AS/400 Advanced Series

System/36 Migration Planning

Version 3

SC41-4152-00

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SC41-4152-00

Take Note!

Before using this information and the product it supports, be sure to read the general information under “Notices.”

First Edition (December 1995)

This edition applies to the licensed program IBM AS/400 System/36 Migration Aid, (Program 5727-MG1), Version 3 Release 6 Modification 0, and to all subsequent releases and modifications until otherwise indicated in new editions. Make sure you are using the proper edition for the level of the product.

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Contents

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A danger notice calls attention to a situation that is potentially lethal or extremely hazardous to people.

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An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer's responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. *(RSFTD201)*

DANGER

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About System/36 Migration Planning, (SC41-4152)

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 considerations for each System/36 and AS/400 product

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/36 to AS/400 Migration Aid User's Guide and Reference*, SC09-1166, should read this book.

The book you need to use for migrating or upgrading information depends on what you are migrating or upgrading to:

- If you are upgrading SSP Release 5.1 and Release 6.0 to a new release of SSP, use the *Fastpath Installation of Your Advanced 36*, SA41-4138. After the hardware and software are upgraded to a new release of SSP, use the *Getting SSP and OS/400 Installed and Running*, SC21-8377.
- If you are upgrading SSP Release 7.1 to a new release of SSP, use the *Changing Your System Configuration–SSP*, SC21-8295. After the hardware and software are upgraded to a new release of SSP, use the *Getting SSP and OS/400 Installed and Running*, SC21-8377.
- When migrating from a System/36 to an AS/400 Advanced Series system with PowerPC technology, make sure the AS/400 target system (the system you are upgrading to) has already been upgraded to V3R6. If the target system is new, it should already have a PowerPC AS processor. If the target system is not new (you have an AS/400 already that you plan to use as the target system), it must be upgraded to PowerPC technology. For more information about upgrading the AS/400 to a system using PowerPC technology, see the *AS/400 Road Map for Changing to PowerPC Technology*, SA41-4150.

Then for migrating or upgrading information, see one of the following books:

- If you are migrating from the System/36 to an AS/400 Advanced Series system with PowerPC technology and plan to use the System/36 Environment, use this book.
- If you are migrating from a System/36 and plan to use multiple operating systems, see the *General Information for SSP Operating System*, SC21-8299.

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

- The *Physical Planning Reference*, SA41-4109, book for directions on how to plan to install your hardware, licensed programs, and cables.
- The *System/36 to AS/400 Migration Aid User's Guide and Reference*, SC09-1166, for instructions on how to migrate System/36 items using tape, diskette, the IBM 5259 Migration Data Link, or communications; 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/36 Environment Programming*, SC41-4730, book identifies the functional and operational differences in the System/36 Environment on the AS/400 system.
- The *System/36 Environment Reference*, SC41-4731, book for information about the procedure control expressions, procedures, operation control language statements, control commands, and utilities that are supported in the System/36 Environment.

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/36 to the AS/400 system that uses the System/36 Environment.

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 System/36 Migration Aid licensed program 5727-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 found in the *System/36 to AS/400 Migration Aid User's Guide and Reference*, SC09-1166.

About Your AS/400 System

The AS/400 system, like your System/36, requires an operating system. Called the Operating System/400 (OS/400) rather than System Support Program (SSP), it provides many of the same functions. In order for you to use your existing applications and data without significant change, Operating System/400 includes a System/36 Environment. This support is similar to that of the System/36, minimizing the effect of migration on your users.

For example, most System/36 utilities, Operation Control Language (OCL) procedures and statements, menus, messages, and Operator Control Commands (OCC) are supported in the System/36 environment. Application programs written in RPG II and COBOL are source-compatible and can be recompiled on your AS/400 system to run in the System/36 Environment. In addition, similar support is provided for licensed programs like DisplayWrite/36 (DW/36), Personal Services/36, Query/36 and PC Support/36.

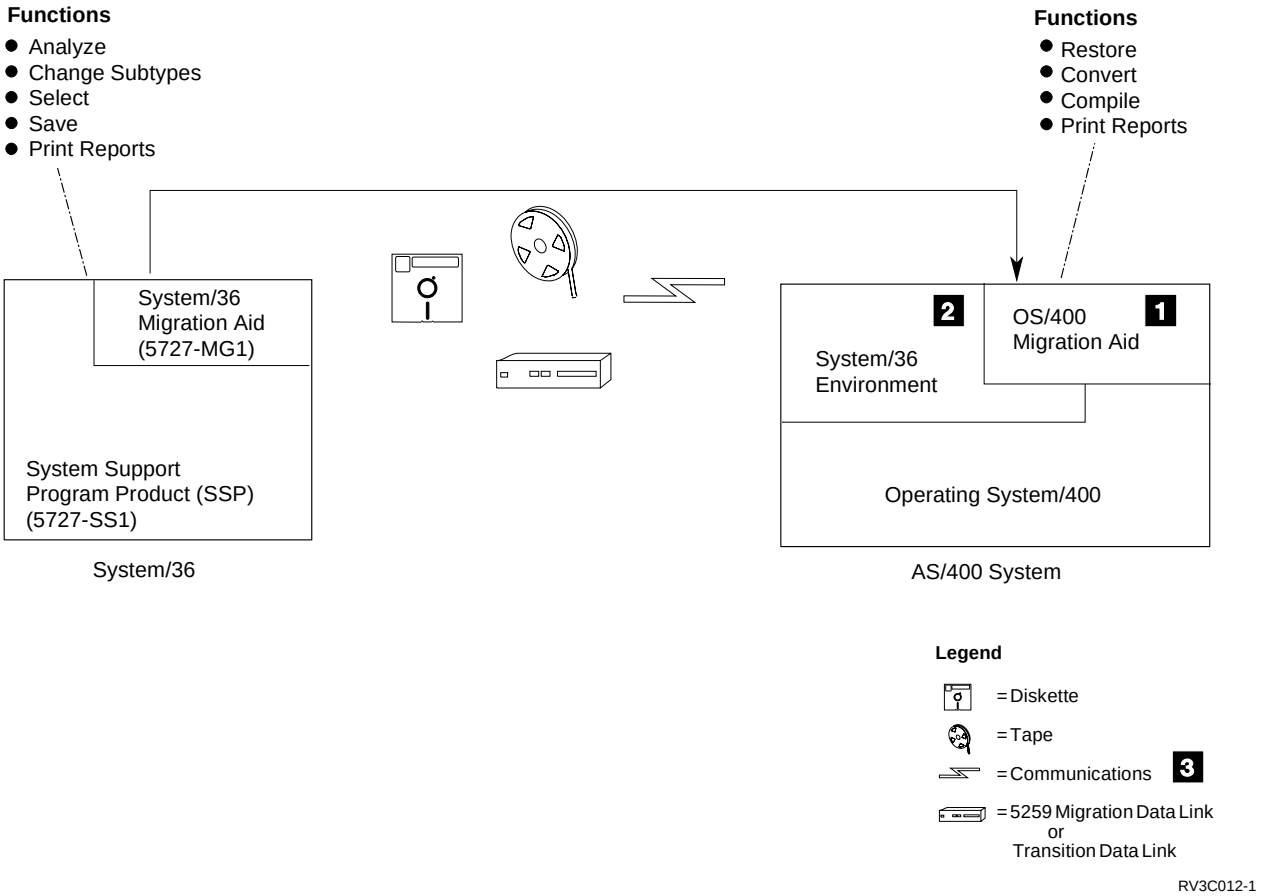
Although you can always use the System/36 Environment, you may decide at some point to use some of the enhanced, more powerful features of the AS/400 system. New functions include relational database support, externally described files and RPG III. Gradually, you can make changes to your system and applications to take advantage of the new features.

