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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 September 1993 *Journal* published in: “A New Chip Set for Proposed SMPTE Standard SMPTE 259M—Serial Digital Interface” by S. Webster, E. Fankhauser, K. Chen, J. Francis, E. Ioszeff, T. Rosati, I. Ridpath, and P. Moore: “A new chip set, implementing the SMPTE 259M serial digital standard, features a modular architecture, making it usable in a wide range of applications. The chip set consists of a single chip encoder, quad output DC-restoring cable driver, automatic cable equalizer with signal strength indicator, cable receiver, and decoder with automatic standards select. Four user-set data rates from 100 to 400 Mbits/s are supported. The decoder is capable of reporting and correcting errors in the sync word. Discussions of the cable equalization technique and the implementation of the devices are included in this article...In the future, increased data rates, enhanced functionality, and the need to handle audio and ancillary data will drive IC development. The eventual adoption of the fiber-optic technology will reduce the need for

cable equalization, which is today the weakest link in the system. With the possible adoption of a “wide screen” standard, the higher data rate capability of the new chip set may become immediately useful.” For the full article, see: <http://ieeexplore.ieee.org/document/7238661>

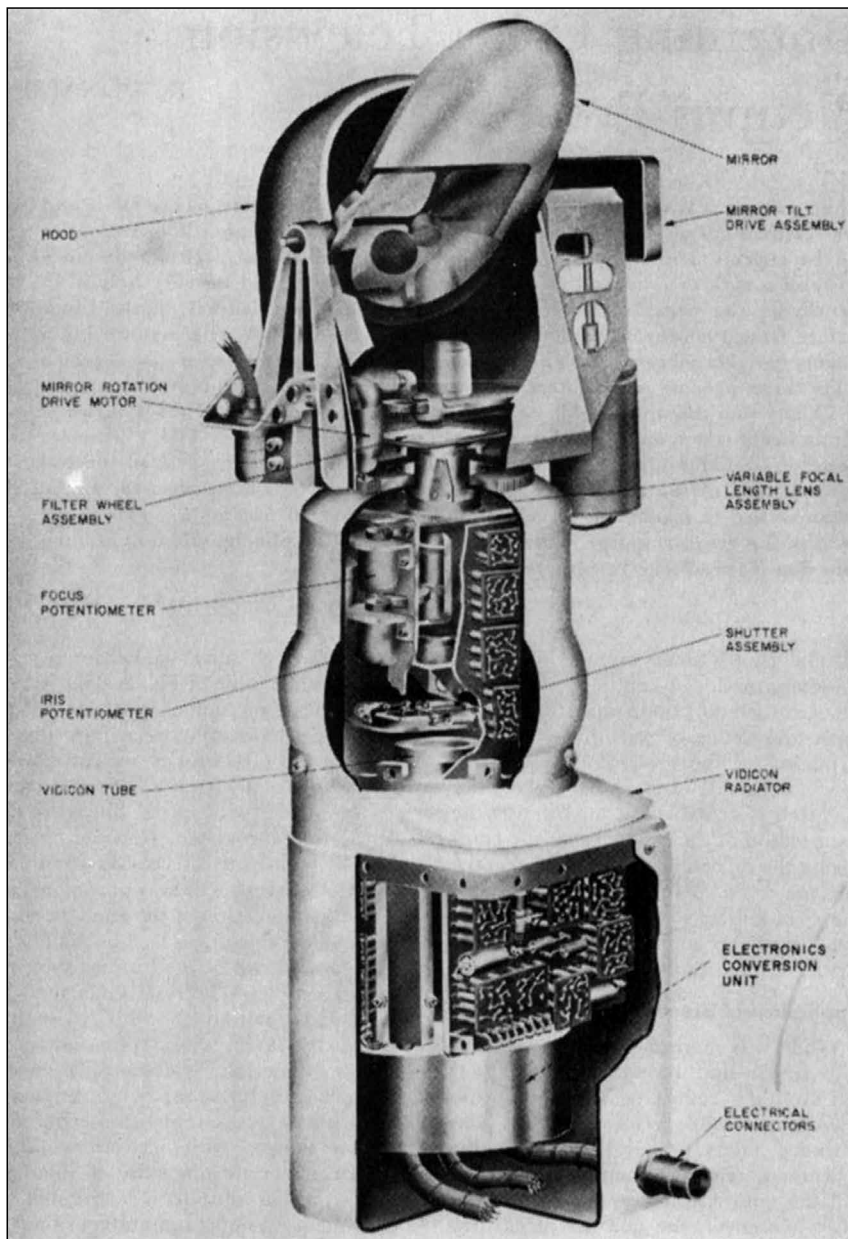
50 Years Ago in the Journal

The September 1968 *Journal* published in: “Obtaining Color Television Pictures From Space” by D. T. Heckel, R. L. Quandt, and L. H. Allen: “When using a TV system, it is desirable to be able to measure self-luminous and non-self-luminous objects, so that the attribute of their appearance known as color can be expressed numerically. Being able to determine the spectral reflectance curve of a rock or other substance on another planet would be very helpful in identifying the material. Surveyor spacecraft, which soft-landed on the lunar surface from 1966 through 1968, have slow-scan 600-line TV systems utilizing a mirror, variable focal length lens, vidicon tube, and a rotating color wheel which holds three primary color filters. The color filters were designed to rotate individually into the optical path of the camera, which necessitated three identical photographs being taken, one photo using each

of the three color filters. The TV-camera electronics relative-spectral response had to be found before the desired spectral transmittance of the three color filters could be selected. Moreover, the green response had to match the corresponding CIE standard tristimulus value curve, because the green response is the basis for defining the photometric unit of luminous flux.” For the full article, see: <http://ieeexplore.ieee.org/document/7262790>

75 Years Ago in the Journal

