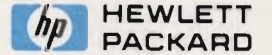


HP Decision Support Graphics/3000



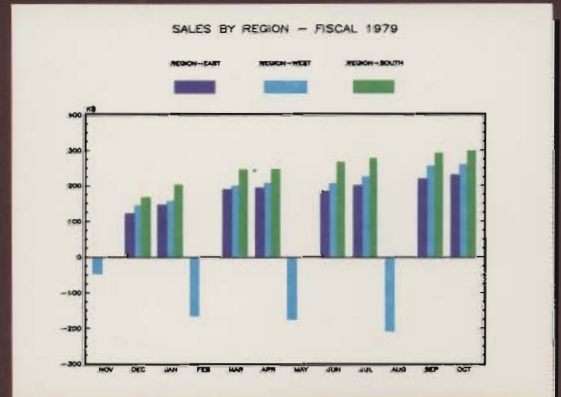
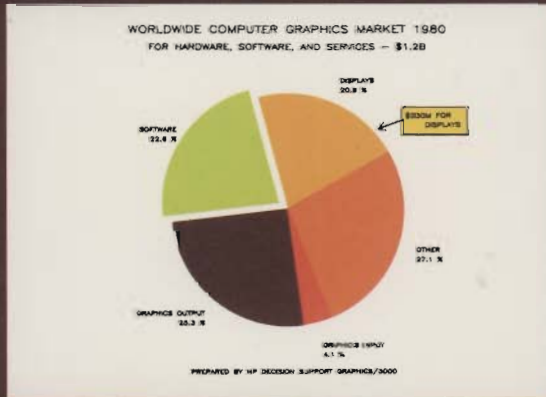
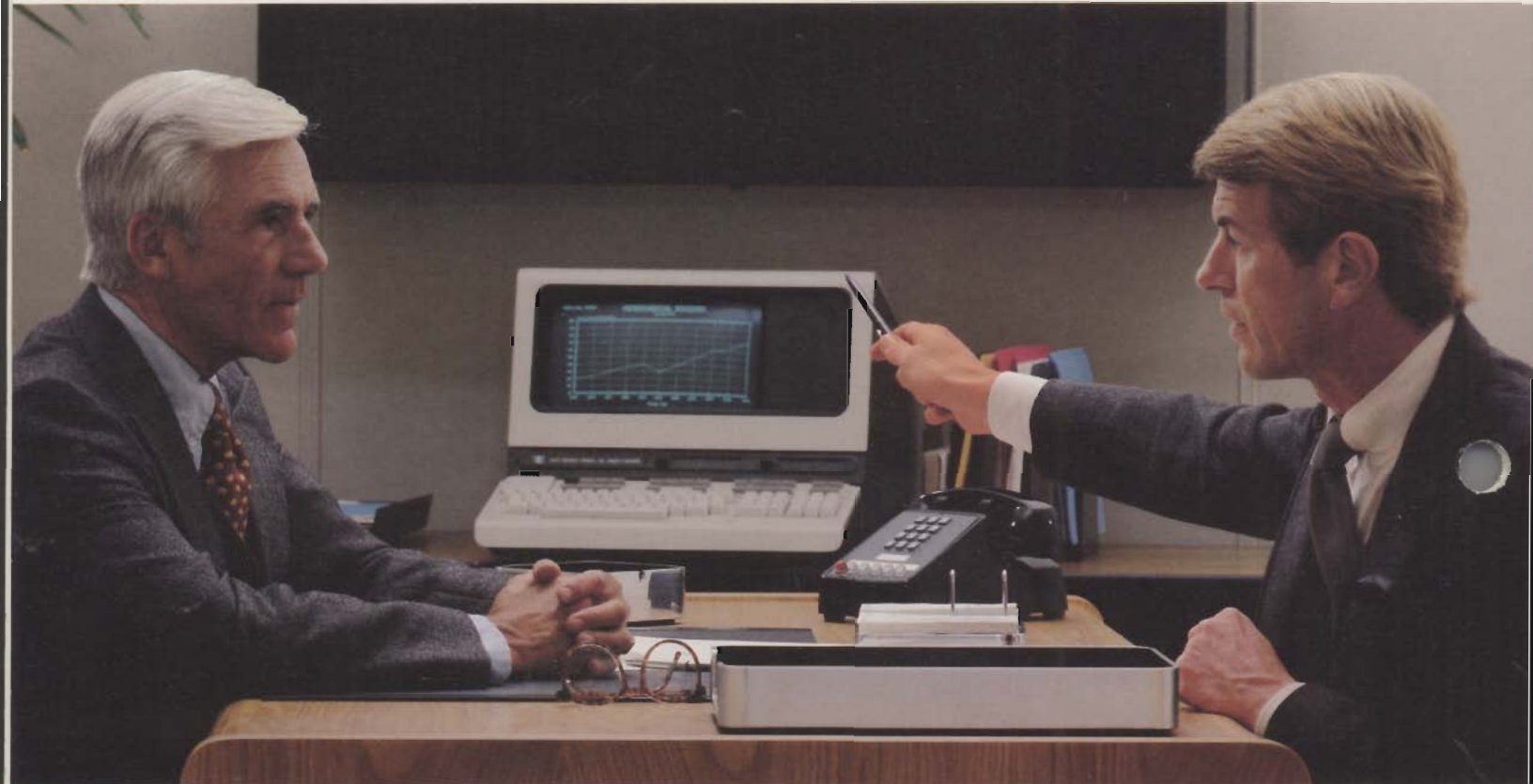
Computer graphics data display

