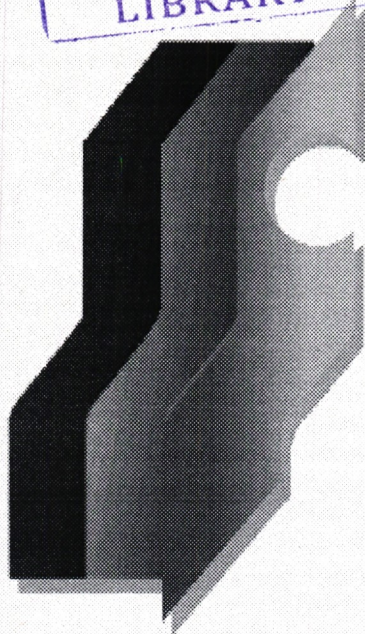


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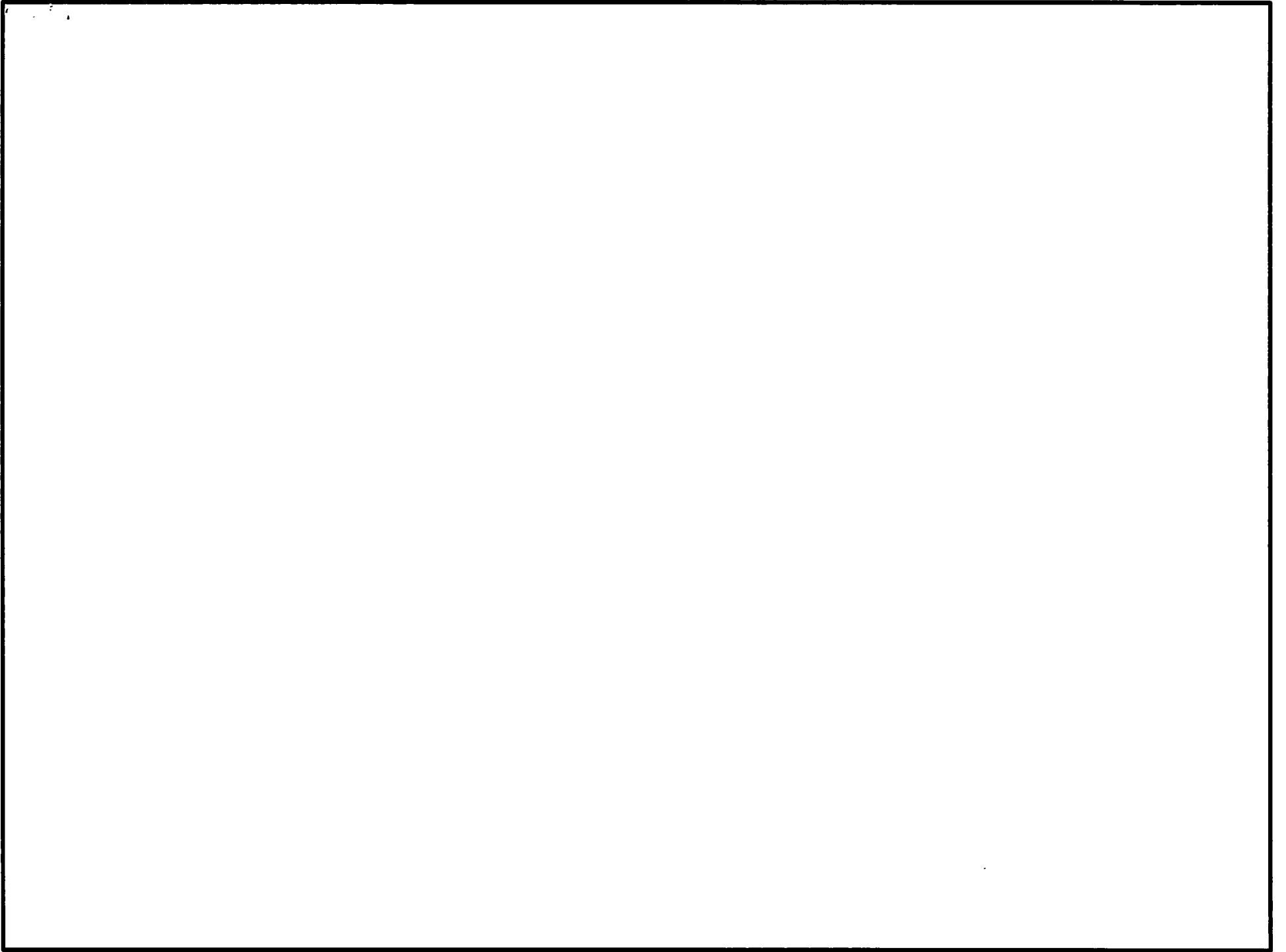


