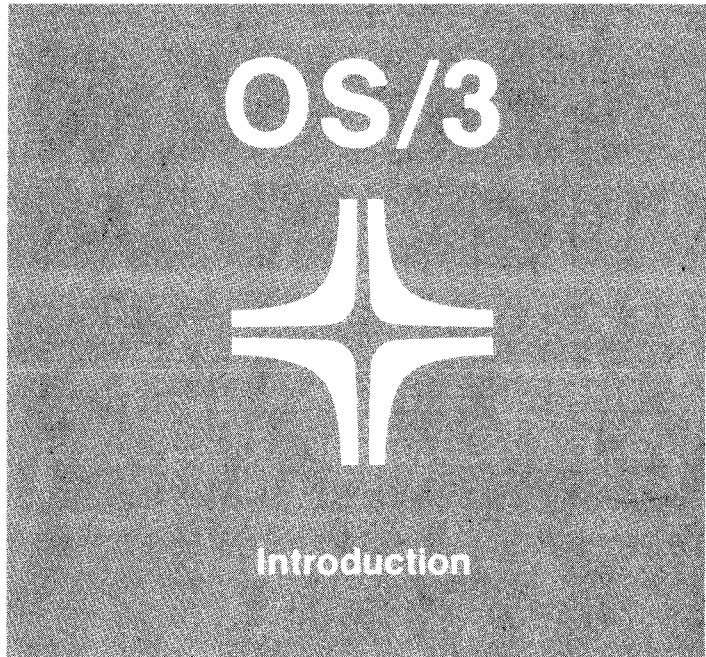


IBM System/32—System/34 to System 80 Transition



Environment: System 80

SPERRY  UNIVAC

UP-8987

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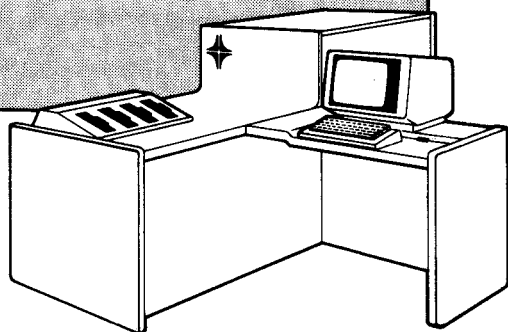
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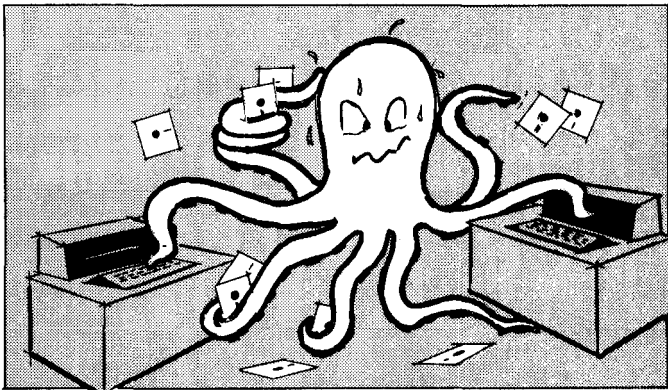
Utility programs and conversion
aids simplify the transition from
IBM System/32 or System/34 to
System 80.



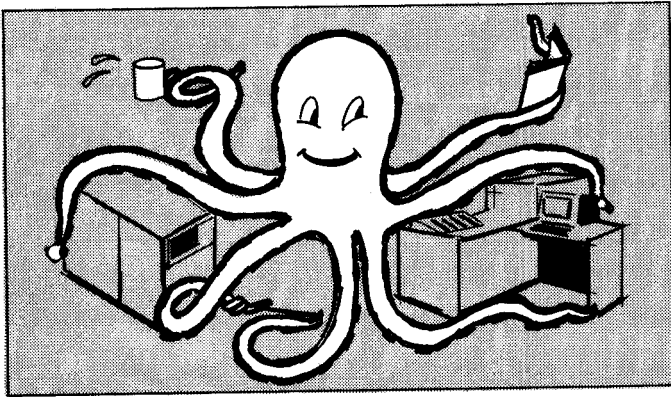


familiarity breeds transition

Many people in data processing view converting from one system to another as a difficult and sometimes unfruitful enterprise. There are many operations involved in such a transition, and they can all be tedious and time-consuming. You must transfer program libraries and data files, change your programs to accommodate a whole new set of language particulars, reconstruct screen display formats, and more while trying to keep production as nearly normal as possible. And, you must learn the new operating system while still using the old operating system to accomplish the transition.



