

CHAPTER SIXTEEN

The Second Time Around - Pomp and Circumstance

The plane took off from Idlewild Airport at 5pm - on time! Next morning we landed at Shannon, in Ireland, because the London Airport was fog-bound. We were served breakfast at the airport, and I bought a souvenir Irish colleen doll for Chris and some linen handkerchiefs for Phyll. Leaving Ireland at 10.30am we found London still fog-bound and after circling for 90 minutes hoping it would lift we landed at Hurn airport, 90 miles south-west, near Bournemouth where there was no fog, but plenty of rain.

All passengers were taken to an army "igloo" type reception shed and given cups of tea. Not enough seats to go round, but it was a relief to stand after all that circling. After a long wait we were taken by a bus to another "igloo", where customs officers passed our luggage, then by another bus to Bournemouth Railway Station to catch the 5.16pm train to London. We arrived at Waterloo Station at 8.30pm. If our plane had been on time we would have reached London 10 hours earlier! There was much confusion about our luggage, and passengers had to find their own in the guard's van. So nobody asked me to pay that \$35 in sterling - and nothing more was said!

It had been agreed in correspondence that Don Craig, the AWA London Manager, would meet me at London Airport. I was worried about this, and tried to ring him from Bournemouth - but without success. I was very relieved to find him waiting for me at the exit from Waterloo Station. He had followed up my movements through the BOAC office. It was too late to go to Chelmsford. Don had booked me a room for the night at the Tavistock Hotel in Tavistock Square, and drove me there.

London and Chelmsford

Lyle had been told of this arrangement, and rang me that night from the home of Valerie's people in Uxbridge, where he was staying. He had bought an old Vauxhall car to use in England, and drove me to Marconis factory at Chelmsford, Essex, next morning - about 30 miles north east of London.

Being Tuesday December 20th, there were but three effective working days before the Christmas break - because Friday, the last working day before Christmas, was unlikely to be productive. A good deal of time was taken up in introductions, which in England - unlike the USA - were conducted with great formality. I inspected our OB van, the Marconi camera friction-head, and various other items of equipment, but concentrated on two very important matters - the choice of telecine film projectors and coaxial switching for the sound and vision transmitters. Lyle had done some good spadework on these

since his arrival two weeks ago, but Marconis still had to be convinced of our requirements.

We had an afternoon conference on projectors with Marconi engineers, and after four hours of haggling they agreed to order two Bell and Howell 614CBVM projectors through the English firm of G.B. Kalee, who had an existing dollar allocation. Lyle and I agreed that additional projectors for review and editing work should not be ordered until we had resolved the question of synchronization with 16mm perforated magnetic tape recorders for double system replay, and Marconi asked us to order these from USA directly. It was very obvious that they disliked dealing with American equipment, and tended to regard American practices with disdain - from the building of skyscrapers to the designation of lifts as "elevators".

Lyle had developed a system of switching for the coaxial feeders between the transmitters and the twin Styroflex feeders which were to feed the upper and lower halves of the 16 stack radiator. This was an extension of the switching arrangement installed at WEWS in Cleveland, and was to make use of the type of Marconi coaxial switches which we had seen at the Ottawa transmitter. This system would permit transmission to continue, with some restrictions, in the event of a fault developing in the 10 kW vision amplifier, or in the sound and vision combining unit, in the power-splitting

transformer or in the feeders and radiator-halves connected to it - by by-passing the faulty equipment. We had not ordered a complete standby transmitter - which would have increased the cost considerably - but this switching arrangement would provide a valuable degree of insurance against certain transmission breakdowns. Marconi agreed to provide the facility at a small increase in cost.

Although we had many arguments with Marconis about the equipment to be supplied, they treated us as honoured guests. We had lunch many times with their senior personnel in their private executive dining room, and on the three nights I spent at Chelmsford before Christmas I stayed in Marconi House - a delightful two-storey mansion on the outskirts of Chelmsford which Marconis maintained as a guest house for VIPs. I had a huge bedroom on the upper floor. Mr Sanderson, who managed the house, brought early morning tea to my room and drew back the curtains of the very large window to reveal the loveliest morning sky I have ever seen - rosy pink from the trees to as high as I could see, with a thick white frost on the long stretch of lawn below, and the branches of the leafless trees outlined against the soft pink of the sky. Three other engineers from various parts of the world were also guests there, and the food and drink were excellent. Dinner was very formal. Ken Owens joined me for dinner on the first night, J.B. Miller on the second and Tom Mayer on the third - all from Marconis senior

staff. Mr and Mrs Sanderson were excellent hosts. They had a six year old son.

I rang Ted Allen on the second night and discussed the building suggestions raised by Keith Cairns in his cablegram to New York. The quality of the phone call was very poor, so I drafted a confirmatory letter. Marconis kindly gave me the services of a stenographer for correspondence that week. A letter from Ted reported that our first two young engineers - Ron Place and Steve Walcowicz, graduates from RMTC - had commenced duty in mid-December. The walls of the studio equipment room were complete and the transmitter building foundations. He sent Christmas greetings.

On Friday I dictated my letter to Ted and retired with several Marconi engineers at midday for a spot at the local. I bought some small Christmas gifts for the Sandersons, and picked up my bags to return to London by train with Freddie Miller of Marconis, who took me by taxi to the Tavistock Hotel by 6pm.

There was a small TV set in my room, and the BBC was televising a programme of carols from the crypt of Canterbury Cathedral. The choir slowly paced between the rows of huge pillars with the Norman arches, and assembled to sing the carols - and there was my old Headmaster, now Archdeacon Bickersteth, conducting the service. As the choir sang, the camera panned around the

pillars and arches of the crypt, dwelling on the beauty of the 800 years old stone carving. I was dog-tired. I flopped on the bed and fell asleep, wishing I could find time to visit Canterbury.

At 10pm I woke, brushed-up and walked down Tottenham Court Road, Oxford Street and Regent Street, to Piccadilly Circus - just to get my bearings and see the Christmas decorations, which were very restrained after Fifth Avenue! The curving Regent Street was bedecked with large coloured "snow crystals", hung above the roadway and glistening in the beams of floodlights. London had not yet had any winter snow. After dinner at a Soho restaurant I took a taxi back to Tavistock.

I had been invited to spend Christmas day, Sunday, with Lyle and Valerie at the home of her parents - Mr and Mrs Draffin - in Uxbridge, about 17 miles west of London. I had a much needed haircut on Saturday, bought some Christmas gifts for them, and caught an underground train from Russell Square station to Trafalgar Square in the evening. I wanted to see the much talked-about Christmas tree, traditionally presented to the people of London by the people of Norway. Emerging from the underground at dusk, I found the Square packed with people singing carols. A choir of boys in cassock and surplice stood on the steps of the Nelson Column between two of the stone lions, illuminated by floodlights. The giant Christmas tree stood in front of the National Gallery - lovely, but

not as big or as flamboyant as the one in the Rockefeller Plaza. The fountain before it was a veil of flowing light.

Salvation Army officers were distributing sheets of carols. I took one, and joined lustily in the singing of "Once in Royal David's City", "Hark the Herald Angels Sing" and "As With Gladness Men of Old" - then "Good King Wenceslas", with all the men singing the king's part and all the women singing the page's part. Accompaniment was provided by the Band of the Coldstream Guards. After "Silent Night", sung as a solo by a boy chorister, the vicar of nearby St Martin-in-the-Fields gave a short address - appealing for good fellowship in the New Year.

