IREECON — Serving Australian Communications

Australia's electronics and television industry is as modern and active as any in the Western world, but it is not very large. Yet, Australian broadcasters need information about new equipment advances, with a forum to discuss current technology and the direction Australian broadcasting is taking. Since the Australian television industry is not large enough to support separate technical conferences and equipment exhibitions for different technologies, the *Institute for Radio and Electronic Engineers of Australia* has created a biennial convention called IREECON, which is held alternately in Sydney and Melbourne, the two largest metropolitan centers on the continent. The latest IREECON took place in Melbourne from August 24 to 28, and continued a well-earned reputation for the excellence of its papers, and the wide range of exhibits covering the television, radio, computer, and electronic components fields.

The general growth in these areas in the rest of the world was reflected in the latest IREECON statistics. More than 800 delegates came to the Melbourne Show Grounds Expo Center to attend the 178 technical lectures, which were also made available in a printed digest. In addition, the largest crowds ever in attendance toured the 40,000 square feet of exhibits, which included virtually all of the major manufacturers of video and audio equipment. Considering the population of Australia is less than 15 million, IREECON managed to create a convention that looked like a smaller version of the NAB or SMPTE. There was something there for anyone working in or connected with the communications industry.

The Technical Conference

Australian engineers take great pride in the high technical standards to which they adhere in their working environments. They are also very innovative in their own research work, and very demanding of equipment specifications on the hardware they purchase. This attitude leads to a very careful review program for submitted papers, and those that are accepted for presentation and publication are of a high caliber.

(continued on p. 1208)

"HERE'S THE CAMERA THAT HELPED US CONQUER SPACE. SHARP'S XC-700."

Bill Gibson, President, Bill Gibson Productions, former Film Maker Of The Year, Consultant to NASA and Director of films for 20th Century Fox, Warner Bros. Seven Arts and the governments of over 15 nations.

"When the space shuttle touched down at Edwards Air Force Base, our cameraman, Tim McGovern, and Sharp's XC-700 were there.

It was a critical shot for a series we're syndicating for TV called "Conquest of Space."

