# converting to IBM System/360



### a new approach to conversion

If you're an IBM 1620, 1400- or 7000series user, you've probably had your system on the air for a few years now. Chances are it's running smoothly and doing the job you expected. But in these same few years your business has grown, perhaps faster than you thought it would, and today your data processing system may be hardpressed to meet the new demands.

You may well be thinking about replacing it with an IBM System/360... a third-generation system that will give you the flexibility you need, including additional direct-access storage, faster magnetic tapes, visual display devices, vastly increased data channel power...plus an operating system unequaled in its field.

But you are probably wondering if conversion still involves the same problems, or has IBM come up with an approach to simplify and shorten the conversion process, minimize disruption and reduce the cost? If you're converting to IBM System/360, the answer is an emphatic "yes," because System/360 brings with it tools that allow you to install with maximum efficiency. This brochure will tell you about these conversion aids.



## protect your programming investment

Compatibility features and associated emulator programs are designed to protect your investment in 1620, 1400and 7000-series programs. Emulators make it possible for you to execute your current programs on System/360 with little or no reprogramming. Using these features, the appropriate model of System/360 will normally execute your 1620, 1400- or 7000-series programs as fast or faster than they run on your present system.

Program simulators provide another way for System/360 to execute your 1620, 1410/7010, 7070/7074, 7080, and 7090/7094 programs. While emulators use a combination of System/360 circuitry and programs, simulators rely entirely on IBM-supplied System/360 programs to interpret and execute instructions written for 1620, 1400- and 7000-series equipment. Consequently, these simulators provide a considerably lower throughput rate than their emulator counterparts.



## aids for program conversion

For a successful system transition, detailed planning is necessary well in advance of actual conversion. The selection and scheduling of programs for conversion should be determined on the basis of their size, frequency of use and expected life. You may decide to run your existing programs for a time by using emulators or simulators. Or, you may wish to convert immediately by rewriting your programs to operate in System/360 mode. In either event, IBM programming aids are available to smooth your path.

### Documentation Aids System

Documentation plays a vital role in the conversion process. If you wish to redesign and reprogram your applications, the documentation of the programs and procedures you currently use must be accurate and complete. Many computer users are finding, to their sorrow, that their original flowcharts bear little resemblance to their current programs and procedures. Also, the many modifications and changes made to their programs along the way caused the original source statements to become outdated.

There is no substitute for careful, up-to-date documentation, but there is a way out if you've fallen behind. It's the IBM Documentation Aids System, a series of programs written for the 1401. These programs can reconstruct the documentation of your present applications from the programs themselves. The Documentation Aids System produces flowcharts, storage maps and analysis listings showing the structure and functions of your current application programs. It also provides a file maintenance program to help keep your source programs up to date during conversion.



### **Programming Languages**

IBM supplies a variety of System/360 programming languages with more facilities and greater flexibility than ever before. Included are COBOL for commercial programs, FORTRAN for scientific programs, RPG for report-writing functions, and PL/I, a single language for commercial and scientific users. These languages reduce programming training requirements, shorten program development time and lessen the need for extensive program documentation.

### Language Conversion Programs

These are used to convert COBOL, FORTRAN II and RPG programs from 1620/1400/7000 language to System/ 360 language. Language conversion programs may be run on the 1401 or on System/360 Models 30 or 40 having 1401 compatibility. A language conversion program will:

- 1. Analyze the COBOL, FORTRAN II or RPG statement to determine if it is completely compatible with the equivalent System/360 statement
- 2. Translate those statements that can be converted
- Identify those statements that cannot be converted
- 4. Produce new source programs
- 5. Produce a listing of source programs

For the most part, you will find that these conversion aids will reduce the manual effort required to convert your programs by approximately 50 percent for those written in COBOL, 65 percent for FORTRAN, and 90 percent for RPG.





# installation and testing plans

There are several IBM plans designed to minimize your parallel operation and testing costs both before and after installation of IBM System/360 in your facility. These include:

#### **Program Testing Allowances**

Most conversions mean redefining your applications and reprogramming. As you prepare your new programs, they must be tested to make sure that they work properly. IBM provides a test allowance for this purpose both before and after installation of System/360. The preinstallation test allowance, which permits you to use IBM testing facilities, provides for program testing and also for conversion of data files into System/360 format.

The postinstallation allowance enables you to continue program testing and file conversion for a period of up to 90 days after your System/360 is installed. During this period, program testing and data file conversion are not considered as billable machine time and may be deducted from any additional use-time incurred. Also, if you find your preinstallation time insufficient, you may obtain up to 30 additional hours by exchanging one day of postinstallation test time for one hour of preinstallation time.

In addition, preinstallation test allowance for System/360 may be exchanged for test time on previously installed IBM systems. This exchange will be made on the basis of eight hours of 1401 test time, four hours of 1460 test time or one hour of test time on other IBM systems, for one hour of System/360 test time.

#### **Conversion Rental Plan**

Parallel operation costs frequently occur when you convert from one data processing system to another. The System/360 Conversion Rental Plan is designed to minimize these costs. It sets the hourly billing rate for units of the displaced system at 10 percent of 1/176 of the monthly availability charge for all metered use. Units not under the metering plan will be charged at 10 percent of the monthly availability charge.

Depending on the type of system to be displaced and the System/360 model installed, this plan is applicable for either two, four or six months.

#### Conversion Credit Allowance Plan

This plan is designed for users who purchase System/360 and would like to use the unique hardware conversion features described in this brochure. These features may be returned for credit during the first 24 months after installation of a System/360. If they are returned within three months after installation, the allowance credit is 92-1/2 percent of the original purchase price. For each succeeding month, this allowance is reduced by 2-1/2 percent per month.



## while you convert... and afterward

Changing data processing systems is seldom a simple procedure, but IBM stands ready to make your conversion to System/360 as smooth as possible. Your personnel will receive classroom training by specialists at IBM Education Centers. IBM systems engineers will provide the technical guidance needed to insure the timely use of your new System/360. And customer engineers will maintain it at peak efficiency.

Once your conversion has been accomplished, modular design permits growth within System/360 to provide you with greater data processing power to handle new applications as they develop. Your IBM representative has the full story.



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