7100 VAR (UNITS)	+02	-02	-07	-03	+19	+24	-18	-02	-01	+7150 VAR (UNITS)	+17	+09	+03	+07	-18	
7110 VAR (UNITS)	-10	+07	-45	+18	+14	+05	+07	+11	-09	-7160 VAR (UNITS)	+06	-07	-02	-01	-06	
7120 VAR (UNITS)	+05	-33	-03	+20	-10	-13	+18	+20	+05	-7100 VAR (UNITS)	+02	-02	-07	-03	+19	
7130 VAR (UNITS)	-10	-21	+18	+01	+12	+09	+06	-02	+08	7110 VAR (UNITS)	-10	+07	-45	+18	+14	
7140 VAR (UNITS)	-04	+17	+29	-06	+11	-02	+32	-13	-37	+7120 VAR (UNITS)	+05	-33	-03	+20	-10	
-07	-02	-01	-06	-02	-07	+03	+17	+04	130 VAR (UNITS)	-10	-21	+18	+01	+12	+09	
-02	-07	-03	+19	+24	-18	-02	-01	+03	140 VAR (UNITS)	-04	+17	+29	-06	+11	-02	
+07	-45	+18	+14	+05	+07	+11	-09	-18	150 VAR (UNITS)	+17	+09	+03	+07	-18	+14	
-33	-03	+20	-10	-13	+18	+20	+05	-03	160 VAR (UNITS)	+06	-07	-02	-01	-06	-02	
-21	+18	+01	+12	+09	+06	-02	+08	100 VAR (UNITS)	+02	-02	-07	-03	+19	+24	-18	
+14	-09	-03	-08	7110 VAR (UNITS)	-10	+07	-45	+18	+14	+05	+07	+11	-09	-17	160 VAR (UNITS)	+06
-02	-07	+03	+17	7120 VAR (UNITS)	+05	-33	-03	+20	-10	-13	+18	+20	+05	-07	100 VAR (UNITS)	+02
+24	-18	-02	-01	7130 VAR (UNITS)	-10	-21	+18	+01	+12	+09	+06	-02	+08	7110 VAR (UNITS)	-10	
+05	+07	+11	-09	7140 VAR (UNITS)	-04	+17	+29	-06	+11	-02	+32	-13	-37	+27	120 VAR (UNITS)	+05
-13	+18	+20	+05	7150 VAR (UNITS)	+17	+09	+03	+07	-18	+14	-09	-03	-08	+07	130 VAR (UNITS)	-10



HP Decision Support Graphics/3000

A valuable assistant on your management team



HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

Computers and the information they can provide are helping today's business managers to be far more productive than their predecessors. Why?

Simply because today's business managers have timelier, more detailed and more accurate information about their business. So much data, in fact, that one of the significant management challenges is to quickly identify what specific information is relevant to each business decision.

Statistics, accounting reports, sales forecasts, production plans and operational expenses result in a continuous flow of information, thousands of pages of numerical detail to be sorted and studied. With HP Decision Support Graphics/3000, HP does more than just compute numbers—it offers you an effective way to interpret information. HP gives management an easy-to-use yet powerful tool for efficient and timely management decision making.

Hewlett-Packard offers tools that help you obtain information in a timely manner. The HP 3000 is a general purpose computer designed to provide solutions in every department. It offers you a broad product line of software like data base management, data entry, multiprogramming in familiar business languages, and many more. The HP 3000 makes a contribution to the way you do business.

Now, Hewlett-Packard has made another significant contribution to the human-computer interface through pictorial communication: business computer graphics.

HP Decision Support Graphics/3000 will become a valuable assistant on your management team.



A faster way to focus the facts

Information presented through graphs offers advantages over tables and columns of numbers. No table has the immediate clarity and appeal of a graph. Graphs give you the analytical power to simply and clearly focus the facts. Hidden aspects of data such as positive and negative trends, cyclical behavior and even interrelationships between different variables can be quickly demonstrated. A well-planned graph conveys the intended message quickly and directly, and leads to the understanding and control of data as a resource.