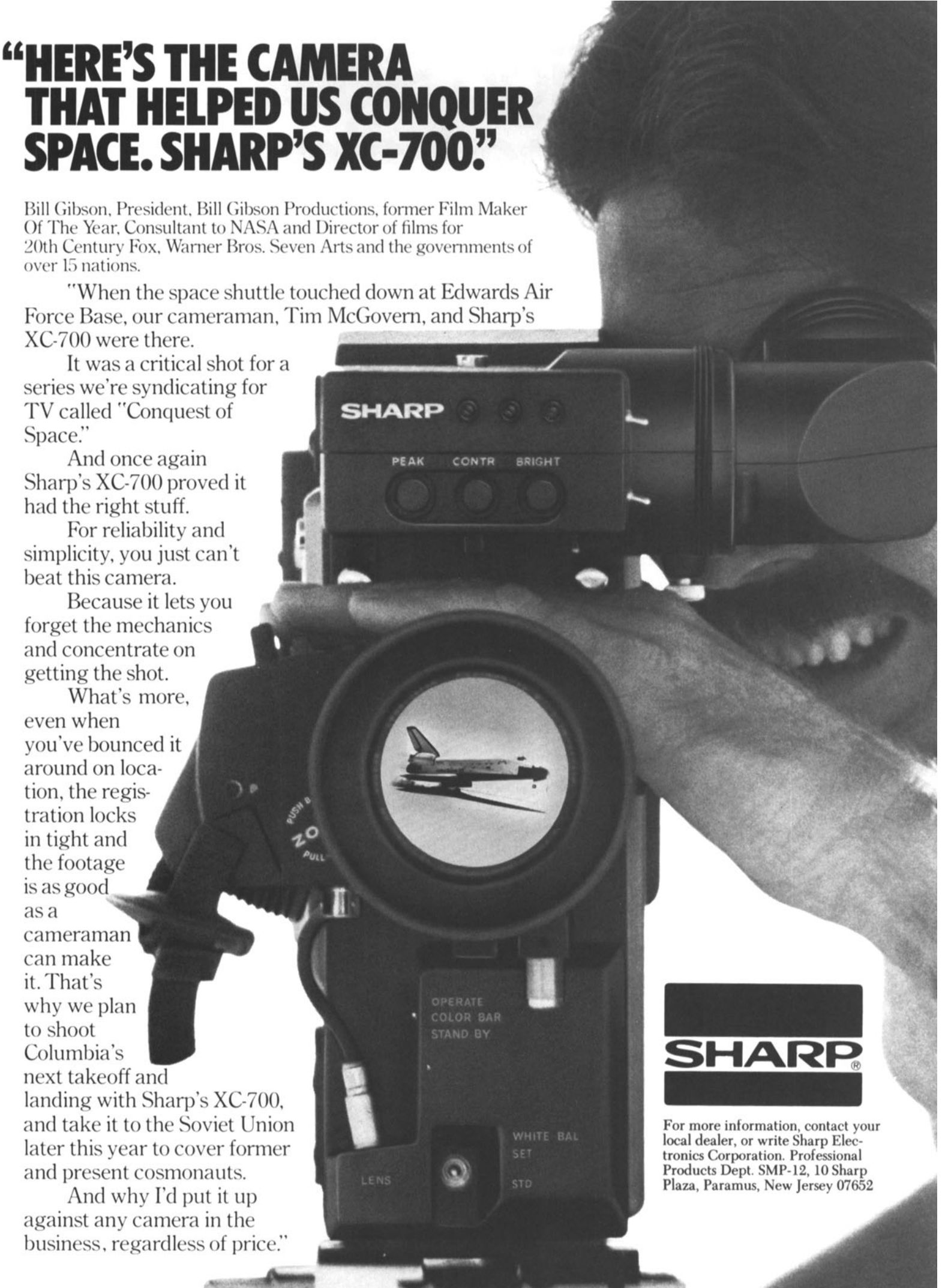
And once again Sharp's XC-700 proved it had the right stuff.

For reliability and simplicity, you just can't beat this camera.

Because it lets you forget the mechanics and concentrate on getting the shot.

What's more, even when you've bounced it around on location, the registration locks in tight and the footage is as good as a cameraman can make it. That's why we plan to shoot Columbia's next takeoff and landing with Sharp's XC-700, and take it to the Soviet Union later this year to cover former and present cosmonauts.

And why I'd put it up against any camera in the business, regardless of price."



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The High Speed 16SR at the Lake Placid Olympics:

The 16HSR has same features, uses same accessories, is powered by same on-board battery as standard 16SR.

Ron Lautore and the old grandmothers:

Ron Lautore was the producer of official filming for the Lake Placid Olympic Committee. "Our aim wasn't just to show the winners," he says. "We wanted to show the discipline. A ski jumper can practice for seven years and it comes down to one jump. If he gets hurt in practice – for him *that's the jump*."

"I had six camera crews assigned to me by the committee. Only one cameraman I had ever seen before. They had all brought their own cameras. I also had the first three High Speed SRs to arrive in the U.S.A."

"Cameramen are all old grandmothers about equipment," says Mr. Lautore. "They get used to their own gear . . . We had about ten minutes to introduce each one to the HSR. After the usual preliminary grumbles, they went out to shoot – and every one of them fell in love with the camera. Now I had six cameramen, each begging me to let him use one of the three HSRs."

Crews had to ski to location.

"I didn't expect to depend so heavily on the HSRs. We'd been told they were high-speed cameras – but they turned out to be more than that. For some shots, the crews had to ski to the locations. When they got there, they could shoot both high speed *and* sync sound with an HSR. After three days, we re-arranged our schedules to build the production around those three cameras."

"When my beard gets completely white from breath frost, I know it's ten or twenty degrees below zero," says Jim Taylor who lives in Vermont.

