COMPLIMENTS OF THE SEASON TO ALL
FROM THE STAFF AT HEADQUARTERS

Telecom news

No. 70

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Bert says "Merry Christmas, Mates"

In nearly 50 years of scrutinising photographs for publication, your editor has seldom seen a more expressive face. It seems to say that Australia is a great place to live, Telecom is a great mob to work for and here is a man for all seasons.

It belongs to Senior Lines Officer Bert Kent who according to all who know him is a remarkable man, inspiring loyalty and admiration from his workers and well-known for great community work.

When it was known that Bert would lead a team to dismantle disused aerial lines in the north of the State, half of the line staff of Telecom NSW volunteered to join him. (See story Kent's Commandos — P 6-7).

"If you work for Bert," his staff say, "you become an extension of his family."

Bert Kent and his wife Barbara, with a family of five, have been involved with St Vincent de Paul in Orange for many years. They run a half-way house in the district. Bert, say his colleages, gives up much of his time visiting sick people in both Orange and Bloomfield Hospitals, with special attention to those who don't have visitors.

We asked Bert to provide the 1981 Christmas message. Here it is: "I hope everyone of you has a wonderful Christmas and a prosperous New Year. All the best!

"I want to emphasise the safety angle to all Telecom employees. I see a lot of accidents happen that are sheer carelessness. Let's make 1982 an accident free year."

Enter, the clever COMMANDER

Telecom last month introduced to Victoria and Queensland the Commander — a new world-class telephone system.

The Commander N series is an advanced telephone system for small business such as manufacturers, hospitals and Government departments.

The Commander range is the first step in the introduction of the small business systems. The systems Telecom has chosen are a Japanese system proven in the American market and a newly developed European system. They will be provided by Standard Telephones and Cables Pty. Ltd. (Sydney) and Siemens Industries Ltd. (Melbourne).

The Commander, which will become available to the other States in March next year, comprises four models which range from:

- N 308: up to 3 lines with up to eight stations.
- N 616: up to six lines with 16 stations.
- N 1236: up to 12 lines with up to 36 stations.
- N 2260: up to 22 lines with up to 60 stations.

The first of the S series will be available in July next year — the 2-7 and 4-16 models — and the 6-20 in June 1983.

The new system is the first of a series designed to streamline business activities, save time in using the telephone and give the individual user full benefit of its versatility.

It can be purchased outright or rented from Telecom and can be a total system or a supplement to an existing telephone system.

At each station on the Commander system, the individual user can have —

- **abbreviated dialling for frequently called numbers;**
- **in-office paging;**
- **conference call facility;**
- **do not disturb status;**
- **hot lines between executives;**
- **multiple line answering;**
- **alternate point answering;**
- **last number redialling;**
- **on-hook push button dialling.**

The flexibility of the system is such that the following features can be added —

- **individual station access restrictions;**
- **hands free operation;**
- **background music connection;**
- **external alarm connection;**
- **external paging connection.**

The modular construction of the main equipment unit enables a customer to instal only the capacity required as it is needed.

This avoids a large capital outlay initially to provide for future expansion and expensive equipment is not lying idle waiting for a business to grow.

The Australian content of the new systems will be 60 per cent or better within two years. This level of Australian content has been made possible by the size of the orders which are expected to total $34 million in 1981/82.

Some of the equipment they will supersede has only about 35 per cent Australian content.

Although the small business systems cannot provide the full facilities of a PABX, their features add up to fast and efficient communications. Installation and maintenance will be facilitated because of fewer wires between extensions.

Telecom expects that apart from businesses and professional offices other customers such as schools, hospitals and even home owners would find the new systems ideally suited to their needs.

They are competitively priced with Telecom's present range of small manual switchboards and intercom systems.

Commander will give Telecom's customers the benefit of new technology because they are more efficient and better value than the range currently provided. Although they are small systems, they provide highly attractive communications facilities.

● The Commander N308 — It has up to three lines with up to eight stations.

CHOGM — a Telecom triumph

CHOGM has come and gone but the story of Telecom Australia's massive involvement in meeting the complex communications requirements of the important international gathering has still to be told. This will be done in picture and story in our first 1982 issue. It is a story of three years planning and the biggest and most successful non-emergency operation Telecom has ever been involved in.

New world-class telephone system

The other 3 models . . .

FAMOUS EXCHANGES CLOSE IN SYDNEY AND MELBOURNE

Functions were held in Sydney and Melbourne recently to mark the closure of two of Telecom's best known exchanges.

In Sydney the City North Telephone Exchange role has been officially taken over by the Pitt Exchange while in Melbourne the City West Main Trunk Exchange (MTX) is to close late next month.

The news that the City West MTX was to close prompted Graeme Taylor, Victoria Engineering Department, to organise a reunion — or an exchange wake — for past and present staff.

Sydney's City North Exchange closure was also marked with a function for past and present staff to farewell the exchange which had been an important link in the growth of Sydney communications.

In November 5 at 11 a.m. Mr City North (Herb Mulholland) and Arthur Calder, a member of the 1919 roster, pulled the knife switch to officially close the exchange after 61 years of service.

The Chief Manager Operations, Cec Way and Chief Manager Commercial Services, Lex McPherson, represented Telecom management at the smorgasbord at Pitt Exchange.

Another member of 1919 staff roster, Bert (Snowy) Standford cut a celebratory cake with the words in icing "City North, 61 years of service, 1920-1981."

Because of the relatively short notice of the closure of the exchange it was not possible for all past and present employees to attend. It is proposed to hold a reunion of past personnel about the first week of February.

Melbourne's City West MTX, while not as old, is as historic. Work on the installation of the Melbourne Semi Automatic Trunk Exchange began in 1939 and despite the outbreak of WW2, Stage One was brought into service the following year.

