HISTORY OF HOLOGRAPHY

Holography, like many great discoveries, is almost an accident. Searching for methods to improve the resolution of electron microscopy, Dr. Dennis Gabor, a scientist at the Imperial College of London, reasoned that by comparing the light shining through the object with a standard reference light he could record not only the brightness but also the spatial relationship of one point of light to another. He made what is called a phase comparison. This is the discovery that makes Holography unique as a photographic technique. Using a mercury arc lamp with a green filter, he produced the first "in line" transmission hologram in 1948.

Dispite Dr. Gabor's theorizing about the use of "coherent" light, Holography lay dormant until 1960 when T. A. Mainman, of Hughes Aircraft Company demonstrated his first ruby LASER (L.A.S.E.R. - Light Amplification by Stimulated Emission of Radiation) which produced an intense spectrally pure light. From there on scientific developments were rapid. Within a year Lloyd Cross sold the first commercially produced LASER and Russian scientists produced the first white light reflection hologram. In this country two scientists at the University of Michigan, Emmett Leith and Juris Upatnieks, used the LASER's coherent light to make the first holograms using an off-axis reference beam. Following this pioneering work, Dr. Tung H. Jeong, of Lake Forest College, in 1965 produced the first single shot, single beam 360 degree transmission hologram. Within several more years Steven Benton of the Poloroid Corporation had developed the white light transmission "the rainbow" hologram, and Lloyd Cross and Dave Schmidt of the Multiplex Company developed the white light "Multiplex Movie." To house and encourage this work, Gallery 1134 Fine Arts Research & Holographic Center was founded in 1977, with its school opening in the fall of that year.