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#### MICROCOMPUTER BUSINESS GRAPHICS SOFTWARE MARKET BACKGROUNDER

The business graphics market is still in its infancy. Among the 11 million users of IBM personal computers and compatible systems, only an estimated nine percent use graphics software packages.

Industry estimates also indicate that only 20 percent of those who need presentation graphics -- primarily managers and professionals -- have purchased PC graphics software, resulting in a tremendous market potential.

While more than \$5 billion was spent in 1986 for graphics presentations and reports, the amount allocated for IBM PC-compatible presentation graphics software, according to Dataquest, was just \$80 million. Expenditures for graphics presentations are projected to reach \$9 billion by 1989, while the market for IBM PC-compatible presentation graphics software is expected by Future Computing to reach \$215 million in 1988.

### Factors Fueling Growth

A combination of several factors is driving the PC business graphics market. Foremost is the increasing number of IBM PCs and compatibles in use. As users become more familiar with computer technology, they are demanding the availability of graphics software. The falling price of high resolution color monitors has also increased demand, because customers want to print out the graphics they see so vividly displayed.

The proliferation of technologically advanced, less expensive output devices is also a factor. Currently, the principle color output device is the pen plotter. It offers quality output and brilliant color, but lacks quality control (because pens get dull) and speed.

Laser printers also have stimulated the graphics software market by producing excellent black and white graphics. In addition, new hardware technology such as thermal film, which heats wax against paper to produce color, is expected to fuel the demand for graphics software.

Industry experts expect that by the end of 1987, multipurpose output devices, which produce high-quality text,
numbers and plotter-quality graphics will be on the market.
These devices should result in a significant increase in the
demand for graphics software.

Another key element in the graphics software market is the graphics board, which allow the display of high-resolution graphics and readable text. The current leader in the market, the IBM-compatible Enhanced Graphics Adapter (EGA), introduced in 1984, will probably dominate for the next two years or so. EGA provides for 16 simultaneous colors from a 64-color palette. Video Graphics Array (VGA) technology, introduced in early 1987 by IBM for its PS/2 line of computers, is the emerging standard. VGA offers inproved text display and up to 256 colors simultaneously.

# Players in the Marketplace

Acquisitions in 1986 of small graphics software companies by major software firms resulted in increased marketing clout behind the major graphics packages. Two of the most noted acquisitions were Ashton-Tate's purchase of Decision Resources, Inc., maker of the MASTER GRAPHICS Series and Lotus's purchase of Graphic Communications, Inc.

In 1986, Ashton-Tate's MASTER GRAPHICS Series captured an estimated 25 percent of the IBM PC compatible graphics software market — the highest of any graphics software company. The MASTER GRAPHICS Series, which is the leading seller among Fortune 1000 companies, includes CHART-MASTER, DIAGRAM-MASTER, SIGN-MASTER, MAP-MASTER, and the new MASTER GRAPHICS Presentation Pack, which combines the first three programs in one package.

In addition to the MASTER GRAPHICS Series, the major packages include Lotus' Freelance Plus and Software Publishing's Harvard Presentation Graphics.

## Graphics Improve Communications

The need for a competitive edge -- what one analyst calls the "Rise of the Information Weapon" -- is driving more managers to demand and use high-quality graphics software. As American corporations face more severe competitive challenges than ever before, savvy managers are taking advantage of computer graphics to help them more effectively communicate and persuade.

Research has borne out the impact of graphics. A 1981 study conducted by the University of Pennsylvania's Wharton Applied Research Center found that graphics help speakers persuade their audience and improves the decision-making process. The Wharton Study compared speakers who used overhead transparencies with those who did not. The study found that when graphics were used:

- o Presenters were perceived as better prepared, more professional, more persuasive and more credible.
- o Decisions made by the audience were more likely to reflect the presenter's view.
- o The group was more likely to reach consensus.
- o Group discussion was shorter and allowed more interaction among participants.

A 1986 study by the University of Minnesota's Management
Information Systems Research Center and 3M Corporation found that
presentation support enhanced perceptions of the presenter, as
well as audience attention, comprehension, and retention
resulting in action. The study found that presentations using
visual support were 45 percent more persuasive than those
without.

# Who Uses Graphics?

Typical graphics software users are managers and professionals who are familiar with the personal computer and who are often faced with tight deadlines to produce high-quality presentations. This group wants software that is easy to use and that will create professional quality presentations.

According to research studies, ease-of-use is the most important factor in the users' buying decision, since graphics products are not used daily, but pulled off the shelf infrequently. Users also tend to forget commands, so graphics software must be simple to employ.

Advanced features and compatibility with existing software are also important factors that affect users' buying decisions. Users want the power to quickly and easily generate dramatic charts and graphs and they want high-quality output, which is the ultimate test of a presentation graphics software package.

#### MASTER GRAPHICS Series

MASTER GRAPHICS products are designed to be powerful and easy to use. Ashton-Tate recognizes that corporate users are generally not graphics artists and do not want to take the time to design graphics from the ground up. Automatic formatting, a key feature in the MASTER GRAPHICS Series, allows users to create a broad range of charts and graphs without training.

A December 1986 survey of <u>PC Week</u> readers rated CHART-MASTER and SIGN-MASTER the easiest to use graphics software packages and the most compatible with existing hardware and software.

CHART-MASTER also topped the list of packages which respondents found to perform better than expected.

Commenting on the current status of the graphics software market, Sean O'Connor, Decision Resources' founder and creator of the MASTER GRAPHICS Series, said, "Today's customers are more demanding of graphics software, but they also need to be further educated on what constitutes good graphics and design.

"That is what we're addressing by combining three of our best-selling products in the MASTER GRAPHICS Presentation Pack and including the 3M book on 'How to Run Better Business Meetings.' This product provides all the tools a manager needs to create great business graphics, and will help managers give more effective business presentations."

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