This gathering made a lasting impression on me. All London seemed to be there with their families - tens of thousands, mostly standing, all singing and happy. The rain had stopped, and it was quite warm. I wandered past St Martin-in-the-Fields to Leicester Square, and caught an underground back to Tavistock. I found the overseas telephone circuit was completely booked-out for Christmas Day, so I sent a cablegram of Christmas wishes to my far-away family.

That Christmas Eve, Ken Owens and his wife Sheila picked me up in his car at 8pm with Lyle and Valerie, and took us to dinner at "Casa Pepe", a Spanish restaurant in Dean Street, Soho. We had a very rich and interesting

meal of Spanish food and watched, fascinated, as host Pepe displayed his trick of directing a jet of wine on to his forehead with his head thrown back, so that it ran down the bridge of his nose to his mouth. They returned me to the Tavistock at midnight.

On Christmas Day Lyle met at Uxbridge station and drove me to the Draffins. He had decked their Christmas tree with coloured lights and parcels. After a traditional dinner of roast turkey and plum pudding, Valerie distributed the presents round the open fire. They made me feel very much at home. At 8pm we listened to Professor Oliphant speaking from Australia on the Empire Radio Broadcast, and the Queen's message. Then we played "500" with cards until tea, and Lyle drove me back to the station.

On Boxing Day I took the train to Shenfield, about 22 miles north-east of London on the way to Chelmsford, and spent the afternoon and evening with John Sidebotham - the engineer in charge of development work at Marconi - and his charming wife and two young daughters, Sally and Susan. Turkey and plum pudding again, "Monopoly" with the children, and a buffet supper with some of their neighbouring friends. Another very pleasant and relaxed evening, and back at the Tavistock by midnight.

Tuesday was another holiday and I spent the day with Don Craig. It was good to have some time with one of my

countrymen, and Don was good company. We walked through Westminster Abbey and St Paul's Cathedral, had dinner and saw the Folies Bergere show "Paris by Night" at the Prince of Wales Theatre with a new star - the young Benny Hill - and the loveable Tommy Cooper with his fez hat and those dreadful tricks that always went wrong!

There were only three Marconi working days between the Christmas and New Year holidays. I spent the first two days at Chelmsford, travelling down by train each day - a 45 minute journey. I tactfully declined their invitation to return to Marconi House at Chelmsford. I knew from experience that staying there would involve much wasting of time talking to other guests and dining in style. I had so much to do before leaving for home. The Tavistock Hotel was quite comfortable and reasonable, with a private bathroom and a TV set. I could get some writing done in my hotel room and on the train travelling to and from Chelmsford - and both were well heated.

I found, as in 1951, that it was far more difficult to get down to the essentials with English engineers than it was in the USA or Canada. Everyone was very nice and polite, but a frightful amount of time was wasted in getting nowhere. It made me feel that I would go crazy living there, much as I loved London and its streets and buildings. However, the London laundry that attended to my clothes at the hotel must have been a relic from the

dark ages. My shirts came back crumpled - the American laundries had made them look like new!

In the course of my discussions with TV engineers in the USA I had evolved a requirement for preview monitoring of picture and waveform inputs to a control room vision mixer which would permit control of telecine Vidicons from the studio control room - when the telecine room was unstaffed for one reason or another. This offered economy of staffing in late night film-only programming, when combined with multiple alternative remote control panels for the Vidicons. I also had ideas for the incorporation of the RCA Special Effects Unit, to give a variety of split-screen and wipe effects. I spent a whole day explaining these ideas to sceptical Marconi engineers who were reluctant to adopt any American concepts. My modifications to the video facilities diagram involved the provision of an additional preview switching bus, a waveform monitor and a picture monitor in each studio control room - but the deletion of an expensive picture-and-waveform monitor and power supply, so that little change in cost would be incurred.

Marconis had undertaken to supply an RCA Special Effects Unit, but not the associated Amplifier - they considered their own mixing amplifier would suffice. We did not agree, and our misgivings were subsequently justified when the equipment was later installed in Melbourne.

Ken Owens was anxious to demonstrate the flexibility of an English-designed camera pedestal, which they hoped to persuade us to accept in place of the Houston Fearless pedestals we had asked to be supplied through RCA. We visited the factory with him, and found that elevation of the camera on this pedestal required a healthy heave, with two hands. We had found that the counterbalanced camera on a Houston Fearless pedestal could be elevated by one finger. Ken reluctantly accepted our preference. Subsequently we learned from Ted Allen that although AWA had now obtained dollars to import Houston Fearless pedestals and a rotatable microwave mounting to Australia, they had still not obtained the necessary import licence - six months after receiving our order!

On the last working day of the year we visited the Vinten factory and saw a very promising prototype friction head for tilting TV cameras mounted on pedestals, which Lyle and I considered superior to the one Marconi intended to supply. Unfortunately it would not be available in production for 12 months. The HWT London office rang me there and read a cable received from Mr J.F. Williams, stating that AWA had advised him that our equipment would be delayed at least a month from the dates originally promised by Marconis. Mr Williams had requested me to investigate closely the causes and to express extreme concern. I rang Marconis immediately and asked for a discussion on deliveries on the following Monday. Bill Vinten took me home to dinner with his

charming wife, and we talked about music and poetry by their fireside. He drove me to the Tavistock at 1am, and before retiring I drafted a cable reply to Mr Williams, requesting dates by which it was estimated accommodation would be ready for installation of equipment at the transmitter and studios. I stressed the necessity of AWA arranging details of an installation contract and reported that Marconis had no request from AWA for spare components and tubes.

On New Years Eve, Gordon Williams of Marconis (no relation to the HWT one) and his wife took me to St James Theatre to see Terence Rattigan's play "Separate Tables" - a wonderful performance by Margaret Leighton and Eric Portman. We dined at a restaurant afterwards - late dining after a show was fashionable in London - with John Sidebotham and his wife and at 12.30am walked to nearby Piccadilly Circus to see the New Year celebrations. The crowd was thinning and the pavement around the Eros statue was strewn with streamers and paper caps. The carnival was over! They drove me back to Tavistock. It was 1956. The year of Australian TV!

Sunday was a blustery, rainy day. I spent the whole day writing notes, drawing a tracing of my proposed new video facilities diagram, and writing to Raytheon, asking them to send drawings of the upper and lower mountings of the passive reflector to Ted Allen, to facilitate design of the supports on the studio tower. Ted had already

advised them of the frequencies now allocated to our microwave links.

In that first week of January I had somewhat heated discussions with Marconis on the question of deliveries and our installation schedule. I sent a cable to Mr Williams giving the shipping dates of some items of equipment, including the complete OB van, but items were to be shipped piecemeal and dates for many, such as synchronizing generators (without which the TV system would not operate), could not be nominated. I advised that the delays were the result of material shortages, sub-contractor delays, and recent work pressure on Marconis by the Independent Television Authority (ITA) who were responsible for the new commercial TV service in Britain. I said -

"Chelmsford striving improve situation --- Will send full airmail report Cairns. Endeavouring coordinate vital items."

Mr Williams sought AWA's assistance in maintaining our priorities.