Broadcasting

FOCUS ON TECHNICAL INFRASTRUCTURE

THE HOUSE OF COMMONS
BROADCASTING SERVICE

June 1996



1. CHAMBER TV CONTROL ROOM TECHNICAL FACILITIES

In 1977, two small offices one floor below the Chamber, served as the original Broadcasting Service control room. Later, a permanent control room was built above the south gallery facing the Speakers chair. Today, its technical facilities include:

EQUIPMENT:

- 1.1. (7) Hitachi Z-One-C CCD cameras, with Canon zoom lenses
- 1.2. Vinten remote control heads for the cameras
- 1.3. (1) Ross 216 video switching console
- 1.4. (1) Inscriber character generator
- 1.5. (1) Soundcraft audio console
- 1.6. (2) JVC S-VHS videocassette recorders
- 1.7. A custom microphone switching console in the Chamber
- 1.8. A custom control panel for TV lights in the Chamber
- 1.9. The audio systems control facilities and related support equipment.

1.1. The first pictures of the House debates were brought to viewers using four manned and four remote-controlled RCA TK-76 cameras, with Schnieder zoom lenses. This system was subsequently upgraded to seven remote-control version D cameras.

By 1985 the image quality could no longer be economically maintained. These cameras were then replaced with seven Sony BVP-5 CCD solid state cameras. The Sony cameras were upgraded so that technicians in the TV control room could balance the colour by remote control. Each camera was equipped with a 33/1 ratio zoom, f 1.4, Canon lens.

Today, technology in image reproduction has advanced to a point where the current new Hitachi Z-One-C cameras offer improved picture quality using a lower light level.

1.2. The remote camera heads are manufactured by Vinten and include a Microswift four-function hand control (pan, tilt, zoom, focus). Each controller contains a microprocessor capable of storing 500 pre-programmed camera shots and controlling all seven cameras in the House.

1.3. The Ross video switching console provides all standard special effects which may be used for openings and closings of the House. Special effects other than camera cuts and dissolves are normally not used during the daily coverage of the Proceedings.

1.4. Members are identified with superimposed text produced on an Inscribe character generator. This machine, which was modified to meet special requirements of Parliament, is capable of storing all Members' names (including their riding, party affiliation and province), bilingual titles for Ministers and Parliamentary Secretaries, other information such as opening and closing graphics, and Orders of the Day. All text is stored by file retrieval code.

1.5. The Soundcraft audio console provides a mix of floor and interpretation audio for a better "live" sound, with the capability of adding ambient "room" audio when floor sound is not available. The final audio product can also be assisted with playbacks of music from CD or audio-tape. The three main audio feeds distributed from the audio console are:

Floor sound, French interpretation and English interpretation.

1.6. Two S-VHS videocassette recorders are included in the control operation. Their main purpose is to provide back-up recordings should difficulties arise with the signal connection to Master Control in the operations centre of the Wellington Building. They are also used extensively as a viewing facility for the Speaker's Office, Table Officers and the Journals Branch, and to play back videocassette inserts into the opening and closing of coverage should other facilities fail.

