

# **HP 3000** **Information Management Systems**



**At last...an all-business approach  
to business computer software**



**HP Computer Museum**  
**[www.hpmuseum.net](http://www.hpmuseum.net)**

**For research and education purposes only.**

# When you buy a business computer system, you want more information to more people—faster! Not more problems.

We've seen it happen all too many times.

Management decides they're ready to put in a big, expensive computer system.

They look at maybe a dozen different computers. Compare features. Compare prices. And make what seems to be a good, sensible decision.

Unfortunately, there's one thing the typical manager doesn't look at too closely.

The software.

That's quite an oversight. Because it can take anywhere from three months to a year to develop the programs you need. And cost you three or four times what you paid for your new computer. Just in programmers' salaries.

Then, when the whole system is finally ready, you're in for another surprise. When you realize that you can't communicate with the computer at all. Unless you're a skilled programmer.

Which means the only way to get information out of most systems is to give a job request to one of the programmers and wait until he's not too busy handling somebody else's batch of requests to take care of you.

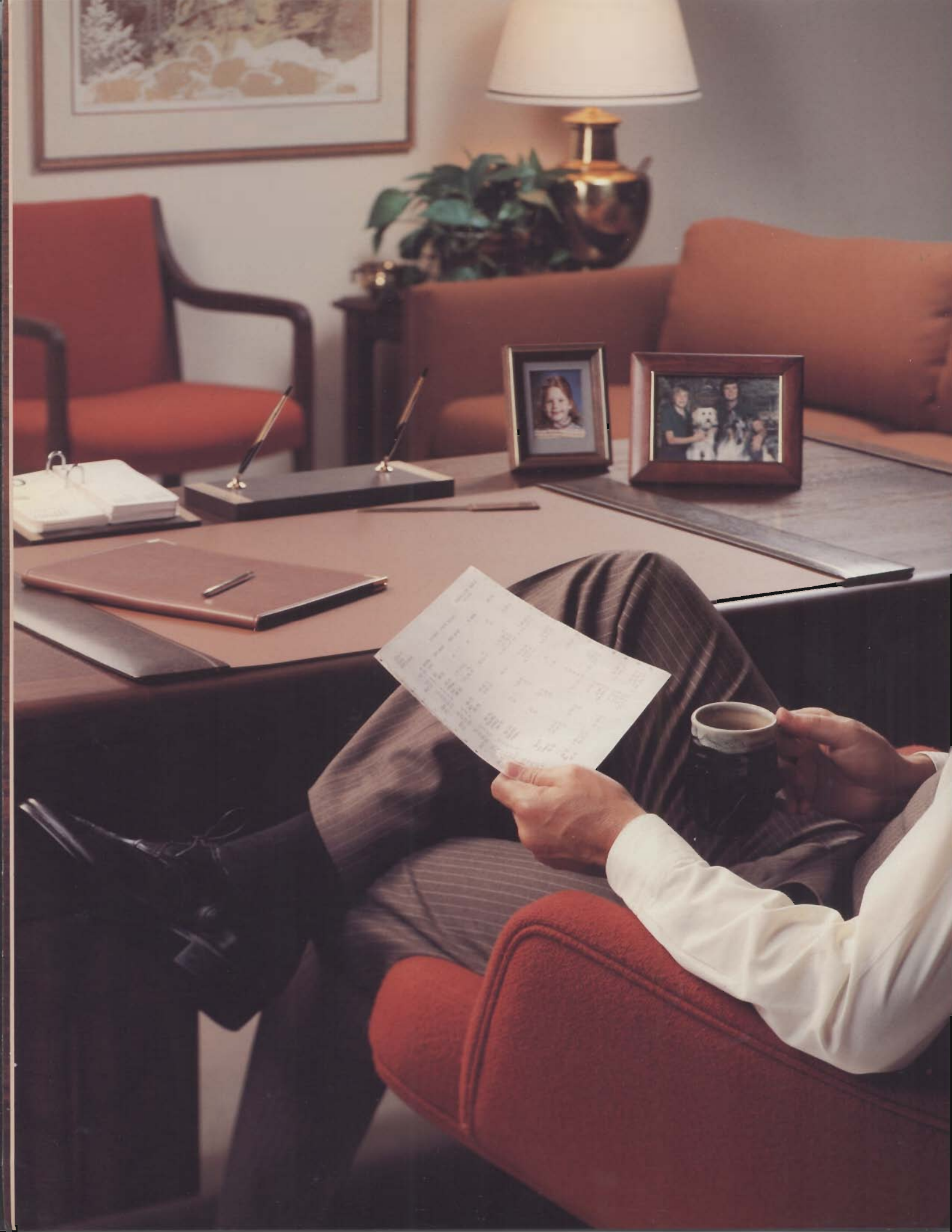
So there you are. With a much bigger system. A much bigger department. A much bigger budget. And work backing up. The irony of it is that you're left in a completely unbusinesslike position. With less control of your business than you had before.

