



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

**T**he April 1992 *Journal* published in "International Overviews: Japan:" "...Concerning HDTV, on August 25, BS-3B, laden with great expectation, was launched and placed into orbit (Fig. 10-2). It was named "Yuri the 3rd b." Its success is expected to result in longer broadcasting hours... NHK conducted an experimental broadcast of HDTV through the Sumo Wrestling program. The transmitted wave was received by a tracking antenna set aboard a ship in Seto Inland Sea, and clear pictures were reproduced there. In addition, the Hivision Promotion Association has been established. The regular broadcasting of HDTV is expected to start with the launch of BS-4, which is planned for 1997... HDTV has already been put to practical use in some museums. The Hivision Gallery in a museum in Gifu, in central Japan, introduced HDTV in 1988... The first HDTV service started on 25 November 1991, using one of the

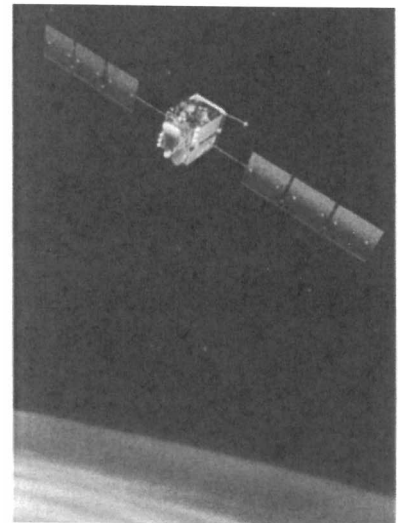
broadcasting satellite's channels. It airs programs 8 hours a day." For the full article, see: <http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=7236126>

## 50 Years Ago in the Journal

The April 1967 *Journal* published in "Continuous Motion-Picture Projector for Television Scanning," by J. F. Müller and L. K. Degen: "A projector for intermittently projecting 60 picture/s from a continuously moving 35 mm film onto a vidicon target has been constructed. A xenon gas-filled flashlamp, triggered by a transparent fiducial mark adjacent to the picture on the film, illuminates the picture. The short duration ( $2 \times 10^{-6}$  s) of the flash effectively stops the motion of the picture. The projector includes a conventional optical system for reproducing photographically recorded sound. The projector is being used in a PICTUREPHONE® system test and evaluation program... by the Visual Research Group at Bell Telephone Laboratories." For the full article, see: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7262993>

## 75 Years Ago in the Journal

The April 1942 *Journal* published in "Color Television" by P. C. Goldmark, J. N. Dyer, E. R. Piore, and J. M. Hollywood: "...Color television was demonstrated for the first time in July 1928, by John L. Baird in England. Both at transmitter and receiver, a three-spiral scanning disk was employed. Each of these spirals consisted of a succession of holes that were covered with red, green, or blue filters, scanning the picture completely in the three primary colors. At the transmitter photocells were employed, while at the receiver two gas-discharge tubes controlled by a commutator were used. One of the tubes was filled with neon and acted on the red spiral, while the other tube, filled with a mixture of helium and mercury vapor, appeared



A model of the BS-3B (Fig. 10-2, *SMPTE J.*, Apr. 1992, p. 271).


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through the blue and green spirals. The transmission employed a bandwidth of the order of 10 kc and the pictures corresponded to a number of lines, somewhere between 20 and 30 per frame... Early in 1938, in England, John L. Baird demonstrated a 9 × 12-ft, 120-line color television picture using sixfold interlacing, employing a flying spot, mirror drum, and rotating filters at the transmitter.” For the full article, see: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7252699>

### 100 Years Ago in the Journal

The April 1917 *Journal* published in “Report of Committee on Electrical Devices” by H. M. Wible, M. Mayer, W. C. Kunzmann, H. A. Campe: “In the early days of the motion picture industry, the source of light was, in many instances, of the well-known calcium type.

Artificial gas, such as acetylene was also used, but as the public became interested in this new form of entertainment and education, the demand for a better form of illuminant necessitated discarding these sources of light. This was due to the increased size of the picture theaters and the demand for larger and better illuminated or more distinct pictures. It was for these reasons, primarily, that the electric arc was adopted for motion picture work. The electric arc is particularly well adapted to this service as it is one of the most intensely brilliant artificial illuminants known to science...1. Advantages and disadvantages of alternating current. 2. Advantages and disadvantages of direct current. 3. Various methods of changing from alternating to direct current when alternating current is available and direct current is desired: (a) Mercury Arc

Rectifiers. (b) Motor Generator. (c) Rotary Converter. (d) Mechanical Rectifier. 4. Various apparatus for obtaining proper arc voltage when alternating current is to be used: (a) Choke Coil or Reactance. (b) Auto Transformer. (c) Rheostat. 5. Determination of proper arc voltage for both direct current and alternating current at various currents. 6. Relation to alternating current of frequency flicker and its synchronization with the shutter. 7. Nature, size, and structure of carbons required for both alternating and direct currents for various currents. 8. Proper angle of carbons for alternating current and direct current. 9. Maximum density of current at carbon points in order to obtain maximum efficiency.” For the full article, see: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7308226> 

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