, SC09-1165, tells you how to use the reports. The *System/38 Environment Programming*, SC41-3735, has conceptual and reference information. For other changes you need to make, see Appendix A. Depending on the nature of the changes required, you may decide later whether you want to make the changes on the System/38 or the AS/400 system.

Step 7. Plan to Make Changes

In general, objects can be saved on the System/38 and restored on the AS/400 system. They should perform the same way they did on the System/38. However, some exceptions are identified by the analysis reports. You may need to make some additional changes. Also, you need to recompile programs that are listed as not observable. See Appendix A for a list of general exceptions that may require you to make changes before migrating to the AS/400 system.

Task 3. Planning Your Migration

Depending on your strategy, you may be doing the following steps several times for different applications. The Migration Aid is flexible in allowing this, but the steps should be followed in this order regardless of which strategy you chose. See the *System/38 to AS/400 Migration Aid User's Guide and Reference*, SC09-1165, for information on how to use the Migration Aid.

Step 1. Plan to Resolve Names of User Profile and Office Object Names

You need to resolve user profiles and office object names if you are migrating more than one system to your AS/400 system, or if you are migrating office users. Complete this step before you move any user profiles or office objects.

Note: If you plan to migrate office users from System/38 to the AS/400 system, you should not enroll those users in AS/400 Office before migration. If you enroll those users, you will not be able replace or rename the user profiles that already exist on the AS/400 system.

Step 2. Plan to Stop Any Production Changes

At this time you need to stop changes to objects you are going to migrate, such as changing configurations, files, user profiles, and so on. Identify and correct any unsupported objects you want to change before you migrate.

Step 3. Plan to Select Your Objects

Use the select option to identify those objects that are ready to migrate to the AS/400 system. You can choose to select certain objects, or you can choose to migrate the entire system. You can start the selection process on the System/38 well before the actual migration. In fact, selection can begin before the AS/400 hardware has been installed.

Users can select their own objects for migration, or one person can perform the selection for all users.

You can make selections during more than one session. For example, you might select some of your libraries now, and finish selecting your libraries at a later time.

Step 4. Plan to Save Your Selected Objects from System/38

Save the objects you selected to a storage medium, such as tape or diskette, or to save files (accessed by a user-written communications program) so the objects can be migrated to your AS/400 system. You can save your selections to media at any time after selection is complete.

Step 5. Plan to Verify Your Save Operation Was Successful

The Migration Aid produces an exception report automatically at the end of every save operation. Use this report to verify that the objects you selected have been saved successfully. If no exceptions occur, a message stating that all objects were successfully migrated from the System/38 is shown on the report. If exceptions do occur, make the necessary changes at this time. The objects can be reselected and saved again.

At this time you can produce a status report to get the status of your migration. Several reports are available to provide information on the objects.

Step 6. Plan to Restore Your Saved Objects on the AS/400 System

Refer to the *System/38 to AS/400 Migration Aid User's Guide and Reference*, SC09-1165, for specific information on how to restore your objects.

Step 7. Plan to Verify Your Restore Operation Was Successful

Again, the Migration Aid produces an exception report automatically at the end of every migration run. As you did with the save function, use it to verify that the objects that you saved have been restored to your AS/400 system successfully.

At this time you can produce a report to get the status of your migration.

Step 8. Plan to Make Changes

Objects requiring changes that were not changed on your System/38 need to be changed on your AS/400 system before they can be used. Appendix A lists some of the differences between the AS/400 system and System/38.

Step 9. Plan to Test Your Applications

Before you place your AS/400 applications into production, ensure that the programs work as expected.

Task 4. Completing Your Migration

The following steps should be completed when you have finished Tasks 1 through 3.

Step 1. Develop a Schedule for Migration

Now that you have reviewed the migration process, you can schedule your migration and the installing of the AS/400 system. You need to allow enough time for:

- Installing the AS/400 hardware and licensed programs. See Task 1 (Step 1) on scheduling.
- Preparing for education.
- Running reports.
- Making changes identified by reports and those not identified by reports.
- Preparing media.
- Saving and restoring objects.
- Testing migrated applications.

Step 2. Verify Your Strategy

After you have gathered all your reports and other information, check to see that you are able to use the strategy you chose in Task 2 (Step 1). Consider:

- The size of your system.
  - Storage capacity
  - Number of applications
  - Number of products
- The time you have available for migration. Can production be stopped and, if so, for how long?
- Whether you need to make changes before and after the Migration Aid moves your objects.
- Whether you have enough physical space to have both systems running at the same time.
- Whether you want to do a sample test. A sample test is best done by migrating one or two libraries so that you can see how long migration takes and how it works. While you do this, you can continue to work on System/38.
- Ensure you have enough DASD.

Step 3. Review the Checklist

You can use the following checklist to plan.

Migration Planning Checklist

This planning checklist provides a convenient way for you to review the tasks you need to complete as you do the migration process.

Check off tasks as you complete them.

Task 1. Planning to Install Your New AS/400 System. This includes:

___ Planning a schedule.

___ Developing an education plan.

___ Completing the System Information Form.

___ Ordering publications.

___ Planning a system maintenance program.

___ Planning for support using data communications.

___ Planning to install your system.

___ Planning for licensed programs and applications.

Task 2. Planning Your Strategy.

___ Choosing your strategy.

___ Choosing people to perform migration.

___ Ensuring you have met all system requirements.

___ Planning to install the System/38 Migration Aid

___ Planning to run the System Summary Report.

___ Planning to use the analysis reports for unsupported functions.

___ Planning to make changes.

Task 3. Planning Your Migration

___ Planning to resolve user profile and office object names.

___ Planning to stop any production changes.

___ Planning to select your objects.

___ Planning to save your selected objects from System/38.

___ Planning to verify your save operation was successful.

___ Planning to restore your saved objects on the AS/400 system.

___ Planning to verify your restore operation was successful.

___ Planning to make changes.

___ Planning to test your applications.

Task 4. Completing Your Migration

___ Developing a schedule.

___ Verifying your strategy.

___ Review this migration checklist again.

Appendix A. Major Differences between System/38 and the AS/400 System

Most objects can be saved on the System/38 and restored on the AS/400 system. They should perform the same way as they did on System/38. However, there are exceptions. The *System/38 Environment Programming*, SC41-3735, shows you the detailed exceptions. Some general exceptions are:

Program Objects

- System/38 program objects are transformed when they are restored. Though this is an automatic function, it requires a longer restore time. For the transformation to occur, the System/38 program object must have a program template when it is restored to the AS/400 system. If you have removed the program template, the program cannot be restored on the AS/400 system, and you need the source code to create the program again.
- These CL commands and other objects are not supported or are supported differently on the AS/400 system. If a CL program contains these commands, the restore of the program object (*PGM) can fail. The source code for the CL program needs to be changed and the program needs to be compiled again. The Migration Aid analysis function identifies where you have used these commands in your CL programs.

