

AUSTRALIA

Education

The Victorian State Government has provided a grant of \$2.5 million to upgrade facilities at the Victorian Film and Television School. The students will now have access to nonlinear and digital production technology. In addition, the school is in the process of developing a content-focused multimedia course, scheduled to begin in 1998.

Silicon Graphics and Power Macintosh systems are being purchased to drive 2-D and 3-D graphics, animation, and multimedia programs. The new nonlinear editing suites, based on Avid technology, have been configured with balanced audio and film matchback options. These options were chosen because an estimated 70% of the present work is on film and a lot of the post-production goes back for negative matching.

The Avid system replaces video off-line suites and a number of Steenbeck flatbed film editors. Because of the shift to nonlinear editing, the school has purchased a used Bosch FDL60 CCD telecine machine for processing in-house rushes; previously, film-to-tape transfers were done outside. The school has also switched to digital audio post-production and has purchased three Postation dedicated audio workstations from Digital Studio Processing. The new equipment will bring all the work back in-house.

Terrestrial Digital Television Broadcasting

During the past year, tests of the ATSC 8-VSB and DVB COFDM digital modulation systems have been made with regard to the future Australian Digital Terrestrial Television system.

The first terrestrial digital television broadcast demonstration took place in November 1996. Since then, both the 8-VSB and COFDM modulation systems have been bench-tested at the laboratories of the Department of Communications and the Arts in Canberra, and a report on the measurements was produced.

A contribution from Eric Hitchen, Engineering Consultant, Federation of Australian Commercial Television Stations, Mosman NSW 2088, Australia.

Further over-the-air tests of both systems will take place simultaneously towards the end of the year. Broadcasts will be carried out on Channels 6 and 8 VHF in Sydney. These channels are adjacent to TCN9's analog broadcasts on Channel 9 and ATN7 analog broadcasts on Channel 7. Digital terrestrial broadcasting in Sydney is expected to eventually be on these adjacent channels. The channel spacing in Australia is 7 MHz.

Global Television Camera Update

Global Television, Australia's leading independent outdoor broadcast production company, has invested in new camera technology with the purchase of eight BTS LDK 10 cameras. The cameras, from Canon and Fujinon, can be switched from a 4:3 to a 16:9 aspect ratio, and the 70:1 lenses are fitted.

The new cameras were used, among others, at the Melbourne Spring Racing Carnival held during Australia's premier race, the Melbourne Cup. Global had 30 cameras at this prestigious event.

Channel Seven Upgrades Facilities

Channel Seven in Sydney has been upgrading and adding to a number of its facilities. The network's existing Quantel equipment, Hal Express and Paintbox Express, has been networked to new facilities provided by three twin picture-boxes, three single picture-boxes, a 200-second Hal, and a fully operational Paintbox. Remote M/O storage is available. Currently, the network has only one digital suite and is not looking towards a Henry system until another digital suite is added.

Channel Seven has also committed itself to total digital conversion of its news operation. DVCPRO acquisition and editing facilities will replace the Betacam and Betacam SP units installed some 11 years ago. Silicon Graphics Origin 2000 servers, supplied by Panasonic, will be integral to the new operation along with a New Star news system from Tektronix. The control and resource management system is by Omnibus.

Channel Seven's final objective is to have a server system that is accessi-

ble from any station news operation in the network. All stations at the present time are connected by conventional 2-Mbit data circuits, which will be expanded for future operations.

DVD Manufacturing

In a technical alliance with Pioneer Video Corp., Southern Star Duplitek, Australia's largest audio and video-cassette duplicator, is expanding into CD, CD-ROM, and DVB manufacture. Along with compact discs for music and computer industries, videodiscs will be manufactured for the major Hollywood studios.

A Pioneer-developed Phoenix mastering system will be supplied by Marubeni Australia, along with two Marubeni dual-line systems consisting of Meiki moulding machines and an Origin spin-coater and finishing unit. The system is totally automated and production and quality control data are constantly monitored online by Pioneer engineers in Tokyo.

A manufacturing facility will also be set up by Pacific Mirror Images in Melbourne, centered around a fully automated Nimbus DVD mastering suite supplied by ProDisc Compact Disc Systems. A bonder has also been purchased to make double-sided discs, and test and evaluation equipment is present at the manufacturing plant.

Network Ten Moves HQ to New Facility

Network Ten in Sydney has moved to a new facility in Pymont, an inner city suburb. Ninety percent of the equipment in the technical area is new and includes advanced technologies such as digital serial routing.

The Atrium Studio is the centerpiece of the new facility. The studio shares the building's atrium floor with the network's newsroom, which is used as a backdrop for the news-readers.

Problems such as controlling ambient noise and the incidence of outside light through windows had to be solved. Acoustic baffles were installed on the lighting grid to reduce the reverberation time in the studio. Different types of lighting are now used depending on the time of day. The natural light entering the studio

during daytime is supplemented with daylight fluorescents. The use of energy-efficient fluorescents also helps with air-conditioning problems; at night, standard incandescent lights are used. The main 360 sq. m. production studio uses standard incandescent lighting.

