



OTVA NEWSLETTER

Overseas Telecommunications Veterans Association (Australia)
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Next meeting: **FRIDAY 16 MARCH 12:00 NOON AT THE BOWLER'S CLUB.** For those who didn't make the November meeting, the Bowler's Club is at 95 York St Sydney 2000, (02) 9299 6569. Please advise the usual suspects if you will be present by 14 March. David Richardson <d_s_richardson@yahoo.com.au>, 9487 1985 or Henry Cranfield <henrycra@aapt.net.au> or 9534 1526.

Catering will be self service, allowing a number of options and the usual cash bar.
BE THERE!!

DATES FOR YOUR DIARY

15 June AGM Bowlers Club. More details next Newsletter.

SUBSCRIPTION RENEWALS: If your envelope is sporting a flashy red mark it means you are just about unfinancial and either you will get no more newsletters or we will invite the heavies to visit you. A simpler alternative would be to renew for several years in one hit. Saves hassle, cheques and postage and you should see the big smile on Bernie's face!

HISTORIC DVD'S. For those who didn't make the Jubilee Bash on 17 November, there was a DVD produced for each member present. As is inevitable, there were some extras produced, and these are available on a first come, first served basis for \$10 each which will cover

THE OVERHEADS

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postage and handling. If you haven't got it already, get your piece of OTC history!

PRESIDENT'S MESSAGE : A Happy New Year to all and lets hope that 2007 brings good health and fortune to all!

Firstly congratulations and thanks to Will Whyte and Peter Bull for their excellently organised "Golden Anniversary Function." This also goes to the many who helped to ensure its success. The only complaint was the time was too short?

In looking to this year, we are endeavouring to maintain low costs of functions and a central location, not an easy task in these times. The solution is bigger attendance as this defrays the room cost. Another problem on the horizon is a venue for our committee meetings. Presently , through Will Whyte, we are able to meet at OPTUS Nth Sydney but they are moving to Macquarrie Park at Ryde in this coming July hence our need. If any one can offer assistance, please let us know.

We are also arranging a visit to the "Southern Cross Fibre-Optic Cable Terminal at Alexandria for those interested. This will be an inspection and morning tea only due to its location.

The AGM this year is set down for Friday the 15th June 2007 and we look forward to a good attendance and the venue will be in the next Newsletter.

Anyone with ideas as to functions or improvements please let us know by telephone or internet as our success depends on your contributions

Sincerely

Henry

SA XMAS GATHERING: at McLarenvale Pub held on 30th Nov 2006. Present were John McGregor (President), Max Lang, Mike & Margaret Richardson, Ernie Barrett, Harro Krause & Mike Kay.

Apologies received from Harry Stone (flu) Dave Herbert, Paddy Wilkinson and Dick Inwood.

A minutes silence was observed in memory of Dave Meldrum who passed away since our last meeting of a severe stroke. He will be sadly missed by a large number of fellow operators throughout the Coastal Radio Service as he was such an excellent operator and wonderful fellow to work with. Memories of his past efforts will go on forever with some of us. Paddy Wilkinson gratefully forwarded flowers to Darwin on behalf of our group for Dave's funeral and a collection was taken at this meeting from those present. Mike Kay and a waitress took photos of us gathered around the large Xmas tree in the centre of the dining area. A good discussion took place with Margaret showing no emotion at being the only female present. It was good to have her there to keep an eye on us! A group of Englishmen were also there for lunch, they are here to see the "Test Cricket" match in Adelaide tomorrow & were enjoying lunch here and giving others a bit of entertainment as well.

Meeting closed at 2pm after another wonderful lunch with plenty of chatter and a few drops of fine local produce.

John McGregor President (for this term!)



Mike Howe, Mike Richardson, John McGregor, Ernie Barrett, Margaret Richardson, Harro Krause (owner & operator of VIA commemorative station), Max Lang

Fraternal Xmas greetings with a happy healthy New Year to all my old colleagues & workmates – 73s, 88s, Rbp and diddly-da-de-dah. (SK) cheers & beers. Harry Stone

THIS ARTICLE ON ROSS McDONALD Well blow me down and away

From John Walker.