CL Commands Not Supported

ADDDEVMODE	Add Device Mode Entry
APYPGMCHG	Apply Programming Change
BGNIWSSRV	Begin Intelligent Work Station Services
CHGCNPA	Change CSNAP Attributes
CHGCRDF	Change Card File
CHGCUD	Change Control Unit Description
CHGDEVD	Change Device Description
CHGDEVMODE	Change Device Mode Entry
CHGDOCOWN	Change Document Owner
CHGLIND	Change Line Description
CHGSTGCFG	Change Storage Configuration
CLCSTGCFG	Calculate Storage Configuration
CLNPRT	Clean Printer
CPYFRMVDSK	Copy From Virtual Disk
CPYTOVDSK	Copy To Virtual Disk
CRTCRDF	Create Card File
CRTCUD	Create Control Unit Description
CRTDEVD	Create Device Description
CRTLIND	Create Line Description
CRTPRTIMG	Create Print Image
CRTRJECFG	Create RJE Configuration
CRTVDSK	Create Virtual Disk
CVTTOVDSK	Convert to Virtual Disk
DLTDOC	Delete Document
DLTPRTIMG	Delete Print Image
DSPCHLSTS	Display Channel Status
DSPCNPA	Display CSNAP Attributes
DSPCRPHLP	Display Cryptographic Help

DSPDEVCFG	Display Device Configuration
DSPDIR	Display Directory
DSPDOCAUT	Display Document Authority
DSPFNCHLP	Display Finance Help
DSPLNKSTS	Display Link Status
DSPMNU	Display Menu
DSPPGMCHG	Display Programming Change
DSPSTGCFG	Display Storage Configuration
DSPUSRPWD	Display User Password
EDTDOC	Edit Document
EDTTXT	Edit Text
ENTADM	Enter Administrative Management
GRTDOCAUT	Grant Document Authority
LODPGMCHG	Load Programming Change
LSTCNPDTA	List CSNAP Data
LSTCNPHST	List CSNAP History
MNGDIR	Manage Directory
MNGDSTL	Manage Distribution List
OVRCRDF	Override with Card File
PCHPGM	Patch Program
PRPAPAR	Prepare APAR
PRTDOC	Print Document
PWRCTLU	Power Control Unit
PWRDEV	Power Device
RSTPGMPRD	Restore Program Product
RMVDEVMODE	Remove Device Mode Entry
RMVPGMCHG	Remove Programming Change
RSTDOC	Restore Document
RVKDOCAUT	Revoke Document Authority
SAVDOC	Save Document
SBMCRDJOB	Submit Card Jobs
STRCNFCHK	Start Confidence Check
STRCRDRDR	Start Card Reader
STRCRDWTR	Start Card Writer
STRPDP	Start Problem Determination Procedure

CL Commands with New Parameters

CRTSPADCT	Create Spelling Aid Dictionary

CL Keywords Not Supported

ALRCTLU	Alert Control Unit
BASDCT	BASIC Dictionary
PRTIMG	Print Image

LOC Keyword Parameters Not Supported or Supported Differently

*M1
*M2
*M12
*S2
*S3
*S12
*S23
*S123

Message Queues Not Supported

QCHG	System Change Log

System Values Not Supported

QAUTOIMPL	Auto-IMPL Indicator
QAUXSTGTH	Auxiliary Storage Threshold
QBADPGFRM	Bad Page Frame Maximum
QCHGLOGSIZ	Program Change Log Size
QCSNAP	Communications Line Statistics
QSCPFSIGN	Allowable Sign-on Attempts
QSIGNLVL	Sign-on Level
QSRVLOGSIZ	Service Log Size
QSRVONLY	Service log Only
QSYSOPRDEV	Systems Operators Default Device

Changed or New System Values

QALWOBJRST	Allow Object Restore
QALWUSRDMN	Allow User Domain
QASTLVL	Assistance Level
QATNPGM	Attention Program
QAUDCTL	Auditing Control
QAUDENDACN	Auditing End Action
QAUDFRCLVL	Auditing Force Level
QAUTOSPRPT	Automatic Force Level
QAUTORMT	Automatic Remote Controller
QBASPOOL	Base Pool
QBOOKPATH	Book Path Search
QCCSID	Coded Character Set Identifier
QCNTRYID	Country Identifier
QCRTAUT	Create Authority
QCRTOBJAUD	Create Object Audit
QCTLSBSD	Control Subsystem Description
QDYNPTYSCD	Dynamic Priority Scheduler
QFRCCVNRST	Force Conversion on Restore
QIGCCDEFNT	Double-Byte Code Font Name
QJOBMSGQFL	Job Message Queue Full
QJOBMSGQMX	Job Message Queue Maximum
QKBDBUF	Keyboard Buffer
QLANGID	Language Identifier
QLOCALE	Locale Path Name
QMAXSIGN	Maximum Sign-on
QMCHPOOL	Machine Pool
QPRBFTR	Problem Filter
QPRTKEYFMT	Print Key Format
QRMTSRVATR	Remote Service Attribute
QSETJOBATR	Set Job Attribute
QSFWERRLOG	Software Error Log
QSRTSEQ	Sort Sequence
QSRVAUTITV	Server Authentication Interval
QSYSLIBL	System Library List
QTIMSEP	Time Separator
QUPSDLYTIM	Uninterruptible Power Supply Delay Time
QUTCOFFSET	Coordinated Universal Time Offset

System Logs Not Supported

QCHG	System Change Log
QSRV	Service Log

System-Supplied User Profiles Not Supported

QCE	Customer Engineer
QPSR	Program Support Representative

Object Types Not Supported

PRTIMG	Print Image

Objects Not Supplied

QDKT	Diskette

IBM Programs Not Supported

QCALLMENU	Call Menu
QOPRMENU	Operator Menu

Files

Most files are migrated to the AS/400 system.

The following files are not supported on the AS/400 system and require changes to be made to your applications before you restore them.

- Device files
  - Only objects saved on Release 5, Modification Level 0, or later releases, can be restored.
  - If a device file refers to a device that is not supported on the AS/400 system, then that device file is not supported on the AS/400 system. See “Devices” on page A-5 for a list of devices not supported on the AS/400 system.
- Display files (*FILE DSP) and mixed files (FILE MXD)
  - Display files and mixed files are not supported when the DSPSIZ keyword value of *DS1 (16 by 64-character display station) or *DS2 (12 by 80-character display station) is the only entry because the CE console and the 12 by 80-character models of the 5250 display stations are not supported.
  - Display and mixed files that specify the console display as one of the devices are not supported because the console display is not supported on the AS/400 system.
- Communications files (*FILE CMN) and mixed files (*FILE MXD)
  - Communications files and mixed files using the keyword value of SECURITY(2 *PASSWORD) are not supported on the AS/400 system.

Security

- The AS/400 system does not support single-level sign-on, such as with a password only. You need to enter both a user ID and a password to sign on.

