**SELECTIVE UPDATE**

**NCGA Turns a Corner**

"With lawsuits out of the way, we can get back to the business of serving our constituency," says Richard Peters, (NCGA and CalComp VP) in an exclusive interview with IEEE CG&A.

Computer graphics, says Peters, whether viewed as a field or a feature, is changing rapidly. Pressure is coming both from the fact that marketing is becoming a key ingredient for survival and that price erosion threatens the success of many a smaller or less sophisticated vendor.

Those from technical backgrounds who can change hats and learn marketing are a step ahead. But many cannot and persist in believing that their enterprises can survive without such expertise. In today's marketplace, Peters proposes, such entrepreneurs not only need to hire marketing and administration experts if they are to survive, but they need to call on their professional organization, in this case NCGA, for cogent and decisive leadership and information, and they need to use the organization to make important contacts.

**Answers**

The National Computer Graphics Association is making great strides in becoming more responsive to the needs of both the product vendor and the user, according to Peters. But it also has a new constituency, which will serve the other two as well. Peters describes the new situation in the field with the following chart:

![Diagram](https://via.placeholder.com/150)

The well-established route for a product, still quite valid, is from producer through OEM to user, or in other cases straight from producer to user. But there is a less well-established route, which is from producer through value-added remarketer, through dealer to user. A good value-added remarketer is hard to find, says Peters, but this is an important ingredient in the continued strength of the computer graphics marketplace. It is the value-added remarketer who can provide marketing knowhow, distribution channels, individualized product mixes, even education. While the OEM sells applications to the more knowledgeable user, the value-added remarketer does the mixing and matching needed by producer, dealer, and user alike.

An important new NCGA program will be aimed at all the parts of this marketplace chain, from producer through user, but with a new special emphasis on the value-added remarketer, seen by the NCGA board of directors as the link most in need of development today.

**Study**

A Delphi Study of the Computer Graphics Industry is a huge volume that resulted from in-depth research by NCGA. Because it is such a weighty volume, it has been extracted down and the more important nuggets of wisdom about the computer graphics marketplace presented in a more manageable form.

While many have heard of this important study, most were unaware that it is an ongoing project. NCGA hopes to keep the study going indefinitely, and the latest edition of highlights will debut at Computer Graphics 86 in Anaheim, California, May 11-15.

The principal purpose of the study, reports Peters, is to identify trends. The study is divided into "General Trends," "Focused Trends," and "Institutionalization of Computer Graphics Trends." General Trends describe the industry, the market, and the products of computer graphics. Focused Trends describe specific technical characteristics and specific application areas. Institutionalization of Computer Graphics Trends are global, industrywide, trends and standards that transcend the market characteristics of individual products.

Trends, in this extract from the larger study, are identified as high impact or low impact in each category, and there is even a section on trends whose impact has not yet been assessed.

**New NCGA Quality**

"We're becoming more assertive on trends, opinions, impact statements, etc.," says Peters. "We hope to make continuation of this study an annual event." It is an ongoing project because it is linked to the NCGA Corporate Advisory Board and the Board of Directors.

It is clear how that influence is felt when you understand that the NCGA Board is made up of 15 people, about half from industry and half from the users, academic, and consultants sector. As a matter of fact, Peters reports, this field mix formula has been written into the bylaws.

And standing behind the Board is a long-range planning committee responsible for identifying new criteria that need studying. Now that the major study has been done, it will be constantly updated in highlights, with new areas being identified by the long-range planning committee and studied as needed, or dropped as no longer applicable.

The target audience is the entire NCGA constituency. Corporate members can be expected to understand immediately the value of the study for them. Users and academicians may need to learn how much impact it can have on them, and the newest constituency, the value-added remarketers, will be able to use it as the backbone of their business.

The corporate members can use the study to guide them in product development; academicians likewise (if you consider both their research and their students as products), while the user will see what future trends can be expected to do to computer graphics. The value-added remarketer will find highlighted
opportunities, specific information for getting the job done. "It is all part of a revitalized and stronger NCGA," says Peters. "NCGA was formed to extend real and concrete services to its members and to the industry in general, and that charter is being pursued with renewed vigor today."

**NCGA preview: Increased focus on CAD/CAM**

The seventh annual NCGA conference will offer 27 different tutorials and technical sessions on CADD, CAM, CAE, and CIM. This represents a 125 percent increase over the previous year and makes industrial automation subjects a major focus of the five-day event.

Specific sessions include Mechanical CADD for Beginners; Fundamentals of CAD/CAE; New Directions in PC CAD; Expert Systems; Management Issues; Trends in Electronics CAD/CAE; Solids Modeling; CIM Planning/Implementation; and CIM Technologies, Strategies, and Implementation.

A featured session will provide an update on MAP and TOP, protocols the NCGA says have rapidly captured the attention of the computer graphics industry around the world.