I remember the family very well when they were in Melbourne. Ross's father, George

worked for OTC in the financial sector. (He was with OTC in Fanning Island). A very well liked and respected colleague and a complete gentleman to boot.

Older son Geoff, (Ross's brother), also worked with OTC for a short time and completed the cable course and was stationed at Suva and Fanning Island for some time. Geoff eventually left OTC for various reasons.

Geoff and I, along with Keith McCredden, completed our technical studies in Melbourne together which finished around about 1959. We were all very close friends at the time.

Geoff and Keith went into the Cable service and I went into HF radio.

I remember Ross in Melbourne when they came back from Fanning. Gee he was just a young boy. I have vague recollections of his sister but I suspect she was in boarding school at the time. Ed Willingham was also a friend of Geoff's. If anyone can be able to get in touch with Ross and let him know, I would be very interested to hear what happened to his brother Geoff.

Geoff's departure from OTC was a strange occurrence of which I know very little. I have not heard from him since. I did hear a rumour once that he had died early. I am sure Keith McCredden and Ed Willingham would also be interested.

Regards to all ...Life is great.

John Walker

Some might be interested in this story from the Fiji Times (Sunday, October 22, 2006)

ISLAND BOY SETTLES IN SOUTH SEAS

by Monika Singh

Fanning Island, in what is today Kiribati, where Ross McDonald frolicked as a 11-year-old. IMAGINE being 11 years old and living on an almost uninhabited island and not having to attend classes in school every day?

Well, Ross McDonald lived this fantasy that almost every 11-year-old kid dreams off.

He was born in Perth, in Western Australia, and his family moved to Fanning Island in the Central Pacific when his father, who worked

for Cable & Wireless, was transferred there in 1955.

Fanning Island, then part of the Gilbert and Ellis islands, is today a part of Kiribati.

"Our ship passed through Fiji, Tonga and Western Samoa on the way there and this was my first experience of the Pacific," he said.

His family spent two years on Fanning Island.

"It was tremendous. You must remember that we are going back 50 years in time and it was a very remote and isolated island and we just had a great lifestyle there," he said.



Ross McDonald

"There were only about a dozen or so expatriate families for Cable & Wireless there and about 200 Gilbertese people on the island.

"Interestingly, the island was owned by Burns Philp whom I later came to work for.

"Burns Philp had a copra plantation there and the supply ships used to come in about every three months to bring food and supplies for Cable & Wireless and the plantation."

He said his school days were different because on Fanning he did two years of schoolwork via correspondence.

"Probably the best thing about that was my mum and my late sister, Beverly, used to instruct me on my schoolwork and instead of doing six hours of school work a day, I would be off after about an hour's work in the

morning and spend the rest of the day outside roaming around," he said.

By outside he means he would be fishing in the lagoon or sailing an outrigger canoe that his father had made for his brother Geoffrey and himself.

"It was made in the traditional way with the boards bound together with coconut twine," he said.

He said they had hours of fun on that and used to sail everywhere.

His mother always worried when they were late home that something had happened to them.

Mr McDonald recalled exploring the bush or swimming in the lagoon with the other expatriate children as well as Gilbertese children.

He said the Gilbertese taught him many skills, including how to cut toddy from coconut palms.

He would climb the smaller palms to do that, giving the toddy to the Gilbertese.

"It was a wonderful lifestyle for a child because we had complete freedom and we roamed around the island having fun, and of course, some times getting into trouble, doing just about everything we could imagine."

He said there was no danger and none of the pressures that modern lifestyles and cities now place on children.

Even though Mr McDonald had two years of school through correspondence he feels his education was not affected because once his family returned to Melbourne he easily got back to his normal studies.

He said he thought the experiences he had through travel and being on Fanning Island had helped him mature faster than other children and that helped him when he returned to formal education.

"When I finished school in 1959 I was the dux," he says proudly.

The McDonald family came to Fiji in 1960 and since Mr McDonald had just finished

school, his father said he had to get a job to earn a living.

"Dad got me a job at the ANZ Bank in Suva. That was when the ANZ Bank was the smallest bank in Fiji. "I started as a bank clerk and my salary was 416 pounds a year, which is \$832," he said. The ANZ Bank in Suva in those days was located in what is now the New Peking Restaurant. "I think they had about 16 or 17 staff. During my time with the bank, I had the chance to work in Lautoka several times and experience the life in the West in the days when CSR (Colonial Sugar Refinery) dominated the sugar industry.