Devices

These devices are not supported:

- 5424 multifunction card unit.
- 370 Channel PRPQ.
- System/38 CE console.
- Diskette magazine, (though a single-slot diskette unit is supported).
- 5251 Model 1 Display Station.
- 5251 Model 2 Display Station.
- 5252 Dual Display Station (960-character display).
- 3410 Tape Unit (though the 2440 or 9347 Tape Unit is supported to read 1600 bpi tapes).
- 3411 Tape Unit (though the 2440 or 9347 Tape Unit is supported to read 1600 bpi tapes).
- 5211 Printer (channel-attached system printer).
- 3262 Printer (channel-attached system printer).
- 3203 Printer (channel-attached system printer). RPQ S01570 converts a 4245 Model 012 to a 4245 Model T12, which is supported on the AS/400 system.
- 4245 Model 012 Printer (channel-attached system printer). RPQ S01571 converts a 4245 Model 020 to a 4245 Model T20, which is supported on the AS/400 system.
- 4245 Model 020 Printer (channel-attached system printer).
- 5224 Model 11 Printer (Japan only).
- 5225 Model 11 Printer (Japan only).
- 5225 Model 12 Printer (Japan only).
- Basic uninterruptible power supply is not supported, though uninterruptible power supply is still supported.

Objects

Objects not migrated by the Migration Aid that you need to change yourself are:

- User auxiliary storage pools (ASP)

  You need to use dedicated service tools support to redefine ASPs because the support on the AS/400 system has changed for these features.

- IBM-supplied libraries with names starting with Q

  The Migration Aid does not migrate IBM-supplied libraries with names beginning with Q. In this case, a user library needs to be renamed or the objects moved to a library with a name that does not start with Q.

Glossary

This glossary includes terms and definitions from:

- The *American National Dictionary for Information Systems*, ANSI X3.172-1990, copyright 1990 by the American National Standards Institute (ANSI). Copies may be purchased from the American National Standards Institute, 1430 Broadway, New York, New York 10018. Definitions are identified by the symbol (A) after the definition.
- The *Information Technology Vocabulary*, developed by Subcommittee 1, Joint Technical Committee 1, of the International Organization for Standardization and the International Electrotechnical Committee (ISO/IEC JTC1/SC1). Definitions of published parts of this vocabulary are identified by the symbol (I) after the definition; definitions taken from draft international standards, committee drafts, and working papers being developed by ISO/IEC JTC1/SC1 are identified by the symbol (T) after the definition, indicating that final agreement has not yet been reached among the participating National Bodies of SC1.

adapter. (1) A part that electrically or physically connects a device to a computer or to another device. (2) A device for attaching parts, for example, parts having different diameters or voltages.

address. (1) The location in the storage of a computer where particular data is stored. Also, the numbers that identify such a location. (2) In data communications, the unique code assigned to each device or system connected in a network. (3) In the Distributed Computing Environment (DCE), an unambiguous name, label, or number that identifies the location of a particular entity or service. See *presentation address*. (4) The second part of a two-part user identification used to send distributions. See also *user ID/address*.

Advanced Function Printing (AFP). Pertaining to the ability of programs to use the all-points-addressable concept to print text and images on a printer.

Advanced Peer-to-Peer Networking (APPN). Pertaining to data communications support that routes data in a network between two or more APPC systems that do not need to be directly connected.

advanced printer function (APF). A function of the Application Development ToolSet/400 licensed program that allows a user to design symbols, logos, special characters, large characters, and forms tailored to a business or data processing application. The function supports printing of any design on the 5224 or 5225 dot matrix printer.

advanced program-to-program communications (APPC). Data communications support that allows programs on an AS/400 system to communicate with programs on other systems having compatible communications support. APPC on the AS/400 system provides an application programming interface to the SNA LU type 6.2 and node type 2.1 architectures.

AFP. See *Advanced Function Printing (AFP)*.

APPC. See *advanced program-to-program communications (APPC)*.

application. (1) A collection of software components used to perform specific types of user-oriented work on a computer. (2) A particular business task, such as inventory control or accounts receivable. (3) In CSP/AE, the collection of CSP/AE objects that together can be run on an AS/400 system. An application consists of a program object, up to five map group objects (depending on how many different devices are supported), and any number of table objects. (4) In DB2 for OS/400 SQL, a program or set of programs that perform a task; for example, a payroll application.

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

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

archive. In Backup Recovery and Media Services for OS/400, a service that copies inactive files from disk to removable media for longer term storage and removes the files from disk to free disk storage space. The user can select specific objects or groups of objects to include or exclude from the archive process.

| **AS/400 Business Graphics Utility (BGU)**. The IBM licensed program that can be used to design, plot, display, and print business charts.

ASP. See *auxiliary storage pool (ASP)*.

assembler language. A source language that includes symbolic machine language statements in which there is a one-to-one correspondence with the instruction formats and data formats of the computer.

authorization ID. In DB2 for OS/400 SQL, a user profile. A name identifying a user to whom privileges can be granted.

auxiliary storage pool (ASP). One or more storage units defined from the disk units or disk unit subsystems that make up auxiliary storage. ASPs provide a means

of placing certain objects on specific disk units to prevent the loss of data due to disk media failures on other disk units. See also *unit*, *system ASP*, *user ASP*, *library user ASP*, and *nonlibrary user ASP*.

BASIC (beginner's all-purpose symbolic instruction code). A programming language with a small list of commands and a simple syntax, primarily designed for numeric applications.

BGU. See *AS/400 Business Graphics Utility (BGU)*.

binary synchronous communications (BSC). A data communications line protocol that uses a standard set of transmission control characters and control character sequences to send binary-coded data over a communications line.

bpi. Bits per inch.

BSC. See *binary synchronous communications (BSC)*.

cable-through. A function or feature of a display station that allows multiple work stations to be attached to one cable path.

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

CGU. See *character generator utility (CGU)*.

character. Any symbol that can be entered on a keyboard, printed, or displayed. For example, letters, numbers, and punctuation marks are all characters.

character generator utility (CGU). A function of the Application Development ToolSet/400 licensed program that is used to define and maintain user-defined double-byte characters and related sort information.

chart. In AS/400 Business Graphics Utility, displayed, printed, or plotted output that compares one or more sets of variable data in chart form. The types of charts are bar, line, pie, surface, histogram, Venn diagram, and text.

CL. See *control language (CL)*.

COBOL (common business oriented language). A high-level programming language, based on English, that is used primarily for commercial data processing.

column function. In SQL, a process that calculates a value from a set of values and expresses it as a function name followed by an argument enclosed in parentheses.

command. A statement used to request a function of the system. A command consists of the command name abbreviation, which identifies the requested function, and its parameters.

command file. (1) In Client Access for OS/400, the file that is used to establish the Client Access for OS/400 environment and to start its functions. (2) In the OS/2 program, a PC file with a file name extension of .CMD that functions like a batch file in DOS. (3) In RJE, a remote job input stream that can contain host system commands and job control language (JCL), data, and RJE control statements (READFILE or EOF). Contrast with *data file*.

common user identification (common user ID). In Client Access for OS/400, the user identification of a Client Access for OS/400 user that is used by the router when establishing a communications connection with a host system if a user ID is not specified in either the CONFIG.PCS file or in an alternative configuration file. The router uses this common user ID when connecting the personal computer to each additional host system. See also *user identification (user ID)*.

communications configuration. The physical placement of communications controllers, the attachment of communications lines, and so forth; and the configuration descriptions that describe the physical configuration to the system and describe how the configuration will be used by the system. See also *line configuration*, *controller configuration*, and *device configuration*.

