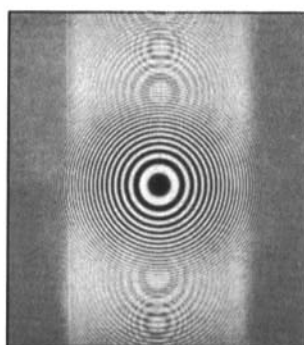


Highlights

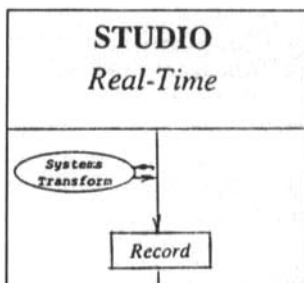
- 92 HDTV Bandwidth Reduction Using Motion Compensation and DATV • G. Thomas •** This article discusses the addition of motion compensation to an earlier motion-adaptive bandwidth reduction system. The earlier system reduced the bandwidth of a high-definition television (HDTV) signal by a factor of four and was capable of transmitting a highly detailed image in stationary parts of the picture. However, loss of resolution in moving areas was an objectionable artifact, which would become increasingly obvious in an HDTV transmission system as the performance of cameras and display devices improved. The addition of motion compensation, with the aim of being able to transmit signals with high spatial resolution in all parts of the picture except those whose motion cannot be estimated accurately, significantly improved the quality of the decoded picture, although at the expense of the compatible picture quality.



- 104 Matrix Conversion for Improvement of Vertical-Temporal Resolution in Letter-Box Wide-Aspect TV • N. Suzuki, M. Kageyama, K. Ishikura, Y. Hirano, H. Yoshigi, and T. Fukinuki •** This article presents a study of a letter-box method for wide-aspect TV; top and bottom bars are used for improving vertical-temporal resolution. The authors propose a new method for separating and combining augmentation signals, in which block processing using a matrix operation is adopted and original proscanned images can be completely reproduced at receivers. The new method is implemented in basic hardware. As a result, the augmentation signals allow proscanned images to be completely recovered in wide TV receivers without significant aliasing occurring in current receivers. Even if the signals have only low-frequency components, dynamic characteristics are sufficiently improved.



- 111 Annotated Glossary of Essential Terms, Edition No. 7.1 • F. J. Kolb, Jr., and the SMPTE WG on High Definition Electronic Production •** High Definition Electronic Production, chosen for study and coordination by SMPTE Working Group (N15.04), is concerned with the arts and sciences of program production, as they are seen to be influenced by and benefit from a periphery of rapidly evolving sciences and technologies. Program origination is provided with a multiplicity of potential sources for captured and generated images; post-production offers an increasing palette of tools for merging and integrating source material to achieve maximum artistic impact; distribution channels and facilities are multiplying both in number and in diversity and awaiting suitable good programs.



- 126 Reprint of Milestone Journal Paper • The Development of Television and Radiomovies to Date • C. F. Jenkins •** (originally published in March 1930 *J. SMPE*) • Radiomovies for entertainment in the home have progressed rather satisfactorily during the year. Our audience on 46 meters has grown in a year to some 18,000 or 20,000. To distinguish them from the radio fan with a set which covers only the entertainment band from 200 to 550 meters most of this audience are known as amateurs. This limitation of visual radio to short wave channels comes about because the Federal Radio Commission does not at present permit visual broadcast in the audible entertainment band. This is the reason we cannot encourage the purchase of a television attachment for your present set.

Our broadcasts were well received rather widely over the United States, very dependably as far west as Denver; occasionally we got reports from California, Canada, Cuba, and Puerto Rico of reception on the 46-meter channel. But as 46 meters gave double images in local territory, we also simultaneously broadcast on 186 meters for Washington, Baltimore, and other nearby receivers. As with audible radio there are locations in which reception is better than in other places.

- 129 Sound & Vision '90 — The Fourth International Conference and Exhibition of the SMPTE Australian Section • B. Smith •** Sound & Vision, the Fourth International Conference and Equipment Exhibition of the SMPTE's Australian Section, held at the Sydney Showground from Tuesday, July 3, through Friday, July 6, 1990, successfully showcased the latest in film, television, and computer technology and provided an enthusiastic forum for debate on the directions likely to be taken by the industry in the next decade. The four-day Sound & Vision '90 conference was conducted under the general theme of "Merging the Technologies of Film, Video, Audio, and Computing." The conference program attracted over 600 delegates, including 94 overseas visitors, and contained 53 papers.

