



Michael Dolan

*In this column, we provide interesting historical briefs from the Journal articles of days past. The purpose of this column is primarily entertainment, but we hope it will also stimulate your thinking and reflection on the Society's history, how far we have come in the industry, and (sometimes) how some things never change. This column has been sponsored by Television Broadcast Technology, Inc., since March 2001 (<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7257346>).*

### 25 Years Ago in the Journal

The October 1991 *Journal* published in “HDTV and Film—Issues of Video Signal Dynamic Range,” by Laurence J. Thorpe: “The SMPTE Working Group on High-Definition Electronic Production (WG-HDEP) developed the basis of an HDTV production standard from 1984 to 1987. In September 1988, the SMPTE formally standardized the 1125/60 HDTV studio origination format, now well known as the SMPTE 240M standard. Since that time the work of the WC-HDEP has continued unabated. Prominent among the group's activities have been rigorous development of the digital representation of SMPTE 240M and a broad examination of image transfer of an HDTV production standard to 35mm film (and vice versa). In the digital work the issue of signal dynamic range emerged early as a major topic of study...[and] called for a closer look at the total transfer characteristic of the HDTV camera and how it should be preserved throughout the total System... The film can clearly record considerably more than...9 f-stops, or a contrast ratio of more than 500:1 can be captured if some nonlinear compression can be accepted in the darker areas and the highlights.

And such compression can indeed be accepted; in fact, it has become a well-honed artistic, creative tool in the hands of practiced cinematographers.” For the full article, see: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7234316>

### 50 Years Ago in the Journal

The October 1966 *Journal* published in “Development of Wide-Screen Usage in the USSR,” by Deane R. White: “A Series of articles and reports of discussions published in the Russian journal *Tekhnika Kino i Televideniya* show that conversion to wide-screen pictures is far from complete in the USSR, although it appears that the attractiveness of wide screens has led to an acceptance of their introduction as a national goal. Discussion continues on the formats, production methods and theater changes by which progress can be made within the practical limits facing the industry. The importance of correct decisions is heightened by the concentration of responsibility in the hands of a rather small group of decision makers and the fact that the decisions affect some 140,000 cine installations, estimated to be about half the theaters in the world... What has been said, allows one to conclude that the methods of Superscope and Superscope-235 surpass in all ways the Techniscope system. Nevertheless, the economic

advantages of the latter are so attractive that a current series of films aboard is being photographed by this method ... It will be interesting to watch further developments in the USSR to see if the size and complexity of their market coupled with their centralization of the decision making process will come to conclusions different from those hammered out under the pressures of our competing entrepreneurs.” For the full article, see: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7262858>

### 75 Years Ago in the Journal

The October 1941 *Journal* published in “The Stereophonic Sound-Film System—General Theory,” by Harvey Fletcher: “In 1934 a series of papers on auditory perspective was presented before the A. I. E. E. describing a transmission system which was later called a stereophonic transmission system. It consisted essentially of three complete channels working together, each comprising a microphone, a high-gain amplifier, a predistorting and corrective network, a transmission line, an amplifier, a restoring and corrective network, a variable distorting network and attenuator, a power amplifier, and a loud speaker, as shown in Fig. 1. It was shown that by means of this system symphonic music and other sounds could be picked up in a hall in Philadelphia, transmitted to a hall in Washington, D. C., and there reproduced without the introduction of apparent distortion or noise ... Theoretically, there should be an infinite number of such recorder-reproducer sets. Practically, however, only a few such channels are needed. On a large stage it has been found that

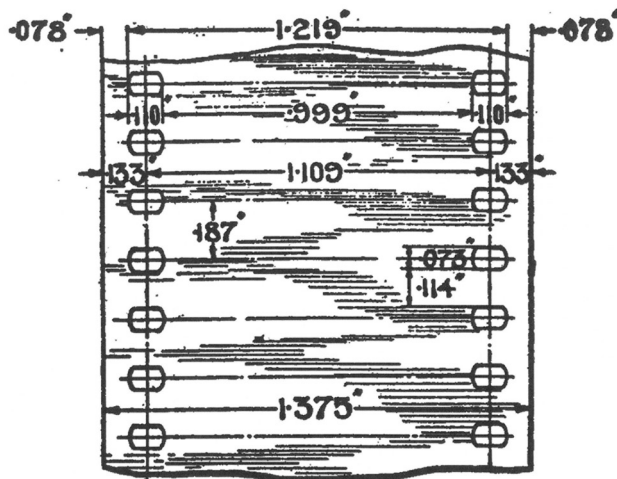
three channels are sufficient to give a good illusion of the sounds coming from all parts of the stage.” For the full article, see: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7252859>

### 100 Years Ago in the Journal

The October 1916 *Journal* published in “Motion Picture Film Perforation” by Donald J. Bell: “My reference to Cine-machinery is intended to broadly cover all machinery used for the manufacture, assembling and projection of motion pictures, and I shall endeavor to briefly present my conclusions in reference to Standardization of perforations of Motion Picture Film ... Undoubtedly, all who are engaged in this line of endeavor have wished for a fixed standard to follow, but there has been no bringing together of designers and heads of the various departments of motion picture manufacturing establishments or those who direct the development and manufacture of projecting apparatus. Now, our genial friend—C. Francis Jenkins—has

taken the initiative and by his invitation we are here to form the Society of Motion Picture Engineers. I am sure we are all grateful for the opportunity that is now offered us and have come to New York City with a feeling of pleasure because we shall have the opportunity to lend our aid to the advancement of the Cinematographic Art. The invitation to join with you

gentlemen as a charter member gives me great pleasure and I assure you that my humble efforts will be given happily and to the fullest extent of my understanding. My present concern and greatest interest is – as you may infer from my previous remarks—STANDARDIZATION.” For the full article, see: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7309018>



Motion Picture Film Perforation (from *Trans. Soc. Mot. Pict. Eng.* October 1916).



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