

## SMPTE Delegation Visits the People's Republic of China: By President Eady and Delegates

In the December issue of the *Journal*, the SMPTE delegation's visit to Tokyo, and its participation in the Motion Picture and Television Engineers Society of Japan (MPTEJ) Symposium on HDTV Production, was covered in detail. This was, however, only the first leg of our trip to the Far East. On September 19, our delegation of SMPTE President Harold Eady, Executive Vice-President Carlos Kennedy, Engineering Vice-President Richard Streeter, Governor Irwin Young, and *Journal* correspondent Joseph Roizen left Japan for Beijing, where we were joined by Secretary Stephen Kerman, Governor-at-Large Bengt Orhall, and a few

other SMPTE members, including Arnold Brown, and Paul Yang who acted as our trip coordinator. Our delegation was very appreciative of Mr. Yang's efforts in helping to organize our visit to the PRC.

Our invitation to the PRC came from the Ministry of Culture through Di Shijie, vice-president of the Chinese SMPTE and vice-director of the Chinese Film Bureau. The SMPTE was asked to provide a series of presentations on film and television topics, and to participate in a four-day Academic Lecture Symposium organized by the Chinese SMPTE in Beijing. The SMPTE lectures were interspersed with technical presentations made by Chinese speakers, and the symposium was held at the Science Center in the Friendship Hotel complex in Beijing. There was obviously a great desire on the part of our Chinese hosts to establish better relations be-

tween their SMPTE organization and ours. As a result, there were many ceremonial events, and both technical and social visits to local film and TV facilities as well as to China's most famous tourist attractions.

While Beijing was the focal point of our delegation's technical activities, a smaller SMPTE group continued on to visit Shanghai, Hangzhou, Guangzhou, and Hong Kong. This report will cover our activities in chronological order, divided between technical and non-technical events. All the members of the delegation commented on the warm hospitality extended to us by our Chinese colleagues, the improved understanding we gained about the film and television industry in this vast country, and the satisfaction we felt at being able to share our technical and operational experiences with our counterparts in the Chinese SMPTE.

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Note: Joseph Roizen acted as editor for this article and contributed several of the photos. Mr. Roizen joined the SMPTE delegation in Tokyo and then went on to China on behalf of Dolby Laboratories, Inc. He made valuable contributions to the success of the trip.



The SMPTE delegation enjoyed visiting some of the many famous tourist attractions of Beijing.

Throughout our visit to the PRC, we had the pleasure of presenting to the various Chinese delegates and hosts a variety of SMPTE mementos. These consisted of such items as Society pins, paperweights, standards manuals, and Society publications, in addition to specially designed plaques that read: "To commemorate the visit by the delegates of the Society of Motion Picture and Television Engineers to the People's Republic of China, September 1985."

We all left China deeply impressed at the enormous strides the Chinese have made during the last few years in updating and expanding their public television services, as well as at the steps they have taken for modernization of film production.

### The Academic Lecture Conference in Beijing

Organized by the Chinese SMPTE, this four-day series of lectures included both film and television technology and operating practices. The Chinese speakers covered a very wide range of topics in the more than 55 papers given, including several tutorials on component color TV, computer graphics in television, the dye transfer process, optical sound on film, and many others. Of particular interest to us were two television papers on China's plans for satellite broadcasting in the fu-