Since visualization is one of the mind's most powerful tools, graphs help you to

- interpret more rapidly
- communicate more effectively
- remember far longer.

HP Decision Support Graphics/3000 Enhances your productivity

Time is a manager's most valuable resource. HP Decision Support Graphics/3000 is an effective time saving tool in management summaries. It enables you to see trends and relationships at a glance. You or your staff can design multi-color presentation-quality graphics in only minutes! These graphs can be prepared right in your office, available when and where you need them!

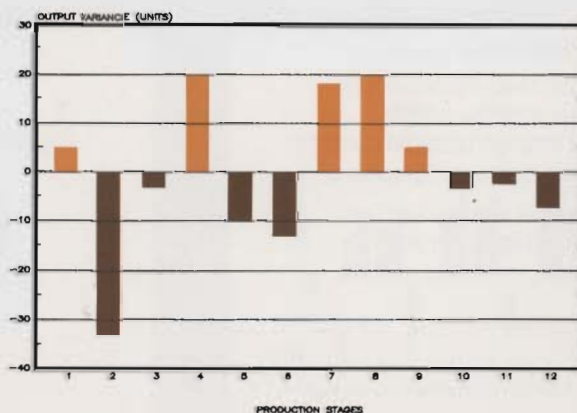
Business computer graphics improves communications and leads to greater efficiency and increased productivity.

DAILY PRODUCTION REPORT AUG. 15, 1980 VARIANCES FROM TARGET

PRODUCTION STAGES	1	2	3	4	5	6	7	8	9	10
7100 VAR (UNITS)	+02	-02	-07	-03	+19	+24	-18	-02	-01	+03
7110 VAR (UNITS)	-10	+07	-45	+18	+14	+05	+07	+11	-09	-18
7120 VAR (UNITS)	+05	-33	-03	+20	-10	-13	+18	+20	+05	-03
7130 VAR (UNITS)	-10	-21	+18	+01	+12	+09	+06	-02	+08	
7140 VAR (UNITS)	-04	+17	+29	-06	+11	-02	+32	-13	-37	+22
7150 VAR (UNITS)	+17	+09	+03	+07	-18	+14	-09	-03	-08	+06
7160 VAR (UNITS)	+06	-07	-02	-01	-06	-02	-07	+03	+17	+04
7100 VAR (UNITS)	+02	-02	-07	-03	+19	+24	-18	-02	-01	+03
7110 VAR (UNITS)	-10	+07	-45	+18	+14	+05	+07	+11	-09	-18
7120 VAR (UNITS)	+05	-33	-03	+20	-10	-13	+18	+20	+05	-03
7130 VAR (UNITS)	-10	-21	+18	+01	+12	+09	+06	-02	+08	
7140 VAR (UNITS)	-04	+17	+29	-06	+11	-02	+32	-13	-37	+22
7150 VAR (UNITS)	+17	+09	+03	+07	-18	+14	-09	-03	-08	+06
7160 VAR (UNITS)	+06	-07	-02	-01	-06	-02	-07	+03	+17	+04
7100 VAR (UNITS)	+02	-02	-07	-03	+19	+24	-18	-02	-01	+03
7110 VAR (UNITS)	-10	+07	-45	+18	+14	+05	+07	+11	-09	-18
7120 VAR (UNITS)	+05	-33	-03	+20	-10	-13	+18	+20	+05	-03
7130 VAR (UNITS)	-10	-21	+18	+01	+12	+09	+06	-02	+08	
7140 VAR (UNITS)	-04	+17	+29	-06	+11	-02	+32	-13	-37	+22
7150 VAR (UNITS)	+17	+09	+03	+07	-18	+14	-09	-03	-08	+06
7160 VAR (UNITS)	+06	-07	-02	-01	-06	-02	-07	+03	+17	+04
7100 VAR (UNITS)	+02	-02	-07	-03	+19	+24	-18	-02	-01	+03
7110 VAR (UNITS)	-10	+07	-45	+18	+14	+05	+07	+11	-09	-18
7120 VAR (UNITS)	+05	-33	-03	+20	-10	-13	+18	+20	+05	-03
7130 VAR (UNITS)	-10	-21	+18	+01	+12	+09	+06	-02	+08	
7140 VAR (UNITS)	-04	+17	+29	-06	+11	-02	+32	-13	-37	+22
7150 VAR (UNITS)	+17	+09	+03	+07	-18	+14	-09	-03	-08	+06
7160 VAR (UNITS)	+06	-07	-02	-01	-06	-02	-07	+03	+17	+04
7100 VAR (UNITS)	+02	-02	-07	-03	+19	+24	-18	-02	-01	+03
7110 VAR (UNITS)	-10	+07	-45	+18	+14	+05	+07	+11	-09	-18
7120 VAR (UNITS)	+05	-33	-03	+20	-10	-13	+18	+20	+05	-03
7130 VAR (UNITS)	-10	-21	+18	+01	+12	+09	+06	-02	+08	
7140 VAR (UNITS)	-04	+17	+29	-06	+11	-02	+32	-13	-37	+22
7150 VAR (UNITS)	+17	+09	+03	+07	-18	+14	-09	-03	-08	+06
7160 VAR (UNITS)	+06	-07	-02	-01	-06	-02	-07	+03	+17	+04
7100 VAR (UNITS)	+02	-02	-07	-03	+19	+24	-18	-02	-01	+03
7110 VAR (UNITS)	-10	+07	-45	+18	+14	+05	+07	+11	-09	-18
7120 VAR (UNITS)	+05	-33	-03	+20	-10	-13	+18	+20	+05	-03
7130 VAR (UNITS)	-10	-21	+18	+01	+12	+09	+06	-02	+08	
7140 VAR (UNITS)	-04	+17	+29	-06	+11	-02	+32	-13	-37	+22
7150 VAR (UNITS)	+17	+09	+03	+07	-18	+14	-09	-03	-08	+06
7160 VAR (UNITS)	+06	-07	-02	-01	-06	-02	-07	+03	+17	+04
7100 VAR (UNITS)	+02	-02	-07	-03	+19	+24	-18	-02	-01	+03

