

Industry News & Educational Activities

A Brief Account of the Development of Television in China

Ed. Note: This survey was prepared by Sun Tong-gen, Chief Engineer, and Zhou Chung-rong, Head of the Technical Department of China Central Television. Portions of the survey were used as an introduction to the "Report to the Society on the Visit of the SMPTE Delegation to the People's Republic of China" which was presented at the 121st Conference by SMPTE President Robert M. Smith and other members of the delegation. Excerpts from the "Brief Account" are given below.

China's first television broadcast took place in 1958. The first station, named Beijing Television (BTV), was the predecessor of the present China Central Television (CCTV). A trial broadcast went on the air 1 May 1958, and scheduled operation began on 2 September. Monochrome television then used the 625/50 system which is equivalent to the present CCIR-D system. At that time there was only one television studio and a 1-kW transmitter using VHF Band 1 channel 2, and in the city of Beijing, there were less than 1000 television sets, most of them in factories, offices, schools, and communes. In that same year (1958) stations were set up in Tianjin, Shanghai, Guangzhou, Wuhan, Sheyang, and Harbin with television equipment made in China.

By 1965, there were 23 television stations throughout the country and in Beijing, Shanghai, and other big cities, programs were being broadcast over two channels, one for news and entertainment and the other for education, and a microwave transmission between Beijing and Tienjin had been tested. Broadcasts in color began in 1973.

Since then, the advance of television in China has been extremely rapid with more than two million television sets installed in homes and educational and business places throughout China. At present, CCTV is on the air about 70 hours a week with some 40 hours of educational programs broadcast over the entire nation by means of a microwave link or videotapes to television stations in various provinces, cities, and autonomous regions. About 30 hours of programs are received in the Beijing area alone.

Television University

In 1979, CCTV and the Ministry of Education established a Television University with ten courses on basic science and engineering, presented on television by professors and lecturers from various universities. About 500,000 students are presently enrolled for the Television University. The courses are on the air about four hours a day and 41 hours a week including rebroadcast.

By 1976, CCTV broadcast all its programs in color using the PAL system with programs mainly on videotape or film, only news being broadcast live. CCTV has a laboratory for de-

veloping and copying both reversal and negative color films.

CCTV is housed in the building which was formerly the home of the Beijing Television Station. It covers an area of 60,000 ft² and contains three studios. The largest (6,500 ft²) is used mainly for taping entertainment programs; the second largest (1,600 ft²) is used for educational programs, and the smallest (425 ft²) is used for news broadcasts. CCTV also has four OB vans for color television and another containing two EFP cameras.

Programs are transmitted by microwave from Beijing to 25 cities, provinces, and autonomous regions. Local television stations send their own programs to Beijing to be broadcast.

Since 1976, CCTV has been exchanging programs with various foreign countries through Intersat and the ground stations of the Ministry of Post and Telecommunications.

Although great advances have been made in a few years in television technology in China, because China is a vast country with an enormous population, the number of television sets and the areas receiving television broadcasts are still very limited in relation to the total population. Plans for the future, however, include a modernized television center and importation of up-to-date equipment, including ENG/EFP cameras and videotape and videocassette recorders, and these plans are rapidly being placed in effect.

Masthead Changes: Board of Editors and Staff

Readers of mastheads will note that the inside back cover of the *SMPTE Journal* is a little different. First, Arthur Biderman has been hired for the new staff position of Technical Editor/Writer. We welcome him and are sure that his work will help us to forge better and stronger links between authors and readers of the *Journal*.

Five names have been omitted from the listed Board of Editors. Of the five, three members have asked the Chairman, Rodger J. Ross, to relieve them from their Board positions for personal reasons after long and fruitful service to the Society. C. J. Bartleson and Glenn Matthews have each served on the Board for more than a decade, and Clyde Keith has served for more than a quarter of a century. Each of the three has made his own invaluable contribution to the Society. Mr. Bartleson has had several excellent papers on color perception and color film published in the *Journal*. Mr. Matthews has been a member of the Society for a half century and Life Fellow for 18 years; he served as Editorial Vice-President from 1957 to 1963. Mr. Keith has also had several papers published in the *Journal* and was Editorial Vice-President from 1947 to 1951.

The other names no longer listed on the Board of Editors are K. B. Benson and Pablo

Weinschenk-Tabernero. Their respective positions as Editorial Vice-President and Associate Editor take precedence over the Board positions they have served in for a number of years. (Mr. Weinschenk-Tabernero had been on the Board for more than ten years before being appointed Associate Editor in 1979).