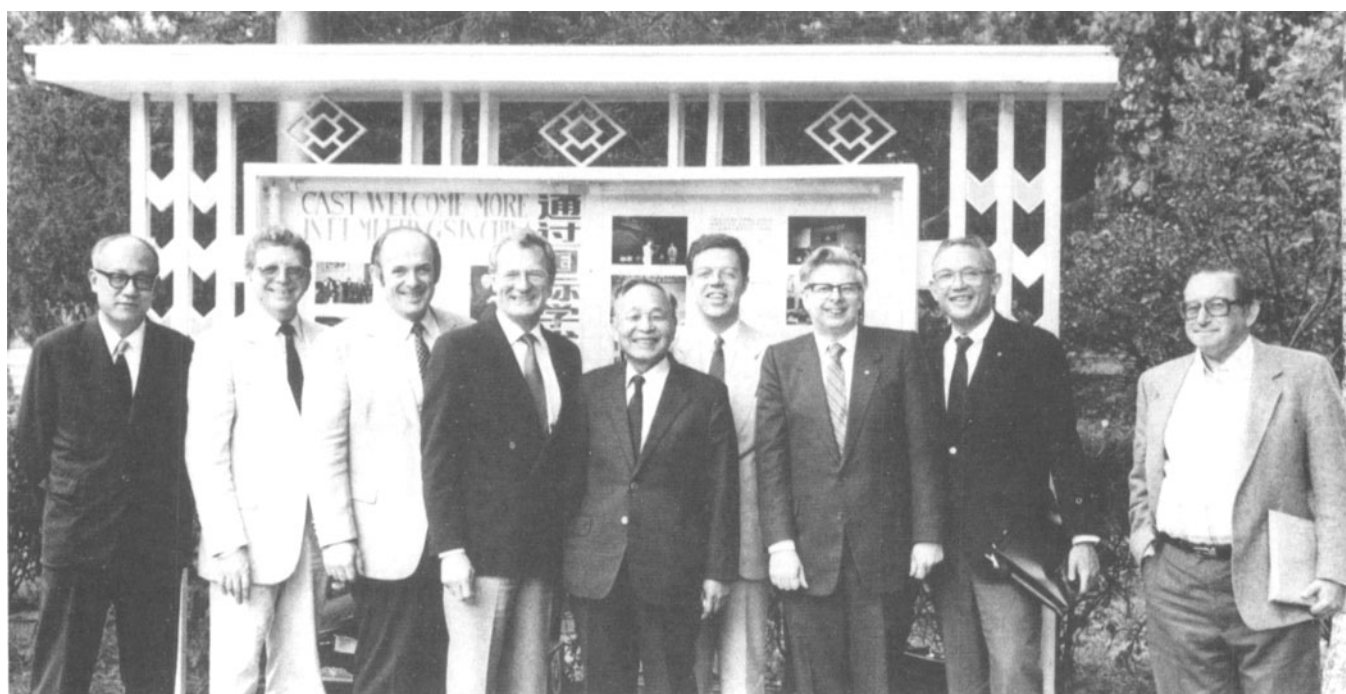
*Harold Eady presenting plaque commemorating SMPTE visit to Zang Erzah, chief engineer, Beijing Film Studios. Eady presented several such gifts at various locations during the trip.*

ture, and on the huge new production center under construction in Beijing.

The opening session on Saturday morning (September 21) at the Science Center attracted an audience of more than 200 Chinese delegates who heard the president of the Chinese SMPTE, Situ Huimin, welcome our delegation and declare the conference open. His remarks, and those of Presi-

dent Eady and other key speakers, were covered by an ENG team from the local TV studio using a portable camera and a U-Matic recorder.

The SMPTE delegates had been pre-assigned various technical topics to cover, and Eady led off the symposium with an extensive review of the history, current status, and goals of the Society. Eady's specially prepared



*The SMPTE delegation at the Science Center in Beijing, site of the Chinese SMPTE Symposium. (L-R) Sun Tong Geng, Carlos Kennedy, Stephen Kerman, Harold Eady, Situ Huimin, Bengt Orhall, Richard Streeter, Irwin Young, and Arnold Brown.*



A group of Chinese engineers attending one of the workshops conducted by SMPTE delegates during the Academic Lecture Conference. Several workshops on different topics were held in addition to the formal lectures presented in the main auditorium.

slide lecture gave a detailed profile of the SMPTE's publications, test materials, conferences, and specific services to both the industry and its own members. During the opening session, Eady also presented the Chinese SMPTE with a set of our publications and manuals containing all of the Society's film and television standards and recommended practices, for their technical library.

Eady's address was followed by a paper on the state-planned Broadcasting Satellite System by Xu Zhongming and Zhang Zhijian. Mr. Xu presented this paper, which described the reasons for selecting a DBS/Ku-band operation, the type of satellite to be used, and its up- and down-links, as well as the services areas to be covered. Xu indicated that current terrestrial television services in China cover less than 65% of China's 9.6 million km<sup>2</sup>, 70% of which is quite mountainous. Satellite broadcasting was therefore a way to accelerate the delivery of television service to the vast interior areas of the country, and to increase TV coverage to above 90% by the early 1990s.

