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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 May 1997 *Journal* published in “Serial Digital Interface for HDTV” by H. Gaggioni, M. Ueda, F. Saga, K. Tomita, and N. Kobayashi: “Based upon the experience gained from the application of digital technology to 525/625 broadcast and production environments, it is acknowledged that the wide acceptance of new equipment takes place only after the market introduction of a digital serial interface. Recently, the TV standards organizations of SMPTE and BTA have agreed to a new standard for digital serial transmission of studio HDTV signals. The overall transmission rate for a digital studio HDTV signal (1125-line, 2:1 interlace, with a 10-bit per component sample) is approximately 1.5 Gb/s, while its active payload is in the order of 1.2 Gb/s (for 1035/1080 active lines). This article describes the practical development of a complete transmission system for the transport of serial HDTV signals for studio production and post-production applications. Furthermore, a description will be given of test

results of transmission experiments over 100 m (approximately 300 ft) of Belden 8281 (5C-2V) coaxial cable.” For the full article, see <https://ieeexplore.ieee.org/document/7243806>

50 Years Ago in the Journal

The May 1972 *Journal* published in “Dropout Considerations in Video-Tape Recordings and Proposed Recommended Practices” by the SMPTE Engineering Subcommittee on Tapes and Reels, Norman C. Ritter, Chairman: “In general, a dropout may be defined as a momentary random signal reduction in the amplitude of the RF signal recovered from the tape. Since the first day of video-tape recording, dropouts on tape playback have had an important effect on performance quality. Through the years, various definitions and practices have been used in evaluating the dropout activity of videotape, and this presents a need for uniformity. The...objectives were: 1) to formulate a clear definition of dropout, 2) to review the various methods of counting dropouts, and 3) to present reasons for recommending a single electronic method of doing that. As will be pointed out, the discussion of dropouts becomes more complicated when color signals are present and it was felt this should be explained. It

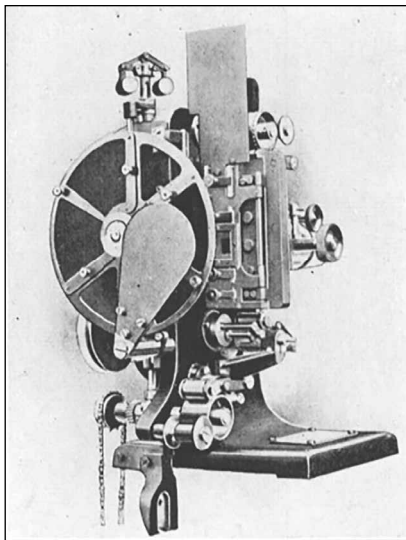
is hoped that this article will assist video-tape manufacturers and tape users to speak the same language when discussing dropouts. It is also our hope that our work will lead to a recommended practice.” For the full article, see <https://ieeexplore.ieee.org/document/7233873>

75 Years Ago in the Journal

The May 1947 *Journal* published in “Flashtubes—A Potential Illuminant for Motion Picture Photography?” by F. E. Carlson: “A flashtube consists simply of a gas-filled envelope containing two electrodes. In all of the flashtubes currently in use, the envelope is a slender tube of glass or quartz with the electrodes at each end. Some types consist of straight or curved tubes...for use in trough reflectors; in others, the tubing is coiled in the form of a helix... to produce relatively concentrated sources suitable for use with lenses or reflectors which are surfaces of revolution. ...The light emitted by a flashtube results from the discharge of a condenser, or the application of a pulse of energy between the electrodes. To avoid the damaging effects of high peak currents, characteristic of a condenser discharge, most tubes, at present, are of a type such that no switch is required in the discharge circuit. This is accomplished through adjustments in tube design so that the tube will not flash over when the full operating voltage is applied to the two electrodes. In this case, flashover can be made to occur when desired by ionizing the tube so that it becomes conductive.” For the full article, see <https://ieeexplore.ieee.org/document/7251647>

100 Years Ago in the Journal

The May 1922 *Journal* published in “Color Photography” by C. E. K. Mees: “Processes of color photography are divided generally into the additive and subtractive recesses. The additive processes involve the production from the original subject of three negatives, each made by means of one of the three primary colors: 1) red, 2) green, and 3) bluish-violet. From these negatives, positives are made which are projected in the superposition on the screen through filters of the same color as those of which the negatives were taken. In the subtractive processes, the three negatives are printed in such a way that



Kinemacolor Projecting Machine (Fig. 16 from *Trans. SMPE*, May 1922, p. 149).

the colored images can be produced, each positive being printed a color complementary to that of the filter through which the corresponding negative was taken, the red being printed in bluish-green, green in magenta, and blue in yellow. These color positives are superposed to produce the color picture...owing to commercial considerations the process which has developed furthest is the subtractive process in which only two colors are used instead of three, and these are on opposite sides of the film. ...This process is known as the Kinemacolor process and has enjoyed a considerable success.” For the full article, see <https://ieeexplore.ieee.org/document/7229983>

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