This was a suite of modern cordless switchboards with associated motor uniselector switching equipment to handle interstate trunk traffic.

Installation work was also proceeding on the intrastate 2VF exchange and also at country centres where 2VF equipment was required.

Stage 2 was brought into service in September 1941 when selected country centres were converted to 2VF working, creating history as the first motor uni selector equipped 2VF trunk service in the world.

The Trunk Exchange had now reached its capacity with four intra-state demand suites, a through suite, suspense suite, trunk inquiry suite, overseas suite, a multi-coin suite, plus ancillaried services and three interstate suites.

The last major installation was a locally designed suite of cordless positions and associated switching equipment for the trunk test room in 1967.

Direct dialling by Melbourne subscribers to Chelsea, Dandenong and Frankston was introduced in 1948 and later extended to Croydon, Mornington and Werribee.

In August 1953 transit switching equipment was introduced and any centre having 2VF signalling trunks into Melbourne were now able to call other country and interstate centres without the assistance of a Melbourne telephonist.

The official guests at the staff reunion for Melbourne's City West Main Trunk Exchange.

AND THE NSW LIBRARY!

I would like to bring to your attention an inaccuracy appearing in the October, 1981 "Telecom News", Page 4, in an item entitled "Computer Impact on Libraries".

In the final paragraph it is stated that only the Headquarters Library has access to the DIALOG and ORBIT systems and these are utilized by the State Libraries through them.

However the Telecom Library N.S.W. has been using these systems directly since May of this year and can offer all the services mentioned to N.S.W. users.

Marie Douglas, Librarian, Telecom Library N.S.W.

FRANKLIN'S NOW ROUND-THE-CLOCK

The Franklin Telephone Exchange became the 24-hour station for the ATD (Adelaide Telephone District) on July 6 this year.

North Adelaide and Edwardstown exchanges have reverted to normal day staffed exchanges from Monday to Friday. Functions previously carried out by them are now performed by the Franklin Exchange.

The changeover involved the removal and redesign of the alarm scheme used to extend alarms after hours.

Extensive use is made of alarm concentrators with an alarm display in the Franklin Exchange. This allows staff to monitor exchange and PABX alarms as they occur.

Teleprinters on the ADR-X network and a terminet for the ARE 11 network provide a backup to allow further analysis of faults, and facilities to reset some alarms.

After the Fault Despatch Centres close, customer complaints are received in the Franklin Exchange from 1100 via teleprinters.

Testing facilities allow most customers in the ATD to be remotely tested from the Franklin Test Desk.

The large amount of information required by the shift staff such as network details, procedures and call out details is stored on a small business computer.

An Apple 11 plus two disc drives has been used. This allows quick access and ease of updating of records on a regular basis.

The whole of the project was completed on time and involved a team effort which included drafting, engineering, workshops, project teams and exchange staff.

GMT gives way to UTC

New regulations adopted by the International Telecommunications Union will result in the use of Universal Co-ordinated Time (UTC) instead of Greenwich Mean Time (GMT) from 1 January, 1982, in all international telecommunications activities.

The time scale UTC was introduced throughout the world on 1 January 1972, and since then has been the basis for Australian Eastern Standard Time.

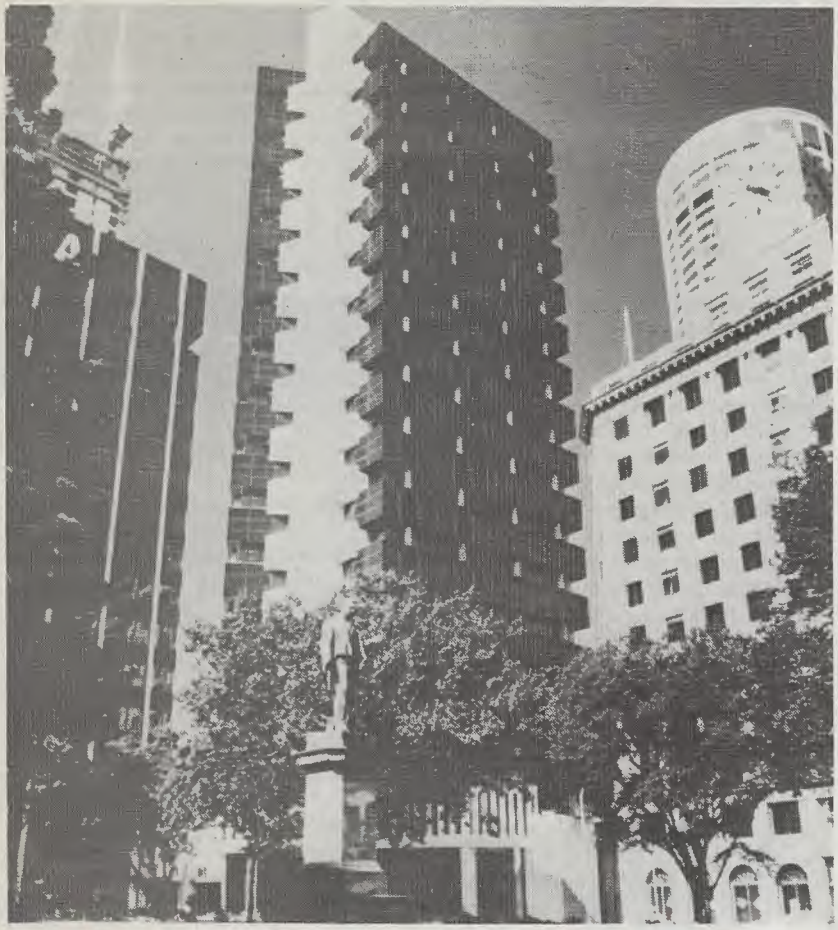
Greenwich Mean Time and Universal Co-ordinated Time differ in that GMT is based on the variable rotation of the earth with respect to the sun and corresponds to the mean solar time on the meridian of Greenwich; Universal Co-ordinated Time is based on an international atomic time scale.