As Editor, I wish to thank all — those who are leaving the Board and those who are continuing on it — for their knowledgeable advice and assistance. I shall continue to draw on the experience of the past members of the Board by calling from time to time for their advice. Those who continue on the Board, I hope to call on more frequently than in the past.

Again, to all of you my thanks!

David A. Howell
Editor

The organizers of the International Broadcasting Convention to be held 20–23 September 1980 in Brighton, England, have announced that two more names have been added to the list of IBC Corresponding Members. (The earlier list of Corresponding Members appears on p. 664 of the September 1979 *Journal*.)

Invitations to become IBC Corresponding Members have been accepted by V. Ye. Dementyev, Director, OIRT Technical Centre, Czechoslovakia, and Ryo Takahashi, Director-General of Technical Administration and Construction, NHK, Japan. With these two important areas now covered, together with the areas already covered by Corresponding Members, the IBC has extensive representation around the world, the announcement stated.

IBC Corresponding Members give support to the IBC UK Committees in the organization of the Convention and particularly in their international liaison with the broadcasting industry and services.

IBC sponsors include the SMPTE, the Electronic Engineering Association, the IERE, the IEE, the IEEE, and the Royal Television Society.

Audiovisual sales finished out the decade of the 1970s on a mixed note, according to an announcement from Hope Reports, 1600 Lyell Ave., Rochester, NY 14606. Based on a strong third quarter, Hope Reports projects a 1979 year-end total of about \$3.3 billion, up 100% over sales in 1969, and 13% over 1978 sales of \$2.9 billion. However, there is some concern over the long-announced recession, audiovisual-related executives are demonstrating caution in implementing 1980 plans, as indicated by delays in advertising budgets normally committed before the end of the previous year.

In retrospect, the best year of the 1970s, based on the total percentage gain, was seen in 1973 when the increase was 20%. In the past 21 years, only once has the sales growth pattern fallen to the minus — in 1975 when audiovisual sales were off -0.1%. The strongest product/system gains in the decade were those of videocassette recorders, a new system introduced in late 1972, and the 2- × 2-in slide system which forged ahead to lead all systems in total dollars expended. Among major products, the 16-mm film system proved surprisingly strong at the end of the decade.

These findings are to be highlighted in

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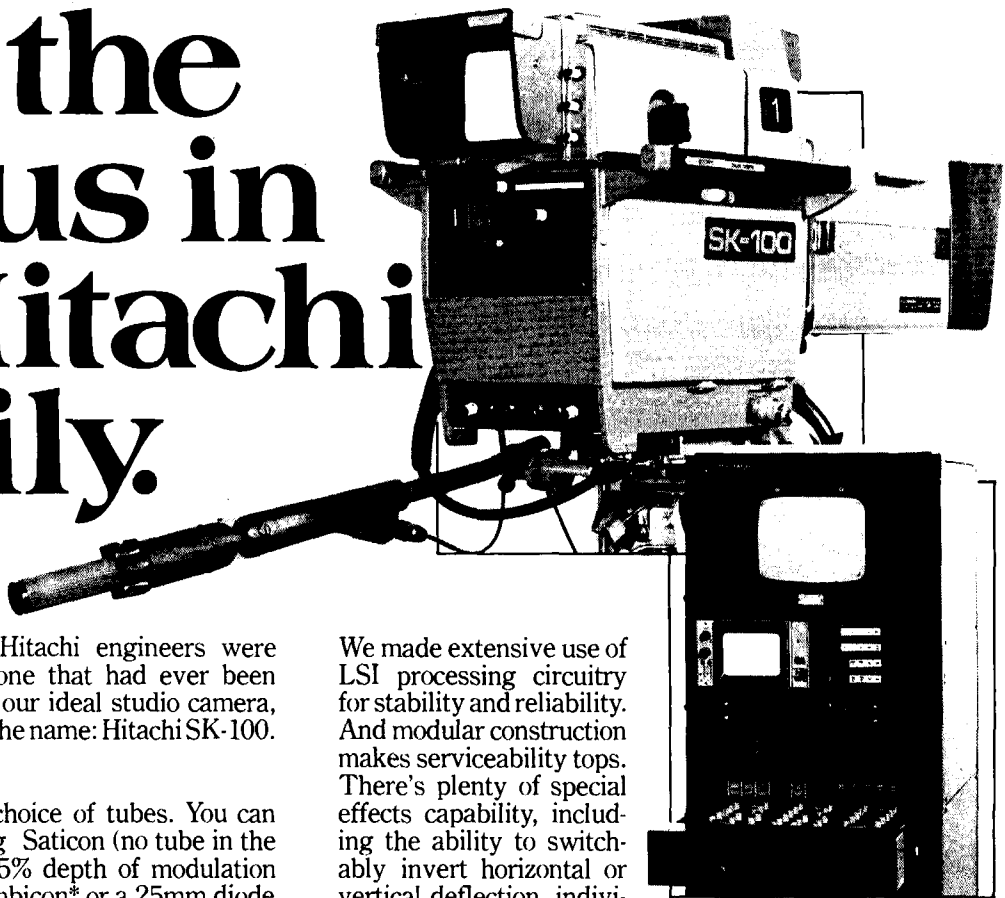
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The SK-100 comes with your choice of tubes. You can have our *new* 1" (25mm) low-lag Saticon (no tube in the world has greater resolution: 65% depth of modulation @ 400 TV lines) or a 30mm Plumbicon* or a 25mm diode gun tube. Choose the Saticon with its pin-lead target design, and you also get the highest S/N ratio of any camera to date: 56 dB!