During the technical sessions, SMPTE Executive Vice-President Carlos Kennedy, Ampex Corp., lectured on VTR formats in current use, and also talked about the digital VTR format of the future. Engineering Vice-President Richard Streeter, CBS Broadcast Group, reviewed the HDTV situation and showed a 35mm transfer of an 1125-line, 60-field HDTV program produced by RAI, called Omnicron. SMPTE Secretary Stephen Kerman, Tektronix, described test and measurement techniques in video, and Governor Irwin Young gave a dissertation on computers in film laboratories. Bengt Orhall of Film Teknik, SMPTE Governor-at-Large from Sweden, gave a paper on electronic film conforming as used in his facility. Joe Roizen, Telegen, an editorial board member of the *SMPTE Journal*, described the Dolby system used in modern stereo optical sound. Eady and Roizen also had two additional topics: Eady reviewing the use of SMPTE time code in film editing, and Roizen describing CCD color camera technology.

In addition to the technical papers,

the second day of the conference was dedicated to a series of separate workshops conducted by the SMPTE speakers with groups of Chinese delegates interested in particular topics. Archival storage, motion-picture sound, film processing, video measurements, and other technical subjects were covered in detail.

Jin Mengshen, CCTV, presented a paper on the planning of a large-sized modern TV center, in which he described the architectural and technical goals of a new 24-story color TV production center being built in Beijing. Designed to provide up to four nationwide program channels, this 84,000 m<sup>2</sup> structure has a central high-rise tower 110 m tall, thus making it the highest building in Beijing. Next to it is a circular production area whose 44,000 m<sup>2</sup> will contain 12 studios with staging areas ranging from 1000 m<sup>2</sup> to 150 m<sup>2</sup>. According to Mr. Jin, this will increase broadcast hours by a factor of 1.8, and production of programming will go up to 172.5 hrs per week. Building completion is expected by mid-1986, and equipment move-in by the end of the year.



*SMPTE President Harold Eady delivering the opening address at the Academic Lectures Conference in Beijing. Seated is Situ Huimin, president, Chinese SMPTE.*

In addition to the formal lectures and workshops, the conference provided an opportunity for officials from both societies to exchange views on better future communication on technical and organizational topics. By the end of the conference, all agreed that Chinese film and television engineers should participate more in SMPTE activities in the U.S., and in fact, several Chinese SMPTE members, including our principal guide, host, and translator, Zhang Jian, did attend the 127th SMPTE Conference in Los Angeles.

The Chinese SMPTE organizers had also arranged for our delegation to visit major film and television facilities during our stay in Beijing, and to get a firsthand look at the half-completed CCTV Center.

The visit to the China Central TV headquarters started with the traditional ceremonial round of teacups, and a review by Sun Tong Geng, chief engineer, CCTV, of the current state of Chinese TV services. He gave some statistics and projections for the future. By the end of 1985, Mr. Sun stated, there would be about 60 million TV sets in use, with more than 5 million of those in color. TV Broadcast studio facilities had doubled between 1982 and 1984 (from 54 to 102), and another 85 broadcast centers were being added in 1985. On-air and program production hours were also going up to keep pace with the public demand.

A tour of this sprawling facility, built in the 1950s, revealed numerous

production and post-production rooms equipped with the most modern technical gear, from Ampex VPRs and ADOs to Grass Valley switchers, Sony U-Matics, and Rank telecines. All were busily creating program material for daily broadcast. Mobile vans and ENG gear were parked outside ready to cover local events. While much of the hardware we saw was imported, our hosts were proud of some of their own achievements in locally built equipment. This included sound consoles, switching and distribution systems, and an electronic character generator that copes

with the thousands of Chinese ideographs needed to title or subtitle programs. Even though the CCTV headquarters was undergoing massive reconstruction, we were told that most of the new equipment would probably be moved to the new TV center when it was completed.

The new center was our next visit, which turned out to be an exciting one. Mr. Sun and Mr. Jin accompanied us to the site of the new production center that Mr. Jin had described in his lecture the previous day. A beautiful scale model of the structure was on display in the architect's construction shack, and we were given a more thorough description of the layout of the buildings.

Since the 24-story tower was already up, we were invited to inspect it from the top. Putting on hard hats, some of which were Chinese wicker versions, we were guided to an outside wire cage elevator, suspended by a thin single cable, which hauled us creakingly up 22 floors.

As the tallest structure in Beijing, the new TV Center affords a great view of such noted landmarks as Tien An Min Square, 7 km to the east. Since Beijing's metropolitan area is relatively flat, the roof of the building should provide an excellent microwave site for communications links. From up there we could also see the heavy construction activity going on to complete the 3-story circular-shaped production center adjacent to the tower.