Commercial TV in Britain had begun on September 22nd, 1955, only three months ago, and Marconi was still supplying equipment for it. There then was only one transmitter in operation, providing the London service from Croydon. The ITA owns and operates all commercial TV transmitters in Britain and exercises control over all programmes and advertising matter transmitted, but it does not produce programmes or own studios. TV studios

are owned and operated by programme companies, and two companies provide the London service - one on weekdays and the other on weekends. When the commercial service began, the programme companies recruited a large proportion of their staff from the ranks of the BBC, much to the annoyance of that august body. As a result, it appeared that the staffing and practice of the commercial studios was far more like the BBC than commercial TV in either the USA or Canada.

News services for commercial TV in Britain are provided by a separate organisation, the Independent Television News (ITN), which feeds news programmes to the commercial programme companies. Lyle and I inspected the ITN facilities in Television House, Kingsway, London in the first week of January. We obtained details of the film cameras and raw stock used in their operations and saw their small studio for live commentaries and telecine facilities. They used three Pye studio cameras and a Bodde rear projection screen, and their telecine room had three Staticon cameras (the Pye equivalent of the RCA Vidicon) but no slide or opaque projectors. Their 16mm and 35mm film projectors were by Philips and they had a dubbing suite and a film theatrette.

On most weekdays I commuted to Chelmsford by train. Lyle drove from Uxbridge. One morning I was surprised to find Murray Stevenson of ATN-7 in the same train compartment, travelling to Chelmsford with much the same

problems as I had. We were given a demonstration of the Marconi TV recorder, using rapid pull-down of 16mm film, at their development establishment at Beddow. We were doubtful about its reliability, but Murray eventually purchased one and obtained good results. We inspected their microwave links.

At the end of that first week in January we had a cards-on-the-table discussion of deliveries with Don Craig, Ken Owens, Tom Mayer and Rexel Lewis - Manager of their Broadcasting Division. The picture was not very encouraging. Some items were six weeks behind the schedule given to us in September. I reiterated Mr Williams strong protests at the delays, and Mr Lewis expressed his concern at their inability to keep faith. He assured me that air freight would be used to despatch critical items which had been delayed. They agreed to send weekly cables to AWA advising actual shippings, and Don Craig undertook to ensure that equipment actually left on the scheduled ships.

In the course of discussion Marconis claimed they had received no request to quote for spares. My minutes of the discussions in Melbourne showed a request was definitely made, and Don Craig confirmed that AWA had passed it on. Marconis produced an installation schedule received from AWA in December, listing dates for transmitter and radiator installation which I had

strongly rejected and had asked AWA to amend. I confirmed this request from my notes also.

It appeared that Marconis objected to the dates I had proposed because they wished to provide only one transmitter installation engineer to supervise three other installations, at ATN-7 and ABN-2 in Sydney and ABV-2 in Melbourne, as well as HSV-7. My proposed dates would have required two engineers from Marconis. After considerable discussion they agreed that two would be desirable.

It was disturbing to find that no Marconi engineer had any experience in the installation of Styroflex feeder cable, which they had contracted to supply. In the USA I had learned of the trouble which could occur with inexperienced installation of this cable, and determined to pursue this question later. There was also confusion about the location of the Styroflex on the transmitter tower. We had asked for it to be inside the tower framework, to facilitate repair if that ever became necessary, and we had sent Marconis drawings showing this in September - but they were planning to install it outside the tower.

All these omissions and confusions in liaison between AWA and Marconis did little to inspire confidence in our equipment contractors.

On the Saturday morning I rang Ted Allen and reported on all this. He recorded the conversation, and this time we had good transmission. Ted gave me estimated dates for the completion of sections of the studio building in which we urgently needed to install equipment -

The end of January for the equipment rack room
 The end of March for the smaller studio control room (control room 2)
 The end of April for the telecine room, control room 1 and dish room.

The rack room ceiling was in place, but the areas on the floor above could not be completed until work on the adjacent studio tower was complete, because of danger from falling objects. Ted said that pouring of the floor of the transmitter building would have to wait for drawings which Marconi promised to air-mail, showing necessary floor ducts. I advised him that projected shipments would not make it possible to begin transmitter and radiator installation before April.

On the Sunday I wrote a 17 page letter to Keith Cairns reporting on all these matters, and giving my recommendations for the purchase of news film cameras and raw film stock, with detailed reasons. I told Keith that both the CBC in Canada and the BBC had experienced similar delays in Marconi deliveries - especially with spares - but said they were generally happy with the equipment when eventually it arrived. I told him of my proposed video facilities features to economise in staffing and improve flexibility and reliability.

During that first week in January, Marconis began issuing to Lyle and me a series of weekly typed programmes for our activities, such as -

Thursday Jan. 5th.

9.30am - Discussions and inspection of TV links with Mr J.F. Gordon

12.30pm - Lunch in Convention Room with Mr H.A. Lewis.

We understood the necessity for making appointments with their staff, but we were not consulted beforehand about the times, and when it was known we wished to visit a factory, the programme stated -

Monday Jan. 9th.

am - Visit Strand Electric & Co Ltd, accompanied by Mr A.G. Husselbury

pm - Visit Mole Richardson & Co Ltd, accompanied by Mr A.A. Miller

We took exception to this regimentation. It was almost as though we were being manipulated like puppets by an unseen Marconi guru. We found, when we visited the factories of sub-contractors with Marconi personnel, that our discussions were inhibited, and we were unable to obtain information about deliveries of our much needed items of equipment. We therefore developed our own counter-measures. When we found ourselves in discussion with two persons in a factory, Lyle would divert one of them to another part of the works while I continued discussions with the other. The Marconi representative

was then nonplussed - he didn't know which way to turn. After the second week there were no more typed programmes. It was a case of checkmate!

The Marconi orchestration of my movements was not confined to technical matters. Lyle spent his free time with his Valerie, but I was a free agent and received frequent invitations from Marconi personnel. I was never sure whether these were the result of camaraderie, company policy, or the English tradition of "Noblesse Oblige" - but I enjoyed the company of the engineers concerned and got along with them very well as individuals, whatever our differences might have been on technical questions at the Chelmsford works. Maybe Marconis' method of dealing with these raw and somewhat obstreperous Australians was akin to the approach of Telemachus in Tennyson's "Ulysses" -

"...by slow prudence to make mild
A rugged people, and thro' soft degrees
Subdue them to the useful and the good."

The invitations were given in a friendly spirit. It would have been boorish to refuse them, and I am sure the Marconi hosts enjoyed the joint outings as much as I did - but it made no difference to our determination to get what we wanted in equipment and facilities.

On that first Saturday in January, after my long phone call to Ted, Hexel Lewis called for me in his car. He was a small, dapper man, habitually wearing a bowler hat. Driving past Marconi House in the Strand he raised

his hat deferentially. We lunched at Scotts in Coventry Street, just off Piccadilly Circus, then went to the Royal Academy to see "A Thousand Years of Portuguese Art" - a marvellous exhibition of paintings, sculpture, tapestries, pottery and metalwork - some very beautiful and some rather dull.

