

In Memoriam

The world of audio has lost a giant. **John George Frayne**, who died in Pasadena, California, on October 31, 1990, had a long and distinguished career in sound recording for both film and disk. Born in Ireland on July 8, 1894 he came to the United States as a young man. His education included an A.B. degree from Ripon College and a Ph.D. from the University of Minnesota. Both degrees were in physics and mathematics. After teaching for several years at the collegiate level, John went to the California Institute of Technology in 1928 as a National Research Fellow. The following year he left to join the rapidly developing industry of motion picture sound.

His professional career was spent largely with Western Electric and its ERPI (Electrical Research Products Incorporated) division. Later, he joined the Westrex Corporation, which was a successor to ERPI. The three decades from 1929 to 1959 were spent with these companies. In 1959 he joined Datalab, a division of Consolidated Electrodynamics Corporation, in Pasadena.

John witnessed and participated in many of the major developments in sound for motion pictures. His accomplishments included the development of a noise reduction system for variable density optical recording and methods for the measurement of intermodulation distortion. During the early 1950s he led Westrex' work in magnetic recording on film. But for most members of the AES he is probably best known for his pioneering work, with Robert



John George Frayne

Davis, in developing the Westrex 3-A cutter head, which truly launched the stereo LP record. In a friendly battle, which included European partisans of a vertical-lateral channel assignment, John's introduction and demonstration of a viable 45-45 cutting system won the day.

During his last years at Westrex, John fostered the use of magnetic recording on film as an alternative to magnetic tape. In those days before code-decode noise reduction, the thicker oxide coating and base material, and its higher linear velocity gave magnetic film significant advantages in dynamic range and print-through over the tape of the day. The technology was used by Everest Records and Mercury Records to great technical advantage, as record reviews attested. Today, we can hear many of these landmark recordings through their CD reissues. During his Westrex years, one of the projects John worked on was with Bart Locanthi on loudspeakers for motion picture application using acoustical lenses. Many students know John's work as co-author with Halley Wolfe of *Elements of Sound*

Recording (John Wiley, 1949). This was without question the first genuine handbook on the art and science of recording and is still much sought after 40 years later.

Many honors came John's way. He was president of the Society of Motion Picture and Television Engineers (SMPTE) during the 1955-56 period. At the time of his death he was one of the only ten honorary members of that society. Other SMPTE accolades included the SMPTE *Journal* Award, with V. Pagliarulo, in 1941 and the Progress Medal in 1947. He also received the Samuel L. Warner memorial Medal Award in 1959 for his many developments in motion picture sound technology.

The Academy of Motion Picture Arts and Sciences gave him three awards. The first two were in 1941 and 1953 for his work in distortion measurement. The Gordon E. Sawyer Award, an "Oscar," was given to John in 1984 for a career of technological achievement in motion picture sound.

The AES conferred on him a fellowship in 1958, the Berliner Award (now the Silver Medal) in 1959, the Gold Medal in 1978, and an honorary membership in 1985.

Until relatively recently, John attended technical meetings in the Los Angeles area and gave freely of his knowledge and wit. The AES Los Angeles Section's "Afternoon With John Frayne" (published in the July/August, 1990 issue of the *Journal*) gives an indication of what we shall all miss.

JOHN EARGLE