"The day we filmed the Downhill, my beard was white. We were at the top of Whiteface Mountain and it was *cold*. People were having trouble with their cameras."

150 fps instantly.

"I was using one of the production's HSRs, switching it on at 100 and 150 frames per second. I didn't have to anticipate the athlete's movements. Even in *that* weather, the HSR got up to speed right away."

Jim Taylor

"It was important to do everything in a low-key way," says Mr. Taylor. "I held still at crucial moments and the HSR was quiet – so the officials let me get closer and closer to the Downhill starting hut."

It *wasn't* an exotic high-speed.

"The Lake Placid Olympic Committee paid me to bring my own equipment," says Rick Rose. "But after using an HSR, I hated to go back to my own camera; and I think my camera is a good one."

"Shooting sports for television, you seldom need more than 150 frames. The HSR gave me confidence because it *wasn't* an exotic high-speed – it was a regular Arriflex. Easy loading, fast changes, Zeiss lenses; and quiet."

Rick Rose

Four feet away.

"Finally, I ended up about four feet from their skis. I was down in the snow, looking up, using the wide end of the 10-150, shooting at 24, 100 and 150 frames."

"The Bobsled Run start was another place where you had to be unobtrusive. To prepare for as fast a start as possible, the team concentrated and breathed in unison. Everything was quiet. Officials saying: *Shhh*."

Shot possible only with 16HSR.

"The shot I got there was from just behind – ice being kicked into the lens as they pushed away. Before that, at 150 frames, you could see the intensity of concentration, the effort being put into those few seconds. We couldn't have gotten that shot with a noisy high-speed camera."

Sync effects.

"While I was getting high-speed footage, soundwoman Barbara Potter would be recording wild effects. Then we'd walk over and do an impromptu interview, or we'd shoot crowd reactions in sync. All with the same equipment."

"For me, that's the beauty of the HSR – the flexibility. That, and it's an Arriflex."

If you have questions about their experiences with the 16HSR, you can call Rick Rose at (602) 795-9295, and Jim Taylor at (802) 658-3954.

Sync sound with the 16HSR

Jim Taylor and Barbara Potter shooting sync sound with 16HSR at Lake Placid. "We shot several interviews outdoors on the quiet mountain sides," says Mr. Taylor. "Barbara used a shotgun up close and I'd be on a tripod about 10 ft. back. Played back on the Nagra, you could not hear the camera."

The 16HSR

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The papers at the '81 conference covered the fields of television broadcasting, communications theory, satellites, medical electronics, and many others. In the television field, the papers covered many of the advanced technologies now being used in practical devices or being considered for future equipment.

In the area of CCD (charge-coupled devices) Dieter Poetsch of Bosch/Fernseh described the progress in this area and how CCD sensors combined with digital video processing have led to the development of a commercial telecine of very high image quality. He also described a feature called *Panscan*, which permits selectable scanning of desired areas of cinemascope film.