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

compilation. Translation of a source program (such as RPG/400 or COBOL specifications) into a program in machine language. In Integrated Language Environment (ILE) languages, compilation translates source statements into modules, which then can be bound into programs or service programs.

compile. (1) To translate a compilation unit written in a high-level programming language into an object containing machine-language instructions. In the original program model (OPM), the object type is *PGM. In the Integrated Language Environment (ILE) model, the object type is *MODULE. (2) In Integrated Language Environment (ILE) languages, to translate source statements into modules that then can be bound into programs or service programs.

compiled program. In the original program model (OPM), 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 machine-language program. The system-recognized identifier for the object type is *PGM.

compiler. (1) A program that translates programming language into machine language for use by the computer. In the original program model (OPM), output from the compiler is identified to the system as *PGM. In the Integrated Language Environment (ILE), the output from the compiler is identified to the system as *MODULE. (2) In Integrated Language Environment (ILE) languages, a program that translates source statements into modules that then can be bound into programs or service programs.

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 list of the high-level language source, a cross-reference list, diagnostic information; and for programs, the description of the externally described files. See also *source listing*.

compress. To replace repetitive characters in a file or folder with control characters so that the file or folder takes up less space.

configuration. (1) The physical and logical arrangement of devices and programs that make up a data processing system. See also *communications configuration*, *line configuration*, *controller configuration*, and *device configuration*. (2) The manner in which the hardware and software of an information processing system are organized and interconnected (T).

configure. (1) To describe the interconnected arrangement of the devices, programs, communications, and optional features installed on a system. (2) To describe setting up auxiliary storage pools.

console. (1) A display station from which an operator can control and observe the system operation. For example, an operator can install the operating system, do an attended IPL, or sign on the system after using the End System (ENDSYS) command. (2) In COBOL, a function name associated with the operator's display station.

control language (CL). The set of all commands with which a user requests system functions.

| **control statement**. (1) In programming languages, a
| statement that is used to interrupt the continuous
| sequential processing of programming statements; for
| example, a conditional statement such as IF, PAUSE,
| or STOP. (2) In RPG, an entry on a control specifica-
| tion.

| **Control Program Facility (CPF)**. The system support
| licensed program for System/38. It provides many func-
| tions that are fully integrated in the system, such as
| work management, database data management, job
| control, message handling, security, programming aids,
| and service.

controller configuration. The process of creating configuration descriptions for the local (device configuration) and remote (communications configuration) controllers that make up a data processing system. See also *line configuration* and *device configuration*.

conversation. (1) In APPC, the communications between the application program and another application program at the remote system. See also *protected conversation*, *session*, *transaction*, and *unprotected conversation*. (2) In dynamic data exchange (DDE), a connection between a DDE client and a DDE server.

conversion table. An object that contains a set of hexadecimal characters used to convert one or more characters of data. The table can be used for the conversion of data being moved between the system and a device. For example, data stored in one coded character set may need to be displayed or entered on display devices that support a different coded character set. The table can also be used to specify an alternative collating sequence or field conversion functions. The system-recognized identifier for the object type is *TBL. See also *table*.

CPF. See *Control Program Facility*.

cryptography. (1) A method of protecting data. Cryptographic services include data encryption and message authentication. (2) In Cryptographic Support for OS/400, the transformation of data to conceal its meaning; secret code.

database. A collection of data with a given structure for accepting, storing, and providing, on demand, data for multiple users.

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

data communications. The sending and receiving of data between computers, remote devices, or both according to selected protocols.

data description specifications (DDS). A description of the user's database or device files that is entered into the system in a fixed form. The description is then used to create files.

data dictionary. In IDDU, an object for storing field, record format, and file definitions. The system-recognized identifier for the object type is *DTADCT.

| **data file**. (1) A group of related data records organ-
| ized in a specific order. A data file can be created by
| the specification of FILETYPE(*DATA) on the create
| commands. Contrast with *source file*. (2) In RJE, a

| remote job input stream that can contain host system commands and job control language as well as data. Contrast with *command file*.

data file utility (DFU). The part of the Application Development ToolSet/400 licensed program that is used to enter, maintain, and display records in a database file.

data link. The physical connection (communications lines, modems, controller, work stations, other communications equipment), and the rules (protocols) for sending and receiving data between two or more locations in a data network.

data link protocol. The rules that govern control of the physical connection for sending and receiving data between two or more locations in a network. Examples of data link protocols include (a) asynchronous, (b) binary synchronous communications (BSC), (c) Ethernet, (d) synchronous data link control (SDLC), (e) token-ring network, and (f) X.25. Contrast with *communications line*.

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

data terminal equipment (DTE). (1) That part of a data link that sends data, receives data, and provides the data communications control function according to protocols. (2) In OSI, a physical node on a network.

DBCS. See *double-byte character set (DBCS)*.

DDM. See *distributed data management (DDM)*.

DDS. See *data description specifications (DDS)*.

dedicated service tools (DST). The part of the service function used to service the system when the operating system is not running.

default. (1) A value that is automatically supplied or assumed by the system or program when no value is specified by the user. (2) In DDS, the value specified by the user with the DFT or DFTVAL keyword in DDS. (3) In DB2 for OS/400, a predetermined value, attribute, or option that is supplied by the system when no value is specified by the user. For example, the default of a column is blanks if the data type is character, or zeros if the data type is numeric.

| **device**. (1) A piece of equipment that is used with the computer. A device does not generally interact directly with the system, but is controlled by a controller. Each device has a device description associated with it, and often also has a job associated with it. Devices can be workstations, printers, diskette units, tape units, or remote systems. (2) In Backup Recovery and Media Services for OS/400, an IBM tape reel or cartridge unit, or any other unit containing removable media, which is available to the AS/400 system for use in BRMS for OS/400 processing.

device configuration. The physical placement of display stations, printers, and so forth; and the configuration descriptions that describe the physical configuration to the system and describe how the configuration will be used by the system. See also *line configuration* and *controller configuration*.

device description. An object that contains information describing a particular device or logical unit (LU) that is attached to the system. A device description is a description of the logical connection between two LUs (local and remote locations). The system-recognized identifier for the object type is *DEVD.

device emulation. The programming that allows one device to appear to the user or to a system as another device. See also *5250 emulation* and *3270 device emulation*.

DFU. See *data file utility (DFU)*.

DIA. See *Document Interchange Architecture (DIA)*.

disk. A direct-access storage medium with magnetically recorded data.

diskette. A thin, flexible magnetic disk permanently stored in a semirigid protective jacket.

diskette drive. The device used to read or write data on a diskette as the diskette rotates within its protective jacket.

diskette file. A device file created by the user for a diskette unit.

display screen. The part of the display device, which is similar to a television (TV) picture tube, used to display information entered or received at a display station.

display station. A device that includes a keyboard from which an operator can send information to the system and a display screen on which an operator can see the information sent to or the information received from the system.

distributed data management (DDM). A function of the operating system that allows an application program or user on one system to use database files stored on remote systems. The systems must be connected by a communications network, and the remote systems must also be using DDM.

distributed host command facility (DHCF). A function of the operating system that supports the data link

between a System/370 terminal using an AS/400 application in an HCF (Host Command Facility) environment.