The difference between UTC and GMT has not exceeded 0.7 seconds since 1972, and will never be allowed to exceed 0.9 seconds. This is achieved by periodic adjustments of one second in UTC.

The difference is important to those who rely on accurate time for their work, such as navigators and surveyors. Correction is available from the time service on short wave station VNG Lyndhurst, Victoria, to convert UTC to GMT with an accuracy of about 1/10th of a second.

SUPER FUND BUILDING 'AUSTRALIA'S BIGGEST PROPERTY BUY'

The Superannuation Fund Investment Trust's purchase of the CBA Centre in Sydney earlier this year was the biggest property purchase in Australian history.



The price of $124.5 million raised some eyebrows, and a few doubts about the building's value.

But the Trust believes it is one of the best investments it has made on behalf of contributors to the Commonwealth Superannuation Fund.

For a start, the real price of the building is more like $110 million because the $124.5 million is to be paid in three instalments over 26 months.

This leaves the Trust free to invest the deferred payments at about 16 per cent until they are due, while it also collects its share of the rent on the building's 42,000 square metres of office space and 10,000 square metres of retail space.

PRESTIGE BUILDING

This 38 floor prestige building is the Sydney Head Office of the Commercial Bank of Australia. A very new building, it is regarded as one of the three best office addresses in Sydney.

It has considerable potential for both income and capital growth because it was bought at an ideal time, just before large rental increases in the Central Business District of Sydney.

With virtually full occupancy guaranteed for the next 20 years, its office space is currently let at only $145 per square metre, while the market price has already reached $200-$240.

OCCUPANCY GUARANTEED

With no vacant space in the CBD and slack building activity, such industry publications as "Property Investor" are already claiming that rentals will rise to $320 within two years.

The initial yield on the building — that is, net rent over total price was over 5 per cent.

Deputy Chief General Manager Jim Smith who is a member of the Superannuation Fund Investment Trust which has purchased the 38 Floor CBA Centre in Sydney seen at left.

This compares with much smaller, older and inferior buildings in the CBD which have changed hands this year with yields as low as 3.8 per cent.

YIELDS TO DOUBLE

With rents predicted to reach $320 per square metre, the yield should more than double within two years and of course the capital value should also move up at least in line with the CPI.

The effective cost per square metre for the CBA Centre of about $2,100 compares favourably with other sales, for example the 18-year-old P&O Building at $1,750 per square metre and the Lufthansa Building at $2,000.

Both these are much smaller buildings.

Over a 10-15 year period, the Trust expects the building to return a better growth in income and capital value than could have been gained from any other comparable investment.

Applause for our fiddlers

The Telecom float in the recent Warana Festival procession in Brisbane had a decidely gold color about it. As befitting the "Olde King Cole" theme, the six fiddlers were dressed in gold and gold and red. The float, which was drawn by the Brisbane designed and constructed mobile touchfone, drew applause from the thousands along the route through Valley and City streets. Next year's Warana is being organised to complement the Commonwealth Games and Telecom already has its thinking cap on for a novel idea. The six fiddlers on Telecom's "Olde King Cole" float are (l to r) Lisa Godbold, Melinda Conlon, Robyn Smith, Kym Anderson, Jodie Anderson, Jennifer Rodgers.

NO JANUARY TELECOM NEWS

Telecom News will not be published in January. Watch for the first interest-packed issue around Feb. 1, 1982.

KENT'S COMMANDOS ATTACK POLES:

Master of the Tip-Toeing Cat, Tom 'Rusty' Rushton.

OVER one hundred thousand kilometres of pole routes remain in New South Wales — all of them unused and in a state of disrepair.

Complaints from the public have poured in for the best part of twenty years — cattle and sheep get tangled in the trailing wire, the route is an ecological eyesore, and so on.

Telecom has also had its problems with these disused routes. Apart from the high cost of maintenance, the theft of the overhead copper wire has created increasing problems.

So early this year, a special team of volunteers was set up to dismantle the pole routes.

Twenty-eight men from all over the State started work in Tamworth, in the north-east.

Every day, an average of 126 poles are pulled down, but even at this rate, it is expected to take another seventeen years before all the poles are down.

When the team arrives at its location, the route is first inspected by the Senior Lines Officer to assess any electrical hazards. Then the route is isolated.

. . . and 17

The ABBEY crew are first on the scene. They undo the braces and combiners and cut the stay wires.

The galvanised iron and copper wires are then separated each side of a pole, and the cross-arms removed.

Next on the scene is the wire recovery truck. Two men feed the wire as it is coiled on to the drums and the feed lines are also controlled from behind.

After tying off, the rolls of wire are removed and deposited on the truck bed — copper for recycling on one side, galvanised iron on the other.

The last thing to be done is the removal of the poles.

This is done by either Case tractor or caterpillar.

Bert Kent, SLO, is the leader of the team.

Members of the special team back row: Kevin Battersby, Fred Richmond, Ken Dean, John Montgomery, EPM St. Leonards, Roy Shoveller, Wayne Rhodes, Tom 'Rusty' Rushton, Kevin Nickless, Steve Moxham, Tony Camm, Kevin Mills, John Fuller, Vince Trakcevski, Barry Morris, EPM Bathurst, Bob Cruickshank, Larry Warrender, Neville Harvey and Alec Durmisovski.
Front row l. to r: Bill Kowniles, Bert Kent, SLO, Nick Kanaris, George Anderiotikas, Frank Brennan, Lyall Vincent, John Smith, Len Pettrow and 'Doc' Wilcox.

INFLICT 126 CASUALTIES A DAY

years to go!

