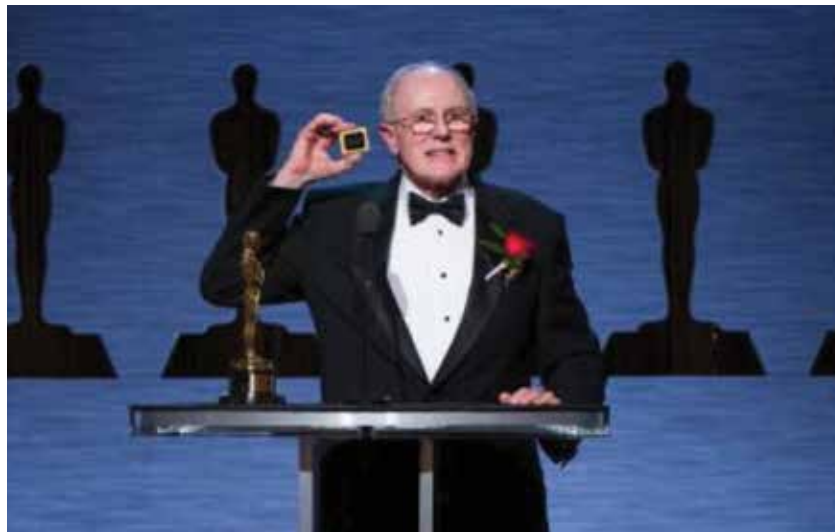


T SENSORS™ FOR TRILLION SENSOR ROADMAP

First Oscar to MEMS Engineer: DMD Inventor Larry Hornbeck

Larry Hornbeck, a friend of Janusz Bryzek and speaker at MEMS Technology Summit at Stanford in 2010, has been awarded an Academy Award® of Merit (Oscar® statuette) for his contribution to revolutionizing how motion pictures are created, distributed, and viewed using DMD technology (branded as the DLP® chip for DLP Cinema® display technology from TI).

Kurt Petersen, a long time friend of Larry's expressed the next wish: "Now all we need is a MEMS person getting a Nobel Prize".



The technology now powers more than eight out of 10 digital movie theatre screens globally. Produced with different resolutions and packages, DLP chips also see use in personal electronics, industrial, and automotive markets. The present good-times with DMD are enjoyed only because TI was willing to make a major long-term bet on this novel way to modulate pixel-arrays, which required building the most complex Micro-Electro-Mechanical System (MEMS) the world had ever seen.

Development of the DLP chip began in TI's Central Research Laboratories in 1977 (following pioneering work of Kurt Petersen at IBM) when Hornbeck first created an array of "deformable mirrors" controlled with analog circuits. In 1987 he invented the DMD, and TI invested (about \$1 billion) in developing multiple money-losing generations of the technology over the next 12 years. Finally, in 1999 the first full-length motion picture was shown with DLP Cinema technology, and since then TI claims that the technology has been installed in more than 118,000 theaters around the globe. As most are running 4k resolution, this application consumed about half a trillion mirrors.

"It's wonderful to be recognized by the Academy. Following the initial inventions that defined the core technology, I was fortunate to work with a team of brilliant Texas Instruments engineers to turn the first DMD into a disruptive innovation," said Hornbeck, who has 34 U.S. patents for his groundbreaking work in DMD technology. "Clearly, the early and continuing development of innovative digital cinema technologies by the DLP Cinema team created a definitive advancement in the motion picture industry beyond anyone's wildest dreams."

<http://semimd.com/eds-threads/2015/02/10/oscar-for-dmd-inventor-hornbeck/>