*SMPTE Secretary Stephen Kerman with scale model of the new CCTV building under construction in Beijing. The 24-story tower will house most of the administrative offices, and the circular building will contain the shooting stages and control rooms.*



*Mr. and Mrs. Eady participating in welcome toast at the official Welcome Banquet.*

The trip down was equally breathtaking, and our hosts gave us a further rundown on some building details we could now appreciate better from our short tour.

To balance matters, we also visited the Beijing Film Studios, where a specially made welcoming sign in English and Chinese greeted us at the entrance. The Chinese produce a total of about 200 feature films a year for cinemas all over the country. Since they do not show many foreign films, local production is a very important industry. In Beijing, the film facilities include a studio, a laboratory, and a distribution department. The Beijing Film Studio we visited produces between 15 and 30 productions per year, with a total labor force (including actors and directors) of about 1400 people. Most of the film equipment was made in China, with the notable exceptions of a U.S. robotic camera, RCA telecines, and Dolby noise reduction. The film laboratory had a Technicolor dye transfer process.

One of the most memorable aspects of our visit to the Beijing Film Studio

was the lunch we were served there. We had been informed by our translator, Mr. Zhiang, that this studio was as famous for its cuisine as for its films. They had their own gourmet chef, who made sure that visitors to the executive dining room were treated to the best that Chinese culinary arts could deliver. We were not disappointed, as one round after another of delicious delicacies showed up on our tables.

Our closing banquet in Beijing was hosted by Wang Feng, director of CCTV and vice-president of the Chinese SMPTE. At the end of this sumptuous meal, which included numerous friendship toasts, both Wang Feng and Eady agreed that future cooperation between the Chinese SMPTE and our Society would go forward from that moment on to a new plateau of mutual understanding and interchange.

The SMPTE delegation participated in many other memorable events, including an afternoon visit to the Palace Museum in the Forbidden City, a morning trip to Beijing's

famed Summer Palace, and an all-day visit to the Great Wall of China. On two other evenings we attended a Chinese music theater with a mix of Oriental and Occidental music and dance performance, and an evening at the Beijing Symphony.

### **Shanghai Visit**

The visit to Shanghai by a smaller SMPTE delegation consisting of Eady, Streeter, Young, and Orhall provided a similar opportunity for presenting lectures and visiting local TV and film facilities.

On September 25, the delegation went to the Shanghai Institute of Technology, where about 200 members of the Chinese SMPTE were gathered to meet us. All of the SMPTE officials gave shortened versions of the papers they had presented in Beijing, and a lively dialogue with the audience ensued. Chinese engineers were very interested in the full range of technical topics, posing questions about everything from future TV systems to slide presentation equipment. SMPTE President Har-

old Eady also used this occasion to present a membership plaque to Keinosuke Nakajima, who is probably our Society's eldest new member.

The following day (September 26) was taken up with a visit to Shanghai TV, where the chief engineer, He Yun, was our principal host. Shangai

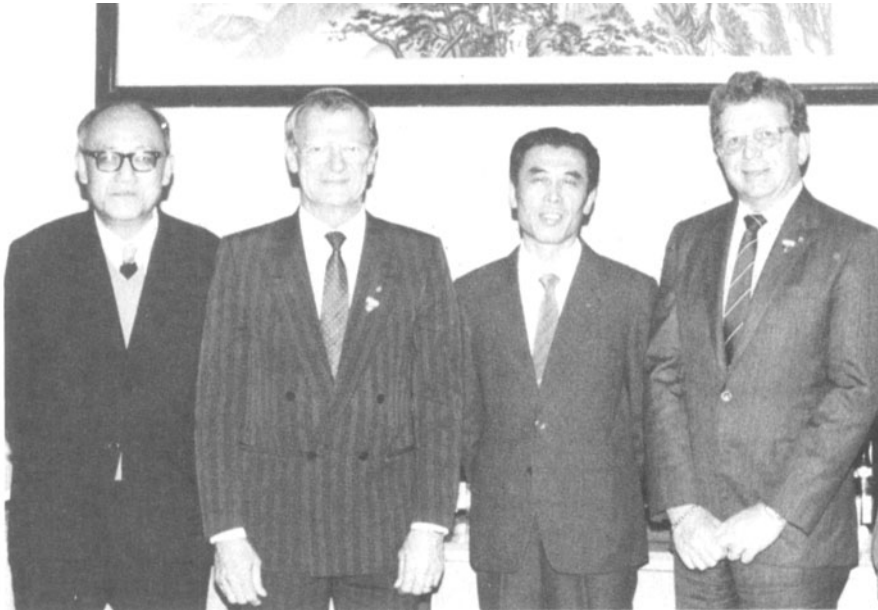
Television was the first TV station on the air in China, starting operations on October 1, 1958. Today it operates three channels (5, 8, and 20). Channel 5 is the network outlet station for CCTV, and the other two handle local programming. All channels are transmitted from a common tower, 210 m

high, on the studio grounds. The buildings have 3,000 m<sup>2</sup> of operating space, and include three production studios, extensive technical facilities, and microwave links in a rotunda on the tower.

