

Ten MILLION Watts

And a cast of Ten Thousand. The largest show on earth is just a few weeks away. Connections enters the Ceremonies bunker to sample the nervous tension.....

The Opening Ceremony of the 2000 Sydney Olympics is the largest performance ever staged, and might never be topped for scale. It is easily understood how the interest attached to the Opening and Closing Ceremonies of the 2000 Sydney Olympics grows at an ever increasing pace, held in the largest stadium with the greatest media interest, and before the largest television and cable audience ever. This is a tornado, a perfect storm, and an earthquake, all cued to go off at once.

It's well known that Australian born Ric Birch is Director of Ceremonies at the 2000 games. He alone has headed more of these events than any living human - and has adroitly navigated through many boring months of petty Games scandals and political curve balls. Now he has delivered a pre event state of organized mayhem, where the organizational totem has the matrix all working as planned. It's a management system that has been developed over two decades of mega- events.

The bunker is sedate, with a theatrical backstage feel. More than 120 work stations are crammed into a concrete space under the East stand of Stadium Australia, in what may be a dressing room space in another time. A cafe is sighted near the entry, white boards, schedules and the driftwood of a transient crew pack the

foldup trestle desks and overflowing filing cabinets.

We've negotiated this story for months, passed through three levels of security and signed things that would make our lawyer blush. We understand how the team in the bunker DO NOT WANT details of their segments and performance to become known. We've held the line and kept quiet against a growing tide of rumour, resisting the urge to tell you what we thought we knew, what we thought you knew, or what we heard while propped up against a green room bar. All of which may or may not have been correct. So we stick to the source. Our emails are cc'd to Ric Birch, and he is finally worn down - or worn out.

So inside the Bunker, finally, and Technical Director Morris Lyda is coming down to talk to us. He is riddled - crippled - with the flu. Eye watering, throat constricting, sneezing, dribbling up-to-bed-now type flu. Don't come near me, Morris! But he want's to give Connections readers the broad brush stroke on what is happening. We are honoured.

Lyda is one of the top three production manager's on the planet. He is Texan, or was, since he married an Australian girl and now calls this other big country type of place home. His resume features some of show history, including those immortal production icons Pink Floyd. In nature he is measured and sharp, hiding behind the drawl.

Working under Morris is Malcolm White, in charge of Operations. Operations is in charge of anything that needs to be moved or powered, and oversees venues and logistics. Morris's other realm is the Art Department, headed by Brian Edmonds. The Art Department has over 100 people attached to it, and it includes all of the props, scenery. Essentially anything built or made with metal, fabric, wood or paint. Costumes are also a part of the Art Department, and the Costume Department is headed by Paula Ryan.

Here's the scoop: if the Opening Ceremony is a mind blower, then the Closing Ceremony will be tenfold harder to pull off. This is because the team have just thirteen hours to set it up! Opening has two weeks, along with several soon to be announced dress rehearsals. "We don't get access to the Stadium until September first" says Morris.

After the Atlanta Olympics in 1996, where Ric Birch produced the hand-over ceremony, we asked him what he looks to achieve in a ceremony. "In the simplest form, to be true to the whole city. Ceremonies have to achieve all the requirements of the Olympic character, and the traditions. We start with a script, and everything else unfolds from that". (You can read the Atlanta story at: <http://www.conpub.com.au/conmag/oct96/atlanta.html>).

Before Atlanta, Ric Birch ran the Ceremonies at Barcelona in 1992, for Expo 88 in Brisbane, and was instrumental in the 1984 LA Olympics Ceremonies.

In Sydney Morris Lyda stresses the isolation from the world production community. "We are deeply self sufficient here, at the end of the food chain". Technical contracts were let with local

Ric Birch



suppliers, who rely on overseas equipment being shipped down. Much of the lighting rig was sourced from German production giant Procon - as the overall design simply exhausted resources available in Australia and from the primary contractor, Bytcraft. Procon have much inventory based on High End Systems branded automated lighting, although no announcement of what is actually specified for Sydney has been made.

Lighting Designer John Rayment and Lighting Director Rohan Thornton will preside over the largest single show ever lit in the world, with Bytcraft supplying equipment, support, logistics and crew. Durham Richie and Paul Rigby are fronting the Bytcraft team.