However, such a transition doesn't have to be difficult. When you convert from an IBM System/32 or System/34 to the SPERRY UNIVAC System 80, you'll be surprised how well the transition goes! SPERRY UNIVAC Operating System/3 (OS/3), the operating system which runs on System 80, has been enhanced to make your transition as painless as possible.



OS/3 eases your transition in two ways:

1. OS/3 has several features that let you accomplish the necessary conversions more easily. These include utility programs to transfer your program libraries and data files, a utility program to convert IBM operation control language (OCL) to OS/3 job control language (JCL), and equivalent programming languages to minimize conversion problems.
2. Many of the software features of OS/3 have taken conversion from System/32 or System/34 into account, and have been designed to appear as familiar as possible to users of System/32 or System/34. In some cases, you can actually use IBM programming specifications as input to OS/3!

Now, we'll tell you about those features and how they can make your transition between System/32 or System/34 and System 80 smoother and easier.

moving day for your files

One of the most important tasks you'll perform in moving from System/32 or System/34 to System 80 is the transfer and reformatting of program libraries and data files.

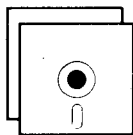
Here is how you move program libraries.

To transfer your program libraries, you use diskettes, the medium common to both systems. You copy your program libraries to diskettes on System/32 or System/34, using the \$MAINT utility routine. Then you mount the diskettes on System 80, and use the COPYS3 utility program to transcribe your source program libraries and OCL procedures (procs) to an OS/3 library disk file. It's just that simple!

SYSTEM/32-SYSTEM/34

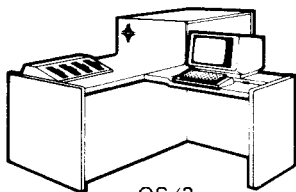


SMAINT



COPYS3

SYSTEM 80 (OS/3)



OS/3
PROGRAM
LIBRARIES

This is how you transfer data files.

Like program libraries, you transfer your data files on diskettes. There are two utility routines you can use on System/32 or System/34 to copy your data files to diskettes, depending on the size of records within your data files. You use the TRANSFER procedure to copy files with records of up to 256 bytes, and you use the \$COPY routine for files with larger records.

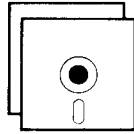
When you transcribe the diskettes to disk files on OS/3, you need only one utility: the OS/3 Data Utilities. It copies diskettes made under both the TRANSFER procedure and the \$COPY routine.

SYSTEM/32-SYSTEM/34



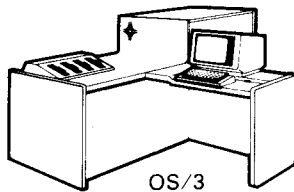
S/32-34
DATA
FILES

TRANSFER or SCOPY



DATA
UTILITIES

SYSTEM 80 (OS/3)



OS/3
DATA
FILES

RPG II spoken here

Most users of System/32 or System/34 use the RPG II programming language. Sperry Univac has taken special care to ensure that moving your RPG II programs from your present system to System 80 is as straightforward and trouble-free as possible. In many cases, all you have to do is recompile your programs on System 80. OS/3 RPG II is highly compatible with System/32 or System/34 RPG II, so few modifications should be required.

A feature of OS/3 RPG II you'll quickly recognize is RPG II auto report. Auto report gives you a method of creating RPG II programs without having to know in detail all the RPG II forms and specifications. You'll be able to use OS/3 RPG II auto report with the same ease you used System/32 or System/34 auto report. In fact, the two auto report processors are compatible and require no changes at all!