The large attendance was itself very interesting - every shape and kind of people, some very humble, some very aristocratic and some very "arty". I was intrigued by the garb of one fellow, a coarse woollen black outfit with a hood hanging down at the back. I thought he must belong to some religious order. Hexel said no, that was a duffel coat. In 1955 duffel coats had not yet reached Melbourne in appreciable numbers, with their clothes-peg like buttons hanging by strings.

Then we had tea and cake and continued to "The Boat Show" at Olympia in Hammersmith Road. Hexel was a keen yachtsman, and wanted to price and examine auxiliary outboard motors. After wandering round all kinds of sailing and motor boats and fittings we left to drive to a hotel for tea.

Hexel's car refused to start. He thought he might have over-choked it, so we retired to a nearby pub for a drink, to give the petrol time to evaporate.

Sustained cranking produced no kick. I suggested he examine the petrol feed and ignition. The answer was an empty petrol tank. Hexel was sure there was some petrol in the tank, which couldn't get out because of the side slope at the kerb. He asked a passing motorist to tow us to the centre of the road, but there wasn't room to get a straight pull with a rope, so with much grunting the three of us managed to push it out, with see-sawing back and forth as Hexel turned the steering wheel.

Still the car refused to start, so we set off on a route march to find a garage that would give us some petrol in a bottle. With this in the tank, the car started like a bird. We had dinner at 10.30pm!

Next day I went to Sunday tea with Kath Skinner, the same who accompanied me to the Tower of London with Jack Donovan in 1951, at her flat in Queens Gate Terrace, Kensington, a few hundred yards from the Albert Hall. She was sharing with Eunice Culley, another friend of the family in Adelaide, and I took them both to see "The Remarkable Mr Pennypacker" at the New Theatre that week - a very funny comedy starring Elizabeth Sellars, Hugh Wakefield and Nigel Patrick. London had its first winter snow on the Sunday, but it was gone by the morning.

The remainder of January was spent prising details out of Marconis, investigating news film equipment for TV, discussing telecine and studio lighting equipment and

inspecting BBC and ITA installations. I told Marconis what we wanted in the video facilities switching and monitoring for our studios and the associated video patching panel - to provide for changes in routing and emergency replacement of faulty equipment - but they only produced drawings that missed the point. Complaints had no effect, so I decided that the best course was to produce my own tracings and feed these progressively to Marconis. This I did, chiefly in my room at the Tavistock. Marconis knocked them into workmanlike shape, with some constructive comments, and I then had no cause for complaint. By this means we reached agreement on the video facilities diagram, the video patching panel, the equipment room rack layout, the floor duct arrangements and the inter-cabling routing for the studio technical areas. We also reached agreement on the equipment layout for the transmitter building and the associated floor ducts.

Meanwhile Lyle inspected various equipment units under test, and found many points requiring attention for satisfactory performance. The first load of equipment left on the "Toronto" on January 9th.

On the second January Sunday I joined Lyle and Valerie at Uxbridge and we drove to the Cotswolds to see some absolutely captivating 13th and 14th century villages - Chipping Campden, which I visited in 1951, Bourton on the Water, Broadway, and Upper and Lower

Slaughter. We marvelled at the one ninth scale model of Bourton village behind the Old New Inn - so meticulously created from the honey-coloured Cotswold stone, including the model of the Inn itself, with a model of the model in its backyard - and its model of the model of the model shrinking almost to vanishing point.

Upper Slaughter was especially lovely, with houses built on the steeply rising banks each side of the stream. There was no bridge. The roadway crossed the stream in a shallow ford. I climbed over a rock wall to take a photo of the village church. Lyle and Valerie were some distance away. Halfway across the paddock I saw a large pig charging up the hill towards me. I had no wish to be bowled over by a large pig. I turned and fled, climbing the top of the wall just as the pig reached the bottom - snorting loudly. I turned to find Lyle and Valerie convulsed with laughter. I took my photo from the top of the wall!

Next night Lyle took us both to see "The Pajama Game" at the Coliseum - the same show that I had seen with Lyle in New York, but with a different cast, starring our own Australian Joy Nicholls of radio "Take it from Here" fame, with Arthur Lowe in a minor part. Lyle and I inspected studio lighting equipment at Mole Richardson and Strand Electric factories and obtained the missing information about weights to enable us to specify the correct type of pantograph suspensions which were to

be supplied by Kiegl of New York. We had asked Marconis for this last October, without result.

We visited the BBC TV studios at Shepherds Bush and the remote studio set up at the Granville Theatre by Associated Rediffusion, one of the two London commercial programme contractors. We were told that a nasty accident had been narrowly averted when a camera pedestal - backing towards the edge of the stage - finished up in the orchestra pit. We inspected the BBC transmitter at the Crystal Palace and the ITA transmitter at Croydon.

I wrote many detailed letters to Ted Allen and had several phone calls to Melbourne - one was a three cornered discussion with Ted and Keith on the progress of our project. Keith and his family were very good to Phyll and Chris during my absence abroad.

I had lunch with Hal Maugham, the HWT London Manager who gave me some secretarial assistance with my correspondence to contractors and the use of his Fleet Street office to interview four potential engineer recruits for our staff.

I wrote to Raytheon, Houston Fearless, Kliegl and RCA finalising details of equipment we were obtaining from them. As we entered the fourth week of January I realised that negotiations with Marconis would have to be brought to a head. Progress on many items requiring

discussion and action was painfully slow, and I could not remain in England indefinitely - there was too much waiting to be done in Melbourne and it was clear that Ted Allen was heavily overloaded.

Therefore I drew up a list of 24 items to be discussed with Marconis and which should be finalised by the end of the week - drawings to be completed, designs and sample components to be submitted, technical data and specifications promised, information promised on availability of equipment items and components, installation data required and a workable installation programme which showed the division of labour between Marconis, AWA and HSV personnel.

This was typed and distributed for immediate comment. Marconis said they could finalise all items, but despite the best efforts of Lyle and myself several items were still incomplete at the end of the week. They gave us a draft report on our discussions, which was corrected and approved as a record for future reference.

I wrote a formal letter to Hexel Lewis listing additional items of equipment which discussions had shown would be necessary in order to achieve the flexibility and reliability in facilities which we desired in our studios and transmitter. I requested quotations for the items involved, and sent copies to AWA and Ted Allen. Prices were obtained later from AWA.

We had asked Marconis whether a McLaren Ricardo diesel engine driving a 69 KVA Brush alternator would be suitable as a source of standby power for our Marconi transmitter. This diesel-alternator existed in the HWT building we were converting to TV studios, and we proposed moving it to Mount Dandenong. Marconis located an identical diesel-alternator in England, and arranged for it to be brought to Chelmsford to test with our transmitter, but the transmitter was not yet ready for testing, and we were surprised to learn that Marconis had never previously produced a 10 kW vision amplifier for the RF band allocated to HSV-7. They had been manufacturing 2 kW vision transmitters which required an output amplifier for higher powers, but the maximum output they had produced so far was 7.5 kW. We required a 10 kW amplifier for our transmitter to achieve the 100 kW effective radiated power with the 16 stack Marconi radiator. In effect we had been quoted for a pious hope. The amplifier was under construction, and one of Lyle's responsibilities was to see whether Marconis could achieve the required power output.