The audio system for the Olympics was reported in Connections (May this year) and is designed and operated by legendary sound engineer Bruce Jackson. It is based on EAW branded loudspeaker systems, and supplied by Sydney firm Norwest Productions, whose additional inventory has propelled them to third largest sound production company in Australia. Steve Law is shepherding the audio implementation, "Chris Kennedy (Norwest CEO) has done a brilliant job bringing in support from EAW" says Morris.

Klotz Digital have recently been contracted to provide digital audio processing equipment. They have had an Australian office established for some time, headed by Wil Stam, and have some innovative technologies that we will examine in a future issue. "The Klotz system offers greater flexibility than many other systems," says Lyda.

The provision of electricity is a major issue at a large show. Ceremonies have projected their power requirements, and compared these projections to the power available at Stadium Australia. For example, the Stadium's sports lights will not be utilised during the Ceremony, therefore, the show will utilise about 70% of the electrical supply normally devoted to the Stadium's sport lighting.

Based on measurements made by Energy Australia during sport events, it was determined that the Stadium uses 40% of the total power available from the grid. The Stadium's supply is roughly 17 Mega Watts, of that they need about 5-6 Mega Watts for an event.

Bytcraft then performed on-site measurements during sporting events to determine where the power was utilised. Based on these observations, Ceremonies has been able to effectively utilize all of the Stadium's underutilised power and avoided the acquisition of additional power generation.

The ten million watts consumption figure is what Ceremonies calculates it will require to power the show, and this figure is down from the thirteen million estimated by the team in earlier planning.

One big - major - aspect of the gig is Communications. At Barcelona, 350 walkie talkies were used. The requirement for this opening Ceremony will be larger, and will use comm's more

effectively. The competition for spectrum in an already crowded bandwidth is as serious as the 100M sprint. Within SOCOG (Sydney Organizing Committee for the Olympic Games) the enormous job of frequency management is left to the Technology Division.

Morris's Comm's guru, Laurence Estrin, has a major gig in front of himself, and were it not for his experience at the LA Games, Barcelona, and years of sport and public mega-events, he might be very depressed. Working with local contractor P.A. People, he is confidently progressing toward a totally connected Ceremony.

Other departments include rigging, headed by Reg Dew, with infrastructure coming from Adelaide Festival Trust and APC. As the clock winds down, the activity reaches fever pitch.

Morris has a good handle on things. Two random comments: "There is no economy of scale if there is no scale", and - asked about the impossibly tight timeline for setting up the closing ceremony: "We'll just get into it with gay abandon!"

The only unresolved problem facing the team is just who will organise the after party!