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This is a zero-reference computer that gives you a dramatic reduction in set-up time, yet requires no technical skill. Just push a button and green, red, and blue channels are set up so you can be air-ready in moments.

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The Digital Decade

A workshop on "The Digital Decade — Its Impact on the Broadcaster," will be presented by the SMPTE at the convention of the National Association of Broadcasters in Las Vegas, it was announced by SMPTE Editorial Vice-President **K. Blair Benson**, Video Corp. of America. The workshop will be held on 14 April from 8:00 a.m. to 9:30 a.m. in Room A3A6 at the Las Vegas Convention Center.

Benson, who will be chairman of the workshop, said the program would take the form of a panel discussion by a group of experts from the SMPTE. Participants on the panel are **William Connolly**, CBS, Chairman of the Study Group on Digital Television Tape Recording; **Michael Fisher**, ABC, Chairman of the Committee on Television Video Technology; **Robert S. Hopkins**, RCA, Chairman of the Committee on New Technology; **Miguel A. Negri**, NBC, Member of the Study Group on Digital Television Tape Recording; and **Roland Zavada**, Eastman Kodak Co., SMPTE Engineering Vice-President.

Information on the workshop may be obtained from **A. Conte**, SMPTE, 862 Scarsdale Ave., Scarsdale, NY 10583, (914) 472-6606.

the new almanac, *Hope Reports AV-USA 1975-1979*, fifth edition, being prepared for publication.

An exhibit of 75 color prints made from Autochrome glass plates produced between 1907 and the mid-1930s entitled "Autochromes: Color Photography Comes of Age" went on view at the Library of Congress in Washington, D.C., on 28 January for the first of two showings which will last through 1980. The exhibit honors Louis Lumière who in 1904 developed the first successful color process that could be used in a conventional camera and called it Autochrome. The exhibit was assembled and the prints made by Ilford, Inc., Paramus, NJ 07652.

The first major Danish demonstration of **Confravision Video-Teleconference** will be given at the Bella Center in Copenhagen on 18 June. Danmedia, a study group under the Danish Academy of Technical Sciences concerned with mass communication and telecommunications, planned the demonstration in cooperation with the Danish Data Processing Society to take place during EuroComm 80 which will be held 17-19 June at Bella Center. Radio Denmark and the Post and Telegraph Service will provide technical assistance for the video-teleconference which will be held on the potential for the future of this type of conference. Direct, live picture and sound connection will be established between the Bella Center in Copenhagen, where 300 participants will be able to follow the demonstration, and studios in Oslo and Stockholm.

CINE (Council on International Nontheatrical Events) announced that U.S. films won top honors, including Gold and Silver Awards at recent international film competitions, the Rio de Janeiro Scientific Film Festival, and the Malta Golden Knight and New Zealand Christchurch Amateur Film Festivals. CINE entries carried away four of the seven prizes awarded in the Rio Festival. At the Malta

Golden Knight Festival, *Junior High School* produced by David Wechter, Michael Nankin, Steven Jacobson, and Helen Spears won the top award, the Gold Knight Trophy and two other amateur films produced in the U.S. won Silver Knight Trophies. At the Christchurch Festival, *Yoicks*, produced by Pat Kay, won the Hei.Tiki Trophy for the Best Film of the Festival and the Kodak Trophy for the Best Photography. Four other films also won awards for sound, animation, and editing.

CBS and RCA announced an agreement whereby RCA is licensing CBS to manufacture and distribute videodisks worldwide, using the RCA SelectaVision system. This development will require a major expansion at CBS Technology Center, Stamford, Conn., as industry prognosticators are forecasting that by the end of the 1980s there will be videodisk players in as many as one-half of all American homes that presently have color television.