At 64 years of age, Bert is one of the fittest men around. He loves his work and cares for his men.

He is there to counsel and 'mother' any member of the team who has a problem, personal or work-related.

He has a reputation for hard and untiring work and is much admired by his crew, so much so, that when it was made known that Bert would be the SLO on the job, men from all over the State volunteered to join the team.

Some members of the team live in nearby country towns, most however, have homes and families in the metropolitan area. These men are happy to drive a distance of several hundred kilometres every second weekend just to be members of Bert's special gang.

Another old-timer with the team is Tom 'Rusty' Rushton, 63, caterpillar driver. He has driven heavy machinery for the last thirty years and can manoeuvre that 'Cat' with the greatest of ease.

'Rusty' has spent more than 9,000 hours driving the caterpillar and respects 'the girl,' which he affectionately calls 'The Cat'.

He makes driving cats look easy.

'There's nothing to beat them,' he says, 'and if you treat them right, they last forever.'

Because of the equipment she has attached to her front, 'Rusty' claims the old girl 'tiptoes,' and unless you treat her gently she can easily overturn.

He is just one member of a special team doing a special job and doing it well. Members of the team include: Bert Kent, SLO: Steve Moxham, Lines Officer; LS2: Freddie Richmond, Fred Brennan, Wayne Rhodes, Bob Cruickshank; LS1: George Anderiotikas; Linemen: Len Pettrow, Nick Kanaris, Kevin Nickless, Alec Durmisovski, Lance Vincent, Tony Camm, Bill Kowniles, Larry Warrender, Kevin Battersby, Vince Trakcevski, Roger Hendy, Roy Shoveller, 'Doc' Wilcox, Ken 'Blue' Dean, Johnny Fuller, Joe Malcolm; Caterpillar driver: Tom 'Rusty' Rushton.

The ABBEY crew undo the braces and combiners and cut the stay wires.

The poles are removed by specially equipped tractors and loaded into trucks.

And in SA

HISTORIC AERIAL TRUNK GOES

And in South Australia it was the end of an era recently with the removal of the telephone wires on the upstream side of the Murray Bridge road bridge.

It is the last of South Australia's provision of trunk lines on open wire aerial routes. The original single wire telegraph circuit from Adelaide to Melbourne went via Hindmarsh Island and the Coorong to the South East.

It is believed that the first wires on the bridge were part of the railway communications system erected in conjunction with the interstate railway link in 1886.

In 1909 the PMG erected the aerial route on the upstream side of the bridge to provide speech circuits between Adelaide, Murray Bridge, the South East and Melbourne.

Additional wires were added to the route over the years and alterations were performed as a result of developing technology to enable more circuits to be derived from each wire pair.

The last major rearrangement of installation on the road bridge occurred in the late 30s. The route ultimately comprised four arms carrying 16 pairs of wires ranging from 300lb to 100lb copper wire.

Each pair could accommodate 16 speech circuits with the 300lb pair originally used for radio broadcast circuits between Adelaide and Melbourne via the South East.

Broadband radio systems from Adelaide to Bordertown, Mt Gambier and Melbourne have replaced the aerial trunk route and large size cables have been laid in conduit on the bridge to serve customers in the rapidly expanding area east of the Murray River.

DIRECTORY FILM AT HOYTS

The colour film "Books that Link a Nation" produced for the NSW Directories Branch and recently shown at the 1981 Sydney White Pages Product Launch has been accepted by Hoyts for screening throughout Australia.

The film, which details the ways directories are produced and narrated by TV personality Geoff Stone will be shown with the movie "An Eye for an Eye", an action packed thriller mystery. It commenced in Sydney on November 5, Melbourne November 19 and Perth November 26.

"Books that Link a Nation" will be shown with another film (yet to be chosen) in the remaining capital cities.

Traffic — new records

Australians made more than six billion telephone calls during the year ended 30 June, 1981, setting a new record for telephone usage in this country. As well, telex traffic rose to an all-time high of 43,050,000 calls during the same period.

Giving details of the traffic figures, Telecom's Managing Director, Mr Bill Pollock, pointed out that telephone traffic in 1980/81 was more than 50 per cent higher than in Telecom's first year of operation in 1975/76.

The 6,240,908,000 telephone calls during the year were:-

	1980/81 calls	% age variation from 1979/80
Local telephone calls	5,552,272,000	+ 9.7
STD calls	627,994,000	+ 18.8
Operated connected trunk calls	49,872,000	- 7.2
ISD calls	4,717,000	+ 48.0
Operator connected overseas calls	6,053,000	+ 16.7

Telecom's customers dialled 92.6 per cent of their long distance calls and nearly 44 per cent of their overseas calls.

Mr Pollock attributed the increase in STD traffic to three main factors.

"During the year, we introduced a 20 per cent lunchtime discount on STD calls and also reduced long distance STD rates. These moves combined with the effects of our Community Access 80 rates encouraged greater use of STD facilities."

The most dramatic increase in traffic occurred in ISD calls. More than 4,717,000 ISD calls were recorded for the year — an increase of 48 per cent over the previous year's figures.

Telex traffic rose dramatically by 15.1 per cent in 1980/81. This increase, too, Mr Pollock related to reductions in long distance telex charges which came into effect from 1 July, 1980.

"On the other hand, telegram traffic declined by 11 per cent to 5,061,000 messages," Mr Pollock said. "But this is in line with world-wide trends and no doubt the fall will continue."

Looking to 1981/82, Mr Pollock saw a continuation in the healthy growth of telephone and telex traffic.

"Despite the fact that we have had to increase some charges this year — the first price rise for six years — a telephone call is still good value for money compared with charges for other services and for travel," Mr Pollock said.

"We expect to install 510,000 new telephone services and 9,000 new telex services this year and telephone traffic will continue to grow as in previous years," he said.