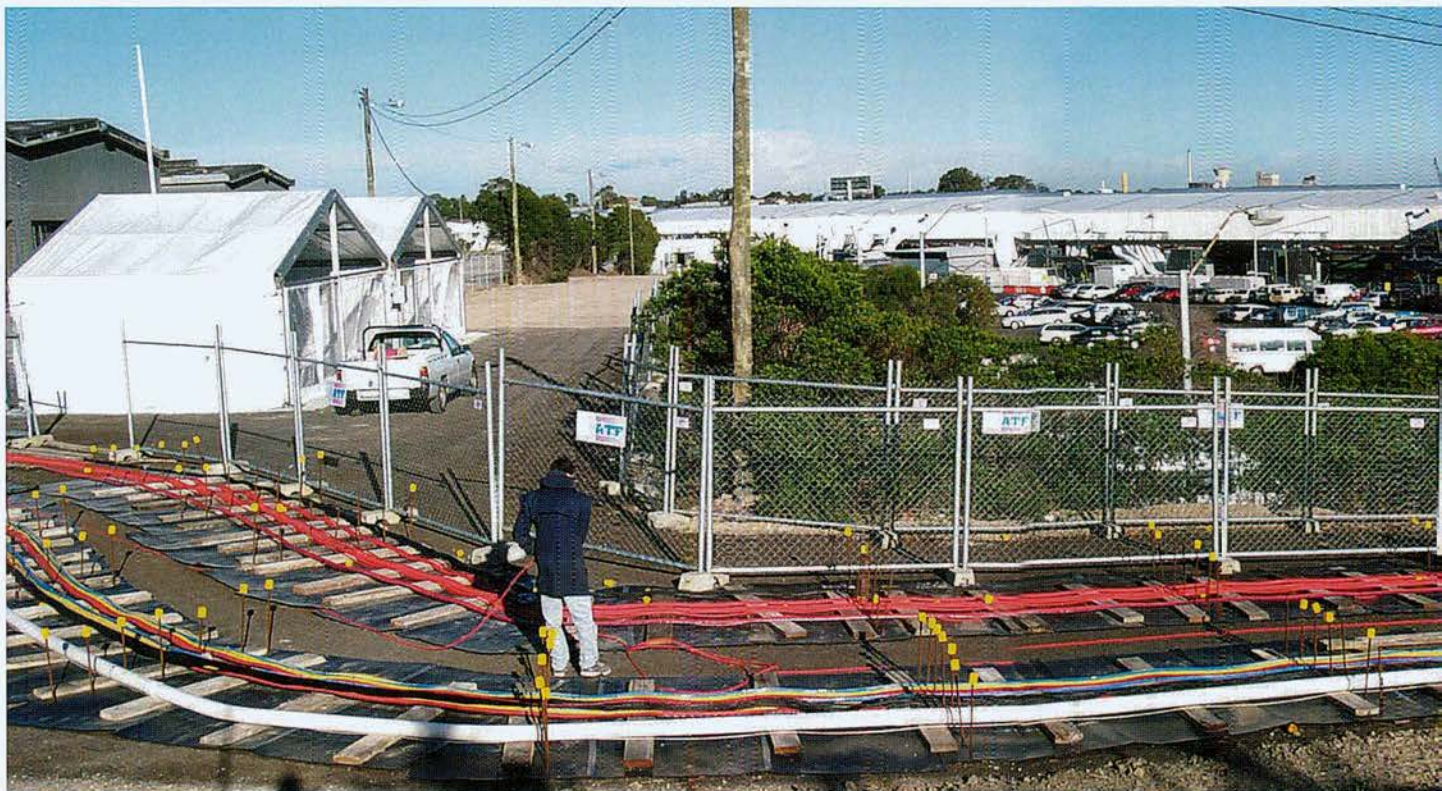
By Julius Grafton



Morris Lyda

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BROADCASTING THE SYDNEY OLYMPICS



BROADCASTING THE SYDNEY OLYMPICS

Facts and Figures

- Olympic broadcast centre for 190 Rights Holding radio and television organisations.
- 35 Rights Holder studios.
- 1,600 broadcaster rooms.
- 402 monitor video wall.
- 350 tonnes of electrical, video, communications, earth and power cables.
- Enough power to light a town the size of Bathurst (approx. 30,000 people).
- Satellite Farm with 15 satellite earth station dishes.
- 22 metre Skytower.
- Monitoring up to 40 simultaneous Host Broadcast sports signals.
- Largest Rights Holder space - EBU 13,000 square metres.
- Smallest Rights Holder space - Estonian Radio 8 square m.
- Two food courts, a restaurant and a bar able to service up to 2,500 people at a time.
- 17 magnetometer and security bag checks.
- 1,500 doors.
- 18,000 square metres of painted surfaces.

Perhaps the most complicated temporary broadcast installation ever attempted is currently being commissioned for the Sydney Olympic Games. It is organised by the Sydney Olympic Broadcasting Organisation (SOBO) - the Host Broadcaster for the 2000 Sydney Olympic Games.

SOBO is a full service broadcast company that has been created by the Sydney Organising Committee for the Olympic Games (SOCOG). The 2000 games may well have an event called 'acronymy'!

As Host Broadcaster, SOBO will televise every Olympic event. This coverage is provided as a service to broadcasters who have purchased the Olympic television rights from SOCOG and the International Olympic Committee (IOC). These television organisations are called Rights Holders.

To televise the Olympics, SOBO will employ more than 3500 staff, 200 of whom work full-time in the eight main function areas; Executive, Production, Technical Operations & Engineering, Broadcast Information, Support Services, Venue Management, Business Affairs & Personnel and Booking.

From the 13th of August to the first of October, SOBO will be one of the world's largest television organisations. This massive personnel force will work at every Olympic venue and at the International Broadcast Centre (IBC).

The IBC (pictured above) will be the headquarters for the Olympic television operation. Situated directly to the west of the

Olympic Stadium at Sydney Olympic Park, the IBC will be the largest in Olympic Games history. It will consist of more than 70,000 square metres of television facilities, including; videotape edit suites, control rooms, studios, transmission capabilities, booking, information and logistics offices.

About the IBC

The International Broadcast Centre (IBC) is located in a large warehouse complex between Sydney Olympic Park and the Olympic Village, it is the headquarters for the host broadcaster of the Games, Sydney Olympic Broadcasting Organisation (SOBO) and the 190 plus Rights Holding broadcast organisations.