DAILY PRODUCTION REPORT, 8/15/80

MODEL 7120



HP Decision Support Graphics/3000 Makes your data come alive

HP DSG/3000 can draw graphs using your data accumulated in a data base or sequential data file. A visual presentation of your business data highlights important trends and relationships.

For example, here are a few of the myriad graphics presentations which can be pertinent to management:

Budgeting and planning

Bar-charts show interrelationships and patterns of data more effectively than conventional statistical reports. Bar-charts readily display trends, components and proportions of budgets. They make "what-if" comparisons clearer and help a marketing manager in making decisions and proposing strategies that take advantage of new opportunities.

Sales analysis

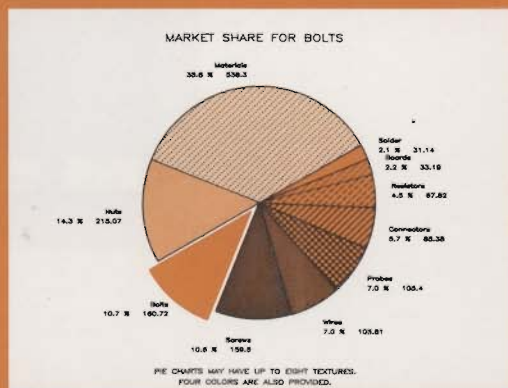
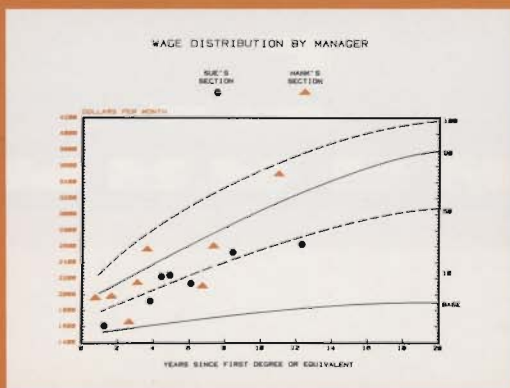
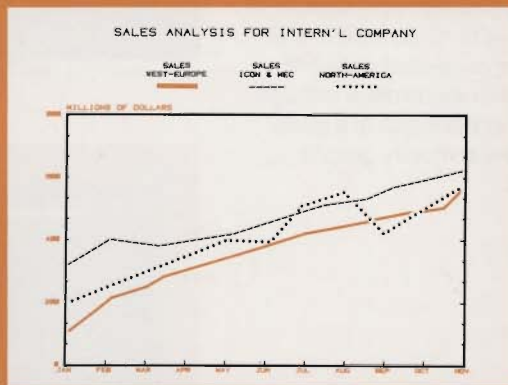
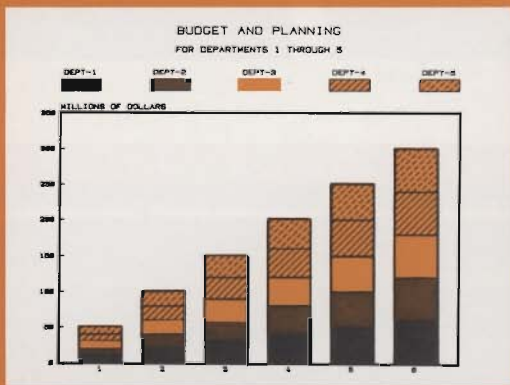
HP DSG/3000 helps you to be more cost effective in preparing vast amounts of regular reports. A glance at a line-chart can tell a sales manager whether sales are going up, down or are leveling off. Why read through repetitive reports of changing data?