The book, *System/36 Environment Programming*, SC41-4730, has more detailed information about the System/36 environment.

What Is the System/36 to AS/400 Migration Aid?

The System/36 to AS/400 Migration Aid is a licensed program that moves the information on your System/36 to the AS/400 system, using tape or diskette, the 5259 Migration Data Link, or through user-written data communications programs. The Migration Aid provides a menu path, making it easy to use. The intent of the Migration Aid is to reduce the time it takes you to become productive on the AS/400 system.

The following diagram shows you how the Migration Aid works:



| 1 OS/400 Migration Aid (Option 4 of OS/400)

| 2 System/36 Environment (Option 5 of OS/400)

| 3 Communications (you need to write your own programs)

The System/36 to AS/400 Migration Aid consists of two parts. The first part, the System/36 Migration Aid, runs on the System/36, providing an easy, structured method of identifying and saving your libraries, files, folders, and other items. It also identifies where differences exist between the System/36 and the AS/400 System/36 Environment so you can make the necessary changes to your items before and after migration. The second part, the OS/400 Migration Aid, runs on the AS/400 system to restore and convert your saved items. In addition, your application programs (RPG II and COBOL), messages, screen formats, and menus can be automatically compiled.

Several reports are created by the Migration Aid that allow you to track your progress as you migrate from System/36 to the AS/400 system. For example, you can run a report that describes everything that exists on your System/36. Or, if you migrate in stages, you can run a status report that identifies the items that have been migrated to the AS/400 system as well as those that have not yet been migrated from your System/36.

Using the Migration Aid on System/36, you can do the following:

- Run a system summary report of all items on System/36
- Run an analysis report for unsupported functions or functions supported differently on the AS/400 system
- Select items to migrate to the AS/400 system
- Save selected items to migration medium
- Restore items to the AS/400 system
- Recompile programs

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

Some of the items the Migration Aid moves are:

- Source members for programs, screen formats, messages, and menus
- Procedures
- Data files and alternative indexes
- Libraries
- Folders
- Data dictionaries
- Security and master configuration information

The Migration Aid also moves the items used by the System/36 SSP and licensed programs, such as:

- Advanced printer function (APF)
- Business Graphics Utilities/36 (BGU/36)
- Data file utility (DFU) programs
- Distributed Data Management (DDM)
- Multiple Session Remote Job Entry (MSRJE)
- PC Support/36
- Personal Services/36
- Query/36

The Migration Aid does not move the following items:

- Load members
- Communications definitions, except for those created by the work station support for the master configuration record (for example, SSP-Interactive Communications Feature (SSP-ICF) line and subsystem members and X.25 configurations)
- User-defined configuration records

The Migration Aid can move these items, though they are not supported on the AS/400 system:

- User-written assembler language programs and subroutines
- FORTRAN programs
- Work station utility (WSU) programs

BASIC programs requires special consideration.

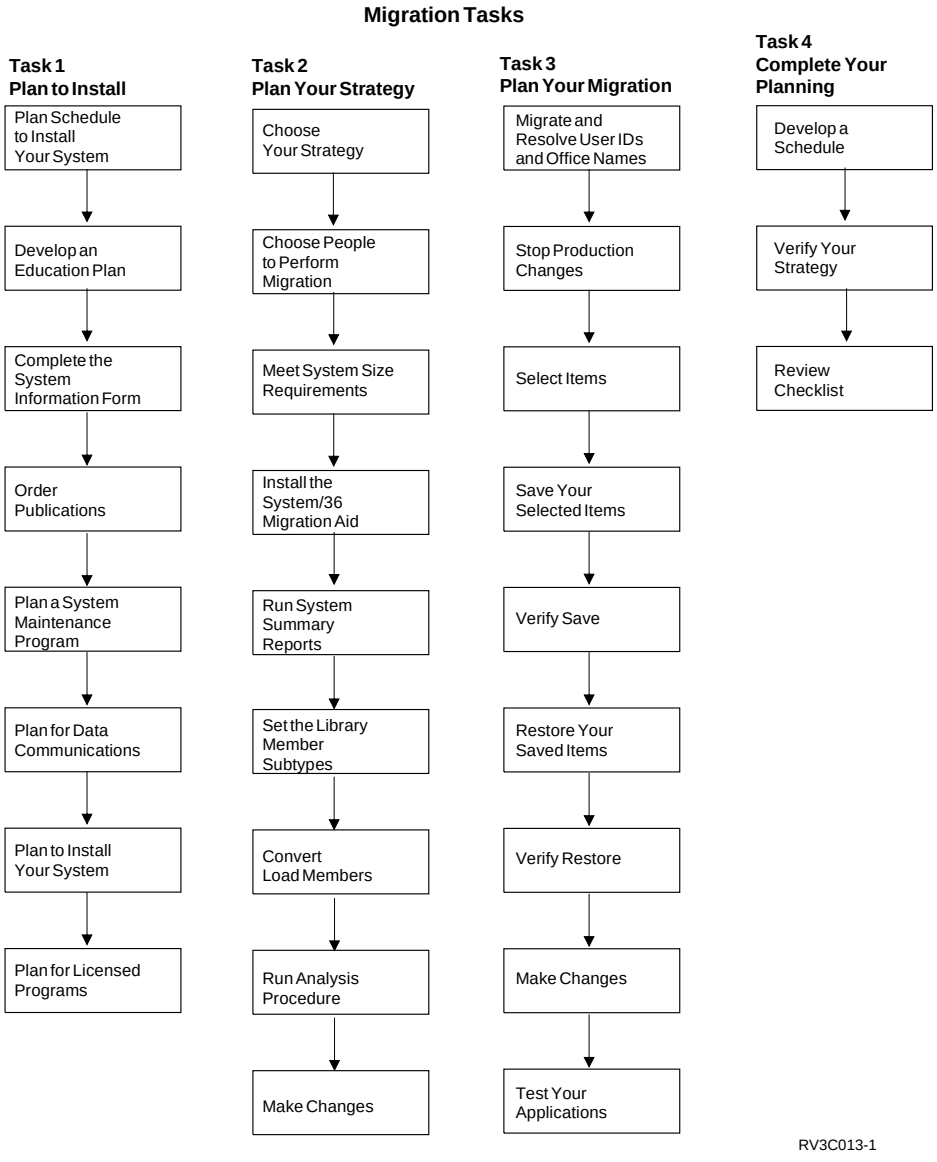
See Appendix A, “Product Information,” for more information about each of these products.

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. The book 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/36, 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/36 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/36 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/36 and the AS/400 system, such as plug type, temperature and humidity, power, and UPS considerations. In addition, the AS/400 system requires a tape unit and CD-ROM. These device are used in place of (or in addition to) diskettes for saving and restoring items. The tape unit is used in place of diskettes for saving and restoring, but you can not write (save) on a CD-ROM. See Appendix A, “Product Information,” for devices that are different.

After your AS/400 hardware and licensed programs are installed, the system is **configured**. Configuration is the process of telling the system which devices are attached to it. Both your local and remote display stations and printers are configured when the Migration Aid moves the master configuration record from System/36 to the AS/400 system. The AS/400 system can automatically configure currently attached and additional devices for you if this option is selected when you install your AS/400 system.