1.7. The microphone switching console is located in the south gallery of the Chamber. The console operator selects Members' microphones as he or she is recognized by the Speaker. The operator can select or cancel the Speaker's and Clerk's microphones, as well as those of the Clerk's Table and the Gentleman Usher of the Black Rod (an officer of the Senate who summons Members to the Senate Chamber). The Speaker's Chair and Clerk's Table positions are able to activate or cancel their own microphones, and the Speaker's



control can also override all Members' microphones.

1.8. The custom lighting control panel makes it possible to adjust all individual lighting fixtures including the large chandeliers, to satisfy the TV lighting requirements in the Chamber.

1.9. Although located on another floor, the audio centre is a vital connection to the TV control room. It contains all the circuitry for the microphones and translation booths, and all the amplifiers and compressors needed to "sweeten" the Chamber sound by compensating for room acoustics.

2. *TV LIGHTING INSTALLATION*

The lighting installation in the House of Commons Chamber consists of 24 1200-watt H.M.I. lamps with a colour temperature of 5,600 K (colour corrected to 3,200 K for television purposes). In addition to the H.M.I. lighting, eight 2000-watt Multi broads are used to provide "fill" for the corners.

The combination of both lighting systems provides a light level of 40 to 45 foot-candles, which is considerably lower than normal television studio lighting. The Broadcasting Service specifically purchased cameras that can function with lower lighting levels since Members had problems with glare when stronger lights were used. The quality requirements for televising proceedings are also less stringent than those for studio production.



3. VENTILATION FACILITIES

Before House debates were televised, the ventilation system for the Chamber was shared with other services. Since then, however, the system has been used mainly for the Chamber. The fan unit has a capacity of 30,000 cu. ft./min. and the cooling coils are supplied with chilled water from the main heating and cooling plants.

Due to the heat caused by the TV lights, further ventilation and cooling facilities were installed at ceiling (catwalk) level. This fan unit has a capacity of 7,500 cu. ft./running and the coils are also supplied with chilled water.

4. OPERATIONS CENTRE FACILITIES

The operations centre, located in the Wellington Building across the street and to the west of the Centre Block, is made up of the enhancement centre, the master control area, OASIS facilities, two video editing suites and a production studio. The technical equipment in the centre is varied but, in general, the recording formats are Betacam, D-3, S-VHS, VHS, and 3/4" U-MATIC.



5.1 ENHANCEMENT CENTRE

The enhancement centre provides an enhanced feed to the Cable Parliamentary Channel and the OASIS TV network. The enhancements include compressing the picture and running information across the bottom of the screen to explain who is speaking and what is being debated. Other information of interest to viewers is scrolled when the House is not sitting.

EQUIPMENT:

- Ross RVS-416 programmable switcher
- ABEKAS A-52 digital video effects unit to compress picture
- ABEKAS A-42 still-store (300 slide capacity and tape streamer)
- ABEKAS A-72 character generator for text presentation
- TAC audio board
- Sony CD player for background music
- (2) SONY Betacam SP BVW-70 video recorders (for delayed broadcast of sessions)
- (2) JVC S-VHS BR622DXU video recorders (backup for program output)
- VHS video logging recorder
- Associated test equipment

5.2 MASTER CONTROL

The master control room provides a live feed of the House and committees to the electronic media. Master control technicians also record and maintain archival tapes of House proceedings and committees (2,500 tapes per year for a total of 32,000 tapes from 1977-1993). The House Broadcasting Service provides copies of tapes for Members, Senators, the media and educational institutions in return for the cost of the tape.