Both control rooms are identical and fitted with Digital Diamond video switchers from Philips BTS and analog audio mixers from Calrec. The cameras used, Sony BVP 500 Ps and Sony BVP 550 Ps, are all capable of switching between 4:3 and 16:9 formats. All production in the building is based on serial digital video and AES/EBU digital audio.

The presentation facility remains analog, but space has been put aside for a future digital presentation facility, which will eventually feed the network's digital terrestrial transmission when that occurs.

For news production, Ten has installed Sony SX systems which are used in the field, in six edit booths, and two super suites. To provide the convenience of nonlinear editing, three News works systems have also been added.

Server-based storage systems have been avoided for the time being, but the technology is constantly being monitored.

Fox Studios Australia

Fox Studios Australia is the first studio development for 20th Century Fox outside North America. The facility covers 60 acres and is only minutes from the city center. The complex, when complete, will consist of four film sound stages and two television studios.

Sound stage 1 is the converted 60-year old Government Pavilion, a red brick, heritage building measuring 3535 sq. m. Sound stages 2, 3 and 4, measure 3007, 1324, and 751 sq. m., respectively. To service the stages there are ancillary buildings for production offices, dressing rooms, the art department, make-up departments, etc.

On-site preview theaters will be equipped with 35mm dual system, double-headed projectors with variable aspect ratios, and fully Dolby digital stereo. Two on-site construction workshops are housed in one building.

The two television studios, measuring 935 sq. m. and 745 sq. m., will each be fitted with a permanent motorized lighting system. Self-climbing hoists with on-board dimmers are to be employed using trailing edge dimming (TED) technology.

Fox Studios has formed an agreement with Global Television to provide television facilities for the two studios. One control room is to be fitted out with control desks, cabling, and racks by Fox; and Global will supply equipment and technical personnel to operate the studio for hire. The other studio, with an OB van as its control room, can be used separately. Video and audio tails will be available for direct feeds to television stations, cable networks, and overseas facilities.

Fox is also planning a wide range of entertainment facilities such as cinemas, restaurants, and sport arenas to be made available to the general public.

The lease of the Sydney Show Ground to Rupert Murdoch's Fox enterprise was reported in the 1995 Progress Report (April 1996) and its last major use was for the Easter Royal Agricultural Society Show in 1997.

Olympics 2000

The construction of facilities for the Olympic Games in the year 2000 in Sydney continues. With a capacity level of 110,000, Stadium 2000 will seat the most people in the history of the modern Games and will be one of the major Olympic venues. Fourteen of the 28 sports will be centrally located in the 760-hectare Sydney Olympic Park, adjacent to the Athletes' Village.

The International Broadcast Center (IBC), a 680,000 sq. ft. building alongside the Stadium and other venues, will house 180 broadcasters and more than 10,000 accredited personnel. Services will operate 24 hours a day throughout the Games from September 15 to October 1, 2000.

Radio and television coverage of the Games is the responsibility of the Sydney Olympic Broadcasting Organization (SOBO) which is now planning the design and construction of the IBC. SOBO will produce more than 3,200 hours of live pictures from 38 competition venues utilizing the latest camera, videotape, audio, and data technology.

JAPAN

The Japanese ambassador's public residence in Lima, Peru, was attacked by an anti-governmental group on December 18, 1996; the siege continued until April 1997. Cameras placed around the building for 24 hours a day allowed many television stations to broadcast the incident, from its initial stage, throughout the world. As a result, the importance of peace and the tremendous power of the television medium were reinforced.

Japanese Economy

The Japanese government's annual financial report shows that the country's economy is recovering at a slow rate from the collapse of 3-1/2 years ago. Major reasons for the economy's sub-par performance include large investments for facilities, over-employment at the peak of the economic hardship, and decreased property values. As a result, adjustment of the balance sheet is long overdue.

The overvalued yen and the rapid changes in the international structure of industrial sharing gave obscure images and feelings to companies concerning their future. In other words, companies have been hesitant to investing in staff, material, and technology as a countermeasure.

Motion Pictures

Motion pictures have experienced less than blockbuster performances for several years in Japan. However, in 1997, *Shitsurakuen (Lost Paradise)* attracted many viewers, running for a considerable amount of time; *Unagi (Eel)* was the recipient of the Grand Prix award at the 50th Cannes Film Festival; and *Hana-bi (Fire-work)* was awarded the Golden Lion prize at the Venice International Motion Picture Festival. Revenues from the summer release, *Mononoke-hime (A Princess With Magic Power)*, is estimated to be the new record for a long-run feature.