From the 13th of September to October the first, the IBC will be the centre of Olympic television and radio operations, containing studios, technical and production facilities. Operating 24 hours a day, the IBC will be home for the 15,000 plus Sydney Olympic Games broadcast personnel. It will accommodate an average working population of between 6,500 and 7,500 a day.

The complex is comprised of one main building (58,000 square metres) and two support buildings (9,000 square metres). The IBC will provide broadcasters with easy access to 15 Sydney Olympic Park sports venues, as well as the Main Press Centre (MPC), Olympic Village and Opening and Closing Ceremonies.

For the first time in Olympic Games



This is looking at the rear of the IBC, from the Olympic Stadium, which is 150m behind our spy photographer. The cables go up a bridge, unseen at left of the shot, into the Stadium.

broadcasting nine digital control suites and the broadcast compounds for athletics (Olympic Stadium) and gymnastics (SuperDome) will be located within the IBC site. This provides broadcasters with an unparalleled level of security and superior facilities. In addition, the IEC will be connected to the Olympic Stadium by footbridge and to the SuperDome by a tunnel, ensuring ease of access and greater convenience for accredited personnel.

An additional imposing structure on the IBC site is the 22 metre high Skytower. Situated between the main building and the smaller IBC building, Skytower contains three glass fronted studios with a spectacular view of the Olympic Stadium and Sydney Olympic Park. It also has a bookable stand up position and doubles as a microwave dish mounting and radio frequency blimp and helicopter tracking facility.

Another feature of the Sydney 2000 Olympic Games IBC is the world's largest monitor wall. Located in SOBO Tech at the centre of the IBC, the monitor wall displays all television coverage from venues, including unilaterals (Rights Holder) cameras and every signal distributed by SOBO to the broadcasters in the IBC.

Containing 402 individual screens, the wall will be more than 50 metres long and approximately two and a half metres high.

The IBC receives SOBO's host broadcast signals from all Olympic venues, monitors them and feeds this coverage to the Rights Holding Broadcasters throughout the IBC.

Transmission Centre

Broadcast signals being sent by Rights Holding broadcasters to viewers all over the world will pass through the SOBO Transmis-

sion Centre. Transmission from there can be arranged through telecommunications partner Telstra. Telstra can provide circuits via international optical fibre, through satellite uplinks from their major earth stations or from antennas installed at the IBC satellite dish farm.

Commentary Switching Centre

All commentary circuits from venues are received by the Commentary Switching Centre based in SOBO Tech. A Rights Holder commentary at a venue, travels via a four wire circuit, back to the IBC Commentary Switching Centre and then is passed on to the Rights Holder studio area in the IBC and ultimately on to the Rights Holder's own country.

Operations Centre

The Operations Centre at the IBC is the main broadcast status reporting control point for all broadcast related activity at the venues and IBC. All problems, concerns and activities that relate to broadcast venue operations will be reported on a daily basis to the Operations Centre and directly to the SOBO Executive.

To ensure the integrity of the production of the host broadcast International Signal, SOBO's 40 feeds from all competition venues are monitored by production staff for quality, consistency and continuity.

Archive Library & Logging

All live feeds will be recorded by SOBO at the IBC, via the distribution system and each feed will be allotted to one of 40 logging stations. All feeds will be logged and archived and following the Games will be sent to the Olympic Museum.

- 35,000 square metres of ceiling tiles.
- 60,000 metres of carpet.
- 1,800 smoke detectors.
- 300 km's of power cable.

SUBSTATIONS

- 3.6 mVA Substations x 5
- 1000 kVA Substations x 2
- 1.5 mVA Substations x 1

INSTALLED POWER

- Technical Power 5.5 mVA
- Utility Power 2.2 mVA
- Air Cond. Power 8.3 mVA
- Power for retail areas and food courts 4.0 mVA

BACK UP GENERATORS

(1750kVA) x 1C

UNINTERUPTIBLE POWER SUPPLIES (No break power)

- 300kVA x 1, 500kVA x 1

9 KILOMETRES OF CABLE TRAYS

ELECTRIC OUTLETS

- Technical power 5,000
- Utility power 3,000
- Telephone outlets 3,400

AIR CONDITIONING GEAR

- 20 x Air cooled screw chillers
- 7 x Air cooler chillers
- 50 x Air handling units