I had found it necessary to work till 3am on many nights at the Tavistock, but there were some opportunities for relaxation. John Sidebotham asked me home to dinner and to stay overnight at his Shenfield home. We chatted by the fire with his wife as he repaired a pop-up toaster. Hexel Lewis took me to dinner at his London apartment, and I took Lyle and Valerie to

Convent Garden to see the full three-act ballet "Coppelia", danced by the Sadlers Wells Ballet with Anya Linden and David Blair in the roles of Swanilda and Franz. This was a wonderful experience, and the corps de ballet danced with marvellous precision.

Lyle and Valerie reciprocated by taking me to "Don Giovanni" at the Sadlers Wells Theatre on the last Friday in January, but we arrived back from Chelmsford 25 minutes late for the opera, which began at 7pm. This was rather disappointing, despite the excellent singing of Owen Brannigan as Leporello and Denis Dowling as Giovanni. It was the last outing for the three of us, before I left London.

That weekend I worked all Saturday and Sunday at the Tavistock, preparing for my final week of visits and discussions. I had received photos from Ted showing the satisfactory progress being made at Mount Dandenong and the studios. All four legs of the transmitter tower were in position and the building foundations poured. Studio 2 construction was about to commence. I wrote a 14 page letter to Ted, bringing him up to date with developments. I had had an excellent reply from Raytheon regarding our order, and Ted received a copy. His reaction was "What wonderful people to deal with!"

Houston Fearless had advised me that they could divert a 5ft rotatable mount to us from a current

production batch, but they had still not received an official order from AWA. It was now seven months since we ordered one, so I decided drastic action was necessary. I sent a rather caustic cable to Mr Lionel Hooke, Managing Director of AWA. This earned me a rap over the knuckles from Mr Williams of HWT, but it produced the desired result.

The Tavistock informed me that I would have to vacate my room on Monday January 30th, as they had an advance booking. Having worked till 3.30am the night before I was not very happy about packing and moving to another hotel, but I found a room at the Waldorf in Aldwych - a stone's throw from Australia House. It was rather better than the room I had occupied for five and a half weeks and slightly cheaper, but without a private bathroom. It did not compare with the Waldorf Astoria!

That morning I discussed sound recording equipment with AWA and in the afternoon Lyle and I took part in an analysis of our TV installation schedule with Don Craig, Keith Elphinstone and Dr Derek Griess at Marconi House in The Strand. This was my first encounter with Derek Griess, a delightful fellow and a most competent engineer. He had spent most of his time with Marconis working on installations of their equipment in remote parts of the world - most recently in Caracas - and had not suffered from exposure to the stultifying atmosphere of the Chelmsford factory. Derek hated office jobs. He

had a wife and a home in Chelmsford, which he saw rather infrequently, and we were to become firm friends. He was to be in charge of our installation work, assisted at Mount Dandenong by Arthur Pitchers on aerial work and by an AWA engineer, and at the studios by Eric Hitchen and another AWA engineer.

We were to arrange for the provision of riggers at Mount Dandenong and installation technicians at both sites, in collaboration with AWA. The 2 kW vision transmitter installation was to commence in April, with the top half of the radiator, and to be completed by mid-June. The 10 kW power amplifier was not expected to arrive in Australia before September, and so it would not be tested with the 2 kW transmitter at the works.

Installation of the studio equipment was expected to commence in April, and hopefully finish at the end of June. The OB van had already been shipped and was expected to be handed over by mid-April. I pressed for an improvement in this programme. The progress photos received from Ted supported my arguments, but the Marconi forecasts were not encouraging. The first batch of studio equipment had been despatched without the necessary installation materials!

Lyle and I were very concerned about Marconis lack of knowledge and information about Styroflex feeders. They suggested that Dr Griess should visit Denmark, where

similar feeders were shortly to be installed. I was determined to visit the manufacturers, Felten and Guilleaume in Cologne.

That night Lyle and I worked on our test equipment requirements at the Waldorf, and next day discussed our film equipment with G.B. Kalee, who were to import our Bell and Howell projectors. That week we inspected the Associated Rediffusion TV studios and their OB operations, the BBC newsreel operations at Alexandra Palace and discussed test equipment with Livingston Laboratories and lighting equipment with Mole Richardson.

On Thursday night Keith Elphinstone took me to dinner with his wife at the Hungaria Restaurant and Friday was my last day at Chelmsford. Most of the drawings we had requested were ready, and I took prints for checking at the Waldorf. Lyle and I took five Marconi engineers - Elphinstone, Mayer, Sidebotham, Miller and Drury to lunch at the Army and Navy Inn near Chelmsford, in return for some of their hospitality. Lyle drove me back to London. I was glad to see the end of Chelmsford - I had seen little of it besides the factory. Lyle was to continue there for some time yet, checking the performance of completed units of equipment.

In this week England had the coldest weather for 60 years. There was very little snow in London, but it was

freezing cold - with domestic water pipes and car brakes freezing solid.

After some last minute shopping for my family on Saturday morning I worked in the afternoon and went to the Saville Theatre with Tom Mayer in the evening to see Ibsen's "The Wild Duck" - magnificent theatre with Emlyn Williams, Dorothy Tutin, Angela Baddeley and George Ralph. I thought I had never seen more wonderful acting nor more moving a play.

I checked and corrected the Marconi drawings on Sunday, wrote to Ted and worked at the Waldorf till 3.20am. I was feeling much better than a week ago, maybe because I had paid my last visit to Chelmsford.

Marconis was a strange firm - at least the Broadcasting Division was. They were capable of producing excellent TV equipment, but suffered from a complex. They were convinced that they knew what was best for their clients. Their knowledge of TV operations was based on long association with the BBC - they were joint suppliers with EMI of the BBC's first TV equipment in 1937. They looked down their noses at anything produced in the USA, and their experience with commercial TV operations in 1956 was virtually nil - the infant ITV service in England bore little resemblance to the commercial TV of the USA. It was staffed largely by ex-BBC personnel with the BBC outlook.

Marconis probably regarded me as something of an anomaly. Here was a fellow, nurtured in the tradition of the great English Public Schools, with an expressed love of the English countryside and an apparent appreciation of the finer arts, setting up a television station that strived to ape the practices of those dreadful TV stations in America - and attempting to operate it with far less staff than the BBC considered necessary!

I think that Lyle and I probably wore them down just a little bit. We were a pair of lone wolves from Australia. No other Australian engineers camped on their doorstep, hammering out requirements as we did. In most cases we eventually got what we wanted - perhaps we even coloured their outlook! As a result of our representations for Bell and Howell 614CBVM film projectors they sent Ken Owens to Chicago to look at them. It was significant that in other Australian TV stations subsequently equipped by Marconis, including ATN-7, ABN-2 and ABV-2, you would find the same categories of equipment which we had finally persuaded Marconis and AWA to supply - such as 614 CBVM film projectors, Houston Fearless camera pedestals and rotatable mounts, and Kliegl lighting pantographs; and practices which we had finally persuaded Marconis to adopt.

Tradition and conservatism are all very well, but if they prevent you from seeing the progress that other people in younger countries make, they become millstones.

Fortunately we managed to maintain cordial relations with Marconi engineers as individuals. If individual relations had suffered our negotiations would have suffered also.

