

# [Hollywood not only stored digitally, but also has](https://assignbuster.com/hollywood-not-only-stored-digitally-but-also-has/)

Hollywood has gone digital, and the old ways of doing things are dying. Animation and special effects created with computers have been embraced by television networks, advertisers, and movie studios alike. Film editors, who for decades worked by painstakingly cutting and gluing film segments together, are now sitting in front of computer screens.

There, they edit entire features while adding sound that is not only stored digitally, but also has been created and manipulated with computers. Viewers are witnessing the results of all this in the form of stories and experiences that they never dreamed of before. Perhaps the most surprising aspect of all this, however, is that the entire digital effects and animation industry is still in its infancy. The future looks bright. In the beginning, computer graphics were as cumbersome and as hard to control as dinosaurs must have been in their own time. Like dinosaurs, the hardware systems, or muscles, of early computer graphics were huge and ungainly. The machines often filled entire buildings.

Also like dinosaurs, the software programs or brains of computer graphics were hopelessly underdeveloped. Fortunately for the visual arts, the evolution of both brains and brawn of computer graphics did not take eons to develop. It has, instead, taken only three decades to move from science fiction to current technological trends. With computers out of the stone age, we have moved into the leading edge of the silicon era.

Imagine sitting at a computer without any visual feedback on a monitor. There would be no spreadsheets, no word processors, not even simple games like solitaire. This is what it was like in the early days of computers. The only way to interact with a computer at that time was through toggle switches, flashing lights, punchcards, and Teletype printouts. In 1962, all this began to change.

In that year, Ivan Sutherland, a Ph. D. student at (MIT), created the science of computer graphics. For his dissertation, he wrote a program called Sketchpad that allowed him to draw lines of light directly on a cathode ray tube (CRT). The results were simple and primitive.

They were a cube, a series of lines, and groups of geometric shapes. This offered an entirely new vision on how computers could be used. In 1964, Sutherland teamed up with Dr. David Evans at the University of Utah to develop the world’s first academic computer graphics department.

Their goal was to attract only the most gifted students from across the country by creating a unique department that combined hard science with the creative arts. They new they were starting a brand new industry and wanted people who would be able to lead that industry out of its infancy. Out of this unique mix of science and art, a basic understanding of computer graphics began to grow. Algorithms for the creation of solid objects, their modeling, lighting, and shading were developed. This is the roots virtually every aspect of today’s computer graphics industry is based on.

Everything from desktop publishing to virtual reality find their beginnings in the basic research that came out of the University of Utah in the 60’s and 70’s. During this time, Evans and Sutherland also founded the first computer graphics company. Aptly named Evans & Sutherland (E&S), the company was established in 1968 and rolled out its first computer graphics systems in 1969. Up until this time, the only computers available that could create pictures were custom-designed for the military and prohibitively expensive. E&S’s computer system could draw wireframe images extremely rapidly, and was the first commercial “ workstation” created for computer-aided design (CAD). It found its earliest customers in both the automotive and aerospace industries.

Throughout its early years, the University of Utah’s Computer Science Department was generously supported by a series of research grants from the Department of Defense. The 1970’s, with its anti-war and anti-military protests, brought increasing restriction to the flows of academic grants, which had a direct impact on the Utah department’s ability to carry out research. Fortunately, as the program wound down, Dr. Alexander Schure, founder and president of New York Institute of Technology (NYIT), stepped forward with his dream of creating computer-animated feature films. To accomplish this task, Schure hired Edwin Catmull, a University