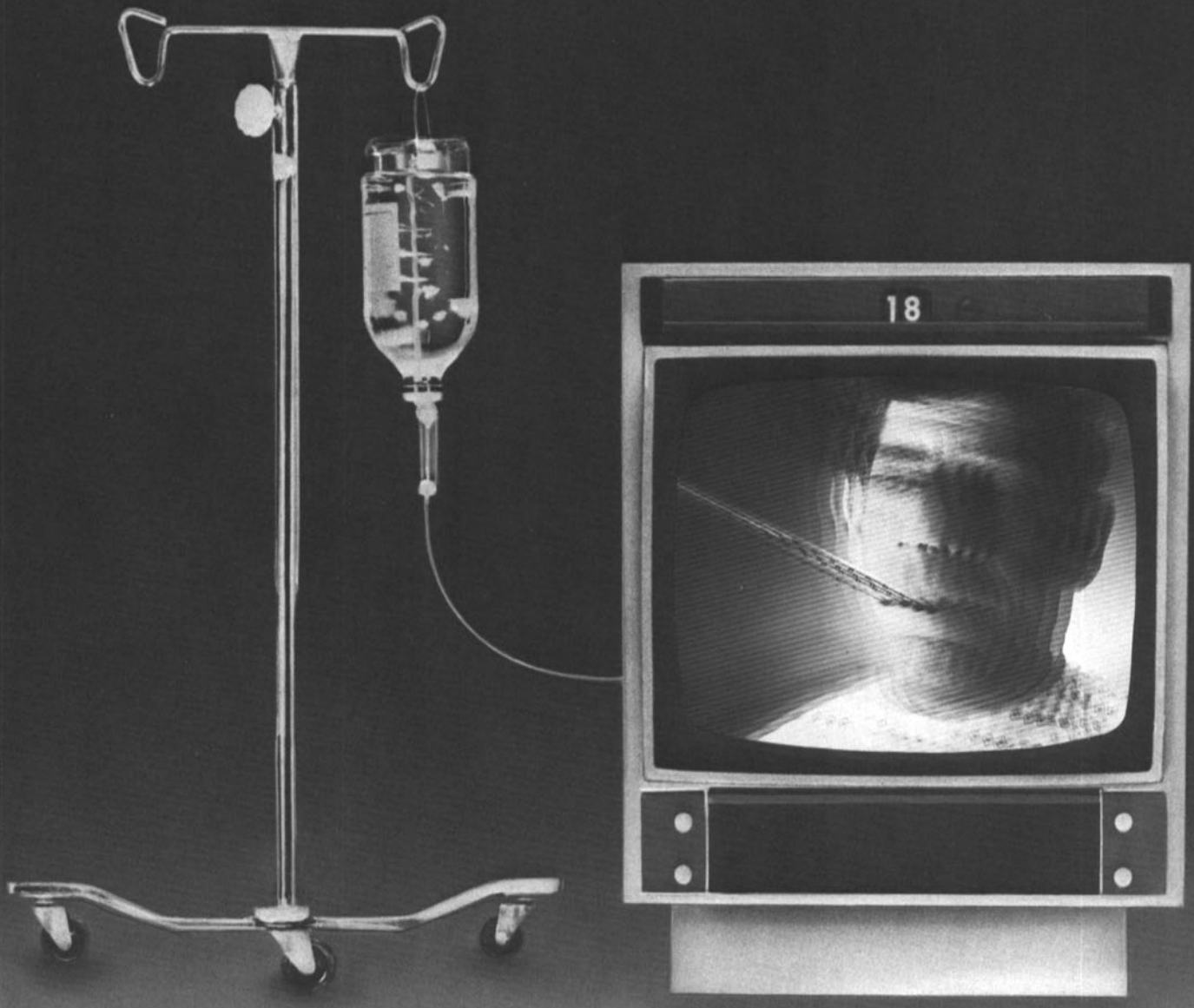
Computer-assisted TV graphics were described by Glen Rose of Ampex, who showed the capabilities of the AVA (Ampex Video Art) system and explained its application to television studio or post-production operations. According to Rose, the key element of this new approach to TV graphics is that typical television graphics can be created in less than half the time required by conventional techniques.

A paper presented by Philips-Mullard showed a very interesting approach to correcting teletext images using a one-chip automatic equalizer. This technique eliminates errors due to ghosting on the radiated signal by detecting the echo and compensating for it.

Fraser Morrison of Ampex gave an update on the digital VTR parameters that have to be considered before such a machine becomes practical. Morrison pointed out that the recording of digital TV signals on tape, in which the tape consumption is comparable to current analog techniques, requires track widths and signal wavelengths that are very hard on the mechanical tape transport design. However, the impressive multiple generation capability of a digital video recorder is a goal worth pursuing, and Morrison covered some of the format considerations that his company was proposing.

Peter Mothersole of VG Electronics U.K. delivered a paper on behalf of A. V. Lord of the BBC's research department on the recent progress of teletext in the United Kingdom. In particular, the developments that are now being intensively studied include the use of more lines in the vertical interval, multiple-page storage in receivers, extension of the character set to accented letters, improved graphics, and high-quality still images.