"And then in 1966 I decided to leave the bank as I was not happy as I felt there was a lack of incentive and reward for doing better," he said.

However, before Mr McDonald left the ANZ Bank, he met his wife, Sonia, who was working for the Bank of New Zealand in Suva.

They were married in 1965.

"Sonia was born in Fiji, and on her mother's side the family came here in the late 1800s.

"They were cane farmers and banana growers on the Wainibokasi River.

"Her father came to Fiji as a 12-year-old with his parents in 1916 when they took over the lease of the Pier Hotel in Suva, which later became the Garrick Hotel."

Mr and Mrs McDonald have a son, Owen, who is a lawyer in Brisbane.

He is an all-round athlete who has represented Fiji.

"In his younger days he represented Fiji in tennis at the South Pacific Games in Tahiti and the Mini South Pacific Games in Tonga, and now plays very good golf," said Mr McDonald.

As for himself, Mr McDonald said he enjoys following all sports and watches many sports on television.

He plays golf with his friends and finds that a great form of relaxation.

"In my younger days I used to play tennis, cricket and a lot of squash.

"I now walk from time to time for exercise and keep myself content with golf," he said.

He likes to read, preferring historical books and biographies, keeps in touch with international news through TV and radio and loves to tend to his small orchid collection.

"I am very keen on orchids. We have a small collection of orchids at home that I watch over," he said.

He said that watching a new orchid bloom was a most exciting experience of nature at its best.

"I am a trustee of the Anglican Church so I get involved in church matters. I am involved with other community organisations," he said.

SOUTHERN CROSS CABLE MEETING (June 1998)

By Tom Barker

The last ten years of my career were spent as the agent for WorldCom, responsible for its business interests in Australia, New Zealand and Hong Kong. During that time, the ownership and management of the company changed many times, culminating in its now-infamous (and fatal) acquisition by the Bernie Ebbers owned LDDS Group.

This story is about the last international meeting which I attended for WorldCom, the Southern Cross Cable Network meeting in Nadi, Fiji, in June 1998, at the Sheraton Royal Denarau Resort Hotel, which is the same venue where the Pacific Nations Heads of Government meeting took place in October 2006. The Southern Cross cable was a Telecom New Zealand initiative and TNZ had a 50% stake in the venture, with Optus having 40% and WorldCom 10%. There are two Australian landing points, two New Zealand ones and four in the USA (two in Hawaii and two in California).

One leg of the cable also lands in Suva and this was a major political coup for Fiji as it was originally planned to serve Fiji via a submerged branching cable splitter, so it was agreed to hold this important meeting in Fiji to celebrate the significance of the event to that country. At that time, WorldCom had been

expanded by Bernie Ebbers' acquisition of several other companies, including some in the UK and its management structure was very hard to comprehend for people like me, a remote agent. I was told to attend this meeting as I was the agent for both Australia and New Zealand and familiar with people in both the TNZ and Optus organisations. The meeting was also to be attended by four other WorldCom people, all cable engineers from the US and UK, most of whom were known to me.

I arrived in Fiji the day before the meeting and after checking in at the hotel, I went down to register, said "Hullo" to the TNZ and Optus guys and went looking for the WorldCom men, who had just arrived from New York and London. I then went to have a chat and a drink with other attendees I knew, from Telcos all over the world.

At this point I was sought out by the Chairman of the meeting (from TNZ) and asked who was the senior member of the WorldCom delegation. I replied that I had no idea, but it certainly wasn't me (not being a company employee) but I promised to find out for him. The reason for his question was that the meeting had become an important political event and the welcoming address was to be given by the Fiji Prime Minister, (General Rambuka), instead of the CEO of Fintel. His address was to be followed by speeches by the TNZ chairman, then the senior delegates from Optus and WorldCom, who would also be asked to participate in radio and TV interviews.