Document Interchange Architecture (DIA). The rules and structure for the exchange of information between office applications. Document Interchange Architecture includes document library services and document distribution services.

document library. The entire collection of documents and folders on a system.

document library object (DLO). Any system object that resides in the document library, such as RFT and FFT documents, folders, and PC files.

double-byte character set (DBCS). A set of characters in which each character is represented by 2 bytes. Languages such as Japanese, Chinese, and Korean, which contain more symbols than can be represented by 256 code points, require double-byte character sets. Because each character requires 2 bytes, the typing, displaying, and printing of DBCS characters requires hardware and programs that support DBCS. Four double-byte character sets are supported by the system: Japanese, Korean, Simplified Chinese, and Traditional Chinese. Contrast with *single-byte character set (SBCS)*.

DST. See *dedicated service tools (DST)*.

emulation. Imitation of one system or device by another.

exception. In VRPG Client, an event or situation that prevents, or could prevent, an action requested by a user from being completed in a manner that user would expect. Exceptions occur when a product is unable to interpret a user's input.

file. A generic term for the object type that refers to a database file, a device file, or a save file. The system-recognized identifier for the object type is *FILE.

flag. (1) The bit sequence 01111110 used to mark a frame in SDLC. (2) Information about the extended attribute that is stored with the extended attribute.

folder. (1) A directory for documents. A folder is used to group related documents and to find documents by name. The system-recognized identifier for the object type is *FLR. See also *document library object*. Compare with *library*. (2) A list used to organize objects.

format. (1) A defined arrangement of such things as characters, fields, and lines, usually used for displays, printouts, files, or documents. (2) The arrangement or layout of fields in a record. (3) The arrangement or layout of data on a storage medium, such as disk, tape, or diskette. (4) To set the block size for the 9332 Disk Unit, either automatically by the system or specifically by the user. (5) To arrange information on a page, in a file, or on a display screen. (6) To prepare a diskette so that it can be used by a computer.

FORTRAN (formula translation). A programming language primarily used to write computer programs for arithmetic functions.

function. (1) Any instruction or set of related instructions that perform a specific operation. (2) In the C language, a named group of statements that can be called and evaluated, and can return a value to the calling statement. (3) In REXX, a series of instructions that a REXX procedure calls to perform a specific task and to return a value. The three types of routines that can be called as functions are internal, built-in, and external. (4) In SQL, an operation that supplies a single value from another value or from a set of values. A function obtains a single value by applying the function name (for example, AVG) to the result of the expression (for example, column-name). See also *column function* and *scalar function*. (5) In capacity planning, a set of transactions performed by a user to accomplish a task such as calendar update, send main, and so on. A function may be comprised of interactive and non-interactive transactions.

GDDM. See *graphical data display manager (GDDM)*.

graphical data display manager (GDDM). A function of the operating system that processes both text and graphics for output on a display, printer, or plotter. Contrast with *presentation graphics routines (PGR)*.

group identification number (gid). A four-byte, unsigned integer (gid) used to identify a group profile. Contrast with *user identification number (uid)*.

half-session. In SNA, one of the locations in a logical connection in a network. See also *session*.

hardware. Physical equipment, rather than programs, procedures, rules, and associated information.

HCF. See *Host Command Facility (HCF)*.

Host Command Facility (HCF). A feature available on a System/370, 43xx, or 30xx host system that enables a user on the host system to use applications on an AS/400 system or other systems as if they were using remotely attached 5250-type display stations. See also *distributed host command facility (DHCF)*.

IBM AS/400 BASIC. An IBM PRPQ that compiles or interprets BASIC programs on the AS/400 system.

IBM AS/400 System/38 Migration Aid. The IBM licensed program that helps organize and automate the migration of System/38 objects to the AS/400 system.

IBM Business Graphics Utility (BGU). The IBM licensed program that can be used to design, plot, display, and print business charts.

IBM Query/400. The IBM licensed program used to select, format, and analyze information from data files to produce reports and other files.

IDDU. See *interactive data definition utility (IDDU)*.

input file. (1) In COBOL, a file from which data is read while the program is running. (2) In RPG, a database or device file that has been opened to allow records to be read. Contrast with *output file*.

Integrated Language Environment RPG/400 (ILE RPG/400). An IBM licensed program that includes a set of RPG compilers to be used for commercial and business applications on the AS/400 system. The compilers include: System/36E RPG (RPG II), System/38 RPG (RPG III), RPG/400 (RPG III), and ILE RPG/400 (RPG IV).

interactive data definition utility (IDDU). A function of the operating system that can be used to externally define the characteristics of data and the contents of files.

interface. (1) A shared boundary between two functional units. (2) In DCE Remote Procedure Call (RPC), a shared boundary between two or more functional units, defined by functional characteristics, signal characteristics, or other characteristics, as appropriate. The concept includes the specification of the connection of two devices having different functions. See *RPC interface*. (3) In TCP/IP, a direct connection to a network.

interface definition. In DCE Remote Procedure Call (RPC), a description of an RPC interface written in the DCE Interface Definition Language (IDL). See *RPC interface*.

interface identifier. In DCE Remote Procedure Call, a string containing the interface Universal Unique Identifier (UUID) and major and minor version numbers of a given RPC interface. See *RPC interface*.

job accounting. A system function that collects information about a job's use of system resources and records that information in a journal.

job queue. An object that contains a list of batch jobs waiting to be processed by the system. The system-recognized identifier for the object type is *JOBQ.

journal. A system object that identifies the objects being journaled, the current journal receiver, and all the journal receivers on the system for the journal. The system-recognized identifier for the object type is *JRN. See also *journal receiver*.

journal receiver. A system object that contains journal entries added when events occur that are journaled, such as changes to a database file, changes to other journaled objects, or security-relevant events. The object type is *JRNRCV. See also *journal*.

keyword. A mnemonic (abbreviation) that identifies a parameter in a command.

keyword functions. The result of processing DDS keywords in a record format specified on an operation. See also *operation*.

library. (1) A system object that serves as a directory to other objects. A library groups related objects, and allows the user to find objects by name. The system-recognized identifier for the object type is *LIB. Compare with *folder* and *document library*. (2) The set of publications for a system. (3) A repository for demountable recorded media, such as magnetic disks and magnetic tapes.

library user ASP. An auxiliary storage pool that contains libraries and folders. Contrast with *nonlibrary user ASP*.

Licensed Internal Code fix. A temporary solution to, or bypass of, a defect in a current release of the Licensed Internal Code. Contrast with *program temporary fix (PTF)*.

licensed program (LP). A separately orderable program, supplied by IBM, that performs functions related to processing user data. Examples of licensed programs are Client Access for OS/400, COBOL for OS/400, Application Development ToolSet/400, OfficeVision/400, and so on.

line configuration. The process of creating configuration descriptions for the lines that make up a data processing system. See also *controller configuration* and *device configuration*.

line description. An object that contains information describing a particular communications line that is attached to the system. The system-recognized identifier for the object type is *LIND.

load. (1) To move data or programs into storage. (2) In SystemView System Manager for OS/400, the smallest logical collection of objects that can make an application option. Code and language are the two types of loads.

local. (1) Pertaining to a device or system that is connected directly to your system or a file that is read directly from your system, without the use of a communications line. Contrast with *remote*. (2) In OSI, pertaining to the node from which one views the rest of the network.

local area network (LAN). The physical connection that allows the transfer of information among devices located on the same premises. Contrast with *wide area network (WAN)*.

local work station. A work station that is connected directly to the system without a need for data transmission functions. Contrast with *remote work station*.