Well, now there's a much more businesslike way to get the information you need.

We have completely rethought the way computers and people communicate with each other. And provided software for our HP3000 computer that lets you use the full power of this high-performance system. Even if you're an executive with absolutely no programming experience.

We've designed this software for RESULTS. The way it works is so simple that we can describe it to you right here. And the benefits it brings to executives and programmers are so important and far-reaching that we think you'll want to read every word.





# You'll feel right at home with this system in about three hours. Or less, if you're a programmer.

Just in case you thought we were talking about some budget home-sized computer, we'd like to show you the system you'll be able to control.

An HP3000 computer that can handle over 100 terminals, 8 mag tapes, 7 synchronous data communication lines, 4 line printers, and even our new laser printing system.

No matter how awesome it sounds to have that much power at your fingertips, the truth is that we've made this whole system so easy to use that it makes life a lot simpler for everyone in your company, from a shipping clerk, to a vice president of marketing, to an MIS director.

And to show you how simple it can be, just take a look at one of our software products: Inform/3000.

Suppose you have a new sales territory opening up, and you want to assign it to your best sales representative. And both of your best reps want the opportunity. So you decide to create a report to show you which one of them has been the most productive over the last two quarters.

All you do is sign on to the system, and type in the word INFORM. At this point, the terminal presents you with a menu of these 9 choices.

#### INFORM FUNCTIONS:

- 1: CREATE A NEW REPORT
- 2: SELECT AN EXISTING REPORT
- 3: RUN THE REPORT
- 4: SAVE THE REPORT
- 5: DELETE AN EXISTING REPORT
- 6: PREVIEW REPORT FORMAT
- 7: SET CONTROL OPTIONS
- 8: LIST AVAILABLE REPORTS
- 9: EXIT FROM INFORM

ENTER A FUNCTION NUMBER> 1

Since you want to create a completely new kind of report, you type in the number 1, and the screen gives you a new menu.

#### SELECTION MODE FOR REPORT ELEMENTS

##### BY ORGANIZATIONAL USE:

- 1: INFORMATION GROUP MENU
- 2: INFORMATION MENU FOR A GIVEN GROUP

##### BY DATA BASE USE:

- 3: DATA BASE MENU
- 4: DATA SET MENU FOR A GIVEN DATA BASE

ENTER A MODE NUMBER> 1

The data you want is in an information group, so you type in the number 1. And the terminal gives you this menu.

#### INFORMATION GROUP MENU

- 1: SHIPPING INFORMATION
- 2: CREDIT INFORMATION
- 3: ORDER INFORMATION
- 4: CONTROL INFORMATION
- 5: MFG MANAGER

ENTER A GROUP NUMBER> 3

What you're interested in is orders, so you type in 3, and the system shows you all the information that's available.