I found the WorldCom engineers and explained the situation, asking them "Who was the senior man?" They were as uncertain about this as I was, so I left it to them to sort out and let me know, ASAP! Shortly afterwards I was told that they had decided that it was ME! I laughed out loud when they told me this, but I understood their difficulty, they were all afraid of saying something which might be embarrassing and a problem for them at headquarters, whereas I was only an agent and politically expendable. I said I was quite prepared to do as they said and I went off to tell the TNZ and Optus people this.

The Chairman said “That’s good, Tom. In that case I want you to help me by looking after the Prime Minister, as we have a lot of organisational things to do and I can’t spare anybody to keep him comfortable during the proceedings”. I agreed, of course, and in due course I was introduced to General (now Prime Minister) Rambuka, who is a very affable character, with an avid interest in Rugby, which he played while studying in England. While I’m a rugby league man, myself, I have met and talked with the All Blacks team and the Fiji Rugby Sevens team members, at Hong Kong Sevens matches (which I have often attended as a guest of TNZ, a major sponsor of that event). The Prime Minister and I got along quite well.

The opening ceremony and interviews all went

blocked off by the General’s armed bodyguard (complete with AK47’s). The photographer waved his arms at people at the ends of the picture and asked them to move in or down, so he would not miss anybody.

This provoked the Prime Minister to turn to me and say “ You know, Tom, this reminds me of a Heads of Government Meeting I attended in Geneva. We were all assembled like this, on the steps of the Palais Des Nations, for an official photograph and the cameraman was having the same problem. He said “ Please move over a bit, Mr Arafat, just a little please, Sir” and he did. I turned round to Bill Clinton and I said “You should hire that guy, Bill, he’s the only man that Yasser Arafat takes any notice of”.



The offending photograph!

off as planned, without a hitch and then, after a morning tea/coffee break, we were all asked to assemble on the front steps of the Hotel, for an official photograph. I was told to stand in the front row, between General Rambuka and the senior Optus delegate, Alan Petts, with the TNZ Chairman, Ken Benson, on the other side of the Prime Minister.

The party filled the whole of the steps area and the photographer, who was perched on a stepladder in the middle of the driveway was trying to get us all in the picture. The usually busy hotel entrance driveway was effectively

I swear this is a true story.

VAMPIRE PALACE: As I left the Blood Bank in Clarence Street recently, I was confronted by the smiling face of Vince Donoghue who was willing to make my next appointment for me (so I wouldn’t forget to come in again). As I was unsure of my commitments, I didn’t take up his offer, but did chat with him. It appears that his daughter is in the administration area ‘upstairs’ and had prevailed upon him to attend for a “few days per week”. This, of course, has grown to five days but he amazes people there with the

number of people he knows, many of whom are ex-OTC. OTC personnel were great supporters of the Blood Bank. Thus there is an invitation to all members to donate, particularly at Clarence Street and chat to Vince when leaving. (He is also close to the Bowler's Club so we expect to see him on 16 March!)

WHEN INTERNATIONAL CABLES WERE REALLY IMPORTANT

By John Phillips (Editorial Apology: I wanted to put this in time for Christmas but it kept getting bumped out by other material.)

When I was researching the content for the OTC Bi-Centennial Exhibition "Settlement To Satellites", I came across this amazing over-the-top (to our eyes) Editorial from the British newspaper The Daily Telegraph for Christmas Eve, 1872. It sings the praises of the new electric wire and publishes Christmas Greetings to the motherland, telegraphed over the international cables from English residents around the World.

Here is part of that Editorial and some of the messages. Read and be transported to the heyday of the British Empire. God is in His (Christian) Heaven; Might is always Right (as long as it is used to subdue Pagans and their ilk); and there is that very English fascination with the weather!

London, Wednesday, December 25, 1872

"We can joyfully point to a phenomenon which demonstrates how year after year the gifts to which we have alluded become richer and worthier. The nations can now speak with each other in one electric tongue which outstrips time and annihilates space: but it is the Christian nations to whom that art has been vouchsafed, and we see Christmas Day hailed by a new and marvellous concourse of thought and fellowship as these simultaneous messages are in one moment flashed hither from the chief cities and seaports of the World.