OS/3 also offers an interactive method of creating RPG II programs: the RPG II editor. This editor lets you write RPG II programs by entering RPG II statements at a workstation. You just *fill in the blanks* of a series of screen displays, much like completing RPG II specification forms. The RPG II editor accommodates programmers of varying levels of skill through different types of screen displays. The novice programmer can use the fill-in-the-blanks screens, which tell him exactly what he must enter to write his program. More experienced programmers can use either a simple columnar screen or a blank free-form screen display to quickly enter RPG II programs. The RPG II editor also checks your RPG II program syntax, helping you create programs that require less debugging. The following illustration shows a typical fill-in-the-blanks screen display. On this one, you describe a file to your program (file description specification form).

```

LINE - 1.0000
1 SEQUENCE NUMBER: ..... 6 FORM TYPE F 7 FILENAME: ..... 15 FILE TYPE: .....
16 FILE DESIGNATION: ..... 17 END OF FILE: ..... 18 SEQUENCE: ..... 19 FILE FORMAT: .....
20 BLOCK LENGTH: ..... 24 RECORD LENGTH: ..... 28 FILE PROCESSING MODE: .....
29 KEY OR FIELD LENGTH: ..... 31 RECORD ADDRESS TYPE: ..... 32 FILE ORGANIZATION: .....
33 OVERFLOW INDICATOR: ..... 35 KEY FIELD STARTING LOCATION: .....
39 EXTENSION OR LINE COUNTER CODE: ..... 48 DEVICE: ..... 53 CONT. LABELS: .....
54 OPTION NAME: ..... 60 ENTRY/STORAGE BYTES: ..... 66 FILE ADDITION: .....
67 CYLINDER OVERFLOW %: ..... 68 NUMBER OF EXTENTS: ..... 70 REWIND: .....
71 FILE CONDITIONERS: ..... NEXT SPECIFICATION TYPE, ST, OR CMD: (.....)
.....
.....
.....

```

we speak other languages, too!

Your programs written in either FORTRAN or COBOL can also make the move over to System 80 with only minor modifications in most cases. And, you can make those changes interactively, using the OS/3 COBOL editor and the OS/3 general editor. The COBOL editor works in much the same way as the RPG II editor, letting you write and modify COBOL programs by entering COBOL statements at a workstation. Like the RPG II editor, the COBOL editor checks program syntax and allows programmers to use fill-in-the-blanks screen displays to write their programs.

FORTRAN programmers will find the powerful OS/3 general editor a great help in creating or modifying FORTRAN programs. This editor lets you create or modify both data and program files from a workstation. Programmers will find the screen mode feature especially helpful. Screen mode transforms the workstation screen into a

coding form, letting you create and modify programs just as if you were using a paper coding form, but with greater ease (and a lot fewer erasures!). Screen mode provides coding form screen displays for COBOL, FORTRAN, and RPG II. Experienced programmers who wish to code programs quickly with minimal assistance will find the general editor screen mode especially easy to use.

OS/3 provides an assembly language, but we recommend that you rewrite your System/32 or System/34 assembly language programs by using one of the high-level languages available with OS/3. This lets you make full use of all the advanced features of OS/3.

You won't have any trouble sorting things out when you move to OS/3. Sperry Univac supplies SORT3, an easy-to-use sort program compatible with System/32 and System/34. SORT3 accepts almost all System/32-System/34 sort specifications and requires very little programming effort. It does not have to be assembled or linked to your programs.

familiar features

Earlier, we mentioned that you'd find many System 80 features similar to the programs and utilities you've been working with on System/32 or System/34. In this section, you'll learn about some of these similar features, how they function on System 80, and how one of them can accept IBM programming specifications.

First, we'll discuss how OS/3 creates screen display formats, and how you can use your S & D specifications to create screen display formats on OS/3.

In OS/3, an interactive utility program, the screen format generator, produces screen display formats. To construct a format using the screen format generator, you simply create the format on a blank workstation screen displayed to you by the screen format generator. After you've created the screen, the screen format generator engages you in a dialog describing the type of data to be

entered by using the screen display format. The screen display format is then stored until you are ready to use it in a program.

To use your IBM System/32 or System/34 S & D specifications to create screen formats on OS/3, Sperry Univac gives you a utility program to automatically convert your S & D specifications into a form acceptable to the screen format generator. The translated specifications are then fed into the screen format generator, and a screen is produced. A printed listing tells you of any attributes of your IBM screen format that cannot be duplicated. The same listing also tells you of any substitutions made to approximate an attribute which could not be directly converted.

we'd like to see a menu, please

Two other features of OS/3 you will find familiar are the system menu screens Sperry Univac supplies and the utility program that lets you create your own menu screens. The menu screens Sperry Univac supplies display information to aid you in logging onto the system and in using the various interactive commands and facilities available with OS/3. Each menu gives you choices of various system functions you can perform. All you have to do is indicate which function you wish to perform. If you need more information before making a choice, you can call for HELP screens. These screen displays explain each function listed on the menu.