However, if you have SSP-Interactive Communications Feature (SSP-ICF) communications, you need to manually configure these using configuration menus on the AS/400 system. For details on how to configure communications on the AS/400 system, see the *System/36 to AS/400 Migration Aid User’s Guide and Reference*. Your AS/400 system comes with a communications port for use with support using data communications. If you do not already have a communications line, you need to order one from your telecommunications supplier to be able to use this port. You also can order the 5259 Migration Data Link. See the *Transition Data Link*

User's Guide, SC21-8372 or the *5259 Migration Data Link User's Guide*, SA21-9551, books for installing details.

The amount of disk space used on your new AS/400 system increases from that used for the same information on your System/36. 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 amounts of disk space you need.

If at any time you plan to run your System/36 and the AS/400 system at the same time, such as when you test the migration of all your items, you need to consider that you should have more DASD, 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/36 program products along with the AS/400 licensed programs which replaced them. Note that all communications support is included in the OS/400 licensed program except for MSRJE and RSCS/PROFS bridge.

System/36 Program Products	Program Number	AS/400 Licensed Programs	Program Number
System Support Program Product (SSP)	5727-SS1	Operating System/400	5716-SS1
Multiple Session Remote Job Entry (MSRJE)	5727-SS1	Communications Utilities/400	5716-CM1
RSCS/PROFS bridge	5727-SS1	Communications Utilities/400	5716-CM1
System/36 Utilities	5727-UT1	Application Development ToolSet/400	5716-PW1
Development Support Utility	5727-DS1	Application Development ToolSet/400	5716-PW1
Programmer and Operator Productivity (POP)	5799-BXT	Application Development ToolSet/400	5716-PW1
RPG II	5727-RG1	ILE RPG/400	5716-RG1
COBOL	5727-CB1	ILE COBOL/400	5716-CB1
BASIC	5727-BA1	AS/400 BASIC	5799-FPW
DisplayWrite/36	5727-WP1	OfficeVision/400	5716-WP1
Personal Services/36	5727-WP3	OfficeVision for OS/400	5716-WP1
PC Support/36	5727-WS1	Client Access for OS/400 Family	5716-XA1
Query/36	5727-QU1	Query for OS/400	5716-QU1
Business Graphics Utilities/36	5727-BG1	Business Graphics Utility	5716-DS1
Cryptographic	5714-CR1	Cryptographic Support	5716-CR1
Retail Point-of-Sales Support	PRPQ	Point-of-Sale Communications Utility for OS/400	5716-CF1

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 items that are not supported.

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/36, 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 your completing your plans. The system summary reports tell you everything that is on your system, while the analysis reports identify items not supported or supported differently on the AS/400 system. At the end of the planning tasks, you will have a chance to verify your strategy.

Migrating Everything at Once

This means that, in most cases, you can migrate everything on the System/36 in one migration step. Migrating in one step is easier for some systems. Migrating in one step does not work well for large systems with many applications.

Use this method if your system is limited to one, a combination, or all of the following:

- Communications
  - 3270 Device Emulation
  - Multiple Session Remote Job Entry (MSRJE)
  - Distributed host command facility (HCF)
  - Distributed system node executive (DSNX)
  - Advanced program-to-program communications (APPC) for Personal Services/36
  - Display station pass-through
  - Distributed Data Management (DDM)
  - ICF Finance
- Applications
  - DisplayWrite/36
  - Personal Services/36
  - Query/36
  - PC Support/36
  - A small number of programs written in RPG II or COBOL

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 items on your system. Some items usually stay the same, such as source members for RPG II and COBOL, menus, screen formats, messages, configurations (communications and system), and procedures; these are the items you would migrate first. Other items often change, such as data files, folders, and DW/36 and Personal Services/36 user profiles. 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 working on the AS/400 system.

You should use this method if you have many application programs and much data, if you have many changes to make, or if you have BASIC, assembler, or WSU.

You do need to have both your System/36 and your AS/400 system operating at the same time. 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 items.

1. Users (user ID and office profile) must be migrated first.

   Note: Before migrating, user IDs, office profiles, and office items should be collected on the System/36 and resolved on the AS/400 system.

2. IDDU data dictionaries must be migrated before linked files.
3. Character generator utility (CGU) master sort table, #KAMAST, must be migrated at the same time as the #EXT2424 extension file.
4. These can be migrated in any order:
   - Libraries, including BASIC, BGU, COBOL, Query, and RPG members
   - Files that are not linked, such as forms control tables, BASIC, APF, virtual disks, BGU graph data input files (GDIF), and data files
   - Folders
   - Spelling dictionaries
   - Master configuration
   - Network resource directory

In Two Stages: You can migrate all items that change infrequently (for example, application programs) at the same time and then migrate all your changing items (for example, data files) at the same time. In this case you might want to make all changes (except for WSU assembler, and BASIC) on the System/36 before you migrate to the AS/400 system.

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 items and then the changing items. You can then verify that this application works before migrating another application. Using this method, Personal Services/36 and DW/36 users can be migrated by application, for example. You can also migrate:

- Applications only
- Files only
- Personal Services/36 and DW/36 users only
- Selected office 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
- Operating your AS/400 system
- Communications installed
- Personal Services/36, DW/36, PC Support/36 users
- Security, if you have security. On System/36, anyone can select and save items to which they are authorized. The master security officer or security officer can select and save everything; only the master security officer or secu-

rity officer can select and save user IDs. On the AS/400 system, only the security officer or someone in the security officer group can use the Migration Aid.

Note: If security is not active, anyone can select and save anything.

Step 3. Ensure You Have Met All System Requirements

To migrate, you must have the following hardware and licensed programs installed on your System/36 and your AS/400 system.

System/36

Hardware

- Direct access storage device (DASD)
  - 850 blocks of storage for the System/36 Migration Aid
  - Enough storage to duplicate the largest library on your system. The system summary report explained in a later step identifies if you do not have enough storage.
- Medium (choose one or more of the following):
  - Tape drive or cartridge
    - 8809 Tape Drive (1/2-inch reel-to-reel)
    - 6157 Tape Drive (1/4-inch cartridge)
    - Optional feature (1/4-inch tape drive for the 5363 only)
  - Diskette magazine or slot
    - 8-inch magazine
    - 8-inch slot
    - 5.25-inch slot
  - 5259 Migration Data Link
  - Transition Data Link (TDL)
  - Communications (you need to write your own programs)
- Printer, to print your system summary, analysis reports, and status reports

Licensed program

- SSP, you can migrate from one of the following:
  - Release 5 Modification Level 1
  - Release 6 Modification Level 0 (available only for Models 5363 and 9402-Y10)
  - Release 7 Modification Level 0
- SSP Program Temporary Fixes (PTFs) should be installed, and SSP should be configured correctly so that you are able to view or print the online help information. Review the SSP configuration, and ensure that the values for prompts 1 (to view the online information) and 2 (to print the online information) on CNFIGSSP display 20.1 are asterisks (*).
- System/36 Migration Aid
- BASIC, if you are changing BASIC subroutines to source members
- DW/36, if you are migrating DW/36 spelling addenda dictionaries
- MSRJE, if you are migrating MSRJE Forms Control Table files

AS/400 System

Hardware

- Storage devices
  - Enough storage to hold all the System/36 items you are migrating. To find out how many more megabytes you need, multiply the member type by the following:

Table 2-1. Storage Guidelines

Member Type	V3R1	V3R6
Load members	7–14	15–30
Source members	3.6–5	3.6–5
Data files	1.2–5	1.2–5
Documents	2	2
Mail logs	1	1
Data dictionaries	1–2	2–4

Note: The ranges of values given represent guidelines and take into consideration the differences among system defaults, compiler types, and other factors that affect object size. Sizes of physical files and source physical files, and any objects that may contain them are influenced most by the system environment in which they are created.