In the columns of The Daily Telegraph this morning there is instant interchange of speech with every part of the wide empire of the Queen (Victoria of course!). The "islands of

the sea" send us Yuletide greetings: the rocky hold of Gibraltar speaks from the gate of the Mediterranean: the sentinel fortress of Malta gives us word of its Christmas Eve doings; the solitary walls of Aden, fervid with fierce sunshine waft us a faithful message. India, from her stately capitals of the East and West, from her inland jungles and hills, from sacred Benares and the seats of ancient idolatries, salutes the English Holy Day. Singapore and Ceylon join in the greeting for themselves and for the islets of the Oriental Archipelago, where the eternal sapphire sky is shining on palm grove and jewelled strand. In the same swift electric breath, China speaks with us, sending her errand faster than the sun can follow; and the youthful empires under our feet, whose night is our day, and whose summer is our winter, make nought of space and time and calendars by this same magic of the wire. We read "good wishes of the season" from Melbourne despatched with many a patriotic heart-beat from the swift-sprung towns and sheep-walks of that mighty island-continent where our children are founding a "Greater Britain".

Under what tracts of wild water, over what desolate waste places of the earth, from what unsubdued regions of solitude or barbarism, and through what swarms of pagan peoples, these magic nerves of our modern life have flashed their fraternal messages. We realise the marvellous value of our new possession most thoroughly when, as this morning, it enables us to present the civilised earth speaking at the same time, in the same words, of united and brotherly feeling.

Such a wonder is this electric speech, not yet forty years old, and each day developing fairy-like powers of surpassing marvel at our command, is no merely material help. It is a magnificent step in the development of man's history, which has proceeded steadfastly, like the unrolling of a golden scroll or the weaving of a splendid web, from the event this day celebrates."

Messages From English Residents Around The World

Constantinople

“Political affairs are, for the moment, without incident: but people live in a state of suspense, not knowing how soon the Sultan may proceed to new Ministerial changes. The disposition of the Grand Vizier, Mehmet Rhendi Pasha, is the only news worth sending. It has rained here for the past three days: the wind is from the West.”

Cairo

“On behalf of the English population here, I transmit with hearty good will the compliments of the Season to the people of Great Britain.

Sir Bartle Frere and his suite, comprising the English Slave Trade Mission, left today for Suez, enroute to Zanzibar....

The latest advices from Sir Samuel Baker are to the 7th of November, from Ackadia. They report that his expedition has sustained a reverse, being compelled to return to Zarbiet Fatookro after several unsuccessful attempts to overcome the resistance of the natives beyond Gondokero.....

The weather in Cairo is fine, but cold. The first rain of the season fell last night.”

Aden

“The small and isolated English population here desires the expression of its wishes that everyone at home may enjoy a Merry Christmas and a Happy New Year. Christmas will be celebrated in Aden by a Masonic Ball, despite the excessive heat of the weather, which brings the temperature in the house to 73 deg in the shade.

Events here are few and unexciting – the most striking of late days being the temporary sojourn of the Rajah of Rampoor and his numerous suite, going in pomp on a pilgrimage to Mecca. The country around the Residency is tranquil.”

Bombay

“The Anglo-Indian community, although they pass their Christmas without the family faces, the roaring fires, the ruddy cheeks, the mistletoe, and the romps, in absence of which the season seems not the same, may be trusted not to let the occasion pass without seeking

and enjoying all the consolations they can find for their hard lot of banishment .

A native who is supposed to have taken a leading part in the Mutiny has been arrested here. Bombay fine, temp 80deg.”

Shanghai

“We wish the dear old country a Merry Xmas and a Happy New Year. The English residents have taken the holiday time by the forelock and are enjoying themselves in shooting and pleasure trips up the country. Weather fine and fresh.”

Melbourne

“Compliments of the season to all in England. Nothing is stirring here, all being engaged in holiday-making and preparing for festivities in the old English style tomorrow. Weather fine. Temperature 67 deg. Fresh Southerly breeze.”

Adelaide

“A Merry Christmas to all in England is sent by the good people of Adelaide, who have entered upon the enjoyment of a general holiday for the season’s festivities.

The Adelaide and Port Darwin land telegraph is working splendidly. The Legislature has voted to Mr Todd a bonus of a thousand dollars, and six thousand more are to be distributed among the officers and men, for their successful construction of the line. The harvest in South Australia has been magnificent. The weather is unseasonable and cold, and the temperature is 63 deg.”