The 12-in videodisk is similar to the LP record, developed by CBS in 1948, in that it is used with a player resembling an ordinary phonograph. With the player attached to a television set, each videodisk selected by the viewer presents up to two hours of programming on the home screen (one hour per side). The SelectaVision videodisk revolves at 450 revolutions/min as compared with 33 $\frac{1}{3}$ revolutions/min for the LP. The grooves on the videodisk are only .00002 mils deep — invisible to the naked eye — while the grooves on the phonograph record are 1 to 2 mils deep.

The work at the CBS Technology Center will be devoted to the technology of mastering the videodisk, which is the first step in the multistage process of producing the videodisk, while work on the remainder of the production process will be conducted at the CBS Records engineering facility in Milford, Conn.

Gotham Audio Corp., 741 Washington St., New York, NY 10014, celebrated its 30th birthday on 28 January 1980, it was announced by Stephen F. Temmer, President. He noted that on 28 January 1950, Gotham opened its doors claiming to be the first independent recording operation in the world to be equipped with Ampex tape recorders. Prior to that time only broadcast networks were so equipped. In 1957 Gotham began importing professional audio equipment from European firms, and in 1972 it began exporting professional audio products manufactured by firms in the U.S. and Canada.

Sony's Video Technology Center in Palo Alto, Calif., the company's first research and development facility to be located outside Japan, has been upgraded to a separate corporation and named Sony Technology Center, Inc., it was announced by Koichi Tsunoda, President of Sony Video Products Co., 9 W. 57 St., New York, NY 10019. Sony was the first Japanese corporation to open a television plant in the U.S. when it established a Trinitron assembly facility in San Diego in 1972. It was also the first Japanese corporation to establish a magnetic tape production facility when it opened Sony Magnetic Products in Dothan, Alabama, in 1977.

The **IS CET** (International Society of Certified Electronic Technicians) Technical Li-

brary is now open for business at a new location, it was announced by Chairman George Sopocko, CET. Sopocko has a good supply of schematics available for older radio and television sets and a fairly good selection of schematics for short wave and amateur radios and radio and television test equipment. Persons wishing to have copies of technical data that are no longer available should write to Sopocko at 5631 Irving Park Rd., Chicago, IL 60634. The basic search and copy fee is \$2 for the first two pages plus 50 cents for each additional page. For further information write to IS CET, 2708 West Perry St., Fort Worth, TX 76109.

Leader Instruments Corp. has announced the opening of its new corporate headquarters at 380 Oser Ave., Hauppauge, L.I., NY 11787. The firm was founded in 1969. In the summer of 1978, Leader's Plainview, NY, facility was destroyed by a tornado and the corporate headquarters was temporarily housed a few blocks from the damaged site. The new facility covers 10,000 square feet and includes executive and sales offices, service center, and warehouse. The firm markets a broad range of electronic instruments and test equipment for industry, education, service, and audio/video applications.

Ed DiGiulio of Cinema Products has been re-elected President of the Professional Motion Picture Equipment Association. William Keith of Filmarts Productions was elected East Coast Vice-President and Roy Low of Lowel-Light was elected West Coast Vice-President. Lee Duncan of Victor Duncan, Inc., was reappointed Secretary-Treasurer for a three year term. Newly elected Board of Trustee members are Mickel Niehenke of Rosco Laboratories and Paul Meistrich of Camera Mart. Volker Bahnmann of Arriflex was chosen Chairman of the Board. PMPEA maintains its national headquarters at University Tower, Suite 806, 6440 N. Central Expwy., Dallas, TX 75206.

Yves Faroudja, President of YFI, has announced the acquisition of new, larger facilities at 946 Benicia Ave., Sunnyvale, CA 94086, and the changing of the corporate name to Faroudja Laboratories, Inc. The new research and manufacturing facility covers 5000 ft² and contains administrative offices and an expandable fabrication area where current product production includes comb filters, video enhancers, and other equipment and accessories. The new facility is located in the middle of Silicon Gulch, a location believed to provide a good environment for further new product research in the television signal processing field.

James Hiller, who retired as Executive Vice-President and Chief Scientist of RCA in 1977, has been elected to the National Inventors Hall of Fame for his development of the electron microscope. He is the second man to be elected to the Inventors Hall of Fame in connection with his work at RCA. Vladimir Zworykin, who hired Hiller as an RCA employee in 1940, was installed in 1977 for his television developments. The electron microscope provides extremely high power magnifications considerably greater than those obtained with any optical microscope. The instrument is widely used in medical, biological, and metallurgical research studies.