For example, if source programs require five megabytes on System/36, they require 5 times 3.6, or 18 megabytes on the AS/400 system.

- Medium (choose one or more of the following):
  - Tape unit or cartridge
    - If you chose the 6157 Tape Drive on System/36 or the optional feature (5363), use the optional 1/4-inch cartridge tape unit (9346) on the 9406 System Unit or the standard 1/4-inch cartridge tape unit on the 9404 System Unit.
    - If you chose the 8809 Tape Drive on System/36, use the 9347 Tape Unit (1/2-inch reel-to-reel on the 9406 System Unit only).
  - Diskette
    - If you chose the 8-inch slot for data, use the 9331 Diskette Model 001.
    - If you chose the 5.25-inch slot for data, use the 9331 Diskette Model 002.
  - 5259 Migration Data Link
  - Transition Data Link (TDL)
  - Communications (you need to write your own programs)
- Display station
  - At least one 24-line by 80-column display station to use the Migration Aid menus.
- Printer, to print status reports and compiler listings
- Software distribution

Licensed Programs

- Operating System/400
- System/36 Environment and the Operating System/400 Migration Aid
- AS/400 licensed programs such as:
  - OfficeVision for OS/400, if Personal Services/36 users or DW/36 users are being migrated
  - AS/400 Business Graphics Utility, if Business Graphics Utilities/36 items are being migrated
  - Client Access for OS/400, if you are migrating PC Support/36 information
  - BASIC, if you are migrating BASIC source members

Note: BASIC is now available as a PRPQ.

  - RPG/400, if you are migrating RPG II source members
  - Communications Utilities, if you are migrating MSRJE forms control tables
- Kanji Operating System/400, if you have CGU

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/36, but you must restore the diskettes to the AS/400 system using the single diskette drive.

Tapes are easier to handle because they hold approximately 40 megabytes of data on a 2400-foot reel. Tapes can read/write twice as fast as diskettes.

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

If you use the 5259 Migration Data Link, you do not need to handle diskettes or tape when you migrate.

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

Step 4. Plan to Install the System/36 Migration Aid

To install the Migration Aid on System/36, see the *System/36 to AS/400 Migration Aid User's Guide and Reference*.

Step 5. Plan to Run the System Summary Reports

First, create a system summary report to show all items loaded on the system. Run this report when no other users are using the system. Estimates of available disk space may be inaccurate if some files and libraries are in use at the time the report is created. This report gives you the summary of disk space available, a list of compilers needed on the AS/400 system, a list of all your library member and folder names not supported on the AS/400 system, and other migration information.

If you have source members, documents, or data stored offline on tape or on diskette, this data is not included in the system summary report.

Note: Some offline data can go directly onto the AS/400 system without the Migration Aid.

Step 6. Plan to Set the Library Member Subtypes

You need to identify library member subtypes on System/36 so that the appropriate conversion or compilation is run during the restore operation on the AS/400 system.

Library member subtypes are specific classifications of source members for library members. The Migration Aid requires that your source members be set to subtypes so it can analyze and identify unsupported source statements using the analysis option. Your source programs cannot be recompiled automatically on the AS/400 system without library member subtypes. You need to identify the following subtypes: ARP, RPG, COBOL, BASIC, FORTRAN, Data File Utility (DFU), Sort (SRT) message, menu, and screen formats (SFGR).

The system summary report identifies the total number of items without library member subtypes for the entire system as well as by library. The Migration Aid provides a function for you to set the subtypes of source members for library members.

Step 7. Plan to Convert Load or Subroutine Members to Source Members

If the missing source analysis reports have identified missing source members for menus, messages, SFGR, or BASIC subroutines, you can use the Migration Aid to convert load and subroutine members. If other types of missing source members are identified, you need to obtain the source members. (For example, if you purchased an application, you need to obtain the source members from wherever you made the purchase.)

Step 8. Plan to Use the Analysis Report for Unsupported Function

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

- OCL procedures and menus: for unsupported commands, procedures, OCL statements, parameters, and utilities
- COBOL source: to identify source members called by Copy statements
- RPG source: to identify assembler subroutines and which RPG source members, identified by Copy statements, need to be migrated
- Configuration members: for unsupported devices and communications types
- Load members: for those that do not have corresponding source members
- Security information: for incorrect user IDs, passwords, and resources for more than one or no owners
- IDDU data dictionaries: for incorrect file names
- Queries: for level checking and for files and formats that are missing or not linked

The *System/36 to AS/400 Migration Aid User's Guide and Reference* tells you what to do with these items. Depending on the nature of the changes required, you may decide later whether you want to make the changes on System/36 or the AS/400 system.

Step 9. Plan to Make Changes

In addition to changes identified by the analysis reports, you need to make the following changes on System/36. Detailed information can be found in the *System/36 to AS/400 Migration Aid User's Guide and Reference*.

Character generator utility (CGU)

If characters found only in the Ideographic Character extension file (#EXT1818) are needed, add them in the Ideographic Character extension file table (#EXT2424).

Note: Migrating System/36 Ideographic Character extension files to the AS/400 system is necessary only if the extension files contain user-defined characters.

Communications configurations

Have your System/36 communications configuration information available for reference later when re-creating the configuration on the AS/400 system.

Multiple Session Remote Job Entry (MSRJE)
You need to convert CDISK files to files or printed output using the RJFILE procedure before migration.

PC Support/36
Change your virtual diskettes to virtual disks.

Personal Services/36
Update your security information to obtain ownership for your lists (calendar and distribution). (The last person to update Personal Services/36 lists is the owner.)

File your mail into folders. Delete any mail you no longer need.

The following changes can also be made on the AS/400 system. However, if you would like to do as much as you can before your AS/400 system arrives, you may want to make these changes on System/36. If you make these changes on System/36, ensure that you have a backup copy.

Menus
Remove or change references to unsupported commands and procedures that were shown on the analysis report.

Note: F12 on the AS/400 system, instead of Command key 3, takes you to the previous menu.

Procedures
Remove or change unsupported procedure calls, OCL statements, parameters, and control statements that were shown on the analysis report.

Security
Be sure ownership information is up to date. If you have incorrect passwords, change them.

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/36 to AS/400 Migration Aid User's Guide and Reference* when you use the following functions from the Migration Aid: select, save, and restore.

Step 1. Plan to Migrate and Resolve User IDs and Office Item Names

You need to resolve user IDs and office item names if you are migrating more than one system to your AS/400, or if the analysis report for security identifies names with characters that are not valid on the AS/400 system, or if you are migrating office users. The options to resolve user IDs and office item names work with the names of user IDs, calendars, and lists. Complete this step as late as possible, but before you migrate user IDs and office items.

Note: If you plan to migrate office users from System/36 to the AS/400 system, you should not enroll those users in OfficeVision for OS/400 before migration. If you do, you will not be able to migrate those users.

Step 2. Plan to Stop Any Production Changes

At this time you need to stop creating and changing source members and changing configurations, files, user profiles, security files, menus, procedures, and so on. Identify and correct any unsupported source members or procedures you want to change before you migrate.

Step 3. Plan to Select Your Items

Use the select option to identify those items that are ready to migrate to the AS/400 system. You can choose to select certain items, or you can choose to migrate the entire system. You can start the selection process on the System/36 well before the actual migration. In fact, selection can begin before the AS/400 hardware has been installed.