Personnel—wage and salary administration

A scattergram vividly portrays relationships between two variables, such as years of service and the rate of pay. A wage distribution is a helpful tool for a personnel manager's salary distribution and review.

Market planning

Consider special reports and studies that are used frequently—or perhaps only once—to make tactical and strategic business decisions. A pie-chart will immediately convey market share to a product manager through the easy comparison of competitive percentages.



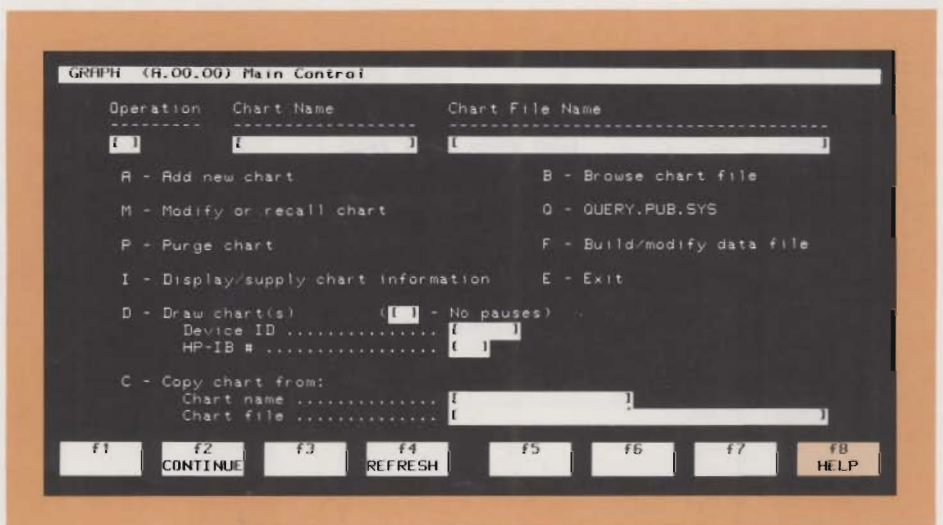
Easy to use with push button simplicity

HP DSG/3000, with its own built-in graphics "expert", requires no special knowledge of graphics design. The non-computer professional can obtain graphs without waiting for the development of application programs or learning complicated protocols. Your office staff can incorporate basic graphics operations immediately.

With a simple selection from "fill in the blanks" menus and the push of one button, you or your staff can prepare a complex set of reports for your periodic executive or boardroom meetings.

An interactive "help" facility gives clear instructions at the user's request and is available with each menu.

Once a graph has been designed, its specifications, including accepted standards, are saved in a graphics portfolio, the chart file. As this file is separate from the data, it is easy to reuse a particular chart on different or revised data. HP DSG/3000 lets the user browse through this chart file— at the touch of a push-button—to review or modify graphs already created.





Easier access to information

Your tabular data can come from any file on the system. This provides easy access to business management information and resources which are vital to your decision making process. HP Decision Support Graphics/3000 provides total security for your company's most valuable, up-to-date information by keeping it on one system.

- Data can come from any tabular data file or can be entered through the terminal keyboard.
- Data can come from your IMAGE data base and can be made available through the interactive use of QUERY, an English-like inquiry language.
- Data can be entered and manipulated by the V/3000 forms management and data entry system, and then accessed for graphical representation.

Flexible and powerful—yet easy to use

- The periodic user can design, modify, and save charts to be used again on changing data.
 - The one-time user can explore data and produce charts easily in only a few minutes.
 - Eight predefined video display keys guide the user through a library of charts and give a choice of easily understandable courses of action.
 - Creation of aesthetically pleasing charts include line graphs, horizontal and vertical bar charts, pie charts and scatter plots.
 - Flexible design provides many options and enhancements to the user, but sensible standards were selected so that high-quality charts can be produced quickly and easily.
 - Data can be automatically scaled and arithmetic and statistical functions can be applied to your data and plotted.
- Chart sizes can be defined by the user. For example, multiple charts can be placed on one page for easy comparison.
 - Annotations are provided to enhance and customize charts with symbols and text.
 - A portfolio of color graphics can be produced on paper or overhead transparencies ready for management presentations and boardroom use.
 - A simple but powerful capability is provided for program development. This capability enables programs which periodically generate reports to include graphs as a tool to clarify data, present a summary, or emphasize a point.
 - The programmatic interface is available in the most familiar business languages: COBOL, BASIC, FORTRAN, or SPL (System Programming Language).