LP. See *licensed program (LP)*.

machine interface (MI). The interface, or boundary, between the operating system and the Licensed Internal Code.

mail log. In the OfficeVision/400 program, a record of all the electronic and printed mail that an office user has sent or received.

medium. The disk, tape, or diskette used to store information in a save or restore operation.

megabyte. A unit of measure for storage capacity. For main storage, 1 megabyte equals 1 048 576 bytes (1024 x 1024); for auxiliary storage (disk, diskette, and tape), 1 megabyte equals 1 000 000 bytes (1000 x 1000).

member. Different sets of data, each with the same format, within one database file. See also *source member*.

menu. A displayed list of items from which a user can make a selection. The system-recognized identifier for the object type is *MENU.

| **message**. (1) A communication sent from a person or
| program to another person or program. (2) In OSI
| Message Services for OS/400, a piece of electronic mail
| in the format of the X.400 CCITT standard. An X.400
| message can be an AS/400 document, note, message,
| or file. (3) In OfficeVision/400, a short communication
| of no more than 202 characters in length sent from one
| user to one or more other users. A message is place in
| the mail log of the recipient, even if the recipient is not
| signed on. (4) In MQSeries for OS/400 message
| queuing applications, a communication sent from a
| program to another program. (5) In Smalltalk, the
| mechanism by which one object requests the services
| of another object. The message identifies the method
| that the object will use to perform the request. (6) In
| system programming, information intended for the
| system operator.

| **message queue**. (1) A list on which messages are
| placed when they are sent to a user ID or device
| description. The system-recognized identifier for the
| object type is *MSGQ. (2) In interprocess communica-
| tions, a mechanism that allows a process to communi-
| cate with other processes by sending messages to a
| process, receiving messages from a process, or per-
| forming control operations on a process.

MI. See *machine interface (MI)*.

migrate. (1) To move to a changed operating environment, usually to a new release or version of a system. (2) To move data from one hierarchy of storage to another.

modem (modulator/demodulator). A device that converts data from the computer to a signal that can be sent over a communications line (modulator), and converts the communications signal received to data for the computer (demodulator). See also *data circuit-terminating equipment (DCE)*.

network. A collection of data processing products connected by communications lines for exchanging information between stations.

network address. In OSI, an address that identifies a particular node. A network address can consist of (a) a network entity title only, (b) an NSAP address only, or, (c) both a network entity title and an NSAP address. See also *network entity title* and *NSAP address*.

network attribute. Control information about the communications environment. System name and default local location name are examples of network attributes. Contrast with *system value*.

network protocol. A communications protocol from the Network Layer of the Open Systems Interconnect (OSI) network architecture, such as the Internet Protocol (IP).

network resource. In OSI, a general term for resources available to the network, such as lines and line sets.

nonlibrary user ASP. An auxiliary storage pool that contains journals, journal receivers, and save files. The libraries for the objects are in the system ASP. Contrast with *library user ASP*. See also *auxiliary storage pool (ASP)*.

| **object**. A named storage space that consists of a set
| of characteristics that describe itself 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 pro-
| grams, files, libraries, and folders.

object code. Programming instructions that were processed by the compiler into code that can be read by the computer.

object program. In the original program model (OPM), a set of instructions in machine-readable form. The object program is produced by a compiler from a

source program. In the Integrated Language Environment (ILE) model, an object program is the result of binding modules together.

OfficeVision/400. The IBM licensed program that allows users to prepare, send, and receive mail; schedule items on calendars; maintain directories of names and addresses; file and retrieve documents; and create and maintain distribution lists. OfficeVision/400 also provides word processing functions and the capability to work on behalf of other users.

offline. Pertaining to the operation of a functional unit that is not under the continual control of the system. Contrast with *online*.

online. Pertaining to the operation of a functional unit that is under the continual control of the system. Contrast with *offline*.

open data path (ODP). A control block created when a file is opened. An ODP contains information about the merged file attributes and information returned by input or output operations. The ODP only exists while the file is open.

operating system. A collection of system programs that control the overall operation of a computer system.

operation. (1) The result of processing statements in a high-level language. See also *keyword functions*. (2) In DCE Remote Procedure Call (RPC), the task performed by a routine or procedure that is requested by a remote procedure call.

output. Information or data received from a computer that is shown on a display, printed on the printer, or stored on disk, diskette, or tape.

output file. (1) In COBOL, a file that is opened in either the output mode or extend mode. (2) In RPG, a database or device file that has been opened to allow records to be written. Contrast with *input file*.

output queue. An object that contains a list of spooled files to be written to an output device, such as a printer or a diskette. The system-recognized identifier for the object type is *OUTQ.

owner. The user who creates an object (or is named the owner of an object).

parameter. (1) A value supplied to a command or program that is used either as input or to control the actions of the command or program. (2) In COBOL, a variable or a constant that is used to pass values between calling and called programs. (3) In the Integrated Language Environment (ILE), an identifier that defines the types of arguments that are passed to a called procedure. (4) In REXX, information entered with a command name to define the data on which a command processor operates and to control the execution of the command. (5) In DB2 for OS/400 SQL, the keywords and values that further define SQL precompiler commands and SQL statements. See also *keyword*.

password. A unique string of characters known to a computer system and to a user. The user must specify the character string to gain access to a system and to the information stored within it.

peer-to-peer networking. See *Advanced Peer-to-Peer Networking (APPN)*.

PL/I. A programming language designed for use in a wide range of commercial and scientific computer applications.

port. (1) System hardware where the I/O devices are attached. (2) An access point (for example, a logical unit) for data entry or exit. (3) A functional unit of a node through which data can enter or leave a data network. (4) In data communications, that part of a data processor that is dedicated to a single data channel for the purpose of receiving data from or transmitting data to one or more external, remote devices. (5) In TCP/IP, a 16-bit number used to communicate between TCP and a higher-level protocol or application (process). Some protocols, such as FTP and SMTP, use the same port number in all TCP/IP implementations. Those assigned port numbers are called well-known ports. (6) An individual user exit point in the mail server framework, for example, QIBM_QZMFMSF_LST_EXP and QIBM_QZMFMSF_ADR_RSL. It is from these ports that snap-in programs are called.

presentation address. (1) In the Distributed Computing Environment (DCE), an unambiguous name that is used to identify a set of presentation service access points. Loosely, it is the network address of an open systems interconnect (OSI) service. (2) In OSI, an address that uniquely identifies an application entity. The presentation address consists of one or more NSAP addresses, a TSAP selector, an SSAP selector, and a PSAP selector.

presentation graphics routines (PGR). A group of routines within the operating system that allows business charts to be defined and displayed procedurally through function routines. Contrast with *graphical data display manager (GDDM)*.