"Once again we will be aiming to achieve greater productivity from the resources we devote to the provision of new works and services," Mr Pollock concluded.

At the third stroke . . .
Nearly half of Australia's 146,942,222 calls to recorded telephone services during 1980/81 were made to find out the time — precisely.
The most popular services in the year ended 30 June, 1981 were:-

Time	***72,560,668 calls***
TAB results	***14,066,050 calls***
Weather	***13,904,602 calls***
News	***8,002,498 calls***
Dial-a-Record	***7,862,526 calls***

'GRANDMUM' TO SCADS OF LADS

Newcastle Service Standards clerk Jean McEwan is a lady for all seasons. As cub leader with the 1st Marks Point Cub Pack, she has been 'grandmum' to hundreds of boys, including two new recruits (pictured above with Jean), Trevor and Steven Henderson. Jean has been nurturing cubs for 25 years. Some of them today are doctors, lawyers as Telecom reported in its October issue No. 68.

Phone book ads to cost more

Higher telephone directory advertising rates will apply in the New Year, effective from January 1 for White Pages and July 1 for Yellow Pages.

Total directory publishing costs have risen by approximately 20% over the past year and are expected to increase by about 18% in 1982/83. The main cost increases are due to:

- Paper price increases, which follow a world wide trend and are beyond Telecom's control.
- Volume costs — that is, increased distribution rising by 9%, which reflects higher telephone penetration and ensures wider circulation of the advertiser's message.

In order to recover directory publishing costs and ensure that the production of directories is economically viable, it has been necessary to increase directory services charges in line with the increase in total publishing costs.

The increase in directory rates are comparable to rate increases experienced by advertisers in other media. Forecast rate increases for other media in 1982 are Television 13-15%, Radio 15%, Newspapers 12%, Magazines 14%.

Considering the increases in other comparable media and the fact that directory publishing costs are currently increasing at 20% p.a., and are expected to increase by 18% in 1982/83, the level of increase in directory rates is reasonable.

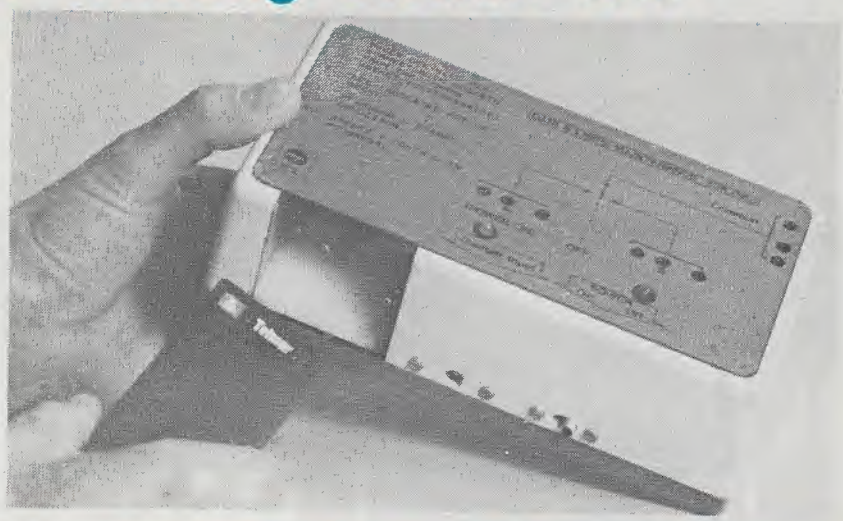
The approved increases in directory rates are as follows:

- For all chargeable matter in WHITE PAGES to be issued after 1 January, 1982, an average increase of 20%.
- For advertisments in YELLOW PAGES to be issued after 1 July, 1982, an average increase of 15%.

Tests a phone: Cooks a roast dinner — Tech's award-winning switch unit

An idea suggested by a Perth Technical Officer could have far-reaching effects that might ultimately be felt in almost every home in Australia.

Laurie Dall, of the Telegraphs and Data Branch in Western Australia, is the inventor of a device known as the "Pager Activated Switching Unit" and recently received a $100 award from the Staff Suggestions Board for his invention.



A close-up of Laurie Dall's "extremely simple" pager activated switching device which appears to have great potential beyond its Telecom use.

The name of the unit is perhaps a bit prosaic but in the words of Technical Services Manager Colin Herring, "the true potential of the device is yet to be developed."

Laurie's device is designed to overcome the disadvantage of having to keep a technician at one end of a private line to perform minor switching functions.

According to Colin, in the past when spare staff have not been available to carry out this common function, customers have been asked to assist.

"We would ask that person to wait at the premises and virtually sit down and switch from once piece of equipment to another on receipt of a telephone call," said Colin.

"This task was a rather onerous one in that it was time consuming and repetitious.

"In realising the problem, Laurie set about finding a way of carrying out this function remotely and mechanically. The end result is this device — conceived by Laurie and developed in conjunction with other members of the Data and Lines Maintenance staff."

The device operates by using a pager unit.

When the pager number is dialled, the tone that is emitted is sensed by a receiver, a capacitor is charged and the resultant pulse is then fed through a counter that, in turn, triggers an integrated circuit.

It is extremely simple. It contains only two easily obtained integrated circuits, 3 transistors, a few diodes and resistors and runs off a rechargeable 12 volt battery with a life of 10 to 15 hours.

One of the uses that it is currently being put to involves fault detection. In monitoring a line, when it is found that a fault condition is present, the device is dialled and Telecom test equipment is automatically substituted for the customer's terminal equipment.

The end result is that tests can be carried out at specific times without there having to be someone at the premises.

It is far more reliable than using the customer to switch test equipment into place because not all customers are technically minded.

At present, the device handles only two functions; however it is readily expandable, using a two-tone or two-staged paging device.