GRHPH (R.00.00) Data Prompt

File name: [IPARTSD] Type: N=numeric, T=text

Variable 1		Variable 2		Variable 3		Variable 4		Variable 5	
name	type	name	type	name	type	name	type	name	type
[REGH]	[IN]	[REGB]	[IN]	[REGC]	[IN]	[MONTH]	[TT]	[PRODUCT]	[TT]
[145]	[]	[172]	[]	[105]	[]	[JAN]	[]	[NUTS]	[]
[120]	[]	[139]	[]	[165]	[]	[FEB]	[]	[BOLTS]	[]
[145]	[]	[155]	[]	[199]	[]	[MAR]	[]	[SCREWS]	[]
[166]	[]	[172]	[]	[215]	[]	[APR]	[]	[NUTS]	[]
[188]	[]	[193]	[]	[240]	[]	[MAY]	[]	[BOLTS]	[]
[193]	[]	[205]	[]	[245]	[]	[JUN]	[]	[SCREWS]	[]
[175]	[]	[210]	[]	[238]	[]	[JUL]	[]	[NUTS]	[]
[183]	[]	[205]	[]	[265]	[]	[AUG]	[]	[BOLTS]	[]
[199]	[]	[225]	[]	[275]	[]	[SEP]	[]	[SCREWS]	[]
[210]	[]	[238]	[]	[279]	[]	[OCT]	[]	[NUTS]	[]
[218]	[]	[255]	[]	[290]	[]	[NOV]	[]	[BOLTS]	[]
[229]	[]	[259]	[]	[295]	[]	[DEC]	[]	[SCREWS]	[]

f1 f2 f3 DRAW f4 REFRESH f5 PREVIOUS f6 NEXT f7 CONTROL f8 HELP

Clarify your most complex data

Data transformation capabilities will help you to mathematically transform values into graphical format that best communicates your information:

Transformation:

This easy to use capability mathematically manipulates columns of data to create new data. You can simply define a new column through an arithmetic statement, such as $PROFIT = SALES - COSTS$.

You can select from any combination of multiplication, addition, division, and subtraction, as well as moving averages and column totals. A variety of financial ratios and trend lines can be added to graphs to communicate performance measures.

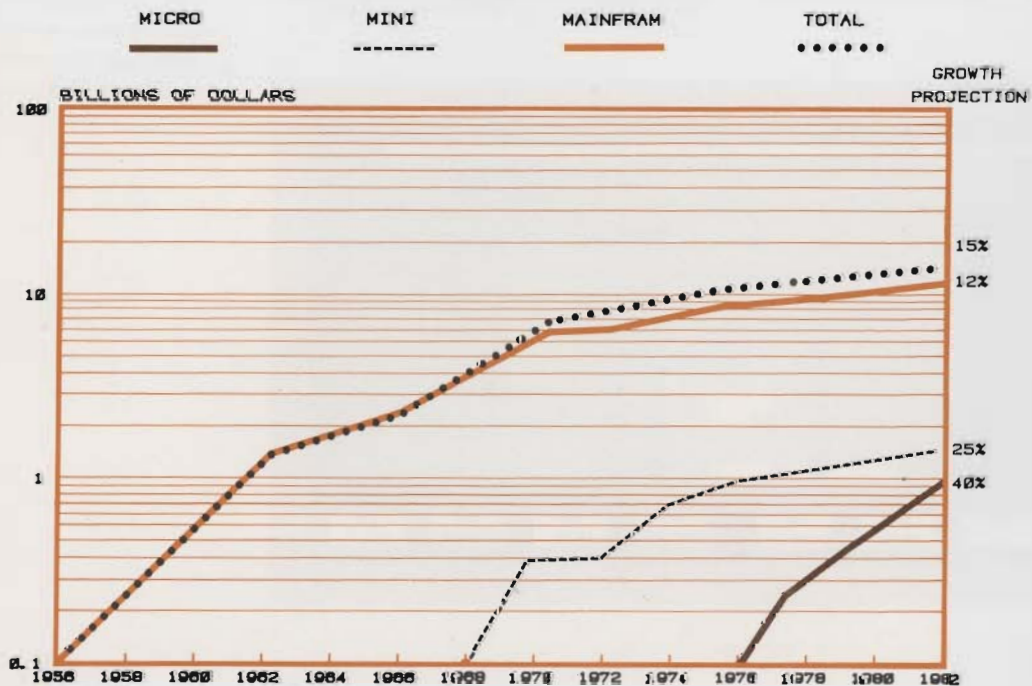
Subsetting:

You can quickly eliminate data which is not needed in your analysis or discussion through data subsetting. For example, you may want to include data for a 3 year period only, while the data file may include data for 5 or more years.