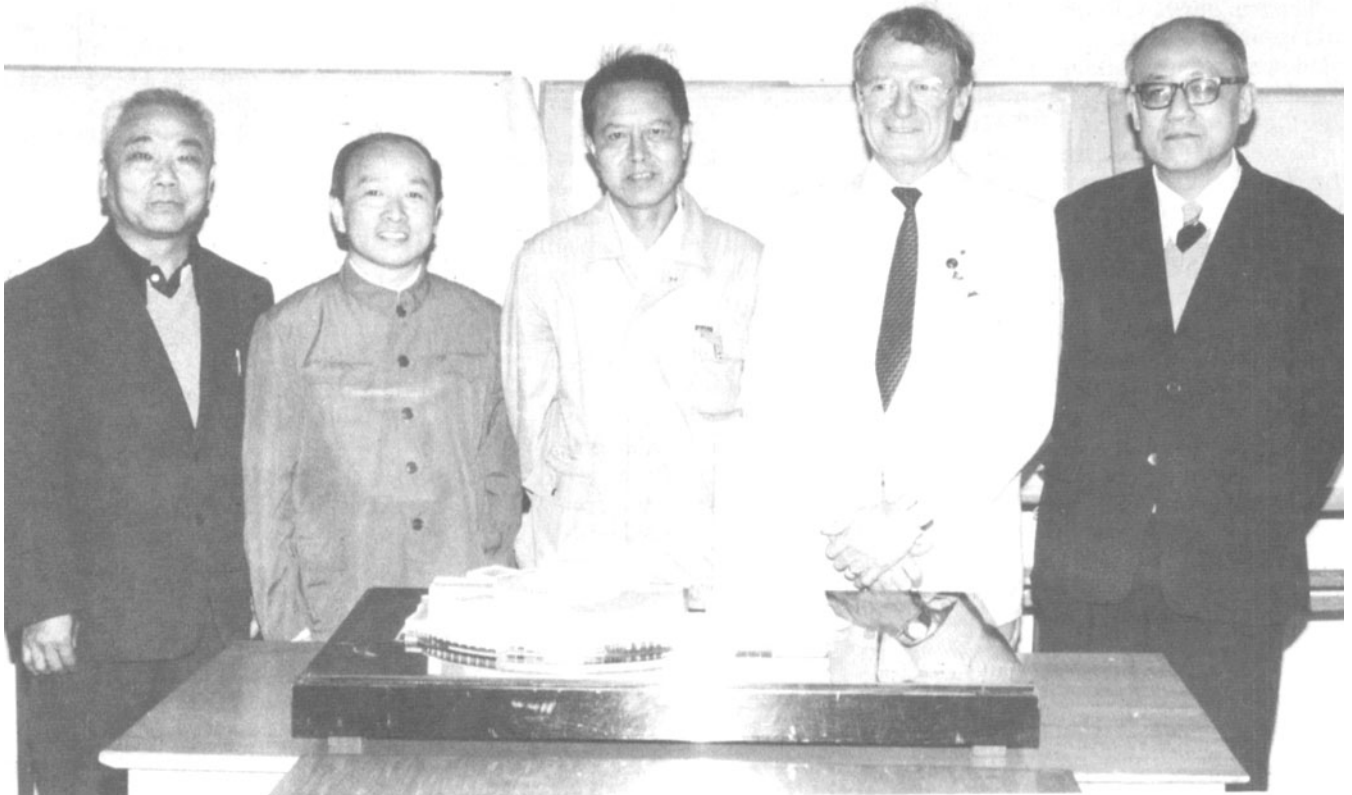
Shanghai TV serves about 75% of China's most populous city, in which there are now more than 2 million TV receivers. About 30% of program production is done on 16mm film, with the rest on videotape. Both 1-in. Type-C and U-Matic recorders are used at this station. At the end of the TV studio tour, Eady presented Mr. He with the SMPTE's latest book, *Components of the Future*, as a token gift from the Society.