CRICKET. *By Gordon Cupit*

In a recent article in the ‘Bankstown Torch’, Brian Mullins, Curator of the Telstra Historical Museum at Bankstown stated :-

“In another era, the progress of Australia’s cricket players abroad has always been eagerly anticipated news back home.

But long before satellite broadcasting, a dedicated network of telegraphists and radio operators in Sydney brought the game to its fans through the concept of ‘synthetic cricket’

Primarily during the 1930s and 1940s, reporters at London's Lords Cricket Ground would send ball-by-ball descriptions of play via morse code to telegraphists based at the Sydney Post Master's General office at Martin Place.

Staffers from, the Australian Broadcasting Corporation would dictate the telegraphs line by line via telephone back to the studio, where the account would be read by an announcer.

Sound effects of the bat hitting ball were provided courtesy of a pencil and an upturned coconut shell.

News from the field would reach the radio studio within an amazing 45 seconds.

Brian recalls listening to the synthetic cricket as a child.

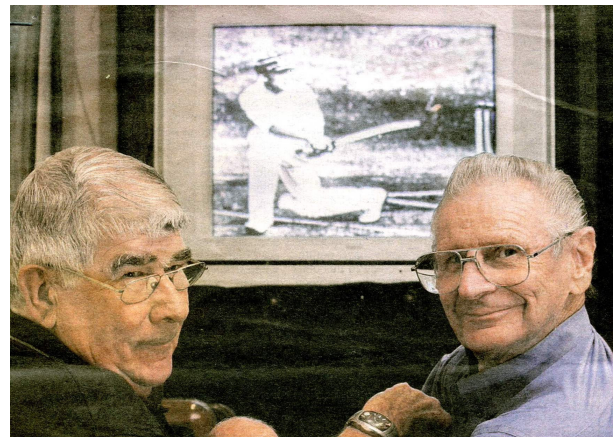
However, in the immortal words of the Goon Show "This is where the story really begins --

The story in the main is correct, but what really happened was the news was transmitted from the UK by Beam Wireless by taped morse transmission at approx 400 words per minute. At the time this transmission was first transmitted to the AWA Receiving Station at Rockbank in Victoria on line to the AWA Melbourne Central Radio Office which had a direct line linked to the AWA Central Radio Office at 47 York street Sydney. As the transmission was in the Peak London to Sydney period, it had to be mixed in with the usual public messages, all traffic was received on tape by means of an undulator. To signify that a cricket message was coming through, a hand signal 'CKT' preceded the transmission. The receiving position was manned by a Senior Telegraphist. He in turn alerted the Telegraphist gumming the tape to a brown paper sheet and immediately gave it a Service Clerk who manned a direct line to the ABC. He read it from the undulator tape to the studio. The message was then typed up and delivered by Beam messenger.

Commentary from London was not sent for every ball, or single runs, but only when there was something special in the play, or at the end of each over, with commentary of of score

and anything special in the over. The rest was made up in the broadcasting studio

If the message was addressed to a destination other than the ABC in Sydney, it was also delivered by Beam messenger. If the destination was outside Sydney, it was taken by a messenger to the Cable Clerk at the GPO in Pitt Street for forward transmission by a PMG Telegraphist.



Peter Hack & Brian Mullins at the Bankstown Museum

LONG DISTANCE TELECOMMUNICATIONS MEDIA (A sequel to the 1963 Paper)

by Cyril Vahtrick

My earlier article(which appeared in the last issue), from a paper which I wrote in 1963 was, of course based on OTC experience but was deliberately kept general. Back tracking a little on some of the history in order to bring OTC itself more closely into the overall picture, the following article aims to show the involvement of OTC in the saga of radio versus cable, showing that this has continued on right up to the present .

Immediately following the creation of OTC, major plans for upgrading international telecommunications services were put in hand. The long standing submarine telegraph cable system, which was owned by Cable & Wireless (UK) and the radiotelegraph and radiotelephone system (which had been owned and operated in competition by AWA), were both still using mostly obsolescent technology and the services relied heavily on the skills of operators. Signs were that there had been very little capital expenditure on these facilities for a considerable period.