Qualification:

Your data may have been stored and retrieved in such a way that a single data column contains information about more than one graphical entity. For example, you can qualify the data in a field so that individual dependent variables are uniquely identified.

ESTIMATED SHIPMENTS AND COMBINED TOTALS OF THE COMPUTER INDUSTRY

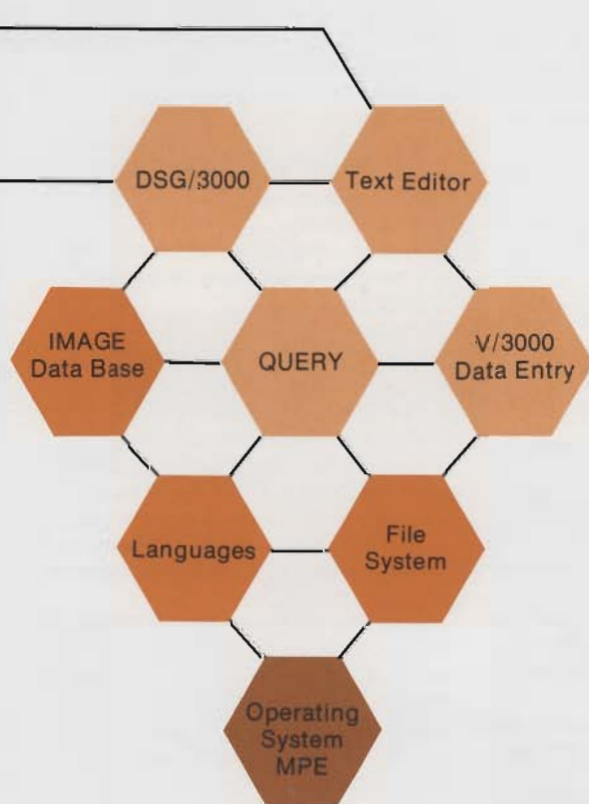
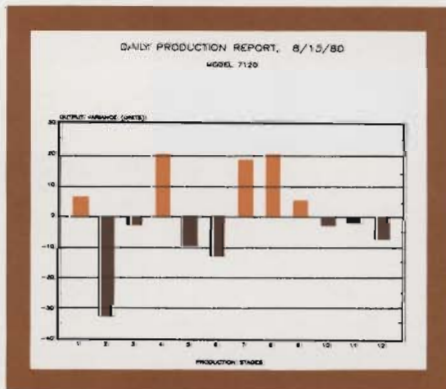


HP DSG/3000 brings it all together

HP's new interactive graphics system for use on the HP3000 computer family was designed specifically for business people and non-computer professionals. HP DSG/3000 sets high standards for graphics productivity, flexibility and ease of use.

HP built its graphics software to complement the already powerful capabilities of the HP 3000 system. It takes advantage of

computer-stored information resources already available to your organization. These include V/3000 forms management and data entry, IMAGE data base management and QUERY, an English-like inquiry language. Today, the HP 3000 is used at over 5,000 locations worldwide, helping managers effectively operate their organizations.



Configuring a business graphics system

Graphics Terminals

2648A Graphics Terminal—provides a bright, raster-scan graphics display of graphs generated by HP DSG/3000, as well as the full alphanumeric terminal features of the 2645A. Hardware zoom and pan, plus rubber band lines aid local interaction with the graphics image. Automatic Plotting allows plotting of data in a line chart format without using HP DSG/3000.

Plotting Area (Resolution)

120 × 240 mm, 4.72 × 9.45 in., (720 × 360 dots)

Maximum Plotting Speed

100 vectors/second

Interface

RS-232-C/V.24 Serial Interface, Multipoint

2647A Intelligent Graphics Terminal—offers all the features of the 2648A Graphics Terminal and in addition is user-programmable in BASIC and high level graphics commands to provide powerful local capabilities for data editing and remote graphics generation. Multiple Automatic Plotting software allows simplified generation of line, bar, pie charts, and text slides without using HP DSG/3000.

Plotting Area

120 × 240 mm, 4.72 × 9.45 in., (720 × 360 dots)

Plotting Speed

100 vectors/second

Interface

RS-232-C/V.24 Serial Interface, Multipoint

High Resolution Vector Plotters

7221B Graphics Plotter—provides high quality, multicolor graphs on paper or overhead transparency material. HP's 7221 draws in four colors by mechanically selecting, returning, and recapping pens under program control.

Plotting Area (Resolution)

285 × 400 mm, 11.2 × 15.75 in., Accepts up to ISO A3 or 11 × 17 in. chart paper. (0.025 mm or .001 in.)