I had a final dinner with Haxel Lewis on Monday, February 6th and sent copies of my European itinerary to Ted Allen and my family. My last three days in London were very full. Lyle and I visited the Cintel factory, Independent Television News and Strand Electric. We spent a day with Don Craig and John Telfer, just arrived from AWA in Australia, discussing installation schedules and lunched with Ken Owens at Simpsons in the Strand. I rang Ted Allen, stressing the importance of obtaining Tektronix 524AD test oscilloscopes for studios and transmitter - every TV station used them and even Marconis, although they were made in the USA. I took Kath Skinner to lunch.

Lyle and Valerie took me to dinner at an Indian restaurant in Regent Street on Wednesday and had a last minute discussion at the Waldorf afterwards. Lyle estimated he would need the rest of February to complete his work at Chelmsford, carrying out acceptance tests and obtaining operational experience. A Memorandum

demonstration studio. He would act as an intermediary between Ted and Marconis.

I flew to Paris by Air France at 10am on Thursday, February 9th. Lyle said goodbye at London airport. It was snowing slightly. I had 2kg of excess baggage in accumulated paperwork - despite the offloading in packages sent home by sea.

Paris

Paris was sunny, but with a bitterly cold wind driving large ice floes down the Seine. I had booked in at the Hotel Lotti in Rue de Castiglione, where I stayed in 1951. The tariff gave me a shock - about double the rate I had paid in London. My chief interest was in the manufacture of 16mm cameras with built-in 16mm perforated magnetic tape recorders, which I had heard of when in London, made by Tolana. I visited M.Derosiere of that company and inspected their factory next day.

The condensation was frozen on the window panes of my glorified garret at the Lotti that morning. My tiny hand was nearly frozen too. I started to dry myself on what I thought was an enormous bath towel, and discovered it had sleeves! Europe was having the coldest winter of this century.

I had discussions with De Brie, manufacturers of film processing equipment, and M.Derosiere gave me an

introduction to M. Falaise of Television Francaise at the Paris TV studios. I was intrigued by the doorways of business houses closed by large wrought iron gates, which opened mysteriously when you pressed an adjoining bell-push. I managed to crack two jokes in French, but I couldn't tell whether they laughed at my jokes or my French. I wrote to Lyle, telling him all the things I hadn't had time to before I left, and went to bed early. On Saturday morning I went over the TV studios. I was getting used to saying "Je suis M. Fishere de Melbourne, Australie. J'avais rendezvous avec M. ---" I found M. Falaise spoke no English at all. I managed to get by because so many technical terms are the same in French and English.

In the afternoon I walked down the banks of the Seine to Notre Dame Cathedral. I hadn't realised that this beautiful building, with its flying buttresses and gargoyles leaning out, brooding over the slow moving river, is actually on an island - L'Isle de la Cite - joined to the banks of the river by three bridges. I went inside for a few minutes, but they chased all visitors out as it was 6pm.

I continued my walk to La Place de la Bastille, through the market area full of shops selling fish and meats and cafes full of Frenchmen talking and drinking wine. I found a departmental store looking very like the ones at home and took the underground Metro back to the

Rue de Rivoli for dinner. I was dog tired. In Paris I had eaten less, walked more and slept more, and felt better for it - despite the freezing cold.

On Sunday I posted some papers to Ted in Rue du Louvre and took photos of Notre Dame and the many bridges across the Seine, then took the 4.20pm Air France flight to Frankfurt, with 12kg of excess baggage.

Darmstadt

A chauffeur from the German firm of Fernseh met me at Frankfurt airport and drove me 28km south on the autobahn to Darmstadt, where Dr Moller had booked me in at the Hotel zur Traube ("Bunch of grapes"). The whole countryside was covered with a blanket of thick snow, which had a deadening effect on all sounds. I had written to Dr Moller from London, expressing a wish to see their TV recording equipment. He was waiting for me with his charming wife in the hotel lounge, and insisted that I be their guest at dinner. My hotel room was very modern and comfortable, and cost 20/- less than the Hotel Lotti!

In the morning a Fernseh car drove me to their factory and I spent the day inspecting and discussing their recording equipment, which embodied two Arriflex 16mm film cameras. They also had a flying-spot slide scanner, but this took two seconds to change slides. Les Free from TCN-9 was also visiting the factory - they

purchased a Fernseh recorder. It gave good results recording from film programme.

Dr Moller took me home to dinner and a most enjoyable evening listening to recorded music and looking at excellent TV reception of German 625 line, 50 fields per second, pictures - a foretaste of Australian quality. They had a beautifully furnished home and a large Alsatian dog named "Graf".

Tuesday, February 14th, was Shrove Tuesday - the last day before Lent. In West Germany this is the end of a two-to-four day carnival known as "Fasching" - common to many Roman Catholic countries before the commencement of the Lenten fast. The word "carnival" literally means "to take away meat". I did not realize the significance at the time, and was in for some surprises.

A Fernseh car took me to the factory at 8.30am, to discuss TV receiver production. In the development workshop there was an atmosphere of suppressed hilarity. The room was decorated with streamers, and one of the men ceremoniously presented me with an illuminated address, typed on a sheet of Fernseh tracing paper, with a red wax seal - bearing an impression of the German eagle, probably from a coin - attached by a plaited length of multicoloured hook-up wire. The inscription on this address read -

"EUG-ESG-FERNSEH-FASCHING
DOCUMENT

Australia lies far from here
and doesn't have the carnival
therefore you learn this festival
in Germany with wine and bear" (sic)

"Mr Fisher,

You undertook your big aerial voyage from Australia to Germany not only for information about the German TV and with business minds, but also to do a wide look on the foolish doings in Germany these days, we hope. On this account the "Fernseh-ESG-EUG Carneval Committee" presents you this "Kangaroo Order" for your big caper from Melbourne to Darmstadt".

Jurgen Davids

It was a strange thing that 19 months later the same Jurgen Davids joined my staff at HSV-7 in Melbourne as an engineer. He remained with us only 12 months.

Having said my farewells to the courteous Dr Moller, I was driven back to Frankfurt to catch the 11.45am train to Cologne - 150km to the north-west.

En route to Cologne I finished writing a letter to Keith Cairns on staffing, begun before I left London. I had received a cable from Keith at the Fernseh factory, which seemed to indicate that the HWT Board felt I had been "letting myself go" on an equipment purchasing spree. I assured Keith in my letter that this was certainly not so, and that the additional equipment items requested were necessary to operate our station with a high degree of reliability and freedom from interruptions to service, and to permit operation with the minimum number of staff consistent with the type of production in hand. I pointed out that the mandatory requirement for

these characteristics - imposed by the commercial nature of TV in the USA - was something quite foreign to Marconis, who were familiar only with BBC operations and the very similar ones governed by the fledgling ITA.

Cologne

The train reached Cologne at 2.30pm and John Telfer met me at the station - he arrived from London the night before, and had deposited his bag in the railway cloakroom, as he was going to accompany me to Hamburg that night. I did likewise, and we took a taxi to the factory of Felten and Guilleaume, manufacturers of Styroflex. The snow was very heavy - I caught a glimpse of the cathedral and its famous spires through a peephole rubbed in the frost on the taxi window as we drove past. At least I could say I had seen them!