There was also another aspect to the lecture series which attracted great attention among the delegates, addressing the question of whether Australia should begin cable TV services or whether it should select some other approach to broaden TV program delivery to the home viewer. To thoroughly air this controversy, IREECON invited Dr. Israel Switzer to be the keynote speaker during the opening ceremony. Switzer is considered one of the leading cable TV experts in the world, and



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We call it Improved Image Submasters. It can be an immediate high quality color correction system for any film or tape, from a 3-hour TV movie to a 30-second spot. And for any production that's simply run out of time and can't afford the luxury and cost of waiting for a film lab to deliver, it's a highly effective cure.

Image Transform takes your image completely apart, digitizes it, analyzes it, and color corrects it. We don't take weeks, either, but mere hours.

The submaster you get back from us will give you better balanced, more vibrant color than you ever thought possible. Quicker than you ever thought possible, because nobody really wants to spend any more time in the hospital than they need to.

We can do wonders for your image.

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is vice-president of McLean-Hunter Cable TV in Canada.

Switzer surprised the audience by emphatically stating that Australia should bypass cable TV and go on to new technologies, such as fiber optics, subscription TV, or direct satellite broadcasting (DBS) for expanded TV services. His main points were that Australia did not have a large enough viewer base to support cable services, and that the cable technology available now is at the end of its cycle and will give way to newer, more efficient signal delivery systems. Later in the conference, Switzer's position was challenged by Isaac S. Blonder, of Blonder-Tongue Laboratories N.J., who said Australians should try cable and let the marketplace decide. Blonder also described subscription TV operations in the United States.

The Exhibition

Having outgrown the Melbourne Institute of Technology where it was previously held, the IREECON equipment exhibition was held in the Victorian Expo Center, a modern circular two-story structure that housed the major exhibits, and an adjacent building connected by a protected walkway where additional products were on display.

The main hall had most of the new video products that were being shown in Australia for the first time. In addition, a few local hotels had selected exhibits to which delegates were invited on a more personal basis.