Users can select their own items 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. If you have made any previous selections, they are shown when you view the Selection display.

Step 4. Plan to Save Your Selected Items from System/36

Use the save option to move the items you selected to a storage medium, such as tape, diskette, or user files (accessed by a communications program) so the items 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 System/36 Migration Aid produces an exception report automatically at the end of every save operation. Use it to verify that the items you selected have been saved successfully. If no exceptions occur, a message stating that all items were successfully migrated from the System/36 is printed on the report. If exceptions do occur, make the necessary changes at this time. The items can be selected 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 items that have migrated, items that have not migrated, and items that have been analyzed.

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

Refer to the *System/36 to AS/400 Migration Aid User's Guide and Reference* for information on how to restore your saved items.

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 items 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

You need to change those applications identified in the analysis reports. For details, see the *System/36 to AS/400 Migration Aid User's Guide and Reference*. In addition to those changes, you need to do the following:

Assembler programs and subroutines
Rewrite the programs and subroutines not supplied by IBM to one of the AS/400 languages.

BASIC
BASIC stream files and record files with unformatted records are migrated and converted by the Migration Aid.

Note: The communications functions of BASIC are not supported.

BASIC record files with formatted records containing 1- or 3-byte binary data or floating-point data have to be converted into 2- or 4-byte binary, Institute of Electrical and Electronic Engineers (IEEE) data format, respectively. A program is provided on the AS/400 system to convert a floating-point centesimal number to an IEEE number.

COBOL
Review the output of COBOL compilations and remove or change unsupported functions, such as TRACE statements, 1255 MICR references, or assembler subroutines.

Configuration
Only the work station support for the master configuration record is migrated from the System/36. If you have any other work station or communications configuration, you need to create it on the AS/400 system.

BGU
Re-create chart formats on the AS/400 system. A set of sample chart formats is provided by BGU to assist in this effort.

PC Support/36
Examine your .BAT files to ensure the files are correct.

Personal Services/36
Users need to notify their correspondents of new or changed user IDs, if appropriate.

Security
If you migrate files, libraries, or folders that have more than one owner, you may want to reassign ownership. Where several System/36 owners or QDFTOWN user profiles are involved, the Migration Aid assigns ownership to the first user found.

Work station utility (WSU)
Rewrite WSU programs in RPG III. See the *System/36-to-AS/400 Work Station Utility Conversion Guide*.

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 AS/400 hardware and licensed programs. See Task 1 (Step 1) on scheduling
- Providing education
- Running reports
- Adding DASD
- Making changes identified by reports and those not identified by reports
- Preparing media
- Saving, restoring, and compiling applications
- 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 that you chose in Task 2 (Step 1). Consider the following:

- 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 items
- 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 the System/36.
- Ensure you have enough DASD.

Step 3. Review the Migration 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.

___ Choose your strategy.

___ Choose people to perform migration.

___ Ensure you have met all system requirements.

___ Plan to install the System/36 Migration Aid.

___ Plan to run the system summary reports.

___ Plan to set the library member subtypes.

___ Plan to convert load members to source members.

___ Plan to use the analysis reports for unsupported functions.

___ Plan to make changes.

Task 3. Planning Your Migration.

___ Plan to migrate and resolve user IDs and office item names.

___ Plan to stop any production changes.

___ Plan to select your items.

___ Plan to save your selected items from System/36.

___ Plan to verify your save operation was successful.

___ Plan to restore your saved items on the AS/400 system.

___ Plan to verify your restore operation was successful.

___ Plan to make changes.

___ Plan to test your applications.

Task 4. Completing Your Migration.

___ Develop a schedule.

___ Verify your strategy.

___ Review this migration checklist again.

Appendix A. Product Information

This appendix highlights information that you should review prior to migrating your System/36 items to the AS/400 system. Further details for all products are found in the *System/36 to AS/400 Migration Aid User's Guide and Reference*.

Advanced Printer Function (APF)

Alternate character set, logo files, and form control files are migrated to the AS/400 system.

Assembler Programs and Subroutines

All IBM-supplied RPG II assembler subroutines are supported except SUBR22 (WSU) and SUBRNI (MICR).

All user-written assembler subroutines and programs need to be rewritten in AS/400 high-level languages (such as RPG III or control language) that perform equivalent functions.

BASIC

BASIC support on the AS/400 system is different from System/36 BASIC. The source members require modification. The program logic should remain the same. References to data files and displays require modification. AS/400 BASIC does not support communications. BASIC stream files and record files with unformatted records are migrated and converted by the Migration Aid.

BASIC record files with formatted records containing 1 or 3-byte binary data or floating-point data have to be converted into 2 or 4-byte binary, Institute of Electrical and Electronic Engineers (IEEE) data format, respectively. A program is provided on the AS/400 system to help you convert a floating-point centesimal number to an IEEE number.

Business Graphics Utilities/36 (BGU/36)

BGU items are migrated to the AS/400 system; however, you need to identify the graph data input files (GDIF) so they can be migrated.

Graph data members and GDIF are migrated to the AS/400 system. Graph formats are migrated but not supported. Sample chart formats are provided so charts can be reconstructed on the AS/400 system and merged with your graph data members.

Character Generator Utility (CGU)

CGU applies to double-byte character set (DBCS) support only. Extended character tables (#EXT2424 and #EXT3232) and master sort tables (#KAMAST) are migrated. Extended character tables (EXT1818) and active sort tables (#KACTIVE) are not.

COBOL

Most COBOL source members are compatible with the AS/400 COBOL.

Items not supported:

- SUBR22 WSU subroutines.
- CBMICR and DBEMCR subroutines, such as magnetic ink character recognition (MICR).
- DEBUG and TRACE statements.
- RM/COBOL programs.

Communications Hardware

Items not supported:

- Digital data service adapter (DDSA).

  However, you can use a V.35 adapter on an AS/400 system connected to an IBM 5821 or 5822 data service unit/channel service unit (DSU/CSU) to connect to a digital network.

Communications Licensed Programs

Items not supported:

- SSP-ICF binary synchronous communications (BSC) connections to Customer Information Control System (CICS) and Information Management System (IMS).

  Change your communications configuration to use synchronous data link control (SDLC) or rewrite your applications using advanced program-to program communications (APPC) to communicate with CICS or SNA upline facility (SNUF).

- BSC RPG II

  RPG II telecommunications programs are source-compatible; however, configuration objects must be defined and varied on. An Override ICF Device Entry (OVRICFDEVE) command is used to connect the program to the line, because the communications OCL statement is no longer supported.

- SSP-ICF BSC for communications control program (CCP) support.

  Rewrite your applications using other BSC support.

- SSP-ICF Peer subsystem.

  SSP-ICF Peer subsystem is no longer supported. Use APPC if the connection is to an IBM Advanced 36. No support is available if the connection is to an IBM System/34.

- Distributed Disk File Facility (DDFF).

  If you have System/36s in your network, you can use DDM to receive equivalent support. No support is available if the connection is to an IBM System/34.

- 3270 binary synchronous Application Program Interface (BSC API).

  Rewrite your application using the AS/400 3270 BSC API.

- Multiple Session Remote Job Entry (MSRJE).

  MSRJE CDISK (compressed) files must be converted to files or spooled output before migration.

- PC 3278 Emulation.

Configuration

The master configuration for the local and remote work stations is migrated. Other configurations have to be redefined manually on the AS/400 system.

