

# **Graphics and the Information Center Manager**

## **Effectively Integrating Business Graphics with Existing Information Processing Systems**

**Product Marketing  
Personal Software Division  
Hewlett-Packard Company**



This document is intended to be used as a handout accompanying a 35mm or overhead transparency presentation. All of the graphics were created using the Hewlett-Packard Graphics Gallery Software. The pictures and clip art illustrations were obtained from several HP Graphics Portfolios.

Overhead transparencies were produced on the HP 7550 plotter. 35mm slides were produced on the HP 7510 film recorder. This handout was created in PageMaker by incorporating pictures from the Graphics Gallery and text that was created in HP Executive MemoMaker. The entire document with text and graphics was printed on a Hewlett-Packard LaserJet Plus.

Special thanks to Marilyn Ruel, Carol Luebke, Cathy Hughes and D.J. Jennings for their assistance in preparing this report.

This presentation is designed to provide Information Center Managers with an analysis of end-user needs for graphics as these applications have migrated from mainframes and minicomputers to PCs. It will explore some of the major issues faced by Information Center Managers as they integrate graphics into their existing information processing systems.

The presentation will also provide a checklist of items to consider in evaluating both graphics hardware and software. It will conclude with a brief discussion of future trends in graphics technology.

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### The power of graphics in improving communication \*

- Meetings tend to be shorter – by as much as 25%
- Presenters using overhead transparencies are perceived as:
  - More persuasive
  - More professional
  - More credible
  - More interesting

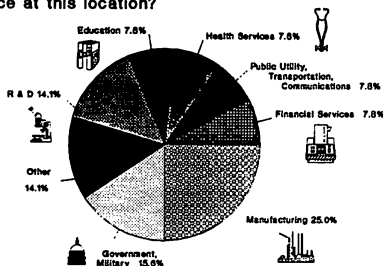
Studies by the Wharton Applied Research Center and the University of Minnesota have confirmed that graphics can be a very effective method to communicate information.

\* As reported in the Wharton Applied Research Center Study.




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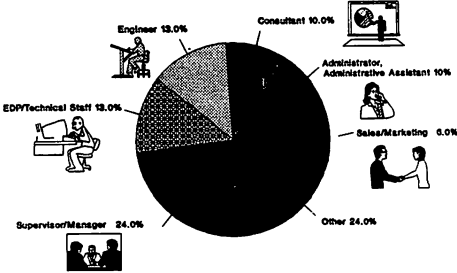
### What category best describes the business or service at this location?



Hewlett-Packard conducts many on-going research studies to better understand user needs for graphics products. A diverse sample of companies was used in one of the most recent surveys.



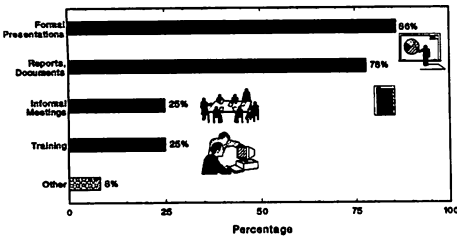
Which category best describes your job function?



Many different types of end-users were surveyed using a five page questionnaire.



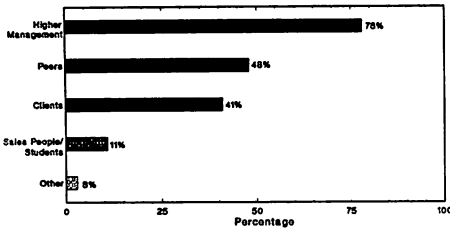
For what purposes will you use the graphics you create?



Formal presentations and documents were cited as the most frequent use for graphics.



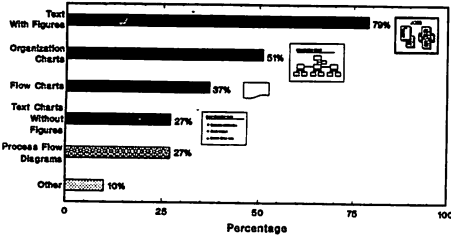
Who is the target audience for the graphics you create?



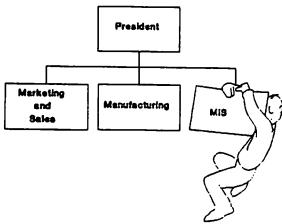
Not surprisingly, these graphics presentations were most often targeted at "Higher Management."



**What kinds of graphics do you intend to create?  
(besides the standard pie, bar and line charts)**



**Do you sometimes feel like you are barely hanging on to your organization?**



Aside from the standard bar, pie and line charts, "Text Charts with Figures" was the most often mentioned type of chart. This is consistent with other studies which have shown that 50-75% of all graphs are text charts. Pictures are very useful in helping people to retain key points.

In fact, if you retain nothing else from this presentation, you will probably remember this slide because of the illustration.

**What do users dislike in their graphics software? \***

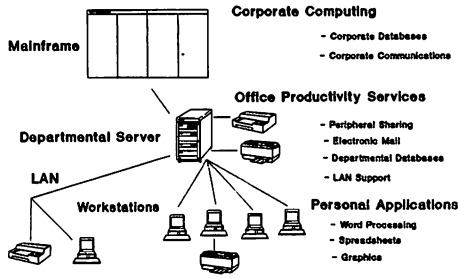
- 54% of people surveyed regretted their purchase because the software was:
  - too slow
  - too complicated
  - too hard to learn
  - "clumsy"
  - required excessive training
  - had bugs

After reviewing why people like to use graphics, it is also interesting to see what they dislike. A survey by PC Week uncovered an astonishing 54% of people who regretted purchasing their graphics software!