#### DATA ELEMENT MENU FOR GROUP: ORDER INFORMATION

- 1: CUSTOMER NO.
- 2: CUSTOMER
- 3: PURCHASE ORD
- 4: QUARTER
- 5: ORIG ORDER
- 6: SHIPPED
- 7: QUANTITY
- 8: ORDER DATE
- 9: SHIPDATE
- 10: BACKORDERFLG
- 11: SALES REP
- 12: CANCEL WEEK
- 13: PRICE
- 14: TOTAL

DISPLAY ELEMENT NUMBER(S)> 4,11,2,5  
SORT ELEMENT NUMBER(S)> 4,11  
GRAND TOTAL ELEMENT(S)>  
SELECTION VALUE ELEMENT(S)>  
REPORT TITLE>

Now you're really getting somewhere. In about ten seconds after signing on, you've found all the files you need. So you enter 4 for QUARTER, 11 for SALES REP, 2 for CUSTOMER, and 5 for ORIGINAL ORDER.

Now the system asks you how you'd like to see this information organized. You're interested in these two sales representatives and their

seasonal ups and downs, so you enter 4 and 11, which tells the system to show you the orders by quarter and to group all the orders for each person together by quarter.

All that's left now is to hit the carriage return on the keyboard to run the report.

The report comes out like this, with each element you asked for at the head of a column, in the order you asked for.

| QUARTER | SALES REP | CUSTOMER | SHIPPED | QUANTITY |
|---------|-----------|----------|---------|----------|
| 01      | Lewis,C   | Abercrom | 400.00  | 300      |
| 01      | Peters,P  | Mays     | 300.00  | 150      |
| 01      | Peters,P  | Bullocks | 400.00  | 300      |
| 01      | Peters,P  | Bullocks | 500.00  | 400      |
| 01      | Smith,B   | Magnin   | 800.00  | 600      |
| 01      | Smith,B   | Broadway | 400.00  | 300      |
| 02      | Albers,A  | Zodya    | 150.00  | 75       |
| 02      | Peters,P  | Mays     | 500.00  | 400      |
| 02      | Smith,B   | Magnin   | 800.00  | 600      |

\*\*\*\*\*END OF REPORT\*\*\*\*\*

If you ever want to create another report like this one, just add one more simple command, to save the report, so you can call up all the formatting and selection instructions you've designed, and run a new report with current data for any of your other sales people any time you like.

And look what's just happened. By following these few simple steps, you've done two things most executives always thought were completely impossible.

You've just written your own computer program.

And even more important, you've just gotten a straight answer from a computer. Without learning to think like a machine.

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OTHER  
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# It'll cost you thousands of dollars to buy this software from us. Or millions if you don't.



When you look at the incredible range of capabilities we've built into this system, it's easy to see that it could cost you years to develop a system that works this well.

We should know. Because we know what it's taken us to produce the whole package, even with our considerable head start in this area.

We want you to profit from our experience!

So we're making the RAPID/3000 software tools—which includes Dictionary, Inform, Transact, and Report—available to you for less than one programmer's annual salary. A lot less. And we've made all the rest of the products in the system available for a price that's just as reasonable.

Two of the most cost-effective software features of the HP3000 are also the most powerful and sophisticated, and have been included in the HP3000 for years: our IMAGE data base system, and our Multiprogramming Executive (MPE) operating system.

Because it's so easy to work with, IMAGE has become a favorite of thousands of programmers all over the world. In fact, it's so popular that they've elected it to the Software Honor Roll in a poll sponsored by Datapro Research Corporation. Not just once, but for three years.

And thanks to this high level software, data bases can be developed independently of programs that use them. No matter what language the

programmer is writing in: COBOL, Pascal, BASIC, FORTRAN, RPG, our own transaction processing language, Transact/3000, or the HP3000 system language, SPL.

And when your programming staff is supported by MPE, they'll never want to use any other system again. Because the Multiprogramming Executive creates an environment that gives programmers direct access to all the resources they need, without going through any system programming routines.

Just look at all the functions MPE handles automatically: file and memory management, process scheduling and handling, accounting, security, input/output, and transaction logging. So programmers who are used to plodding along with outdated, batch-oriented operating systems are totally amazed by how much more work they can get done with MPE.