With the formation of OTC, there was immediate focus on the future. It was recognized that the main practical scope - at the time - for technical development and increased capacity for international services rested with improvement and expansion of the short wave (HF) radio services, with the cable system capacity remaining virtually unchanged. The development of Teleprinter-on-cable (TOC) did, however, allow for some improvement in traffic handling on the cable systems.

In the middle 1950's, OTC made substantial improvements to HF technology, with greater stability and precision in the radio frequencies being used; with greater linearity permitting single sideband and independent sideband operation; with greater range and flexibility of frequency usage (particularly by transmitters); with more versatile rhombic antennas and with automatic error correction. These led to an expansion of service offerings including telex and private leased circuits.

During all this period, telephony was playing only a very minor part in overseas telecommunications because of the poor quality and reliability of this service over HF radio. In addition, the larger frequency spectrum occupation of telephony had quickly led to international frequency congestion.

The introduction of repeatered coaxial submarine cables (beginning with TAT.1 across the Atlantic in 1956) immediately changed this situation for the participants in that cable by providing the quality of telephone service not available on HF radio. Across the Atlantic, telephony quite rapidly became the same dominant service as it was in the domestic sphere and the whole nature of overseas telecommunications took a different turn, with the availability of error-free data and other services on these cables as well.

The completion of the COMPAC cable in 1963 also brought Australia in cable contact with North America and Europe, resulting in our telephone and other usage growing on a scale exceeding even the most optimistic predictions. On the other hand, this mounted concerns that, particularly in Australia's case, there was the threat of total chaos if there was

a failure in this single cable lifeline. It was very soon realized that HF radio, with its limited capacity, could not continue to be viewed as a realistic backup to this vital national service.

Plans were started to establish a "ring main", accessing an alternative cable route across the Pacific by laying the SEACOM cable, interconnecting with other cables at Guam. Even so, this was a very costly proposition considering the very long distances around the Pacific.

When the COMPAC cable quickly reached saturation and with demand still accelerating, the possibility of communicating via satellite started to hold particular interest. The technical feasibility of communicating via satellite had been established in the early 1960's and preliminary costing showed that, across the Pacific, a satellite communication system could be established for significantly less capital outlay than for a second cable system.

OTC took the decision to participate in the development of a global satellite telecommunications system and became an active member of INTELSAT, the international organization set up for that purpose. After a special purpose earth station was established by OTC at Carnarvon, WA in 1966, Australia was well on the way to making telecommunications services available via satellite. By 1969, satellite connections were available, in parallel with cables, via our earth station at Moree to all countries surrounding the Pacific and via Ceduna, across the Indian Ocean to Europe and Africa.

Extremely rapid technical developments in satellite technology, both on the ground and in space, soon led to the prospect that radio - this time microwave radio via satellite - would again supplant submarine cables as the most economic medium for overseas telecommunication services.

OTC had to face a decision on this question during the 1970's when experience showed that there was no slowdown in growth of demand for services and therefore substantial additional capacity would need to be planned

for. Detailed planning figures had indicated that the cost of satellite expansion would be lower than submarine cable and it seemed clear that satellites had the potential capacity to meet all our rapidly expanding requirements. This led to the important question - with the limited capacity of the COMPAC cable quickly becoming more irrelevant in the context of the total demand, could OTC adequately meet Australia's long term overall overseas telecommunications requirements by opting for a "satellite only" solution?

While considerable advances had been made in submarine cable technology with the introduction of solid state repeaters, resulting in an order of magnitude increase in capacity, this still fell short of what was available via satellite. Proper television was also not available on such cables. Nevertheless, cable ownership presented a more secure picture for the future, considering that Australia only had a minor (albeit important) voice in INTELSAT.

Therefore, OTC made the tough decision not to abandon plans for cables and to base the future on a combination of cable and satellite systems.

In the early 1970's OTC decided to go ahead with another trans-pacific cable, (ANZCAN) as a joint venture with a number of other parties, but with OTC as the majority shareholder. So the interplay between radio and cable continued.

With hindsight, this appeared to be the right way to go. The decision to place the very large order for ANZCAN, followed by orders for additional cables, stimulated further cable developments, eventually leading into the optical fibre era. Suddenly it started to appear that optical fibre systems, with their almost unlimited capacity, could provide all necessary international services.