Data File Utility (DFU)

DFU subroutine and load modules are migrated to the AS/400 system. DFU LIST programs are also migrated and converted. DFU source members are not required for migration of DFU programs. DFU source members are not supported on the AS/400 system. However, they are migrated to the AS/400 system and restored as is.

Devices

The AS/400 system supports the majority of devices available on the System/36. However, the following devices are not supported:

- Personal computers with the original Display Station Emulation Adapter.

  You can use the Enhanced 5250 Emulation adapter or the System/36 Work Station Emulation adapter card as a replacement.

- Tape Drive
  - 8809 (Use the 9347 for 1600 BPI data interchange.)
  - 6157 (Use the 9346 and 1/4-inch tape unit with 1/4-inch tape cartridges, for moving data.)

- Diskette magazine.

  A single diskette reader, 9331 Diskette Unit Model 001, is available if diskette interchange is required.

- 1255 MICR reader.

  Use the 3694 as an MICR input device, or migrate all your applications except the MICR input to the AS/400 system and then use communications to transfer the input from the System/36 to the AS/400 system.

- Digital data service adapter (DDSA) communications adapter.

  You can use DDSA communications via the IBM 5821 or 5822 data service unit/ channel service unit (DSU/CSU) and a V.35 adapter on the AS/400

system. If you were using the DDSA for local connection, you can use a V.35 adapter or the IBM Token-Ring Network.

- Printers
  - 3262
  - 5224-12
  - 5225-11
  - 5225-12

DisplayWrite/36 (DW/36)

Items Not Supported:

- Archived documents.

  Archived documents can be retrieved back to the System/36 and then migrated, but they cannot be restored directly to an AS/400 system.

- 6580 Displaywriter connected using BSC.

  6580 Displaywriter connected by SDLC and used by Client Access for OS/400 for document distribution will continue to be supported.

- 6670 Information Distributor.

  OfficeVision for OS/400 does not support the 6670 Information Distributor when printing documents.

Distributed Data Management (DDM)

The network resource directory (NRD) is migrated to the AS/400 system.

Files

- All files are migrated to the AS/400 system. You need to decide which libraries files should be moved to. See the *System/36 Environment Programming* book for information on Multiple Files Libraries.
- BASIC record files with formatted records containing 1- or 3-byte binary data or floating point data have to be converted into 2- or 4-byte binary, Institute of Electrical and Electronic Engineers (IEEE) data format, respectively. A program is provided on the AS/400 system to help you convert of a floating-point centesimal number to an IEEE number.
- Extendable direct files are not supported. You need to rewrite applications. See the *System/36 Environment Programming* book.
- Date-differentiated alternative index files are not supported. Application redesign is required.

Graphical Data Display Manager (GDDM)

All GDDM graphic data files are migrated and supported.

Interactive Data Definition Utility (IDDU)

All IDDU data dictionaries are migrated. A System/36 data dictionary is stored as a data dictionary in a library on the AS/400 system. However, if you have a data dictionary named QTEMP, QDOC, QMGU, QRCL, QSPL, QSRV, QSSP, or QSYS, it is not migrated. It must be renamed.

Libraries

Libraries are migrated into AS/400 libraries with equivalent names. If you have a library named QTEMP or QSYS, it is not migrated. It must be renamed.

Menus

All user-defined menus are migrated to the AS/400 system. The Migration Aid can be used to re-create the source member from the load member if the source member has been deleted.

Note: F12 on the AS/400 system, instead of Command key 3, takes you to the previous menu.

Messages

All user message members can be migrated to the AS/400 system. The Migration Aid can be used to re-create the source member from the load member if the source member has been deleted.

Operation Control Language (OCL)

Most OCL statements are supported in the System/36 Environment. See the *System/36 Environment Programming* book for a list of procedures, OCL statements, utilities, and procedure control expressions that are not supported or that work differently.

PC Support/36

Items not migrated:

- Virtual diskettes.

  Virtual diskettes must be converted into virtual disks or shared folders before migration.

- User-defined translation tables.

  The IBM-supplied translation table must be changed again on the AS/400 system.

Note: Client Access for OS/400 does not work with a 5294 Controller.

Personal Services/36

Migration operates on the basis of selection by user for Personal Services/36. When a given user is selected for migration, all of the Personal Services-related items are migrated.

Items not migrated:

- Outgoing mail files.
- Search lists and search results.

Query/36

All queries can be migrated to the AS/400 system.

RPG II

Most RPG II source members are compatible with the AS/400 system.

IBM-supplied assembler subroutine member SUBR22 is not supported.

Screen Design Aid (SDA)

All screen formats, menus, and messages are compatible with the AS/400 system and can be migrated. The Migration Aid can be used to re-create the source member from the load member if the source member has been deleted.

Security

System/36 security information can be migrated to AS/400 security. See the *System/36 to AS/400 Migration Aid User's Guide and Reference* for resource and office security considerations.

Source Entry Utility (SEU)

SEU is part of the AS/400 Application Development Tools licensed program. User-supplied prompts are not migrated and must be recreated using Application Development Tools.

Sort

All sort specifications are migrated and supported on the AS/400 system.

Work Station Utility (WSU)

WSU programs can be migrated but are not supported on the AS/400 system and need to be rewritten. See the *System/36-to-AS/400 Work Station Utility Conversion Guide*, SC09-1221, for more information.

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.

access code. A 1- to 4-digit number assigned to documents and folders, which gives those users authorized to the access code use authority to the documents and folders.

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 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 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.

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.

application. A particular business task, such as inventory control or accounts receivable.

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.

| **AS/400 Advanced 36**. AS/400 hardware models that
| are capable of running System Support Program
| Product (SSP) or OS/400 as their primary operating
| system. SSP can be used as a secondary operating
| system on AS/400 Advanced 36 models when OS/400
| is the primary operating system.

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.

backup. (1) Pertaining to an alternative copy used as a substitute if the original is lost or destroyed, such as a backup log. (2) The act of saving some or all of the objects on a system to a tape, diskette, or save file. (3) The tapes, diskettes, or save files with the saved objects. (4) For communications, see *switched network backup (SNBU)*.

backup copy. A copy, usually of a file, library member, or folder, that is kept in case the original is unintentionally changed or destroyed.

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.

basic characters. Frequently used double-byte characters that are stored in the hardware of a DBCS-capable work station. The number of double-byte characters that are stored in the work station varies with the language supported and the storage size of the work station. A DBCS-capable work station can display or print basic characters without using the extended character processing function of the operating system. Contrast with *extended characters*. See also *extended character processing*.

| **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.

binary synchronous communications equivalence link (BSCEL) support. The intersystem communications function (ICF) support on the AS/400 system that provides binary synchronous communications with another AS/400 system, System/36, System/38, and many other BSC computers and devices.

bpi. Bits per inch.

BSCEL support. See *binary synchronous communications equivalence link (BSCEL) support*.

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

calendar group. In the OfficeVision/400 program, a list of existing calendars used to schedule items for a group of users in one step.

centesimal floating-point format. The representation for numbers within the computer.

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. 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.

chart format. An object containing chart characteristics, such as the chart type, chart heading, legend position, and so on. The chart format does not include the data values to be plotted. The system-recognized identifier for the object type is *CHTFMT.

CICS/VS. See *IBM CICS/VS*.

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.

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

command file. 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*.

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. The transmission of information between points of origin and reception without alteration of sequence or structure of the information content. See also *data communications*.

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.

compile. To translate a program written in a high-level programming language into a machine-language program.

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 and checksum protection.

console. 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.