Put all this together, and you're faced with one of the simplest business decisions you'll ever make:

Whether you want to spend years of development and millions of dollars trying to develop a system for the same results all by yourself.

Or whether you'd rather let us install the real thing. And have it working for you in a few hours.

# There are many ways to get results. And the choice is all yours.

The whole point of any software system should be to expand your options, not to limit them.

And once you start building your system around the HP3000, you'll get more flexibility than you ever knew was possible.

In addition to our results oriented software, HP office systems products can help to improve productivity in your office. Our Personal Productivity Center brings information processing and communications capabilities directly to secretaries and business professionals in your organization. It offers an integrated set of tools for document management, decision making, personal computing and communication.

HP also offers a complete manufacturing solution for use on the HP3000. Manufacturer's Productivity Network Applications include Materials Management/3000 and Production Management/3000.

The Personal Productivity Center and MPN information processing takes place on the HP3000 along with data processing. Now users can share the same valuable computer resources. This integration of information processing and data processing means quicker access to the information you need to run your business.

Because each one of these software products gives you almost unlimited freedom to make your data system fit your needs, and grow with them. And because we give you all these different products to choose from, each with its own unique advantages.



*You can use our programmer productivity tools to develop applications in a variety of business areas, including inventory control, billing and accounts receivable.*

## ☐ **Dictionary/3000**

The relational Dictionary, which we described earlier, is the key to all information in the system.

It works as an on-line data dictionary and directory that supports the definition of, and remembers the relationships among: data items IMAGE/3000 data bases, KSAM/3000 files, MPE sequential files, programs, VPLUS/3000 forms files, usage functions and security rules. And because common information used by different functional groups in your organization is stored only once, this data is tremendously more accurate.

It also includes a number of utilities that handle the automatic creation and maintenance of IMAGE data bases, audit the integrity of IMAGE data base structures, and load definitions straight into the dictionary, from existing IMAGE data base root files.

### ☐ **Inform/3000**

Earlier in this report we gave you a detailed explanation of the way Inform works.

First, because we wanted to demonstrate how simple Inform makes it to get meaningful information out of your system. But also to show you how easy it is to work with all the data stored deep in your files.

Our products for users work in a very friendly way, so that writing a report is as easy as filling in a form.

By responding to a series of simple questions from the terminal, you can find valuable information about every department in your company, sort it, select only the relevant data, and produce a clear cut report. Even if you've never used a computer before.

### ☐ **Transact/3000**

This is an application system development tool for programmers that consists of a transaction processor and a high-level, task-oriented language. This software dramatically cuts program development time and vastly improves the lengthy maintenance process. Because so much of the routine work is built into the language, the programmer has far less code to write. With Transact, enhancements and application prototypes become realities.

Transact works through Dictionary to interface with IMAGE/3000 data bases, KSAM/3000 files and VPLUS/3000 forms files. And all programs generated by Transact/3000 are complementary and interface with other programs implemented in COBOL, FORTRAN, PASCAL, or SPL.



### ☐ **Report/3000**

This is a highly automated report-writer used by programmers. It is a step beyond Inform in power and capability, and can generate and format simple or complex reports from IMAGE data bases, KSAM, or MPE sequential files.

Inform makes life simple for the user, while Report does exactly the same thing for the programmer.

Report/3000 major features include a powerful set of formatting and control options, sub-item definition with full reporting and item control, a compiled statement language for fast report execution and more.

Report/3000 also provides functional items for complex computations, totals, averages, minimums, maximums, etc. And it does all these sophisticated functions with absolutely no data management or access specifications needed, because it uses the Dictionary.

### ☐ **IMAGE/3000**

We've already given you an overview of the IMAGE/3000 data base management system. To recap, some of the features that benefit you and your programmers are IMAGE's ease of use and installation. It also provides for reduced data redundancy and faster access to information. IMAGE organizes your data to reduce the amount of time needed to retrieve it. And permits more than one program to access the same data concurrently. IMAGE controls the access to data through the use of password security.