EQUIPMENT:

- Image Video routing switcher (80 x 80 x80) to interconnect all audio and video feeds (keypad operated)
- Tektronics 1780R waveform and vector-scope quality control units
- (4) JVC S-VHS BR622DXU video recorders for electronic Hansard
- (6) JVC S-VHS player/recorders for client copies
- (3) Sony BVU- 850 U-MATIC player/recorders for older archive tapes
- (10) VHS machines for client copies
- (1) Betacam BVW-70 player/recorder for client copies
- (5) U-MATIC VO -5600 video recorders for off-air recording
- (2) JVC S-VHS BR622DXU video recorders for committee recording
- (4) fixed and one moveable satellite dishes with receivers
- Hitachi 97 Compucam fixed-shot camera in the National Press Theatre, with remote CCU and limited motion control from master control.



5.3 OPERATIONS

Technicians in the operations centre also provide program feeds to OASIS, an internal closed-circuit network including 35 channels controlled by the Broadcasting Service. These channels are distributed to Members of the House of Commons, Senators and House employees within the parliamentary precinct. They carry House debates and committee meetings, Senate debates (audio only) and also offer a wide variety of programming relating to news and public affairs.

As well as various text information channels, OASIS TV devotes eight channels to Demand Video. These channels carry playbacks of House proceedings and other available programming as requested by Members. Requested programs are played at a pre-arranged time and Members can view them in their offices.

EQUIPMENT:

- Sony BVU-800 U-MATIC recorder for cueing tapes
- (3) Sony VP-5000 U-MATIC players
- (4) JVC S-VHS BR622DXU video recorder/players connected to separate channel modulators, through the routing switcher, to feed individual channels on OASIS
- (13) VHS machines to serve the VHS format on Demand Video
- (11) ADAPTEK 486 computers for text channels
- (2) ADAPTEK 486 computers for graphics creation
- Insciber software system with Sable paint software
- Camera capture system for graphic imaging
- Individual channel monitors

5.4 ANALOGUE EDIT SUITE

Edit one is a complete off-line / on-line editing suite. Technicians can record and edit special presentations, including studio productions and other material shot on location.

EQUIPMENT:

- Betacam BVW-75, BVW-10, digital D-3 and BVU-950 U-MATIC machines for playback and recording,
- Sony BVE-900 computer edit control system with S.M.P.T.E. timecode
- Sony SEG-2550 video effects switcher
- Sony MXP-29 audio mixer
- Sony CD player
- Tascam model 122 audiocassette recorder
- Quanta Q8 character generator
- Edit Lister EDL management system.



5.5 DIGITAL EDIT FACILITY

A D-Vision non-linear editing system using NT platform technology. Capable of digitizing four hours of video material. Contains DVE, Inscribe titling, and audio mixing functions to produce broadcast Betacam SP quality imaging.

5.6 TV STUDIO

A television production studio which is a separate unit of the operations centre, also located in the Wellington Building. This facility is used to produce training and information videos for various departments on Parliament Hill, and information vignettes and programs for broadcast on CPaC.

EQUIPMENT:

- Ross model 514-A video switcher
- Wardbeck audio console
- Sony CD player
- Ampex audio tape and cartridge playback sources
- Quanta QCG 3885 character generator
- (2) Sony BVU- 850 U-MATIC video recorders with S.M.P.T.E. timecode
- Tekskil teleprompter facility, Strand Century lighting board, with memory for set-ups
- (2) Sony DX3000 CCD cameras and capacity for a graphics camera mounted on studio-style pedestals.

- Full compliment of studio lighting including spots, scoops and cyclorama lights by Strand and Lekolite
- Variety of Sony and Shure microphones and stands.

The studio also includes two announce booths and make-up facilities.

In addition to studio equipment, the Broadcasting Service also uses a portable system for segmented production on location consisting of:

- (1) Sony Betacam BVP5 camera with recorder
- Wireless microphone
- Shure portable mixer
- (2) Strand "red head" portable lighting kits



6. *MAINTENANCE*

Audio and video technicians from the House of Commons Electronic and Technical Services test, maintain and repair the equipment used by the Broadcasting Service.