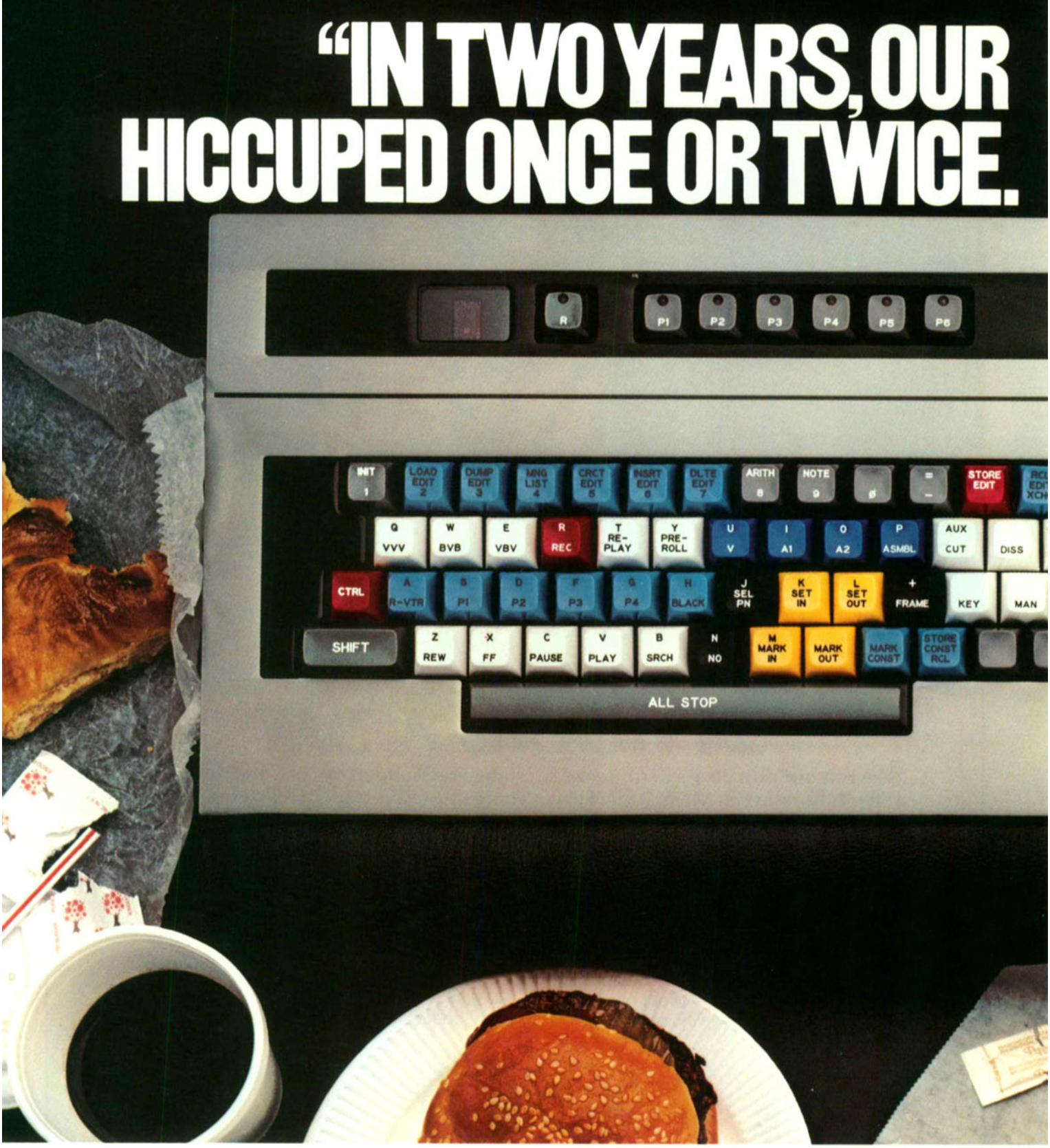
The entrance to the Expo Center was dominated by the Magna-Techtronics stand, which displayed a wide array of video products from the United States, the United Kingdom, West Germany, and elsewhere. Of special interest were the V.G. Electronics Zone Plate Generator, a test pattern particularly suited to investigate digital TV signals, and the Dolby Labs' dual audio boards, designed to provide integrated noise reduction circuits in Type B and Type C one-inch helical VTRs.

According to Lyle Lloyd, the president of Magna-Techtronics, the newest product on this stand was the CMX FLM-1 electronic film editor, which combines the time code flexibility of videotape with the basic requirements needed to edit the original film in a fast, efficient manner. Magna-Tech represents such well-known names as Conrac, CEI, Harris, Microwave Associates, Neve, Schneider, Telemation, and many others, and their booth was a very busy place during show hours.

A second major distributor in Australia is Pacific Communications, and the central item at their exhibit was the largest Grass Valley Model 300 production switcher, fully equipped with digital video effects and E-MEM. Leonard Dole, international marketing manager for the Grass Valley Group, was also on hand to support their

(continued on p. 1214)

"IN TWO YEARS, OUR HICCUPED ONCE OR TWICE.



"Our Sony BVE-5000 editing system is unbelievably reliable," says Randy Cohen, vice president and editor for Broadway Video.

"Amazing that Sony could come up with a state-of-the-art computerized system on its first try," Cohen continues. "And because it's specifically designed for one-inch, it lets me do more with my equipment than other editors."

Broadway Video is both a production and post-production facility in New York City. Its recent credits include "The Best of Saturday Night Live," major political campaigns, promos for the cable network Showtime, and a variety of industrial shows.

"The BVE-5000 worked right out of the box and has been performing flawlessly ever since. With no problems of any kind. Unlike some other systems, whose manufacturers wait for customer complaints to get the bugs out, instead of thoroughly testing their equipment *before* it's sold.