Said Colin, "Thanks to this device, gone are the days where we would have to disconnect a customer's equipment from the network for three or four hours at a time, simply to carry out a few tests.

"With this unit you could prepare your roast dinner, place it in the frypan and simply by dialling the pager number at say 3 o'clock, turn the frypan on so that tea is almost ready when you arrive home.

"If something delays you in your trip home, it only takes another phone call to turn the roast off . . . and a further call to turn it on again when you are finally heading for home!"

Principal Technical Officer Data & Line Maintenance, Jim Cook (L), Public Relations Manager, Tom Alford, Laurie Dall, Chief Operations Manager WA, Jack Magee, Chairman WA Staff Suggestions Committee, John Moynihan and Committee Secretary, Merv Brindley, are shown how the device operates.

120-year-old Burra Exch. makes way for automatic

Technician Gordon Carr wields the "semi-automatic cut-over switch which looks suspiciously like an old broom.

Never again will Dawn Broderick, Supervising Telephonist at Burra have to encourage her telephonists to "Watch the board" at the old Burra Exchange. The last day of September was the last day of operation of the four position switchboard in the Exchange building at Market Street.

The original exchange building was constructed in 1860 to accommodate the Telegraph equipment. Telephone facilities were added in 1911 with Elder Smith and Bogot, Shakes and Lewis the first subscribers.

By 1845 the Burra-Burra township was a group of settlements; Redruth, Aberdeen, Copperhouse, Hampton and the largest Kooringa. The discovery of copper in the Bald Hills Range had brought about a rapid population expansion in the area.

Before the discovery Aboriginals of the Nadjuri tribe had wandered the wooded slopes with white settlers and their sheep.

SHEPHERD FOUND COPPER

In 1845 a shepherd, William Streair found copper. Later, Thomas Picket, a bullock driver found red oxide of copper where Burra now stands.

Kooringa soon became a booming mine town. Within six years a thousand miners were working in the area, many having migrated from England. Other emigrants included Welsh and German smelters, and Spanish muleteers.

The important effect of copper mining on South Australia was to help lift the colony out of the depression of the 1840's. People were encouraged to emigrate to South Australia, more attention was paid to areas north of Adelaide and agriculture and industry expanded.

By the 1880's the price for copper was steadily falling. Copper was again valuable during World War I. By 1877 the mines around Burra and by 1923 on Yorke Peninsula were worked out.

However, the expansion in primary production in the mid north in the early part of the 19th century saw an expansion of wealth for land owners.

EXTENSIVELY RENOVATED

In 1920 the Burra Telephone Exchange was extensively renovated and in April a telephone trunk line to Adelaide was provided.

By 1960 three hundred subscribers were connected to the exchange which controlled two automatic exchanges at Gum Creek and Hanson. In the year 1958/59 there were 125,281 trunk line calls and 145,431 local calls.

By the late 1970's the need for more modernisation and a change to automatic operation in Burra became apparent.

CAREFULLY DESIGNED

The original building was not available for upgrading and a new exchange and technical depot was constructed on the corner of Kingston and Bridge Streets in Burra.

The new exchange was carefully designed by Buildings Branch Officers to blend in with its surroundings;

Telephonists Dawn Broderick, Coralie Field, Susan Pittaway and Robin Tschirn on the call — out to acquaint customers with features of their new automatic phones.

The beautiful old Burra Exchange building built in 1860 for the telegraph traffic when copper was big around Burra.

Burra automatic

FROM PREVIOUS PAGE —

cottages and other buildings of the 19th century.

At 11 a.m. on September 30, 1981 the new exchange was put into operation. A special semi-automatic "cut-over" switch (an old broom) swept the original exchange "off the air." Telephonists Joan Moreland, Robyn Tschirn and Susan Pittaway were on hand to connect these final calls for 11 o'clock.

Construction Branch Engineer Jim Taylor and Principal Technical Officer Ron Amatt-Taylor watched Clare Technicians Gordon Carr, Brian Nayda and others connect the local subscribers to the new exchange.

Five hundred subscribers are now connected at Burra. Telephonists Dawn Broderick, Coralie Field, Susan Pittaway, Robyn Tschirn and Maxine Rosser began the calls out to all of them to explain the correct operation of their new automatic telephones.

To celebrate the conversions the Burra Town Hall was the venue for a dinner for 150 guests.

DINNER GUESTS

Mr Ern Hill acting District Telephone Manager, Kadina welcomed Telecom guests Mr Eugene McCann, acting State Manager, Mr Bob Deeble, Chief Manager Customer Services Department and Mr Ken Work, Supervising Engineer Construction Branch.

Special guest Mr Don Roberts, the Burra Town Clerk, spoke on the special role of Telecom Australia in the history of the town.

Burra TOIC Bob Letcher reported that celebrations continued well after midnight. Present and past staff reminisced on old times and prepared for the latest means of serving Telecom customers in the mid-north of the State automatically.

Telecom Chief Manager, Customer Services in SA/NT, Mr R. Q. Deeble receives the citation from the Governor's wife, Mrs Keith Seaman, C. St. J, President of the SA division of Red Cross.

Disaster aid wins Telecom Red Cross appreciation

It was a great honor for Telecom to receive a Certificate of Appreciation citation from the South Australian Division of the Australian Red Cross Society.

Chief Manager, Customer Services Department, Mr R. Q. Deeble, is shown receiving the award from the wife of the SA Governor, Lady Keith Seaman, C. St. J, president of the division, at the division's annual meeting.

The citation was for unprecedented support and expertise following Cyclone Tracy in Darwin, the disastrous Italian earthquake last year, and on many other occasions including assistance in setting up of the operations centre at Red Cross House and the training of staff to handle disaster situations.

