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 is sponsored by Television Broadcast Technology, Inc., since March 2001: http://ieeexplore.ieee.org/document/7257346

25 Years Ago in the Journal

The November 1994 *Journal* published in "Concept of a European System for the Transmission of Digitized Television Signals via Satellite" by Ulrich Reimers: "In Europe, some 120 organizations are currently cooperating in the development of specifications for digital television broadcasting (DVB or DTVB)… A first result of the European activity was the completion of a specification for the transmission of digitized television signals via satellite in December 1993. The Technical Module (a group of technical experts within the DVB project, chaired by Reimers) took only about six months to develop this specification… The possible integration of satellite transmission in a future scenario for the use of digitized television signals is illustrated in Fig. 1. After data compression for audio and video in particular, the components of the separate programs are combined in a multiplexer. Several complete programs are then multiplexed in a single serial data stream that can subsequently be accommodated in a satellite channel. The signal sent via satellite can be received by a direct-to-home installation (antenna diameter ≤60 cm). Feeding signals to cable network or satellite master antenna television systems is also possible." For the full article, see: https://ieeexplore.ieee.org/document/7240426

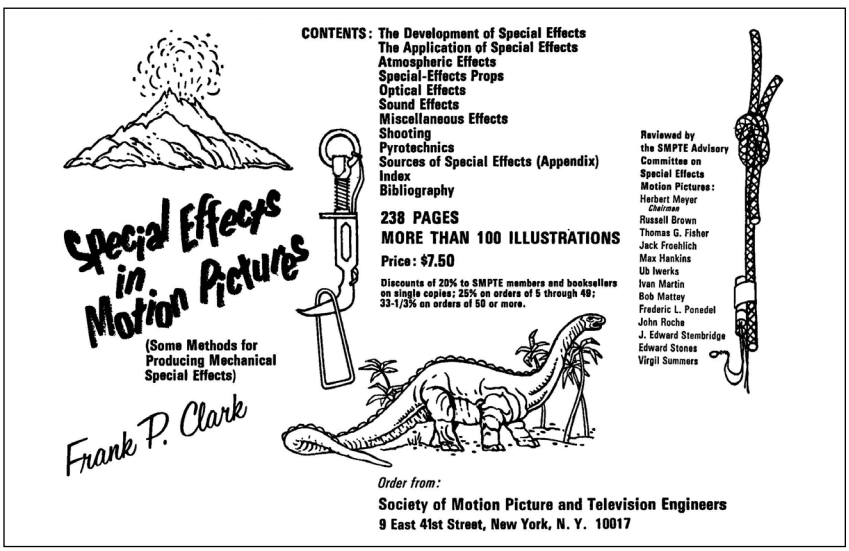
50 Years Ago in the Journal

The November 1969 *Journal* published in "New Products: (and Developments)." For the full article, see: https://ieeexplore.ieee.org/document/7226949

75 Years Ago in the Journal

The December 1944 *Journal* published in "United States Naval Photographic Science Laboratories" by Helen R. Clifford: "American wars were the first wars in history to be recorded by photography. Although a few daguerreotypes were made of the leaders in the Mexican War, it was by the photographs of William Brady that the Civil War was promptly reported to the civilian population. By the time of the Spanish-American War the infant motion picture process was used to report the activities of Theodore Roosevelt and his Rough Riders. Aerial reconnaissance from planes was essayed during World War I. Thus it was that photography became associated with aviation, even though the Navy had not yet officially recognized its importance. The first photographers' ratings were not issued until 1920; prior to that time Naval

(Cont'd on p. 59)



Special Effects in Motion Pictures (From *JSMPTE*, November 1969, p. 1030).

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

The xvc Video Codec—A Revolutionary Software-Defined Video Compression Format

By Jonatan Samuelsson

Efficient video compression is a key technology component that enables high-quality media services across different platforms and connection types. Several different video codecs have been used since the start of TV digitalization, and more efficient compression methods are constantly being developed. This paper focuses on mobile video streaming applications, a rapidly growing application area for which it is absolutely crucial to use the network resources as efficiently as possible. However, compression efficiency is not the only factor that determines which video codec is best suited to be used. There needs to be a clear and reasonable licensing scheme, the encoding complexity needs to be at a manageable level, and most importantly, the receivers must be able to support decoding of the codec. The xvc codec is a software-defined video compression format which, in our tests, delivers unprecedented compression performance, is available with a single reasonable license and with a light-weight decoding process that can be run in software on today's mobile phones and tablets.

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(Cont'd from p. 58)

photographers had been variously rated as ship's cooks, pharmacist's mates, gunners and aviation printers…By its commercial use, for both entertainment and journalism, it became one of the most important media of modem communication…In December, 1943…about one-fourth of the ship's company is composed of members of the Women's Reserve." For the full article, see: https://ieeexplore.ieee.org/document/7252096

100 Years Ago in the Journal

The October 1919 *Journal* published in "Selection of Proper Power Equipment for the Modern Motion Picture Studios" by H. F. O'Brien and H. A. Campe: "The new studios have decided from either their own experience or that of others, that it is an economical proposition for them to have their studios so equipped that a sufficient supply of electrical energy will be available for the proper illumination of their stages. During the past two years, there has been a general tendency toward using more artificial illumination in the studio, almost to the total exclusion of sun light. During this period, there has also been a great tendency to unify the electrical installations so the same nature of current is used throughout, irrespective of the nature of supply current. Some studios, particularly the new ones, in and about New York are being equipped with direct current exclusively. The large power companies, except in restricted zones, are making the extensions of their power distribution system, alternating current, and in fact, have replaced most of their old direct current distribution systems with alternating current. These tendencies have forced most all of the studios to install their own substations for converting the alternating current supply to direct current. Except in certain portions of New York City, there are very few studios located where they can obtain sufficient direct current to meet their requirements, but nearly every studio is located where alternating current can be purchased in sufficient quantity so that the easiest and most economical means of obtaining direct current is to purchase alternating current power and convert it." For the full article, see: https://ieeexplore.ieee.org/document/7230002