Those are just a few of the reasons why IMAGE has become a favorite of thousands of programmers all over the world, and wins their votes year after year in award competitions based on user satisfaction.

And now the addition of RAPID/3000 gives IMAGE users faster, easier access to their data than ever before.

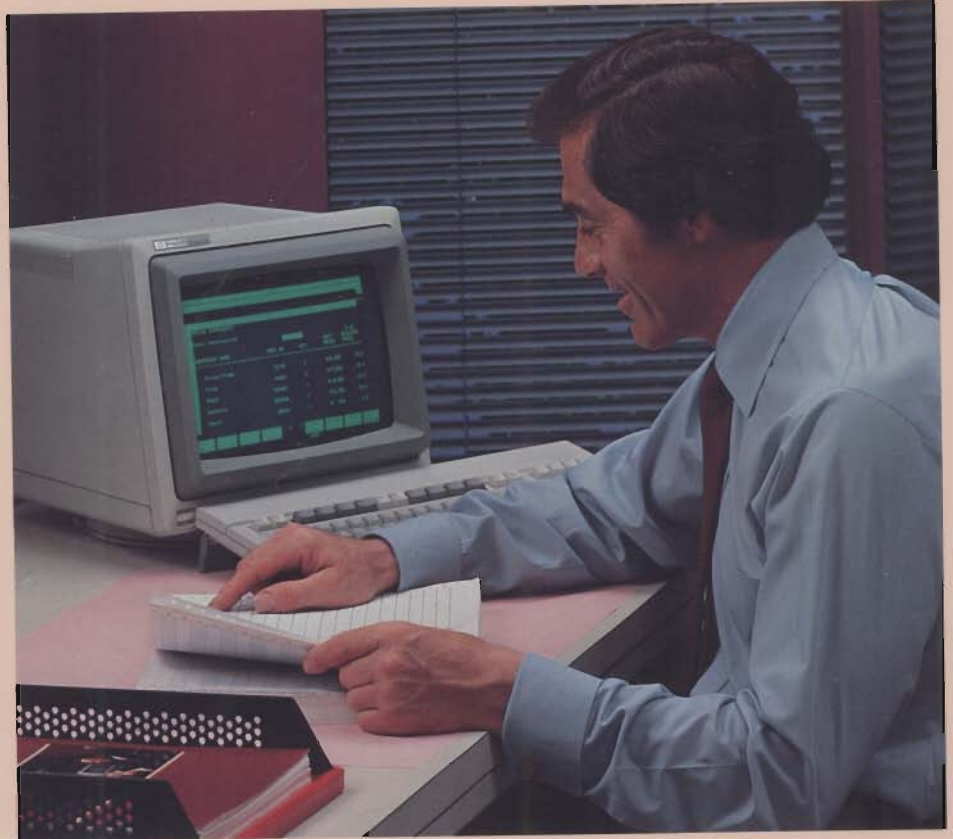
#### ☐ **VPLUS/3000**

This is a data entry software product designed exclusively for HP3000 systems. It helps users handle straightforward data entry tasks more easily, and gives programmers an efficient set of tools to work with.

VPLUS features a forms design facility that lets any user design and store a form—such as an invoice or inventory report format—directly on the screen just by responding to a series of simple questions.

There's also a source data entry facility that allows for immediate on-line entry and modification of data without programming. And a data reformatting facility that makes it easy to change the format of previously entered data to meet the input requirements of existing application programs. VPLUS also includes a programmatic interface that gives the programmer a library of high-level procedures for capturing source data entry in transaction processing applications.

To give you extra flexibility, VPLUS works with two different kinds of terminals: The standard block/page mode CRT used in office environments. And data capture terminals as well—like the type that support bar code readers or give easy data entry through simplified keyboard or function keys—in other words, terminals usually found in manufacturing environments.



#### ☐ **QUERY/3000**

Developed primarily for programmers, this QUERY facility is another extremely helpful tool in designing an IMAGE data base. English-like commands make it easy to locate, update and report data.