The focus of the conference is based on a need the NCGA perceives to provide educational opportunities for the increasing numbers of individuals involved in industrial automation. Industry experts estimate annual growth rates of some 35 percent for mechanical CAD, electrical and electronic design automation, and computer-aided manufacturing.

**Pioneers get special invitation**

The NCGA is extending a special invitation to members of the Computer Graphics Pioneers. They have been offered discounted preregistration rates to Computer Graphics 86 and are invited to the NCGA President’s Reception.

The Pioneers is made up of the men and women who blazed the trail in computer graphics during the 1950s and 1960s. The group is headed by Carl Machover and has some 260 members at present. However, Machover estimates that the potential membership is at least 5000. (Anyone active in computer graphics for at least 20 years is eligible.)

The group was founded in 1982 to help establish some continuity to the history of the computer graphics industry. Persons interested in joining the Pioneers can contact Dave Peltz at 20450 Celtic St., Chatsworth, CA 91311; (818) 998-6157.

The NCGA’s Computer Graphics 86 will be held May 11-15 at the Anaheim Convention Center in Anaheim, Calif. The NCGA’s toll-free preregistration line is (800) 225-NCGA.

**New art contest offers $20,000 in prizes**

The Truevision Art Contest has been established to encourage innovative and creative uses of Truevision and Island Graphics products. The contest is being sponsored by AT&T’s Electronic Photography and Imaging Center (EPICenter) and Island Graphics.

Cash prizes totaling $20,000 will be awarded at ACM SIGGRAPH 86 in Dallas August 18-22.

The contest will be based on the Truevision Image Capture Board (ICB), the Truevision Advanced Raster Graphics Adapter (TARGA), and the Truevision Image Processing Software (TIPS). Both the ICB and TARGA are real-time image capture and display boards that operate in the AT&T PC 6300 and such compatibles as the IBM PC XT and AT.

The ICB captures and displays television-quality images at a resolution of 256 x 256 pixels in 32,000 colors. TARGA captures and displays images in 512 x 512 resolution in either 32,000 or 16.7 million colors, depending on the model. TIPS is a PC-based image creation and manipulation package.

Awards will be divided between ICB- and TARGA-produced entries, with two categories in each: hand-rendered images using TIPS and digitized photos manipulated with TIPS. The prizes will be shared equally among the four divisions as follows: $3000 for first place, $1000 for second, and $500 for third. Two honorable mention awards of $250 will also be made in each of the four divisions.

The panel of judges will include Tom McMillan, managing editor of Computer Graphics World; Margaret Neal, managing editor of IEEE CG&A; Patric Prince, ACM SIGGRAPH art show chair and computer graphics lecturer at California State University, Los Angeles; and representatives from AT&T and Island Graphics.

Entries must be postmarked no later than June 15, 1986. For contest rules, entry forms, and information about Truevision products, contact AT&T EPICenter, 200 Wellesley Blvd., Indianapolis, IN 46219; (800) 858-TRUE.

**Nominees sought for Warner Prize**

Nominations for the fourth annual Jean-Dominique Warner Prize for excellence in information science are due May 15. They should be sent to Gerald Weinberg, 1725 Gage Blvd., Topeka, KS 66604.

The Warner Prize was established in 1983 to honor one of Europe’s leaders in information engineering. It is intended to encourage continuing research and development in the field by recognizing such efforts publicly. Initially funded by Ken Orr and Associates, the award consists of a $3000 honorarium and a commemorative medal.

The selection committee consists of author and lecturer Gerald Weinberg; Gordon Davis of the University of Minnesota School of Management; and T. Capers Jones, a consultant with Norton & Company of Lexington, Massachusetts.

The first recipient of the Warner Prize was Endi Mumford, professor of organizational behavior at the Manchester (England) Business School. She was followed in 1984 by Barry W. Boehm, chief engineer at TRW’s Software Information Systems Division. Last year’s recipient was Alan Kay, an Apple Fellow.

The 1986 Warner Prize will be presented at the 11th annual DSSD Users conference, Feedback 86, to be held in Kansas City October 7-9.

**Hercules sues two over graphics cards**

Hercules Computer Technology has filed suit against two computer mail-order distributors: PC Network of Chicago and The Diversified Group of Hawthorne, California.

Hercules claims that PC Network is packaging exact copies of the Hercules Graphics Card manual and Hercules software with the graphics cards it sells. Hercules is also accusing The Diversified Group of including copies of Hercules software with graphics cards it distributes.
Damages in excess of $100,000 are being sought from each company.

Last August Hercules received a consent judgment against Dyna Systems, a Santa Clara, California, retailer that had been selling imported copies of the Hercules board, operating manuals, and software. Hercules president Kevin Jenkins said the company regularly receives complaints from users who experience problems with what are actually Hercules clones.