The Cinema complex has succeeded as the new system for showing motion

A contribution from Nobuo Mii, Scientific Director/Progress Committee Chairman of Motion Picture & TV Engineering Society of Japan, Tokyo, Japan

pictures. It stimulates present public entertainment. Shochiku, one of the major motion picture companies, organized a new theater chain called The Cinema Japanesque based on former motion picture theaters. The chain is composed of 9 theaters in eight cities that will include a maximum of 50 theaters all over Japan releasing pictures produced by Shochiku.

Motion Picture advocates invested Y100,000 for each theater and also established the Cine Nouveau theater at Kyu-jo, Nishi (west)-ku in Osaka on January 15. It has been running in the black since then.

Television

Perfect TV, started in 1996, has already contracted 328,800 viewers. DirecTV begins experimental broadcasting in November, followed by J-Sky in the spring of 1998. This will result in 350 channels of digital broadcasting through communication satellite. It is the first time Japanese viewers have been provided extensive multimedia channels. Also, Fuji Television constructed its new building in Daiba, Mintoku, and started production and broadcasting in April.

Some digital techniques have been applied for animation production in which celluloid is used. The lined pictures are scanned and procedures such as coloring, composing, editing, and completion are carried out by the computer without the film. The production *ge-ge-ge no Kitaro* was made using this system. Hereafter, the system will be used more widely.

The Society of Motion Picture Engineering Japan, Inc. started in 1947 and expanded to the Society of Motion Picture and Television Engineering Japan, Inc., in 1965. This year, the Society celebrates its 50th anniversary.

The motion picture and television equipment exhibition was held on May 14-16, 1997, at the science museum at Kitanomaru Park in Chiyoda-ku, and was attended by more than 15,600 people. In addition, a motion picture and television seminar, held in honor of the Society's 50th anniversary, took place at the same location on May 13, 14, and 16. This event was attended by more than 1,400 people.

NHK

Japan Broadcasting Corp.

NHK, the only public broadcasting organization in Japan, provides services through various media including two terrestrial TV channels, two DBS (direct broadcasting satellite) TV channels, two medium-wave radio networks, one FM-radio network, an international radio station, and two teletext services. In addition, NHK provides Hi-Vision (HDTV) service and international broadcasting to North America and Europe.

The HDTV service via the broadcasting satellite BS-3, begun by NHK and seven commercial broadcasters in 1994, expanded its broadcasting time from 98 to 119 hours per week in October 1997. The service is now being aired from 7 a.m. to 12 p.m., a total of 17 hours a day, using the follow-on satellite BSAT-1 launched in April 1997.

The Winter Olympic Games

The Winter Olympic Games will be held in February 1998 in Nagano, Japan. At the Games NHK will broadcast around 7 hours for terrestrial TV, 19 hours for DBS-TV, 17 hours for HDTV, and 6 hours for medium-wave radio daily. The broadcast organization will introduce various newly developed equipment to cover the Games, including the HDTV one-piece camera, the high-speed HDTV camera with three times the normal speed, the Bird-Cam that runs in parallel with athletes during downhill races, and the Ice-Zone microphone system for picking up skating sounds to cover the Olympic Games. Thanks to the development by NHK and manufacturers, HDTV equipment has been made as compact and advanced as the conventional NTSC system.

Satellite Digital Broadcasting

DBS broadcasting uses four out of eight channels assigned to Japan for the current NTSC and HDTV services. The remaining four channels will be

used around the year 2000. In May 1996, the Minister of Posts and Telecommunication (MPT) created two study groups to explore the possibility in technical and regulatory aspects of introducing digital broadcasting to BS services using the remaining four channels. In May 1997, based on the reports of the two study groups, the Radio Regulatory Council recommended the Minister of MPT to introduce digital broadcasting to the BS service around the year 2000. The Council also recommended HDTV should be the main service of the digital broadcasting. To facilitate a smooth transition from current analog broadcasting to digital broadcasting, current broadcasters including NHK will provide simulcast services using one transponder. NHK has started preparation for the implementation of satellite digital broadcasting.

In September 1997, the Association of Radio Industries and Businesses (ARIB), a voluntary standardization organization with close to 260 members from the broadcasting, telecommunication, and manufacturing industries, proposed a satellite digital broadcasting draft standard to the Telecommunication Technology Council (TTC). The TTC is planning to formerly recommend the final standard to the Minister of MPT in early 1998.

Digital Terrestrial Television Broadcasting

TTC and ARIB have been studying the digital terrestrial television broadcasting (DTTB) system since 1994. A technical standard for DTTB, which is an OFDM-based system, is under study at ARIB and TTC. TTC will adopt a draft standard in 1998 after laboratory and field tests are completed. Along with the standardization, the Digital Terrestrial Broadcasting Study Committee of MPT has been studying ways to achieve a smooth introduction of DTTB since June 1997.

Since digitization of terrestrial television needs various studies in both technical and business aspects and costs a lot of money for broadcasters, NHK believes DTTB services should be introduced after satellite digital broadcasting is started.

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