Programmers store, modify, retrieve and report on data in IMAGE data bases, and can quickly check to make sure the files they create are set up exactly the way they were designed, and also check the accuracy of data. QUERY can also be used for generating reports from data stored in the IMAGE data base on a local or remote HP3000.

#### ☐ **KSAM/3000**

This is an indexed file subsystem that speeds entry and retrieval of data by using the Keyed Sequential Access Method.

KSAM/3000 provides a file organization based on values of key fields within the data records in the file. Records may be accessed randomly or sequentially by primary and alternate key values, logical record number or physical sequential order.

KSAM/3000 files are accessible by Report/3000 and Inform/3000 and by programs written in Transact/3000, COBOL, RPG, Pascal, FORTRAN, BASIC and SPL.

#### □ MPE/3000

We've described our Multiprogramming Executive operating system too, and gone into detail about all the time-consuming problems it eliminates for programmers. But MPE has a number of user benefits also. Especially its set of over one hundred commands that make it simple for users to run programs, create files, delete files, and perform all kinds of functions that used to call for system level programming skill.

#### □ Programming Languages

To help you match the language to the job, we offer the full range of interactive, ANSI standard program development languages: COBOL, Pascal, RPG, BASIC, FORTRAN, and SPL, the high-performance language we developed specifically for the HP3000 system.

And to make your programmers even more productive, we also added high-level tools which help manage the program development environment like RISE, our RPG Interactive System Environment.

#### □ HPToolset

A combination of easy-to-use features that perform many routine programming tasks, HPToolset frees programmers to concentrate on their primary job—program development.

One of the most important tools, the Workspace Manager, regulates all files needed to develop a program. As a special efficiency feature, we've added data compression techniques to make more cost-effective use of disc storage.

Since all programming tools should be easy to get to, we've developed a User Interface that simplifies the different sets of commands a programmer has to learn.

Using the Full Screen Editor, a programmer can easily enter and modify source code, insert, delete or change text, and update source files automatically.

The Program Translation Manager enables programmers to compile, prep and run programs with minimum effort and maximum effectiveness.

And because programmers shouldn't have to spend a lot of time debugging programs, we've developed Symbolic Debug, which speeds interactive program debugging at the source code level. This approach alleviates the need for programmers to probe the internals of the system to debug their programs.

As a multi-faceted solution, HPToolset can increase productivity by simplifying the programmer's job.



### Integrated Office Solutions

The same HP 3000 that handles your data processing also offers word and document processing, business graphics, electronic mail, personal filing, calendar management and spreadsheets. HP's Personal Productivity Centers connect personal computers and other workstations with the processing power of the HP 3000 and mainframe computers. Ask your HP representative for more information about these powerful office systems.

# A few words about the kind of company that gives you results.

At Hewlett-Packard, we designed our first computer system eighteen years ago for a very special customer.

Ourselves.

Our experience in developing that first system taught us one basic principle we've never forgotten:

That the whole point of a computer system is to solve the user's problems, not the vendor's.

That's such a basic idea with us that it's worth repeating: The whole point of a computer system isn't to impress you with its incredibly sophisticated design. The point is to solve your problems where they occur and to match your data processing resources to your organizational needs.

For eighteen years, we've built all our computer systems around that one simple idea. Naturally enough, we've built our business the same way.



## A word about the people

Ever since they founded this company in 1939, William Hewlett and David Packard have made a science out of getting things done.

Not by working with abstract theories, but by concentrating on the needs of users in the real world, and then using their considerable talents to design systems that fill those needs better than any other systems.

Our way of doing business is to work with you as a partner. And once you agree on a working partnership with us, you've got the full resources of thousands of computer professionals behind you. Systems engineers. Application engineers. Customer engineers. And HP sales representatives. They're all available whenever you need them. In offices around the world. They're all ready to deliver the technology, support, training, and service you need. The better you get to know us, the more you'll see how much we mean business. In every way.

That's getting things done in a pretty big way, indeed. All because we've never forgotten that one simple truth we learned years ago.

Get to know your customer's business just as if it's your own.

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