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 unit. A device or processor card that coordinates and controls the operation of one or more input/output devices (such as work stations) an synchronizes the operation of such devices with the operation of the system as a whole. Same as *controller*.

controller. A device that coordinates and controls the operation of one or more input/output devices (such as work stations) and synchronizes the operation of such devices with the operation of the system as a whole.

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*.

controller description. An object that contains a description of the characteristics of a controller that is either directly attached to the system or attached to a communications line. is *CTLD.

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.

Customer Information Control System for Virtual Storage (CICS/VS). A licensed program that operates on a host system, such as System/370, 30xx, or 43xx, which can be used in a communications network.

DASD. See *direct access storage device*.

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

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 Design Utility (DSU). A feature of the CoOperative Development Environment/400 licensed program that helps users develop and create display files, printer files, and database files.

data dictionary. 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 organized 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. (1) A collection of related data records organized in a specific order. (2) A file created by the specification of FILETYPE(*DATA) on the create commands. (3) In BASIC, the table containing the values from the DATA statements of a program. (4) 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 service unit (DSU). A device that provides a digital data service interface directly to the data terminal equipment. The DSU provides loop equalization, remote and local testing capabilities, and a standard EIA/CCITT interface.

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)*.

DDFF. See *Distributed Disk File Facility (DDFF)*.

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

DDM file. A system object with type *FILE, created by a user on the local (source) system, that identifies a data file that is kept on a remote (target) system. The DDM file provides the information needed for a local system to locate a remote system and to access the data in the remote data file.

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.

Development Support Utility (DSU). A program product that can be used to create, edit, remove, view, or print procedure members and source members.

device. 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.

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 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)*.

direct access storage device. A disk drive used to increase the disk storage capacity of the system.

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.

disk file. A set of related records on disk that is treated as a unit.

display. A visual presentation of data.

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.

display station pass-through. A communications function that allows a user to sign on to one system (either an AS/400 system, System/38, or System/36) from another system (either an AS/400 system, System/38, or System/36) and use that system's programs and data. Sometimes called pass-through or 5250 pass-through.

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 Disk File Facility (DDFF). A feature of the System Support Program Product that allows a System/3 or System/34 with DDFF to access disk files on System/36.

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 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. An entity that requires two character bytes.

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)*.

DSU. See *data service unit (DSU)* or *Data Description Specifications Design Utility (DSU)*.

emulation. Imitation of one system or device by another.

exception. 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.

extended character processing. A function of the operating system that is required to make characters stored in a DBCS font file available to a DBCS-capable work station. Basic characters, which are stored in the work station, do not require extended character processing. Extended characters, which are stored in a DBCS font table, require extended character processing before they can be displayed or printed. See also *basic characters* and *extended characters*.

extended character file. An area on disk that contains the extended ideographic character set.

extended characters. Double-byte characters that are stored in a DBCS font file, not in the hardware of a DBCS-capable work station. When displaying or printing extended characters, the work station receives them from the DBCS font table under control of the extended character processing function of the operating system.

Contrast with *basic characters*. See also *extended character processing*.

external procedure. A procedure that is not contained within a block. Contrast with *internal procedure*.

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. 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*.

folder. 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. Compare with *library*.

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.

forms control table (FCT). An object that contains the special processing requirements for output data streams received from a host system by a remote job entry (RJE) session. The system-recognized identifier for the object type is *FCT.

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.

function subprogram. A user-written subprogram defined by FORTRAN statements, the first of which is a FUNCTION statement. See also *statement function* and *subroutine*.

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

graph. (1) See *chart*. (2) In Performance Tools for OS/400, the displayed, printed, or plotted output that represents the horizontal and vertical axis variables specified by the user for a collection of performance data.

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)*.

graphics data format (GDF). In Advanced Function Printing Utilities for OS/400, the ability to create an AFP resource, such as an electronic overlay.

graph data input file (GDIF). A file that contains all the data values and labels needed to generate a graph. The file is copied to a graph data member by the BGUDATA procedure.

graph data member. A source member that contains all the actual graph data values.

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.

graphics data format (GDF) file. A picture definition in a coded format used internally by GDDM and optionally providing the user with a lower level programming interface than the GDDM API.

group. (1) In the Application Development Manager/400 feature of the Application Development ToolSet/400 licensed program, a collection of parts at the same phase in the development process. (2) A collection of CICS resource definitions that can be usefully exported together. A group normally includes all the elements for an application. (3) In DCE Remote Procedure Call (RPC), a name service entry that corresponds to one or more RPC servers that offer common RPC interfaces, RPC objects, or both. A group contains the names of the server entries, other groups, or both that are members of the group. See *NSI group attribute*. (4) In DCE Security, data that associates a named set of principals that can be granted common access rights. See *subject identifier*.

group authority. Authority to use objects, resources, or functions from a group profile.

group calendar. A display that shows the events for up to seven users at one time.

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/36 Migration Aid. The IBM licensed program that helps organize and automate the migration of System/36 items to the AS/400 system.

IBM CICS/VS. An IBM licensed program that operates on a host system, such as the System/370, 30xx, or 43xx computers, which can be used in a communications network.

IBM Communications Utilities/400. The IBM licensed program that contains the VM/MVS bridge and the remote job entry function.

IBM DisplayWrite 3. A text processing licensed program for the personal computer that allows a user to create, change, and print multiple-page letters, reports, and technical documents that include special symbols and statistical tables.

IBM DisplayWrite 4. A text processing licensed program for the personal computer with the functions of the DisplayWrite 3 program, plus footnotes, merge capabilities, and some advanced editing functions. See also *IBM DisplayWrite 3*.

IBM DisplayWrite/36. A text processing licensed program for the System/36 with the functions of the DisplayWrite 4 program (except footnotes), plus more formatting instructions and merge capabilities, printing options, and support for the combined menu options. See also *IBM DisplayWrite 3* and *IBM DisplayWrite 4*.

IBM OfficeVision/VM. An IBM licensed program that allows users to create, change, and send notes and documents; make appointments and maintain calendars; create and maintain schedules; create and maintain distribution lists; and control electronic mail and personal files. Formerly known as the PROFS licensed program. See also *Remote Spooling Communications Subsystem (RSCS)* and *VM/MVS bridge*.

IBM Operating System/400 (OS/400). Pertaining to the IBM licensed program that can be used as the operating system for the AS/400 system.

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

ID. An identifying string of letters and/or numbers, perhaps with punctuation.

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

IMS/VS. See *Information Management System for Virtual Storage (IMS/VS)*.

index. (1) In COBOL, a computer storage position or register, the contents of which identify a particular element in a table. (2) In DB2 for OS/400, pointers that are logically arranged by the values of a key. Indexes provide quick access and can enforce uniqueness on the rows in a table. (3) In VRPG Client, the identifier of an entry in a part, such as a list box or a combination box.

information frame (I-frame). In communications, a transmission frame that is sequentially numbered and used to transmit data.

Information Management System for Virtual Storage (IMS/VS). A general purpose system that enhances the capabilities of OS/VS for batch processing and telecommunication. It allows users to access a computer-maintained database through remote terminals.

input. Data in information to be processed.

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*.

input/output controller (IOC). A functional unit that combines the I/O processor and one or more I/O adapters, and directly connects and controls one or more input or output devices.

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 communications feature (SSP-ICF). A group of communications features of the System Support Program Product that allows a program to interactively communicate with another program or system.

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. A shared boundary between two functional units.

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*.

internal procedure. In PL/I, a procedure that is contained within a block. Contrast with *external procedure*.

