

Edwin Catmull

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As the co-founder of Pixar, a start-up with a big vision, Edwin Catmull is a highly respected figure in the business and creative worlds. Having revolutionised the world of animation and built one of the most innovative and emulated companies on earth, he is co-founder of Pixar Animation Studios and president of Pixar and Walt Disney Animation Studios. Previously he was vice President of the computer division of Lucas film Ltd., where he managed development in the areas of computer graphics, video editing, video games and digital audio.

He has been honoured with 5 academy awards including two Oscars. He also received the Stephen A. Coons award for his lifetime contributions in the computer graphics field, the progress medal and the fuji gold medal from the society of motion picture and television engineers, the animations industry's UBIwerks award for technical advancements in the art or industry of animation. Additionally, he was the recipient of the IEEE's John Von Neuman Medal for fundamental contributions to computer graphics and pioneering use of computer animation in motion pictures.

He is the founder of three of the leading centres of computer graphics research- including a division of Lucasfilm and Pixar. These organisations have been home to many of the most academically respected researchers in the field and have produced some of the most fundamental advances in computer graphics including image compositing, motion blur, subdivision surfaces and the Z-buffer. He is one of the architects of the RenderMan rendering software which has been used in over 80% of Academy Award winners for visual effects over the past 20 years.

In 1978 he became a member of the IEE's Computer Society, he is also a fellow of the association for computer machinery (ACM) the computer history museum and a has participated in the ACM SIGGRAPH conference for almost 30 years.

Scholastically, he received a B.S. degree in computer science and physics and a Ph.D. in computer science from the University of Utah. He was also presented with an Honorary Doctoral Degree in Engineering in 2005, and received an Honorary Doctorate of Humane Letters from Johns Hopkins University ten years later.

After Graduating from the University of Utah he worked as a developer for Boeing and for the New York Institute of Technology (NYIT) before returning to get his PhD in Computer Science. It was there he started to learn about computer graphics when he saw Ivan Sutherland's computer drawing program Sketchpad. After seeing this he saw the potential that computer graphics had in the future of animation combining his love of both computer science and animation. It was here that he made two fundamental discoveries in the field of computer graphics, bicubic patches and texture mapping. He also invented algorithms for spatial anti-aliasing and refining subdivision surfaces. He also discovered Z-buffering, even though it had already been theorised by Wolfgang Straßer 8 months earlier.

After completing his PhD, he began working for Applicon, a Computer Aided Design Company, but within months was contacted by the founder of the NYIT to be the director of their new computer graphics lab. It was here that he formed a research group working on 2D animation focusing mostly on tools that animators could use to speed up their work. One of the inventions that came out of this research group was Paint.

Eventually Catmull decided that he and the research group should move onto 3D computer graphics, moving into the field of motion capture. By the end of the 70's, the Computer Graphics Lab was starting to struggle and despite the technological development they felt that there was a lack of actual progress. It was then that Catmull was approached by George Lucas, and by 1979 Catmull was head of a group bringing computer graphics, video graphics and digital audio into the entertainment fields. By the end of '79 Catmull was Vice-President of Industrial Light & Magic, the computer graphics division of Lucasfilm. In 1986, after Steve Jobs bought Industrial Light & Magic, he made Catmull CTO of Pixar. It was here that he was the key developer of the Renderman rendering System, scene in Toy Story and Finding Nemo.

In 2006 when Disney acquired Pixar, Catmull alongside John Lasseter were put in charge of reinvigorating the Disney animation Studios. By June 2007 Catmull was made president of Pixar, Disney Animation and DisneyToon Studios respectively. In October 2018 Catmull announced his retirement from both Pixar and Disney, staying on as an adviser until August 2019.