Telecom installed telephone lines at very short notice to cope with the vast numbers of calls during disaster situations and provided additional telex facilities. This assistance made it possible for the society to more quickly process the enquiries from anxious relatives than would have normally been possible.

The citation went on to say that the support of Telecom Australia was vital to the efficacy of the Red Cross Tracing Agency which operates on an international scale.

Telecom was one of ten organisations and individuals to receive the citations.

$5000 GUIDE DOG GIFT FROM NEWCASTLE TELEPHONISTS

Telecom telephonists at Newcastle recently handed over a $5000 cheque to the Guide Dog Association of NSW. The money is to have a pup specially trained to serve as a blind person's guide in future years. The association's executive officer, Mr Jim Jones, received the cheque at a ceremony at the Hamilton Telephone Exchange. The occasion was the culmination of 12 months fund raising for about 160 telephonists. The Officer-in-Charge at Hamilton Manual Assistance Centre, Miss Phyllis Gallagher, said the aim was to reach the target in 1981 — the International Year of the Disabled Persons. Guide dogs are trained at the National Guide Dog and Mobility Training Centre at Kew, a Melbourne suburb. PICTURED: Some of the staff of Hamilton MAC with Mr Len Duggan who is blind and has improved the quality of his life greatly with guide dog King.

NEW MANUAL ON PIR PROCEDURES

Telecom Australia has developed an integrated manual titled Personnel and Industrial Relations Departments' Guidelines and Procedures. This manual will replace the existing Administrative Orders, Industrial Procedures and Personnel and Industrial Relations' Guidelines and Procedures. The new manual is expected to be released in January 1982 through the Personnel and Industrial Relations Departments in the States. It has been structured into specific sections covering Personnel and Industrial Relations policies and practices. Full details will be contained in the February edition of Telecom News.

"TELECOMMUNICATIONS AND SOCIETY" —

Telecom Australia last month launched a publishing tour-de-force — a school project kit set of 122 individual pieces titled "Telecommunications and Society".

The material is designed to be used by teachers as part of the regular curriculum in such subjects as Australian History and Social Science and is aimed at students of years 9, 10 and 11 which will give it a classroom life of three years for any one group of students.

It is the result of two years' dedicated research, writing and editing by Telecom's Information and Publicity Office assisted by the Victorian Education Department's Curriculum Services Unit.

In a letter to principals of all Victorian Secondary and Technical Schools, Dr G. R. Maddocks, Assistant-Director General, Curriculum and Planning of the Victorian Education Department described "Telecommunications and Society" as a "unique co-operative venture originated from a desire by Telecom to improve their student publications.

KIT 1: THE DEFEAT OF DISTANCE

KIT 2: INNOVATION AND IMPACT

"I believe these kits of teaching materials to be of a high educational value and hope that students will not only develop insights into the Telecommunications area but also enjoy the learning experience," Dr Maddocks said in his letter.

Telecom proposes to supply one set of materials free to every secondary school in Australia. Additional sets will be $30 a set or $8 a kit.

The subject of all three kits is that of the impact of telecommunications technology on society and the way people live and work.

Such a theme is of direct relevance and supportive to Telecom's social concerns as expressed through such projects as "Telecom 2000" and seminars on Social Research and Telecommunications Planning arranged by the Planning Division, Business Development Directorate.

The three kits are:

1. "The Defeat of Distance"
   This deals with Australia's isolation during the 18th and 19th centuries and how the invention of the telegraph and in particular the construction of the Overland Telegraph Line, helped alleviate this.
2. "Innovation and Impact"
   This is concerned with the invention of the telephone and the impacts on society of this innovation, with particular regard to the effects on the employment of women, and in the fields of war, medicine, commerce, country life, news-gathering and the workplace.
3. "The Telephone Today"
   This includes 14 Case Studies of modern-day telephone users drawn from interviews

LINEY'S QUICK THINKING AVERTS BOAT TRAGEDY

Quick thinking by Neil Huxtable, a line serviceman attached to Brighton FDC (Victoria) almost certainly averted a possible boating tragedy.

Neil, whilst eating his lunch on Elwood Beach, noticed a small catamaran in difficulty, in heavy seas, about one and a half kilometres offshore.

Shortly afterwards, he observed that one of the sailors had fallen overboard.

Recognising the potential seriousness of the occasion, he raced to his van and radioed his base which in turn notified the police through 000.

In the meantime the catamaran with its lone crewman was being swept out to sea.

Due to his swift action, a police helicopter arrived on the scene — within 10 minutes — followed afterwards by a police launch.

Fortunately, the crewman who had been swept overboard made it to shore under his own steam but the catamaran required the assistance of the police launch.

Bay watcher Neil had a word of advice for budding mariners. "Conditions on the bay on that day were very bad indeed. Port Phillip Bay is a notorious trap for the inexperienced seaman.

"For that reason mariners should not go to sea without proper training and above all not go out on the bay when the weather is obviously bad."

Line serviceman Neil Huxtable points to where a near boating tragedy occurred recently off Elwood Beach (Victoria).

MAJOR TELECOM SCHOOL PROJECT EFFORT

KIT 3: THE TELEPHONE TODAY

with people from all walks of life. The learning objectives relate to how people feel about the telephone, how it affects their life, and its importance to them.

There are no fewer than 122 separate items in the package, consisting of activity cards, resource sheets, case studies, investigations, puzzles and a simulation game. The quality of design and production of the materials is of the highest standard.

The release of the "Telecommunications and Society" project represents a major corporate publicity initiative for Telecom Australia which believes that as a contribution to national education it will:

- **Provide schools with an extremely attractive and useful set of resources at a time when their own resources are being reduced;**
- **Promote an understanding of the benefits of telecommunications to society among Australian students, teachers and parents; and**
- **Demonstrate Telecom Australia's active commitment to its social responsibilities as a service organisation.**

At a launching ceremony attended by leading Victorian educationists, Telecom Managing-Director Bill Pollock said as one of Australia's largest organisations, Telecom had a social responsibility to help inform and educate the general public about its functions.