procedure. (1) In COBOL, one or more successive paragraphs or sections, within the Procedure Division, that direct the computer to perform some action or series of related actions. (2) In query management, a query object that consists of a related set of query commands. A procedure allows an application to run multiple query commands through one call to the callable

| interface. (3) In the Integrated Language Environment (ILE) model, a set of self-contained high-level language (HLL) statements that performs a particular task and returns to the caller. Individual languages have different names for this concept of a procedure. In C, a procedure is called a function.

profile. (1) Data that describes the characteristics of a user, program, device, or remote location. (2) In DCE Remote Procedure Call (RPC), an entry in a name service database that contains a collection of elements from which name service interface (NSI) search operations construct search paths for the database.

program. (1) A sequence of instructions that a computer can interpret and run. (2) In the Integrated Language Environment (ILE) model, the runable object that results from binding modules together.

program object. One of two machine object classifications. It includes those objects used in programs that get their definition from an object definition table. Program objects are used as the parameter or values of machine instructions. Contrast with *system object*.

program temporary fix (PTF). (1) A temporary solution to or bypass of a problem diagnosed by IBM as resulting from a defect in a current unaltered release of a licensed program. Contrast with *Licensed Internal Code fix*. (2) In the SystemView System Manager for OS/400 program, a means of correcting a problem or potential problem found within a product, or of providing an enhancement to a product before a new release of the product is available. PTFs are designed to replace one or more objects in the product. Generally, PTFs are incorporated in a future release of the product.

Programming Request for Price Quotation (PRPQ). A customer request for a price quotation for a licensed program to be designed especially for a particular group of customers or an application. Documentation for the program is provided only to those customers who order the PRPQ. Compare with *Request for Price Quotation (RPQ)*.

prompt. A reminder or a displayed request for information or user action. The user must respond to allow the program to proceed.

protected conversation. An LU 6.2 conversation that supports two-phase commit protocols for resource recovery and resynchronization protocols. Contrast with *unprotected conversation*.

PRPQ. See *Programming Request for Price Quotation (PRPQ)*.

PTF. See *program temporary fix (PTF)*.

query. (1) A request to select and copy from a file or files one or more records based on defined conditions. For example, a request for a list of all customers in a customer master file, whose balance is greater than $1000. (2) The query management object that is used to define queries against relational data.

queue. A list of messages, jobs, files, or requests waiting to be read, processed, printed, or distributed in a predetermined order.

record. (1) A group of related data, words, or fields treated as a unit, such as one name, address, and telephone number. (2) In COBOL, the most inclusive data item. The level-number for a record is 01. A record can be either an elementary item or a group item.

remote. Pertaining to a device, system, or file that is connected to another device, system, or file through a communications line. Contrast with *local*.

remote job entry (RJE). A function of the Communications Utilities/400 licensed program that allows a user to submit a job from a display station on the AS/400 system to a System/370-type host system.

remote work station. A work station that is connected to the system by data communications. Contrast with *local work station*.

Request for Price Quotation (RPQ). A customer request for a price quotation on alterations or additions to the functional capabilities of a hardware product for a computing system or a device. Compare with *Programming Request for Price Quotation (PRPQ)*.

response. (1) In OSI, a service primitive issued by a service user to complete the procedures associated with a confirmed service. (2) In SDLC, a frame transmitted by a secondary station. Stations using asynchronous balanced mode send both commands and responses. Contrast with *command*.

| **restore**. To copy data from compact disc, tape, diskette, optical disc, or a save file to auxiliary storage. Contrast with *save*.

RPC interface. In DCE Remote Procedure Call (RPC), a logical group of operations, data types, and constant declarations that serves as a network contract for a client to request a procedure in a server. See also *interface definition* and *operation*.

RPC protocol. A DCE Remote Procedure Call (RPC)-specific communications protocol that supports the semantics of the DCE RPC API and runs over either connectionless of connection-oriented communications protocols.

RPC protocol sequence. In DCE Remote Procedure Call (RPC), a valid combination of communications protocols represented by a character string. Each RPC protocol sequence typically includes three protocols: a

network protocol, a transport protocol, and an RPC protocol that works with the network and transport protocols. See *network protocol*, *RPC protocol*, and *transport protocol*. Synonymous with *protocol sequence*.

RPG. A programming language designed for writing application programs for business data processing requirements. The application programs range from report writing and inquiry programs to applications, such as payroll, order entry, and production planning. See also *Integrated Language Environment RPG/400 (ILE RPG/400)*.

save. To copy specific objects, libraries, or data by transferring them from main storage or auxiliary storage to media such as optical disc, tape, diskette, or a save file. Contrast with *restore*.

scalar function. In SQL, an operation that produces a single value from another value and expresses it in the form of a function name followed by a list of arguments enclosed in parentheses.

screen design aid (SDA). A function of the Application Development ToolSet/400 licensed program that helps the user design, create, and maintain displays and menus.

SDA. See *screen design aid (SDA)*.

SDLC. See *synchronous data link control (SDLC)*.

security officer. A person assigned to control all of the security authorizations provided with the system. A security officer can, for example, remove password or resource security; or add, change, or remove security information about any system user.

semantics. The relationships of characters or groups of characters to their meanings, independent of the manner of their interpretation and use. Semantics is the meaning conveyed by a character string. Contrast with *syntax*.

server entry. In DCE Remote Procedure Call (RPC), a name service entry that stores the binding information associated with the RPC interfaces of a particular RPC server and object Universal Unique Identifiers (UUIDs) for any objects offered by the server. See also *binding information*, *NSI binding attribute*, *NSI object attribute*, *object*, and *RPC interface*.

session. (1) The length of time that starts when a user signs on at a display station and ends when the user signs off. (2) In Client Access for OS/400, the logical connection between the host system and a personal computer or printer. (3) In communications, the logical connection by which a program or device can communicate with a program or device at a remote location. See also *conversation* and *transaction*. (4) In finance communications, a logical connection by which an AS/400 system communicates with a finance controller. (5) In RJE, the activity of all tasks within a single AS/400 system communicating with a single host system. (6) In SNA, a logical connection between two network locations that can be started, tailored to provide various connection protocols, and stopped, as requested. Each session is uniquely identified in a header by a pair of network addresses identifying the origin and destination of any transmission exchanged during the session. See also *half-session*. (7) 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 user ends the emulation job.

SEU. See *source entry utility (SEU)*.

shared file. A file whose open data path can be shared between two or more programs processing in the same job. See *open data path (ODP)*.

single-byte character set (SBCS). A coded character set in which each character is represented by a one-byte code. Contrast with *double-byte character set (DBCS)*.

source. In VRPG Client, a part that can notify target parts whenever the state of the source part changes. A source part can have multiple targets.

source entry utility (SEU). A function of the Application Development ToolSet/400 licensed program that is used to create and change source members.

source file. A file of programming code that is not compiled into machine language. A source file can be created by the specification of FILETYPE(*SRC) on the Create command. A source file can contain source statements for such items as high-level language programs and data description specifications. Contrast with *data file*.

source listing. A portion of a compiler listing that contains source statements and, optionally, test results. See also *compiler listing*.

source member. A member of a database source file that contains source statements, such as C for OS/400, COBOL for OS/400, RPG for OS/400, or DDS statements. See also *member*.

source program. (1) A set of instructions that are written in a programming language and must be translated to machine language before the program can be run. (2) In communications, the program that starts a session with a remote system. Contrast with *target program*. (3) In DB2 for OS/400, the source in an OS/400 source file member used to create an SQL program.