Intra subsystem. A SSP-ICF subsystem that enables program to communicate with other programs on the same system without the use of communication lines.

keyword. (1) A mnemonic (abbreviation) that identifies a parameter in a command. (2) In the OfficeVision/400 program, a user-defined word used as one of the search values to identify a document during a search operation. (3) In COBOL, a reserved word that is required by the syntax of a COBOL statement or entry. (4) In DDS, a name that identifies a function. (5) In REXX, a symbol reserved for use by the language processor in a certain context. Keywords include the names of the instructions and ELSE, END, OTHERWISE, THEN, and WHEN. (6) In query management, one of the predefined words associated with a query command. (7) A name that identifies a parameter used in an SQL statement. See also *parameter*.

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

level checking. A function that compares the record level identifiers of a file to be opened with the file description that is part of a compiled program to determine if the record format for the file changed since the program was compiled.

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. (A)

library member subtype. A specific classification of a library member type. For example, a source member can be identified as a COBOL source member or a DFU source member.

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.

load member. A library member that contains information in machine language, a form that the system can user directly. Contrast with *source member*.

load module. In CoOperative Development Environment/400, a program in a form suitable for loading into main storage for processing.

local. 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*.

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*.

logo. A letter, combination of letters, or symbol used to represent an entire word (abbreviation for logogram). The display that identifies the IBM Corporation and the program name on licensed programs.

magazine. A container that holds up to 10 diskettes.

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

master configuration record. Information, stored on disk, that describes system devices, programming, and characteristics.

master security officer. A person who is designated to control all of the security tasks that are provided with the System Support Program Product. A master security officer can, for example, deactivate password, badge, or resource security, or add, change, or remove security information about any system operator. Contrast with *security officer*.

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.

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)*.

MSRJE. See *Multiple Session Remote Job Entry (MSRJE)*.

Multiple Session Remote Job Entry (MSRJE). A feature of the System Support Program Product that allows one or more remote job entry sessions to operate on a host system (such as a System/370, or a 30xx or 43xx processor) at the same time.

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

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

network resource directory (NRD). An area on disk that lists the files on remote systems and the route that can be used with distributed data management (DDM).

NRD. See *network resource directory (NRD)*.

NSI group attribute. In DCE Remote Procedure Call (RPC), an RPC-defined attribute (NSI attribute) of a name service entry that stores the entry names of the members of an RPC group and identifies the entry as an RPC group. See *group*.

| **object**. (1) 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 programs, files, libraries, and folders. (2) A visual part of the interface that the user can work with to perform a task. Icons and text are examples of objects. (3) In MQSeries for OS/400, objects define the attributes of queue managers, queues, and process definitions. (4) In DB2 for OS/400, anything that can be created or manipulated with SQL statements, such as databases, tables, views, or indexes. (5) In object-oriented programming, a software entity consisting of instance data and the methods that can be performed on that data. An object is an instance of a class.

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.

OCL. See *operation control language (OCL)*.

| **Office**. See *OfficeVision/400*.

| **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 capa-
| bility 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. The result of processing statements in a high-level language. See also *keyword functions*.

operation control language (OCL). A language used to identify a job and its processing requirements to the System Support Program Product.

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*.

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 Inte-
| grated 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 exe-
| cution of the command. (5) In DB2 for OS/400 SQL,
| the keywords and values that further define SQL pre-
| compiler commands and SQL statements. See also
| *keyword*.

pass-through. See *display station pass-through*.

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 subsystem. The SSP-ICF subsystem that allows System/36 to communicate with another System/36 or System/34 using SNA/SDLC.

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

Personal Services/36. In Personal Services, a program product for sending and receiving mail, scheduling appointments on calendars, maintaining directories of names and addresses, working with groups of users or calendars and accessing document library services.

phone list. A list of telephone numbers to be called using a communications program and the autocall or X.25 feature.

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)*.

printer. A device that writes data from a computer on paper or other media.

| **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 com-

| mands. A procedure allows an application to run mul-
| tiple 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 proce-
| dure is called a function.

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

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

record. A group of related data, words, or fields treated as a unit, such as one name, address, and telephone number.

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

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*.

| **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.

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*.

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)*.

slot. A small opening.

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. The system function of putting files or jobs into disk storage for later processing or printing.

SSP. See *System Support Program Product (SSP)*.

SSP-ICF. See *interactive communications feature (SSP-ICF)*.

statement function. A user-written function that is defined and referred to within the same program. The user-written function is defined in a statement function definition statement. See also *function subprogram* and *subroutine*.

subject identifier (SID). In the Distributed Computing Environment (DCE), a string that identifies a user or a set of users.

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.

subroutine member. (1) A library member that contains information that must be combined with one or more members before being run by the system. (2) In AS/400 BASIC, a library member that contains a BASIC program in the form in which it appears with the computer.

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

switched network backup (SNBU). A modem feature that allows a nonswitched line to be used alternatively as a switched line or allows a switched line to be used as a nonswitched line depending on the characteristics of the modem.

subtype. See *library member subtype*.

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 configuration. A process that specifies the machines, devices, and programs that form a particular data processing system.

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

System Support Program Product (SSP). A group of licensed programs that manage the running of other programs and the operation of associated devices, such as the display station and printer. The SSP also contains utility programs that perform common tasks, such as copying information from diskette to disk.

System/36 environment. A function of the OS/400 operating system that processes most of the System/36 operator control language (OCL) statements and procedure statements to run System/36 application programs

| and allows the user to process the control language
| (CL) commands.

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.

terminal. In data communications, a device, usually equipped with a keyboard and a display device capable of sending and receiving information over a link.

terminal. In data communications, a device, usually equipped with a keyboard and a display device capable of sending and receiving information over a link.

translation table. (1) A system table that provides replacement characters for characters that cannot be printed. (2) An object that contains a set of hexadecimal characters used to translate one or more characters of data. For example, unprintable characters can be translated to blanks, and lowercase alphabetic characters can be translated to uppercase characters. The system-recognized identifier for the object type is *TBL.

transaction. (1) An item of business, for example, the handling of customer orders and customer billing. (2) In CICS for OS/400, a four-character code (called a tranid) that is recognized by CICS. (3) 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. (4) 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. (5) 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*. (6) 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. (7) 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.

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 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*.

utilities. See *utility program*.

Utilities Program Product. A program product that contains the data file utility (DFU), the source entry utility (SEU), the work station utility (WSU), and the screen design aid (SDA).

utility program. (1) A program provided to perform a task that is required by many of the programs using the system; for example, a program that copies information from diskette to disk. (2) A program of the System Support Program Product that performs a common task.

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

virtual diskette. An area of main storage created by the File Support Utility to contain data from an IBM personal computer.

VM/MVS bridge. A function of the Communications Utilities/400 licensed program that provides distribution services between an AS/400 SNADS network and both a VM Remote Spooling Communications Subsystem (RSCS) network and a Multiple Virtual Storage/Job Entry Subsystem (MVS/JES) network. Formerly known as RSCS/PROFS bridge. See also *bridge*, *OfficeVision/VM*, and *Remote Spooling Communications Subsystem (RSCS)*.

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.

work station utility (WSU). The part of the Utilities Program Product that helps you to write programs for data entry, editing, and inquiry.

WSU. See *work station utility (WSU)*.

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.21 short-hold mode. An option specified during system configuration that allows a circuit switched line to be disconnected when the line is not active.

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.

XPF-ICF communications file. A file that describes different types of communications devices. This file allows an application program to do other work while the devices are sending or receiving data.

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.

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System/36 Migration Planning
Version 3

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