Derek Griess and Tom Mayer had flown from London and were waiting for us at the factory. They introduced us to Mr Paul Tils and Mr Peters of F and G, who showed us the cable-making machine. It wrapped a multi-layered spiral of teflon dielectric tape around a tubular copper core, and an outer aluminium sheath was then extruded over the whole to form the finished semi-flexible Styroflex coaxial cable. The cable was made in several sizes. Ours was to be 3.125" outside diameter, to be supplied on two drums in 500ft lengths. The machine was not in operation because this last day of Fasching was

almost a holiday and the staff were holding parties in various parts of the factory.

The offices were all gaily decorated and many of the staff were dancing to a tape recorder in one of the rooms, wearing masks and coloured paper hats. There must be many headaches on the first day of Lent!

We retired to Mr Tils office and discussed the question of hauling, routing, supporting and terminating the twin lengths of Styroflex on our transmitter tower. It was important to exclude from the internal dielectric space any water vapour which could cause electrical breakdown in operation.

The discussion was vital and most detailed. It should have taken place long before. F and G had only a hazy idea of what we wanted to do. Despite the fact that we had asked Marconis last September to obtain mounting details, they had kept the problem to themselves until January - when I announced that I would visit F and G myself. They then decided to send engineers to Cologne to talk to F and G with me. The discussions cleared up many points and I made copious notes. Marconis agreed to supply the tools necessary to terminate the Styroflex, and F and G agreed to send us sample support brackets - which had to comply with various requirements to protect the cable.

As our conference progressed, the office door was suddenly thrown open and a buxom fraulein, obviously full of the party spirit, burst in and chased a reluctant Mr Tils around his desk - before she was persuaded to leave. According to the tourist guide book, on this last day of Fasching women are "free to grab and kiss any man they fancy, in the office, the street or on the bus". We continued our discussion with an apprehensive Mr Tils, to the accompaniment of muffled sounds of revelry without.

The train by which John Telfer and I were to travel to Hamburg was due to leave at 10.45pm. Mr Tils and Mr Peters asked us to dine with them at a restaurant near the station. We had a most satisfying German meal, washed down with plenty of wine. At 10pm we said we had better make a move to the station, as we had to retrieve our bags from the cloakroom. The F and G men said "Don't worry, there's plenty of time. The station is only a block away."

At 10.30pm we left the restaurant and hailed a taxi. However, it was a one-way street and the taxi had to circle the block to reach the station. And there - to our dismay - was a long queue of people in front of the cloakroom counter! Mr Tils went to the head of the queue and, after a great deal of expostulating, managed to persuade the railway officer to release the luggage of these two Australians. Then we had to climb a flight of snow-covered steps and present our tickets for

examination. There was the train, some considerable distance away along a snow-covered platform. Carrying our cases, John and I tried to hurry through the snow, our feet slipping repeatedly on the wet surface below, just as we reached the end carriage the train slowly began to move!

With superhuman efforts we threw our bags over the rear-end railing and managed to climb on board - but in the process I dropped my ticket down between the railway tracks. Mr Peters saw what had happened, and with great presence of mind, jumped down from the platform, siezed the ticket and ran after the retreating train - just managing to place it in my outstretched hand! We shouted our thanks, waved goodbye and entered the carriage to find our seats and collapse into them, heaving sighs of relief.

Hamburg was about 350km north-east of Cologne. We had sleepers on the train, and reached there at 6.12am next morning.

Hamburg

A chauffeur from Nordwest Deutscher Rundfunk met us at the station and drove to their new TV studios some distance from the city - a very imposing building. They had Fernseh recording equipment, but I was not very impressed with their recordings of live shows. I

discussed staff training with Mr Udo Steputat, who asked me home to dinner with his family that night.

John Telfer and I had lunch in the staff canteen, beside a window overlooking the River Elbe. John was a strict teetotaler, and when my attention was diverted by something in the river below, he poured some Coca Cola into my glass of Reisling. John liked his practical jokes. I was not amused.

I visited the factory of Steenbeck and Co that afternoon. I had seen their 16mm film editing machines in England, and they had impressed me. The axes of the film spools were vertical, so that the film passed from one to the other over a horizontal work-table, with the image projected on a ground glass screen at the rear. They were easy to operate, with good flexibility of film handling, and the English users had been very satisfied with them. I obtained catalogue, price and delivery information and we subsequently purchased several.

After dinner with his wife, son and daughter, Mr Steputat drove me to the station to catch the 10.09pm train to Karlsruhe - about 510km to the south west. John Telfer remained in Hamburg, intending to travel to Munich next day.

En route to Karlsruhe I began a 14 page letter to Ted, detailing precisely the information I had obtained

in Cologne about Styroflex cable, with appropriate sketches. I slept well on the train. It arrived three hours late at Karlsruhe next morning, because of the bad weather with snow everywhere. I had to finish my letter later at Munich.

Karlsruhe and Stuttgart

A Siemens and Halske engineer, Mr Gawlick, met me at Karlsruhe and took me to their factory to discuss magnetic tape sound recorders. Then he and another engineer, Mr Lohman continued with me by train to Stuttgart - about 60km further east.

We put up at an excellent and very reasonable hotel forming part of the Stuttgart railway station building - an excellent idea for travellers. The railway porter took our luggage direct from the train to the hotel lobby.

Next morning we drove to the Stuttgart TV studios and then to the TV tower, some distance from the city on a hill covered with trees. This gracefully tapered concrete tower, 161 metres high, is surmounted by a slender steel framework bearing the TV radiator, with an overall height of 211 metres. The top of the concrete tower is surrounded by a barrel-shaped structure which, from a distance, resembles the seed pod of a gigantic bull-rush reed. In this structure there are four floors surrounding the concrete core - the lowest housing the TV

transmitters. Above that are well equipped kitchens and above that again are two very fine restaurants. All floors are surrounded by windows and above them are two observation balconies encircling the base of the radiators.

We ascended to the restaurants in one of the two passenger lifts rising in the core of the tower and enjoyed a delicious dinner, gazing over the snow covered countryside. We spent some time taking photos from the look-out level and then inspected the transmitters before coming down to earth.

The Germans were very proud of this "Fernsehturm", completed only recently, and several similar ones have since been constructed throughout the country. They are engineering masterpieces and have quite an aesthetic appeal.

Mr Lohman caught the train back to Karlsruhe, and Mr Gawlick and I proceeded to Munich, about 190km east of Stuttgart. I booked in at the Hotel Continental, and Mr Gawlick went to his Munich house.

Munich

A letter awaited me from Lyle, telling me of progress at Chelmsford. The diesel-alternator tests with our 2 kW transmitter were "very promising but not yet complete". Mr Gawlick took me to the main Siemens and

Halske factory on Saturday morning, then to lunch with his colleague Dr Korner.

We had our coffee in an upstairs cafe in the Marienplatz, opposite the Rathaus and its tower, which houses the famous Glockenspiel - with its gaily painted figures in mediaeval costume marching in procession past the windows to the sound of the bells and the delight of onlookers at 11am every morning.

Then we went to the famous Hofbrauhaus, where Adolf Hitler held his first meetings of the Nazi movement before World War II. Here, in the beer cellar, there were hundreds of Bavarians drinking from great grey earthenware pots and listening to German folk music played by a band from a raised dais. At one end of the long cellar room with its heavily arched windows were the huge wooden casks of beer. Fraulein made their way between the long wooden benches with arms laden with up to six of these huge earthenware mugs, full of foaming beer and bearing the famous HB sign in blue lettering.