spool. (1) The system function of putting files or jobs into disk storage for later processing or printing. (2) To reduce, through the use of auxiliary storage as buffer storage, processing delays when transferring data between peripheral equipment and the processors of a computer.

subroutine. (1) A group of instructions within another group of instructions that can be called by a program or another subroutine. (2) In data communications, a group of statements in a program that can be run several times in that program. (3) In REXX, an internal, built-in, or external routine called by the CALL instruction that may or may not return a result string. If a subroutine returns a result string, a subroutine can also be called by a function call, in which case it is being called as a function. (4) In RPG, a group of calculation specification statements in a program that can be run several times in that program.

subsystem. An operating environment, defined by a subsystem description, where the system coordinates processing and resources.

synchronous data link control (SDLC). (1) A form of communications line control that uses commands to control the transfer of data over a communications line. (2) A communications 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 Organization for Standardization (ISO), for transferring synchronous, code-transparent, serial-by-bit information over a communications line. Transmission exchanges may be duplex or half-duplex over switched or nonswitched lines. The configuration of the connection may be point-to-point, multipoint, or loop.

syntax. (1) The rules for constructing a command or statement. Contrast with *semantics*. (2) In the Distributed Computing Environment (DCE), a category into which an attribute value is placed on the basis of its form. (3) In REXX, the rules for the construction of a command or program.

system ASP. The auxiliary storage pool where system programs and data reside. The system ASP (ASP1) always exists. See also *auxiliary storage pool (ASP)* and *user ASP*.

system configuration list. A list of devices that are provided with the system.

system object. A machine object classification. Any of the machine objects shipped with the system or any of the operating system objects created by the system.

system security. A system function that restricts the use of files, libraries, folders, and devices to certain users.

system value. Control information for the operation of certain parts of the system. A user can change the system value to define the user's working environment. System date and library list are examples of system values. Contrast with *network attribute*.

System/38 environment. A function of the operating system that processes most of the System/38 control language (CL) statements and programs to run System/38 application programs.

tape cartridge. A case containing a reel of magnetic tape that can be put into a tape unit without stringing the tape between reels.

tape drive. A device used to move the tape and read and write information on magnetic tapes.

target. (1) In advanced program-to-program communications, the program or system to which a request for processing is sent. (2) In DDM, the remote system where the request for a file is sent. (3) In SEU, a line command, such as B (Before) or A (After), that specifies the destination for other line commands such as C (Copy) or M (Move). (4) In VRPG Client, a part that receives a target event from a source part whenever the state of the source part changes.

target program. (1) In communications, the program that is started on the remote system at the request of the source system. Contrast with *source program*. (2) In display station pass-through, a program that runs on the remote system. (3) In VRPG Client, the object to be built by the project, such as a Dynamic Link Library (DLL).

telecommunications. (1) The transmission of control signals and information between two or more locations, such as by telegraph, radio, or television. (2) The transmission of data between computer systems over telecommunications lines and between a computer system and remote devices.

transaction. (1) An item of business, for example, the handling of customer orders and customer billing. (2) In the Distributed Computing Environment (DCE), a unit of processing consisting of one or more application programs that is initiated by a single request, often from a terminal. (3) In the Integrated Language Environment (ILE), a group of individual changes to objects on the system that should appear as a single atomic change to the user. (4) In communications, an exchange between a program on a local system and a program on a remote system that accomplishes a particular action or result. See also *conversation* and *session*. (5) In performance, a unit of work used to express the throughput

of a workload or to request the estimated response time. An interactive transaction is the work done by the system when the Enter key or a function key is pressed. A noninteractive transaction is defined in terms of resource activity used by the noninteractive jobs. (6) In DB2 for OS/400, the work that occurs between begin unit of work and commit or rollback. A transaction defines the set of operations that is part of an integral set.

twinaxial cable. A cable made of two twisted wires inside a shield that is used on the 5250 family devices.

uninterruptible power supply. A source of power from a battery installed between the commercial power and the system that keeps the system running, if a commercial power failure occurs, until it can complete an orderly end to system processing.

| **unit**. The defined space within disk units that is
| addressed by the system.

unprotected conversation. An LU 6.2 conversation that has a synchronization level of none or confirm. If conversation errors or failures occur, the resources used by the application may be in inconsistent states. Contrast with *protected conversation*.

user ASP. One or more storage units used to isolate some objects from the other objects stored in the system ASP. User ASPs are defined by the user. See also *auxiliary storage pool (ASP)* and *system ASP*.

user ID. See *user identification (user ID).*

user ID/address. The two-part network name used in the system distribution directory and in the office applications to uniquely identify a user and send electronic mail.

user identification (user ID). (1) The name used to associate the user profile with a user when a user signs on the system. See also *user profile name*. (2) The first part of a two-part network name used in the system distribution directory and in the office applications to uniquely identify a user. The network name is usually the same as the user profile name, but does not need to be. See also *common user identification (common user ID).*

user identification number (uid). A four-byte, unsigned integer (uid) used to identify a user profile. Contrast with *group identification number (gid)*.

user profile. An object with a unique name that contains the user's password, the list of special authorities assigned to a user, and the objects the user owns. The system-recognized identifier for the object type is *USRPRF.

user profile name. The name or code that the system associates with a user when he or she signs on the system. Also known as user ID. See also *user identification (user ID)*. For SQL, see also *authorization ID*.

| **variable**. A name used to represent data that can be
| changed while the program or procedure is running.

wide area network (WAN). A data communications network designed to serve an area of hundreds or thousands of miles—for example, public and private packet-switching networks, and national telephone networks. Contrast with *local area network (LAN)*.

workstation. A device used to transmit information to or receive information from a computer, for example, a display station or printer.

workstation address. The address to which the switches on a workstation are set, or the internal address assumed by the system if no address is specified.

workstation controller (WSC). An I/O controller card in the card enclosure that provides the direct connection of local workstations to the system.

X.21. In data communications, a specification of the CCITT that defines the connection of data terminal equipment to an X.21 (public data) network.

X.25. A CCITT Recommendation that defines the physical level (physical layer), link level (data link layer), and packet level (network layer) of the OSI reference model. An X.25 network is an interface between data terminal equipment (DTE) and data circuit-terminating equipment (DCE) operating in the packet mode, and connected to public data networks by dedicated circuits. X.25 networks use the connection-mode network service.

3270 device emulation. The operating system support that allows an AS/400 system to appear as a 3274 Control Unit in a BSC multipoint network or an SNA network. See also *3270 display emulation* and *3270 printer emulation*.

3270 display emulation. The function of the operating system 3270 device emulation support that converts 3270 data streams intended for a 3278 display station into data streams that can be recognized by a display station attached to the AS/400 system.

3270 printer emulation. The function of the operating system 3270 device emulation support that converts 3270, DSC, and SCS data streams intended for a 328X printer into data streams that can be recognized by a printer attached to the AS/400 system.

5250 emulation. Any one of many licensed programs that allow a personal computer to perform like a 5250

display station or printer and to use the functions of an AS/400 system.

Index

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System/38 Migration Planning
Version 3

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