There is, however, one service which the world has become accustomed to - global television coverage. With mobile satellite earth stations it has become possible to bring to homes on-the-spot pictures of wars, sporting events and other sensational news.

This universal coverage belongs firmly in the satellite camp and seems unlikely to be replaced by terrestrial facilities in the foreseeable future.

There was also a further development in the satellite environment. The idea of being able to contact anybody in the world on their own private phone - wherever they may be - could be done via satellite with technology being developed. Systems of multiple satellites in low earth orbit (LEO) were launched by private consortia, designed to provide personal service anywhere on the globe. Perhaps they came a little before their time and seem to have run into financial difficulties, maybe because of the incredible rate at which a similar service has developed via the now ubiquitous cellular radio systems..

Giving satellites their due, it has to be said that there is an inherent lack of completeness with the cellular radio system because there is still no coverage over the majority of the world's surface where population density is very small, making it uneconomical to establish the very large numbers of cellular radio stations which would be required to obtain overall geographic coverage. Saturation of cellular frequencies could also be a problem in this context.

There is one area of telecommunications where satellites have come to prove themselves and stand alone - maritime and other similar applications. While progress to wean shipping agencies away from Morse operation on MF and HF frequencies was initially painfully slow, the advantages of satellite operation, especially with the extreme accuracy of the GPS global positioning, satellite systems are now almost universally accepted.

Perhaps we can therefore hope for a "peaceful coexistence" between cable and radio in the future provision of international telecommunications services.

So much has happened in international telecommunications in the last 50 years that it would take much more time and space to put down even all the most important events. A whole book could be written about the arrival of computer technology on the scene, starting first in

the mid 1960's with the senior service with a computerized system to handle international telegrams, but soon encompassing all forms of switching and moving on to today's information technology explosion via the Internet. After all that, it is hard to speculate what the next 50 years might hold!

(Editor's note. ACMA (The Australian Communications and Media Authority) are establishing submarine cable protection zones off Sydney and Perth where most maritime activities are severely restricted. This is not before time but we are now very dependent on our submarine cables (one of which is Southern Cross). Due to the low latency requirements of Internet protocol circuits, cable is the preferred medium and so about 99% of Australia's external traffic now flows via submarine cables.)

THE ROCKING TOWER:

(Dennis Grant)

At the time of construction, the antenna drive mechanism at Moree (1967) included the then biggest hydraulic rams in Australia. There were two of these 11 inch rams for the declination (north/south) movement of the antenna. The Hour angle movement was by means of four small (five horsepower) hydraulic motors. All of this was driven by one of a pair of hydraulic pumps running 3600 pounds per square inch pressure, quite high for those days.

The antenna was built on top of a four storey concrete tower, which for stability in the black soil of Moree had piers going down some ninety feet to bedrock. Although I was not witness to this something went wrong with the tracking system which developed an oscillation and drove the antenna first one way in Hour Angle, then the other, then back and forth and so on. Normally this would not have been an issue except that the frequency of oscillation of the system coincided with the natural resonant frequency of the tower/antenna combination of about one Hz. Before anyone realized what was happening the tower was rocking back and forth about one metre, as observed by the plant officer

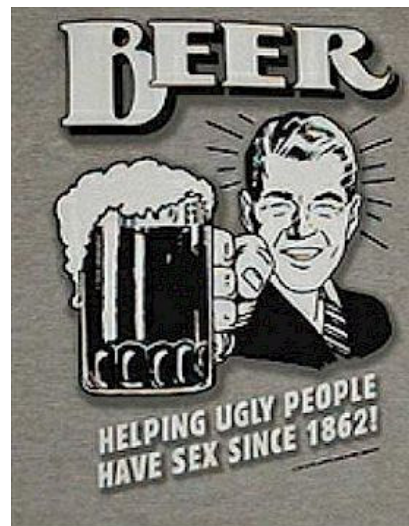
who raced up to shut the hydraulic pumps down.

VALE:

Information is that Phil Chapman passed away recently after a long illness.



Interior shot of new Airbus "Economee" airliner



THE LAST WORD: It always gives me great pleasure to get to this point in a Newsletter. It means I can put this one to bed and move on to other newsletters and other documents it now seems to be my lot in life to prepare. Enjoy!