Many customers wore traditional Bavarian leather jackets, and hats with a feather stuck in the band. There was a general air of good fellowship and much singing. John Telfer would not have liked it! We had dinner in the restaurant on the floor above, and went home for the night.

Next morning Mr Gawlick and I went by train to see the TV transmitter at Wendelstein. This is an 1840 metre high mountain in the Bavarian Alps, about 60km south-east of Munich, and close to the Austrian border. We had to change trains twice. The third train was on a narrow gauge line with a central rack engaged by a pinion beneath the driving engine - which pushed the bright yellow carriages up the steep slope. The engine finished up at the rear for safety reasons. If the engine were in front, a broken coupling would allow the carriages to go careering down the mountain. The train was full of happy skiers. Near the summit we emerged from the mountain mist into bright sunshine and unloaded the skiers.

The tram entered a tunnel and soon drew up at a platform inside, right in the heart of the rocky eminence. There was a doorway at the back of the platform with a bellpush, microphone and small loudspeaker - but no other apparent exit from the platform. Mr Gawlick pressed the button and spoke into the microphone, when challenged by the loudspeaker. They were evidently satisfied, for the door opened revealing a lift cage which took us up through a vertical shaft in the rock to the TV transmitter building.

The transmitter fed the radiator on the tower via Styroflex cable, and they told us that when the cable was brought up to the transmitter site it had to be carried like a long snake on a train of open trucks - because the

tunnels and the overhead power lines of the railway were not high enough for a drum of Styroflex to pass under.

The mountain top was snow-clad, and many skiers were enjoying themselves. Not far from the transmitter building was a tiny chapel, perched on top of a craggy peak. Lord knows how the materials were brought up to build that chapel, or why it should be sited so far from normal human habitation. Perhaps it was an attempt to get as close as possible to the Almighty.

We lunched at the skiing hotel. Everything looked so white and clean, but the view of the countryside was obscured by white mist. We left at 3.45pm the only passengers as far as the Brannenbourg station, where we changed to the train back to Munich.

I finished my last letter to Ted. Next morning after inspecting 16mm film processors, Arriflex cameras and Arricord magnetic tape recorders at the Arnold and Richter factory, Mr Gawlick drove me to the Munich airport to fly to Milan, via Zurich.

Milan

I had to wait two hours at Zurich airport for an LAI plane to Milan, where I was met by Dr Cannelutti of Radio Televisione Italiana. He drove me the 48km to the city where I booked in at the Albergo Touring hotel in Piazza della Repubblica, after a brief look at the TV studios. I

I went for a walk in the snow to see the enormous Gothic Cathedral and the famous La Scala Opera House, where posters advertised performances of Mozart's "Cosi fan Tutte".

With my rapid movement from place to place in Europe I had had no opportunity to have any clothes laundered, and the situation had become desperate. I filled a hotel laundry bag in the morning and rang for room service - I had only two days in Milan. The maid answering my call had no English, few Milanese do, and I spoke no Italian. I had to think quickly.

Not long before leaving Melbourne I had seen an Italian language film called "Domani e Troppo Tardi" (Tomorrow is too late). This might help! One of my favourite duets from "Il Trovatore" was "Ai Nostri Monte Ritorneremo" (Home to our mountains). I pointed dramatically at the laundry bag and announced -

"Ritorneremo domani!"

The maid nodded, smiled as I tipped her, and departed with the bag. My laundry was returned next day, beautifully pressed. It worked! Subsequently I asked someone to translate what I had said. They said it meant "I will return tomorrow". Anyway, it served the purpose.

I spent the day at the studios discussing equipment and inspecting their TV recording equipment made by La Radio Industrie of Paris. I had not heard of this

before, but the results of studio recordings on 16mm Ferrania reversal film were excellent - better than any I had seen elsewhere. This equipment embodied a Camiflex Eclair camera and recorded both odd and even TV fields, using a long persistence cathode ray tube and blanked-off the camera during alternate field scans when the film was pulled down. The cathode ray trace during the blanked-off scan was boosted to compensate for the decay characteristics of the phosphor - a cunning device.

On Wednesday I saw the TV transmitter serving Milan. It had a sealed Styroflex feeder cable, with a dehydrator at the tower top for the copper coaxial to the radiator. As we were being supplied with a dehydrator for the transmitter building from Marconis, I wrote to F and G and asked if the Styroflex junctions with the copper feeder at top and bottom of the tower would permit passage of dry air throughout the feeder length. I thanked Mr Peters for his wonderful assistance in retrieving my ticket at Cologne.

I tried to get a ticket for La Scala, but it was completely booked out. I wrote my last letter to Lyle in London, giving the results of my European investigations.

Flying to Rome in an LAI DC3 plane on Thursday reminded me of my flights between Adelaide and Darwin in 1945, but the seating was certainly more comfortable. I hoped that the weather nearly 500km to the south would be

warmer than this cold European winter. We touched down at Pisa, but I saw nothing of the famous leaning tower. Hugging the coast we saw picturesque Italian farmhouses, yellow, with red tile roofs - surrounded by tall cypress windbreaks and set in the midst of multi-coloured fields under cultivation. Landing at Rome at 1pm I booked in at the Hotel Quirinale.

Rome

A chauffeur from Marconi Italiana came to my hotel and said he had been instructed to drive me round the city and show me the sights. He spoke excellent English. This was just another example of Marconis courtesy to customers, whatever their technical cooperation might be. Definitely company policy! We visited the Colosseum, the Forum, the Basilica de St Paul, the Spanish Steps and many of the fountains in this beautiful city, in an afternoon of bright sunshine.

Friday was spent with Dr Cuturi of RAI, inspecting their studios and discussing TV recording. Dr Cuturi promised to send me information about further recording developments. I packed my bags on Saturday and left by the airport bus after midnight to catch the Qantas super-constellation flight EM532 at 2.25am on Sunday February 26th for home.

We touched down at Cairo, Karachi, Calcutta and Bangkok, reaching Singapore six and a half hours behind

schedule - then left on Monday morning, touching down at Jakarta and Darwin to reach Sydney on the morning of Tuesday February 28th. I had been away for eighteen and a half weeks. I had written 36 technical letters in that time and had managed to write home 26 times. I had made a few purchases for my family in north America and Britain, but in my tearing rush across Europe I had bought nothing. Cars picked me up from hotels and returned me at night, and I had not even had time to replace a tube of toothpaste over a period of three days. In 16 days since leaving London I had visited nine cities, but had seen very little besides television stations and factories. Everyone had been most kind and hospitable and my brain had filled to the brim with technical information, but if this was seeing the world Jules Verne had it all over me! I had missed my Phyll and Chris and it was great to be back in Australia.

Home

I rang home and Keith Cairns, from Sydney, and spent Tuesday and Wednesday mornings discussing installation schedules with AWA, then flew home to Melbourne. Phyll and Chris were well, and it was wonderful to be together again, and to rejoin my colleagues at Dorcas Street. The trip had certainly been worthwhile, and Ted had done a magnificent job in my absence. We had persuaded Marconis to give us almost everything we wanted. Lyle arrived in Melbourne a few days later and reclaimed his flat. Ted

and his wife Marjorie had been able to find other accommodation with the help of HWT.

Now for the countdown!