Maximum Plotting Speed

360 mm/sec (14 in/sec), either axis, 509 mm/sec (20 in/sec) along 45° vector

Interface

RS-232-C/V.24 Serial Interface

7221S Graphics Plotter—offers all the features of the 7221B plus completely unattended generation of multiple graphics output with automatic paper advance. Pages are plotted, advanced, cut, and stacked under program control.

Plotting Area

285 × 400 mm, 11.2 × 15.75 in., Accepts up to ISO A3 or 11 × 17 in. chart paper or roll paper for automatic paper advance. (0.025 mm or .001 in.)

Plotting Speed

360 mm/sec (14 in/sec), either axis, 509 mm/sec (20 in/sec) along 45° vector

Interface

RS-232-C/V.24 Serial Interface

9872B/S Graphics Plotters—have features similar to 7221B/S Graphics Plotters, except offer the HP-IB interface for use with the 2647A Intelligent Graphics Terminal

Plotting Area

285 × 400 mm, 11.2 × 15.75 in., Accepts up to ISO A3 or 11 × 17 in. chart paper or roll paper for automatic paper advance (9872S.), (0.025 mm or .001 in.)

Plotting Speed

360 mm/sec (14 in/sec), either axis, 509 mm/sec (20 in/sec) along 45° vector

Interface

HP-IB Parallel Interface connected to 2647A Intelligent Graphics Terminal

7225A Graphics Plotter with 17601A Personality Module—adds high quality 8-1/2 × 11 in. (210 × 297 mm) vector plotting capability to a 2647A workstation at the lowest possible cost. With simple manual pen changing, multicolor graphics can be produced on paper or overhead transparency material.

Plotting Area

203 × 285 mm, 8 × 11.2 in., Accepts up to ISO A4 or 8-1/2 × 11 in. chart paper. (.032 mm or .0013 in.)

Plotting Speed

250 mm/sec (10 in/sec), either axis, 350 mm/sec, (13.8 in/sec) along 45° vector.

Interface

HP-IB Interface connected to 2647A Intelligent Graphics Terminal

7245B Plotter/Printer—is the most versatile of the HP hard copy graphics peripherals. This device produces graphics display copies from 2647/48A Graphics Terminals, drafting-quality high resolution vector plots, and alphanumeric matrix printing for any combination of plotting and printing on the same page.

Plotting Area

180 × 270 mm, 7.1 × 10.6 in., Using specialized 7245 commands, long-axis plots up to 5 metres (16.4 feet) may be produced. (0.025 mm or 0.001 in.)

Plotting Speed

256 mm/sec (10.1 in/sec), either axis, 363 mm/sec, (14.3 in/sec) along 45° vector.

Interface

HP-IB Interface connected to 2647A or 2648A Graphics Terminal

Graphics Display Copy Devices for 2647A and 2648A Graphics Terminals

2631G Graphics Printer—provides high performance impact printing and graphics display copying at a low cost per page. The 2631G produces up to six crisp copies of both graphics display and alphanumeric data. Other features include four selectable print widths, and subscripting and superscripting.

Plotting Area

Produces screen copies identical in size to 2647A and 2648A display.

Plotting Speed

Copies screen in 58 seconds., Print speed up to 300 lines per minute.

Interface

HP-IB Interface connected to 2647A or 2648A Graphics Terminal

7310A Graphics, Forms, and Text Printer—is a high speed, quiet thermal printer offering graphics, forms, and text printing. Features include inverse printing, bold face type for blinking fields, and automatic page cutting for forms applications, and standard or proportional spacing matrix text for easy readability.

Plotting Area

Produces screen copies 72% of 2647A or 2648A display size.

Plotting Speed

Copies screen in 40 seconds. Print speed up to 500 lines per minute.

Interface

HP-IB Interface connected to 2647A or 2648A Graphics Terminal

HP DSG/3000 supports a broad range of HP's growing family of graphics peripherals. Graphics terminals and plotters can be connected directly to the HP 3000, while HP's line of graphics printers can be used to copy the graphics image from the display of any of HP's graphics terminals.

HP Decision Support Graphics/3000 is designed for unattended plotting and report generation. You can produce multi-color charts which are cut and stacked neatly in the plotter tray for pick-up and distribution. Thus producing periodic graphic reports is as easy as producing tabular reports using a line printer.



Worldwide Support

Draw your own conclusion

Call your HP Sales Representative at a nearby sales office for a graphics demonstration (we're listed in the telephone directory). Invite somebody from your office staff and bring your most recent tabular report—we'll show you how easy it is to produce multi-color business graphs to quickly identify information relevant to your decision making.

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Cupertino, CA 95014
Telephone (408) 725-8111

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