"With its simplified keyboard, the BVE-5000 is

HUMAN EDITORS MAY HAVE BUT NOT OUR SONY."

Randy Cohen, Broadway Video

easier to use, too. It has saved me 25% to 50% of the time other systems require. And since you don't have to be mechanically oriented to use it, the editors can be artists rather than technicians.

"Other advantages include variable search. Dual audio. Vertical interval time code. And the ability to interface with a wide variety of switchers.

"I'll be buying more Sony equipment in the future. Because there are enough reasons for indigestion in this business without machines that hiccup and burp."

Sony makes a full line of 1" and ¾" broadcast equipment, including cameras, recorders, editors and digital time base correctors.

For more information, write Sony Broadcast, 9 West 57th Street, New York, New York 10019. Or call us in New York/New Jersey at (201) 368-5085; in Chicago at (312) 792-3600; in Los Angeles at (213) 537-4300; or in Atlanta at (404) 451-7671.

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extensive equipment display. Fred Williams, the managing director of Pacific Communications, managed to acquire a wide range of American, Japanese, and British products, including Ikegami color cameras, Convergence editing systems, System Concepts studio titlers, and Questech frame synchronizers.

Quantum Electronics, another popular Australian distributor, is headed by a well-known pair of television industry veterans, Ross and Pam Thyer. The Quantum stand featured Quantel products, including the digital video effects unit, and easily recognized U.S. products such as Dynair, Recortec, and Tayburn. Rank Australia seemed to concentrate on audio at their stand, an area in which they represent some of the best products in that field: Altec, Gotham, Nagra, Neuman, and Volumax, among a host of other standard sound products.

The major video equipment suppliers were also there under their own names and had extensive displays of their latest equipment. Ampex had one of the largest exhibits, which featured their full line of VTRs and cameras. The centerpiece of their display was an AVA system operating in 625-line PAL, which was displayed by a graphic artist. Since this was the first time AVA was in Australia, Ampex organized a series of small seminars for Australian broadcasters to demonstrate this new approach to television graphics. Ampex was also celebrating its VTR Silver Jubilee, which coincided with the 25th anniversary of the start of television service in Australia during the Melbourne Olympics in 1956.

Bosch/Fernseh also had a separate exhibit featuring the new FDL-60 CCD telecine and the full line of BCN one-inch helical type B VTRs, as well as their color camera and monitor line. Henry Zahn, a TV pioneer and well-known Fernseh executive, was on hand to explain the finer points of their latest equipment.

Sony was on the lower floor of the Expo Center with a large exhibit and a full complement of cameras, VTRs, editors, and their new SMF-Trinicon single-tube color camera. For some reason, Sony did not show the Betacam (combination camera/VTR), but demonstrated only the camera portion of that new product which had been shown at NAB and Montreux.

Philips was on hand with a full line of equipment on display, but featured test equipment and measuring instruments. One of the highlights was an Australian Philips development, a radio data system (DS1002) for mobile applications. LDK-44 cameras and CDL switchers were also available for visitors to get some "hands-on" experience.

RCA decided to sequester their large exhibit at the nearby Park Royal Hotel and invite IREECON delegates to come over in groups for a technical presentation and a look at the hardware. RCA was showing the Hawkeye camera/VTR combination, as well as their standard line of one-inch

The optical crown for the king-pin film editor

Cinemonta

Cinemonta has fulfilled its promise. It's developed into the perfect editing table for the top professional. Gives him a head-start on his collegues.
Its most striking feature - the optical crown. An exclusive Oldelft innovation, naturally. Gives a quality image throughout the speed range. Discovers faults before projection. But every Cinemonta has a whole array of detail refinements. Like the electronic counter. At the touch of a button it switches from frames to metres, feet, minutes or seconds. And the tone corrector. Fit it to the Cinemonta and it ensures that speech is still intelligible and music acceptable at speeds from ½ up to 2½ synch. In any case, Cinemonta high quality sound is always a pleasure to listen to. Never an irritation. Then there's the Cinemonta viewer, offering a studio audience perfect viewing from all angles.
All this combined in a table layout carefully designed for efficient working.
Cinemonta is available in 16 mm and 35 mm versions.
As a two-plate table. A four- or six-plate table with one monitor. Or an eight-plate table with two monitors.