On September 27, a visit was made to the Shanghai Film Studio. With a studio staff of 1800, including some 600 technicians, this facility produces 19 to 25 feature films per year. The studio contains six shooting stages, a special-effects department, and a laboratory. It was claimed that they can actually produce 14 features simultaneously when necessary.

While most of the equipment was Chinese, Arriflex cameras, as well as other foreign hardware were present. The laboratory was equipped with Chinese processing machines, but



Officials of SMPTE and CCTV in Beijing. (L-R) CSMPTe President Situ Huimin, SMPTE President Harold Eady, CCTV Director Weng Feng, and SMPTE Executive Vice-President Carlos Kennedy.



Visiting a model of the new CCTV complex in Beijing.



The Beijing CCTV building currently housing three operating TV channels and several radio studios. Built in the 1950s, it contains a great deal of modern television equipment, most of it imported.

printing was done on Bell & Howell BHP printers. Of the 1600 prints made, 1000 were in 16 mm, the rest in 35mm. The average normal production time for a feature film is 70 days, with a budget of between 700,000 to 1,000,000 yuan (approximately \$240,000 to \$330,000 U.S.). During our visit, the feature *Spring in the Fall* was in production, and we were able to take a good look at their entire operation.

### Visit to Hangzhou

Our two-day visit to this beautiful city, just south of Shanghai, was an absolute delight. The visit was over a weekend, and afforded our delegation an opportunity to see many of the tourist attractions. We were met by several SMPTE members, including Ren Yan Lang, chairman of the Hangzhou Section. Our hotel overlooked the beautiful West Lake. The local SMPTE members escorted us to many sightseeing events and were extremely gracious.

### Visit to Guangzhou

This city used to be called by its more familiar name, Canton, and is situated in South China near the border with Hong Kong. Our host at Guangdong Television in Guangzhou was Mr. Lun, technical manager, GTV, and also local representative of the Chinese SMPTE. Mr. Lun has also visited the U.S., most recently the NAB convention in Las Vegas in 1985.

Guangdong Television operates three on-air channels, one of which is

the network outlet for the national CCTV program from Beijing. The two other local channels cover that area, one in the Cantonese language. There are two main studios of 600 and 300 m<sup>2</sup> and a smaller news studio. Some 600 employees, of whom 120 are technicians, operate modern equipment which includes Sony 1-in. VTRs, Bosch FDL telecines, and portable U-Matic gear. Guangdong TV beams news broadcasts to Hong Kong, and Guangzhou residents have extremely high antennas so that they can pick up the Hong Kong programs as well.

Our last visit in the PRC was to the Pearl River Film Studio, located in a beautiful park area. One of their sound stages was equipped with Dolby Stereo, and as we listened to post-synchronization activities in a studio, we exchanged ideas about the future mixing of film and electronic production methods with our Chinese hosts.

### Hong Kong Visit

Hong Kong has long been a major center for SMPTE members in the Far East. As a result, President Eady requested a special meeting with local members.

David Bayliss, David Bayliss Ltd., Hong Kong, arranged and hosted a special luncheon, which attracted more than 20 local members who were given a short review of the SMPTE delegation's tour of the PRC. Eady and the SMPTE Executive Committee have expressed interest in having a Hong Kong Section of

the Society, and this potential is being investigated at the present time. It was a wonderful opportunity to meet the local members, and Eady expressed sincere gratitude to Mr. Bayliss for organizing this luncheon.

At the luncheon Dick Streeter, Engineering Vice-President, presented Eady with a gift from the delegation members as a token of appreciation for his untiring leadership throughout the trip to the Far East. The gift was his "chop" bearing his name in both English and Chinese, with the figure of a horse signifying the year of his birth. A chop is used for imprinting documents.

Both Eady and the other members of the SMPTE delegation felt that the visit to China had been extremely beneficial to both sides. The Chinese officials and members gained a better perspective of the SMPTE and its operation. They also learned about the Society and of its activities in film and television. At the same time, the SMPTE delegation had a firsthand look at the progress made in China by her own growing film and television industries.

This invaluable opportunity to associate with the Chinese SMPTE leaders, to exchange ideas, and to lay plans for greater mutual cooperation in the future, will serve both societies well in years to come. In his post-journey communication to all of the host groups in China, Eady summed up the delegates' feeling of gratitude for the outstanding hospitality that made this a successful and memorable trip.