The following illustration shows a menu screen, listing various system functions you can perform, such as the RPG II editor. The illustration also shows, directly below the menu screen, a HELP screen that explains the function of the RPG II editor.

```

      SYSTEM FUNCTION MENU                                OS314
    1. DATA UTILITIES                                6. EDITOR
    2. BASIC                                          7. JCL DIALOG
    3. SCREEN FORMAT GENERATOR                      8. SYSGEN DIALOG
    4. RPG EDIT                                     9. RETURN TO SYSTEM MENU
    5. DDP
  
```

ENTER SELECTION NUMBER: ___

```

    THE RPG EDITOR IS AN INTERACTIVE UTILITY WHICH PROVIDES
    SEVERAL METHODS FOR CREATION AND/OR MAINTENANCE OF RPG II SOURCE
    STATEMENTS. CREATING A SOURCE ELEMENT ALLOWS THE ENTRY OF RPG II
    SPECIFICATIONS FOR A NEW RPG II PROGRAM. MAINTENANCE OF A
    SOURCE ELEMENT ALLOWS SOURCE STATEMENTS TO BE DISPLAYED, CHANGED,
    INSERTED, DELETED, OR REPLACED WITHIN THE ELEMENT. THE RPG
    EDITOR IS A SUBPROCESSOR TO THE GENERAL PURPOSE EDITOR (EDT),
    ALLOWING THE USER FULL EDT CAPABILITIES.
    THE RPG EDITOR PROVIDES THREE DISPLAY FORMAT TYPES FOR THE
    USER: FORMATTED, POSITIONAL, AND FREE FORM.
  
```

PRESS TRANSMIT TO CONTINUE.

OS314H*

More importantly, you can create menus custom tailored to your particular operations. The utility program you use to create your own menus is called the menu generator. It lets you create menu screens which list your own programs. The menu generator also lets you create your own HELP screens for use with your own menus. And, if you decide not to provide HELP screens, the system automatically includes a message indicating that there is no HELP screen available.

control language conversion

One of the more difficult tasks in moving from one system to another is the conversion of the operation control language (OCL). But, when you convert from System/32 or System/34, you won't find those difficulties. Sperry Univac has created a utility program, JCLCON802, to automatically convert your System/32 or System/34 OCL to OS/3 job control language (JCL). Any OCL statements that JCLCON802 can't translate are listed in a printout produced at the end of the program.

a quick review

We've shown you the features through which you make the transition from IBM System/32 or System/34 to System 80. Let's go over those features once again.

- DATA FILE AND PROGRAM LIBRARY CONVERSION

Easy-to-use utilities to transcribe data files and program libraries.

- COMPATIBLE PROGRAMMING LANGUAGES

Special compatibility features of RPG II, RPG II auto report, RPG II editor. Compatible FORTRAN and COBOL languages, use of the general editor to interactively create and modify programs. SORT3, the System/32–System/34 compatible sort program.

- FAMILIAR FEATURES TO EASE CONVERSION

Sperry Univac supplies menus and HELP screens to aid you in performing system functions - lets you create your own menus and HELP screens. OS/3 screen format generator accepts System/32 or System/34 S & D specifications to create formatted screen displays.

- JOB CONTROL LANGUAGE CONVERSION

Sperry Univac supplies a program, JCLCON802, that converts System/32-System/34 OCL to OS/3 JCL (job control language).

beyond familiarity

We've told you how familiar you will find many of the features of OS/3. But you don't acquire a new data processing system just to get a carbon copy of your old system. You acquire a new system to obtain what System 80 and its operating system, OS/3, offer you: new capabilities, more power, and greater ease of use.

In addition to RPG II, FORTRAN, and COBOL, System 80 offers two interactive languages: BASIC and ESCORT. BASIC is well known in the computer industry, is particularly adept at mathematical problems, and is so easy to learn that it is being taught in many high schools. ESCORT is a new language, developed by Sperry Univac, for people with little or no formal computer training. Using simple, English-like statements, ESCORT lets more people use data processing systems productively. ESCORT is sufficiently powerful and versatile that even experienced programmers will want to use it.

The familiar features you'll find on System 80 will ease your transition. The new capabilities System 80 offers bring solutions to your most challenging data processing problems and allow your data processing activities to expand, matching the needs of your growing business.







1
2
3