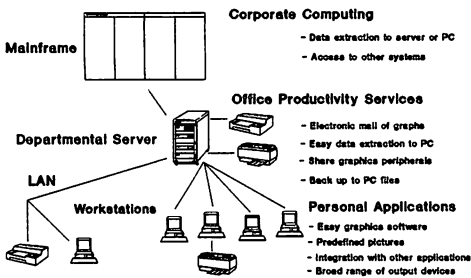
\* As reported in PC Week, December 23, 1988



## Today's Computing Environment



## Graphics Users' Needs in Today's Computing Environment

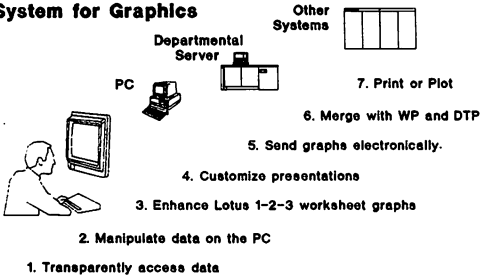


Undoubtedly, you have some combination of mainframes, minicomputers, LANs and PCs. The distribution of processing power down to the workstation level, and the quality and quantity of applications on PCs, have been two of the driving forces in the development of a three tier, information processing environment.

Today, it is much more cost effective to put CPU intensive applications, such as graphics, on workstations where the cost per MIP is about \$ 10K vs. \$ 70-75K on a minicomputer and \$ 150K on a mainframe.

A person developing graphics on a Personal Computer should not be limited to functioning as one individual working in a vacuum. Instead, he should be able to take advantage of the benefits that are provided by a well integrated three tier system.

## An End User's View of a Well-Integrated System for Graphics



In fact, from a users perspective, the PC should act as a window to the resources that are spread throughout the three tiers. In this way, a user should be able to retrieve data from remote systems, manipulate it in his PC applications, turn it into graphs, send the graphs to others, merge them with text in documents and print or plot them on a variety of output devices.



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### Five Reasons to Standardize on Graphics Software

- Guarantee graphs and pictures can be shared
- Reduce the 54% of users who regret their purchase
- Ensure integration with existing information systems
- Eliminate the need for retraining later
- Reduce costs through site licenses



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### PC Graphics Hardware: Checklist

- Intel 80286-Class Machine
  - Color Monitor
  - Hard Disc
  - Printer
  - Plotter



Optional: 35mm film recorder, video output devices, color printers.



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### PC Graphics Software: Checklist

- Graphical interface for ease-of-use.
- High quality output.
- Choice of professional quality fonts.
- Ability to enhance Lotus worksheet graphs.
- Standard charts: pie, bar, line, scattergrams.
- Ability to enhance standard charts with pictures.



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To really exploit the capabilities of your information processing systems, and to maximize the benefits to your users, you may wish to standardize on one graphics software package.

Depending on your users specific needs, you will probably want to consider an 80286 class machine with a hard disc and color monitor as a graphics workstation. In the survey conducted by Hewlett-Packard, over 80% of respondents had such a system.

In selecting software, you should try to choose a package that is easy to use, as well as being highly interactive, in order to avoid the possibility of end-user rejection.



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## PC Graphics Software: Checklist

- Extensive portfolio of pictures and symbols.
- Intelligent support of peripherals.
- Integration with desktop publishing and image scanners.
- Training: classroom, computer assisted, self-paced ...
- Vendor support: phone-in, on-site ...



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## PC Graphics Software: Desirable Features

- Additional chart types: linear regression, combination bar/line, surface, 3D, double Y axis ...
- Painting and free-hand drawing.
- Interchange of graphs with minicomputers and mainframes.
- Ability to add customized logos and symbols.
- Availability of software in site licenses.



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## Future Trends

- Lower price/higher quality laser printers
- Better quality color printers
- Higher resolution graphics displays
- Broader selection of high quality fonts
- Graphical interfaces with pull-down menus
- Better integration of graphics with Desktop Publishing
- Emphasis on graphics integration in the workgroup



In addition to the standard features, you should also consider how well the software exploits the hardware and peripherals' capabilities. Vendor support and training programs that meet the needs of your organization are also important variables that should be considered to ensure a smooth, effective implementation of graphics systems.

In addition to the standard features, there are a number of desirable features you may wish to consider in your selection of software.

In the future, you can expect to see higher quality and lower cost color output devices as well as faster and higher resolution monitors. These high resolution monitors, the use of a mouse, and graphical user interfaces with pull-down menus are quickly becoming standards in graphics systems.

Essentially, graphics will become just another integrated tool that can be employed by an entire workgroup to more effectively communicate information and decisions.

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**Integrating Business Graphics with  
Your Information Systems Can:**

- Maximize end-user satisfaction
- Reduce end-user frustration
- Increase utilization of existing investments
- Optimize system resources



Well-integrated business graphics can increase user satisfaction with information processing systems and optimize the utilization of existing investments.



If you have any questions about the contents of this presentation, or if you are interested in learning more about graphics products and how they can be integrated into your information processing environment, please contact me or your local Hewlett-Packard representative or authorized retailer.

Thank you,

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