

MPEG-2 Technology Sets International Standard For Digital Audio And Video

Columbia University



The next time you marvel at the detail on a high-definition TV, consider the fact that some of the key technology that created those sophisticated television signals originated at Columbia University in New York. Dimitris Anastassiou, Ph.D., professor of electrical engineering at Columbia led the team that developed one of the important MPEG-2 algorithms of the early 1990s.

Professor Anastassiou's groundbreaking research has been incorporated into the international video compression-coding standard.

“ The MPEG-2 technology (the acronym stands for Motion Picture Expert Group) algorithm, is really a set of mathematical manipulations that send and compress quality video and audio over limited bandwidth channels, and then decompress it for display.

MPEG-2 is now used in countless forms of digital technology including high-definition TV (HDTV), DVD disks, Video on Demand, personal computing, direct satellite TV and digital cable systems.

Columbia was the only academic institution involved in the development of the MPEG-2 technology, but it has spurred a prolific research area. Anastassiou's pioneering work has led to a patent pool of nearly 800 patents held by 23 companies, representing a market of \$700 million of royalty income and a total market in the billions of dollars. As long as consumers continue to demand large TV screens with sharp details, Columbia's technology will contribute to making this popular pastime a more stimulating experience.

This story was originally published in 2007.

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