The September 1943 *Journal* published in: “Sound Recording at the Signal Corps Photographic Center” by Major Garland C. Misener: “The portable recording equipment consists of a group of RCA channels, purchased new and used as available. The older equipment includes two PM-33 systems, one recording duplex track and the other modified to Class A-B push-pull variable area. The film machines of the newer channels record Class B push-pull. The choice of Class B for original recording was based, first, upon a desire to eliminate ground-noise reduction equipment, with its heavy drain on the B supply, its relatively complicated adjustments and maintenance, and the unfavorable effects of its exposure control upon sound reproduction due to peak-clipping and ground-noise modulation. Moreover, the extended volume range of Class B not only accommodates more adequately original sound of great volume range, such as gunfire with its attendant breach and trajectory sounds, but it permits also recording at lower modulation levels



Cutaway view of camera (Fig. 4, *JSMPT*E, Sept. 1968, p. 906).

the Making” by G. A. Blair: “Along with the numerous developments in the past decade and more, in which the motion picture industry has rushed forward so fast and placed itself among the large and leading industries of the country, the Eastman Kodak Company has kept pace in the production of raw motion picture film in the quantities necessary to meet requirements without which the other advances would not have been possible... To manufacture a uniform product in small quantities is one thing, but to make it in large quantities and still obtain a material of unvaried quality is a far more intricate problem. For the latter purpose, a wholly different set of apparatus is required, and the development of huge and intricate machines of many different types for large-quantity production has been necessary... We now come to that mysterious compound, the light-sensitive emulsion on which, when coated on the film base, the invisible or latent image is impressed. By suitable chemical development, the image first becomes negative and is transferred to the positive film and is then ready for projection. From this point, all operations in the manufacture of a sensitive film are carried on in darkness or dim red light. To make a sensitive emulsion, a solution of silver nitrate is mixed with potassium bromide dissolved in a solution of gelatine, forming silver bromide which is the compound or emulsion that is sensitive to light. By carefully controlled methods, only known to the experts and always preserved as trade secrets, this mixture of silver bromide in gelatine is converted into the finished light-sensitive product ready for coating on the transparent base.” For the full article, see: <http://ieeexplore.ieee.org/document/7229492> SMPTE

speech and other sound in which overshooting produces objectionable distortion. The latter consideration is especially important when the recording channel does not include a compressor or volume limiter, as is the case with our present

portable equipment.” For the full article, see: <https://ieeexplore.ieee.org/document/7251071/>

100 Years Ago in the Journal

The November 1918 *Journal* published in: “Motion Picture Film in