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Sweden, VIDCO, Bergsgatan 2, S104 22 Stockholm. Tel. 503640
Switzerland, Cine Swiss, Faubourg du Lac 2, 2000 Neuchâtel. Tel. 245040
Yugoslavia, Medikomerc, Marsala Tita 30, Sarajevo 71000. Tel. 36471/36473

helical type C VTRs, and their latest studio and ENG cameras. One interesting new product was the Viewfinder Display Unit (VDU) on the TK47 camera being shown. This VDU defines the safe action area, the relative lens angle, and some instructional word structures right on the viewfinder screen.

The Vital exhibit included their switcher line and the Squeezoom system for image manipulation. In addition, the Vital stand also showed Datatron and Cezar VTR editors and Paltex equipment from the United Kingdom.

Thomson-CSF had a booth in the adjacent building where they showed some of the important components they make for the TV industry; in particular, infrared imaging systems, special vidicons, and 12 GHz TVRO (television receive-only) satellite receivers. Also in the same building, Tektronix had a varied array of computer graphics products, test equipment, and oscilloscopes.

IREECON serves as a focal point for Australian broadcasters to exchange ideas, and to look at new equipment. As such, it attracts virtually all of the key technical people in the television industry. The important lectures were well attended and the exhibit booths had plenty of traffic. IREECON officials estimated that they had six to seven thousand visitors for each of the main exhibit days.

The 1983, IREECON is scheduled to be held in the new exhibition center in Sydney, the Royal Hall of Industry, where some 65,000 square feet of space is available for the expected expansion of IREECON.

Joe Roizen

INDUSTRY NEWS AND EDUCATIONAL ACTIVITIES

Byron Motion Pictures, Inc., of Washington, D.C., one of the East Coast's largest film and videotape processing laboratories, has added several key personnel formerly employed by Capital Film Laboratories, which recently closed its doors, according to Robert B. Roudabush, Byron's President. Some of the new Byron employees are: Paul M. Lyons, formerly Capital's Vice-President and General Manager, who joined Byron as Director, Sales and Service; Douglas Smith, Sales Representative, a position he also held at Capital; and Allen Hart and Debby Farrell, Customer Service Representatives, who held the same positions at Capital.

Toshiba America, Inc., has announced a reorganization and relocation of its divisional headquarters to 2441 Michelle Drive, Tustin, CA 92680. The Consumer Products Business sector will maintain its headquarters office in Wayne, N.J. The other eight divisions will move to the Tustin headquarters. The move is expected to be completed by February 1982.

The School of Television Arts, formerly the RCA Institute Television Studio School, has announced a new training program designed to supply qualified television maintenance engineers, electronics technicians, and studio engineers to meet the needs of the television industry. The training program, entitled BME 600: Broadcast Maintenance and Engineering, was developed by K. Blair Benson, an internationally known authority on television.

The 600-hour curriculum consists mainly of hands-on experience in repair and maintenance of television cameras, switchers, VTRs, monitors, studio and remote systems and an instruction in methods of analyzing systems and aligning components to peak performance. The BME program focuses on the fundamentals of equipment design, operation and repair, with most of the time spent on actual laboratory projects in problem analysis and repair. An electronics background is a prerequisite for acceptance to the program.

Further information is available from Scott Cannell, School of Television Arts in Production, Performing and Editing, 18 W. 61 St., New York, NY 10023.

The American Society of Photogrammetry and the American Congress on Surveying and Mapping have agreed to join in close association in order to represent more effectively the interrelated professions of surveying, cartography, photogrammetry and remote sensing.

The Association of Independent Commercial Producers (AICP) has authorized formation of a new chapter in San Francisco. AICP now has four chapters, the others being in New York, Los Angeles and Chicago.