Hercules reports that it is currently working with authorities in Taiwan to stop the flow of counterfeit computer products to the United States. Hercules manufactures the Hercules Graphics Card and the Hercules Color card, two popular expansion products for the IBM PC.

Megatek 9200's donated to two universities

A gift of Megatek 9200 computer graphics systems with a total value of more than $235,000 has been divided between two midwestern universities by United Telecommunications Inc. of Westwood, Kansas. The recipients are the University of Kansas and the University of Missouri-Columbia.

Megatek, a subsidiary of United Telecom, produces high-performance interactive computer graphics systems. Its 9200's will give the faculty and students at the two universities an opportunity to conduct research or design projects in a real-time environment.

Applications at the two schools include studying sensors to be mounted aboard a spacecraft bound for Jupiter; modeling molecules important to the development and behavior of pharmaceuticals; researching antenna reception and performance; and real-time engineering design and optimization.

VMEbus market expected to surge

The VMEbus has emerged as leader in the very promising 32-bit microcomputer bus market, according to a recent report by Frost & Sullivan. The study predicts that VMEbus product consumption will surge from $75 million in 1985 to $950 million and a 38 percent share of the market in 1989.

The emerging trend toward replacement of the 32-bit minicomputer with the 32-bit microcomputer is opening up new markets, and will continue to fuel the market for the VMEbus board. Frost & Sullivan reports that the main catalyst will be the computer-integrated manufacturing sector, which is expected to triple to $52 billion during the next five years.

The study considers the VMEbus product market in seven basic categories: central processing units, memory, controllers, analog I/O, digital I/O, other functions, and accessories.

The authors estimate that by the end of 1986 more than 120 vendors will be producing at least 600 compatible VMEbus products addressing such areas as computer-aided design and manufacturing, robotics, imaging, machine vision, medical scanning, seismology, infrared detection, and weather analysis.

The study is 222 pages plus appendixes and sells for $1,650. For more information contact Frost & Sullivan, 106 Fulton St., New York, NY 10038; (212) 233-1080.

Proliferation of engineering workstations predicted

A recent study by Stanford Resources expects the market for engineering workstations to grow at a 36.7 percent annual rate during the second half of the decade.

"Graphics Workstations and Terminals" predicts that the worldwide market for graphics workstations and terminals will pass $40 billion by 1990, up from $9.7 billion in 1984.

According to the study, the market for graphics software will grow even more rapidly—37.4 percent annually—and there will be a radical shift toward the PC segment. While the mainframe and minicomputer segments accounted for 85 percent of the software sold in 1984, microcomputers should account for 55 percent by 1990.

The study is aimed at marketing and strategic planning managers of graphics display suppliers, software producers, and OEM manufacturers. It contains a list of 510 graphics workstations and terminals, which includes price, display size, features, and technology used.

Issues addressed in the study include the impact of PCs on the graphics market, price and performance trends, attitudes of users and potential users, and supplier strategies. The study is available for $1995 from International Planning Information, 465 Convention Way, Ste. 1, Redwood City, CA 94063; (415) 364-9040.

Still time to enter Raster Tech graphics contest

Raster Tech and The Computer Museum of Boston have once again challenged individuals "to design the most outstanding and imaginative computer graphics image in the industry." Entries for the second annual International Computer Graphics Image Contest are due June 1, and the winners will be announced at SIGGRAPH '86 in Dallas August 18-22.

Entries may be produced with any computer graphics system, not just those made by Raster Tech—an unusual feature among corporately sponsored contests. Cash prizes ranging from $200 to $2000 will be awarded in both student and professional categories.

A more detailed report of the contest can be found on page 65 of the February 1986 issue of IEEE CG&A. For further information, contest rules, and entry forms, contact Computer Graphics Image Contest, Raster Technologies, Two Robbins Rd., Westford, MA 01886; (617) 692-7900.

Pixar splits from Lucasfilm

Pixar, until recently the computer graphics division of Lucasfilm, is now an independent company owned by Steven P. Jobs and Pixar employees. Jobs paid an undisclosed sum to Lucasfilm for a majority interest and will serve as chairman of the new company.

Under its new ownership, Pixar will design, manufacture, and market high-performance computers and software for computer graphics and image processing applications. The Pixar Image Computer, developed at Lucasfilm over the last three years, is expected to be introduced during the next three months.

According to Pixar, the computer performs complex graphic and image computations more than 200 times faster than conventional minicomputers, and is also faster than a $6 million supercomputer at these specialized tasks. The Pixar Image Computer will sell for approximately $125,000.

Pixar was originally formed in 1979 by George Lucas to bring high technology to the film industry. According to Pixar, the special effects division of Lucasfilm will continue to use the Pixar Image Computer to produce computer animation for films.