multiple goals of encouraging the use of communications technologies and social resources for improving health education and quality of life for Earth's inhabitants, integration of science and technology with various media for the purpose of enhancing awareness of our complex and interconnected world, and for furthering the public's understanding of science and technology and the way they impact society.

Flaherty received a degree in physics in 1952 from the Rockhurst College in Kansas City, MO. He is survived by his wife of more than 60 years, Jan, along with four sons, a daughter, and eight grandchildren.

A funeral mass for Flaherty was conducted on 14 August at St. Agnes Church in Greenport, NY, with burial following in a private ceremony held at Long Island National Cemetery in Farmingdale, NY.

—James E. O'Neal

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EXCLUSIVE ARTICLES ONLINE: ABSTRACTS

For expanded coverage of this month's topic "Compression," you can find the following papers in the Digital Edition. Visit the SMPTE digital library at http://journal.smpte.org to access the issue and to read these additional papers.

High Throughput JPEG 2000 (HTJ2K): New Algorithms and Opportunities

By David S. Taubman, Aous Thabit Naman, Reji Mathew, and Michael D. Smith

This paper describes a drop-in replacement for the Joint Photographic Experts Group (JPEG) 2000 (J2K) block coder that offers exceptionally high throughput, with a small reduction in coding efficiency, while retaining all features of J2K except for quality scalability. Throughputs on the order of ten times or more are achievable relative to J2K. We coin the term fast block coding with optimized truncation (FBCOT) for the overall proposed algorithm. Truly reversible transcoding between J2K and FBCOT bitstreams is supported on a block-by-block basis, enabling systems in which the efficiency and scalability of J2K can be combined with the high-throughput benefits of FBCOT. The algorithm forms the basis of a new standard that will be J2K Part-15 (also known as high-throughput J2K) and is currently at committee draft status within the ISO/IEC working group known as JPEG.

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Core Color Rendering Algorithms for High Dynamic Range Display

By Gary Demos and Doug Walker

As is well known, colors as they exist in the real world must be adjusted so as to look correct and pleasing when displayed on a TV or a cinema screen. In color science, the process of converting these scene-referred colors to display-referred colors is termed *rendering*. The Academy Color Encoding System (ACES) is a good example of a set of open-source picture rendering algorithms. In this paper, the authors, who both participated in the development of ACES, discuss the pros and cons of various rendering techniques and share the results of their latest work. Specifically, we present a method of applying a tone curve that preserves color ratios and has better noise properties than earlier techniques. This algorithm has been successfully used as part of a larger parametric rendering system for high dynamic range display. One of the nice properties of this algorithm is that it has a simple and robust inverse.

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