Randy Roberts:
A New Generation of Visual Communications

One of the most widely acknowledged and significant trends today is the emergence of the "information driven" economy and society. In 1950, only about 17% of the labor force worked in so-called "information jobs", compared with the 65% presently estimated to hold these types of positions. As the nature of information becomes more complex and its quantity grows overwhelming, the importance of organizing and presenting this information assumes greater significance and value. The ability to communicate quickly VISUALLY is becoming increasingly vital.

The effects on society resulting from the development of realistic, synthetically generated images have often been likened to that which occurred following the invention of the Gutenberg printing press. The visual presentation of complex information becomes more widespread each day, and the number of practical applications increases rapidly. As a result, access to comprehensive and complicated information is made accessible to almost every level of society. Whether computer graphics are used for product presentations or the training of aircraft mechanics and pilots, highly complicated information can be presented visually, and therefore, is likely to be better understood. In fact, to anyone involved in pre-selling, training, or educating, computer graphics is the new language of the 1980's and beyond.

The fundamental premise on which this new communication rests is that everything observable to the human eye can be described mathematically. Any mathematical data can then be simulated pictorially by a computer. Over the past decade and a half, research into synthetic image-making has grown phenomenally, evolving from the early computer-controlled photography of 2001: A SPACE ODYSSEY, into the fastest growing form of visual communications.

A primary leader in the field is Robert Abel & Associates, a multidisciplinary company founded in 1971 by Abel and Con Pederson, who had supervised the special effects for 2001. Theirs was one of the first companies which combined graphic design with computer technology. The software which has come from this group, developed in over 800 productions, represents the forefront of computer graphics.

Innovators in the field for over fourteen years, Abel and his associates have assembled a lengthy list of technological breakthroughs, including the invention of the world's first digitally controlled motion picture camera. They were also the first to bring computer graphics to the broadcast media, adapting computers that previously had been used only by engineers and architects.

Abel's broad-based visual communications company has created images for an international clientele in aerospace, automotive, advertising, science, telecommunications and entertainment. The results of their approach are especially visible in television advertising, for Fortune 500 clients like ATT, TRW, Transamerica and ITT. It is work which has made Robert Abel & Associates the most honored studio in computer graphics, winners of 23 Clios, TV's equivalent of the Oscar, for outstanding creative achievement.

The company's computer-related operations have evolved to such an extensive degree that now these operations have been consolidated in a new affiliate: Abel Image Research. Through this move, their software will now be marketed for a wide variety of industrial design and training applications, with initial emphasis on the aerospace, defense, architecture, oil, engineering and automotive markets. Both software products and production services will be offered by the new venture, and Abel, who will serve as board chairman and CEO, has appointed computer industry veteran Robert Darroll as president.

As Robert Abel explained, "We've developed the most consistently productive computer graphics software in the world, and we believe that now is the most opportune time to make it available commercially. For years we've kept our software proprietary, since we were not about to give our competitors the power that we'd developed so painstakingly.

But today, the market for computer graphics productions is growing so enormous that no production company could conceivably meet the demand alone. And now that it makes economic sense for large corporations to purchase software for their own in-house purposes, our market has expanded even further."

"We are also the only company", Abel added, "in the unique position of being able to prove our software, every day, through our commercial productions. That has given us an immeasurable advantage, because our potential customers can see that the product works in real world applications. They can plug in our system and use it immediately." Among the company's first customers is McDonnell-Douglas, along with clients from Britain, Germany and Italy.

By January of 1986, Abel Image Research expects their product line will have developed to include a high-powered, turnkey system which integrates hardware and software. Observed Abel: "There have traditionally been people who made computer hardware, and people who wrote software, and people who did computer graphics productions. We're pulling all of these elements together. Our plan, obviously, is to revolutionize the whole approach to making images, so that it will work for many different applications."

"Regardless of our respective industries, the overwhelming majority of the information we must deal with in modern commerce is invisible data. Whether it's the unemployment rate, the GNP or the impact of OPEC on the economy, such complex information CAN be made intelligible by depicting it through computer graphics. CBS News has been a client of our studio since 1976 and has relied on us to generate visual material for subjects as different as analyzing the 1984 elections to promotion of the network itself. It's apparent that the ability to communicate nonverbally will be the key to communicating most effectively in a post-literate world. To be a force, you've got to be able to visualize your ideas."

Abel cites varied experiences which illustrate the trend. "A case in point is the Herman Miller company, a prestigious, successful furniture manufacturer. A few years ago, they made a very advanced chair, which had advantages that couldn't be well described in words. As a result, the company sold only a couple of hundred chairs in a year and a half. They then came to us for a computer graphics sales film which demonstrated their design visually, and they wound up selling several thousand chairs in the next six months. When they found a way to demonstrate how the product functioned, it finally had commercial value."

"An obvious example is the challenge constantly faced by architects, since the task of depicting a building is difficult if your investor can't read blueprints. It's just an abstract idea that doesn't exist in any directly perceivable way for most people. Through computer graphics, architects can literally take their clients on a 'walk' through a proposed structure. Our company worked with the firm of Skidmore, Owens and Merrill doing precisely that, both for an urban development project in Chicago, and for the Dade County Stadium in Florida. Giving a potential client a simulated 'tour' is of great proven value."

"New opportunities for computer graphics will continue to proliferate", Abel concluded. "Recently, Hoffman LaRoche, one of the world's largest pharmaceutical corporations, came to us to create visual material that would illustrate processes which had never been depicted before, because they occured chemically within the human body. Computer graphics proved a tremendous aid in educating their sales force, and it reconfirmed what a general purpose tool our software really is."

Abel's optimism is shared by many observers in the commercial production industry. ON LOCATION magazine, which recently surveyed the industrial market for synthetic imagery, reported the prediction that "The computer revolution and its attendant revamping of the way business is done will boost the market for industrial computer graphic software and services to nine times present levels – or to $4.1 billion – by 1994."

To paraphrase an old saying: "One picture is worth a thousand words, and if you can make it move, it's worth a million."