In particular, it had a responsibility to inform people about the possible social effects of the work it carried out.

"With these thoughts in mind, Telecom decided that it should seek the advice and assistance of professional educators in designing a series of informational materials for students," Mr Pollock said.

SIMULATION GAME — BUILDING THE LINE

Telecom's Managing Director, Bill Pollock, officially hands over the kit to Dr Maddocks, and below: another speaker at the function, Dr Ann Moyal of the Research School of Social Sciencies at the Australian National University, Canberra, who is currently writing a book on the history of Telecom Australia and its antecedents.

Vocational visit to Exchange

What is a telephone exchange all about? That was the quest of these Year 11 students from the Augusta Park High School when they went on a vocational study tour of the Port Augusta Telephone Exchange in South Australia. Their teachers are Mrs Lesley Bray, fourth from left, and Miss Maria Zampatti, right. Theo Visser, TO1, who conducted the tour, is fourth from right.

Radio Aust. Shepparton 'Mine Host' retires

In 1981 the Queen's Birthday Honors included the award of the British Empire Medal to William (Bill) Davidson, former Officer-in-Charge of Radio Australia Shepparton, in recognition for his service to the public and to the community.

BILL DAVIDSON AT HIS RADIO AUSTRALIA DESK AND BELOW, WITH WIFE MAISIE GETTING THE FAREWELL TREATMENT FROM KEN MacDONALD, SUPERINTENDING ENGINEER OF NETWORK SERVICE BRANCH OF WHICH RADIO SECTION IS PART.

Bill has retired from Telecom Australia after 37 years service, the majority of which was spent at Radio Australia, Shepparton.

He commenced his service in 1939 as a lineman - in - training and was a Lineman Grade 1 at Radio Australia when the station started in 1943.

In 1946 Bill switched to the Technician ranks and worked his way through all work areas and classifications to become the Officer-in-charge (STO3) in 1962 at the relatively young age of 42.

The Radio Australia transmitting station at Shepparton is today the primary station of the Overseas Service of the Australian Broadcasting Commission and is responsible for conveying Australia's image and message around the world.

The station operates around the clock with 9 high power vintage and modern transmitters broadcasting over 1000 hrs of scheduled programs each week in 9 languages to 17 target areas throughout the world.

250 HECTARES

The station, which occupies a site area of 250 hectares, has in addition to the transmitters, a network of 35 aerial arrays and an associated aerial matrix switch together with a full staff of some 54 comprising lines staff, electrical and diesel trades staff in addition to technician classifications.

During his years at Radio Australia Bill was involved in numerous major improvements to station facilities and he saw the station grow from providing only one shortwave transmission service in 1944 to a large international high frequency transmitting complex that provides the service today.

DEMANDING ROLE

The role of the OIC of this station is a most demanding one. Bill, without the benefit of an assistant, managed and co-ordinated the activities of the varied staff groups with skill and sensitivity and was highly regarded by subordinate staff, his peers and senior management.

By virtue of its important role in the fields of dissemination of information and the promotion of Australia's image abroad the Radio Australia station is a source of great interest to politicians, administrators, radio hobbyists, educationists and members of the public.

Bill was therefore frequently called upon to act as "Mine Host" to a great variety of visitors. He fulfilled this role with a natural friendliness and an easy grace, which did him and the station great credit, and secured a warm response from visitors of all ages and walks of life.

COMMUNITY AFFAIRS

Complementing his outstanding record of service to broadcasting, Bill was well known and active in Shepparton's local community affairs including the Wesley Church and local sporting bodies.

Upon his retirement, Bill was accorded a public farewell in the Shepparton Civic Centre. At this gathering, Bill's friends, who included Municipal and ABC representattives as well as Telecom Broadcasting associates, paid tribute to his many contributions to broadcasting and the community.

Telecom Sets Up National Sun Cell Test Facility

Telecom is using a $500,000 grant to set up a national test facility to assess the performance of solar photovoltaic power sources under Australian conditions.

The first stage of the work is mainly concerned with solar modules produced in Japan and is one of the activities covered in the formal agreement between Australia and Japan for co-operation in energy research and development.

The grant was made to Telecom by the National Energy Research Development and Demonstration Council to expand energy research in Australia.

The main objectives of the project are:

- **To demonstrate the ability of solar cell modules to provide power for various applications;**
- **To determine the reliability of Japanese solar cell modules in harsh Australian climates; and**
- **To exchange information on solar module testing technology and test results with Japanese laboratories.**

Solar cell power systems now commercially available are expensive compared to conventional power sources but research in several countries is steadily reducing their cost. With its Government co-operation, Japan is one of the leaders in this field.

Participation in the co-operative evaluation program will give Australia early access to developments in solar module production in Japan.

EXTREME ENVIRONMENTS

The main emphasis of the work is on field exposure of solar modules at sites in Australia which will test their quality to the limit. Sites with extreme environments or with various combinations of conditions are being chosen for testing. Meteorological data as well as the performance parameters of the modules will be monitored.

In the early project stages, work was concentrated at Telecom Research Laboratories where the field site arrangements are being planned and a photovoltaic test laboratory is being set up to make performance measurements on solar cells and modules.

This laboratory will also conduct accelerated environmental tests on modules and investigate the cause of cell and module failure. The centre-piece of the laboratory will be a Large Area Pulsed Solar Similator (LAPSS) — the first of its kind in Australia.

ITALIAN STAFF APPRECIATE SPECIAL RETIREMENT SEMINARS

Staff Welfare Services Section in Victoria were disappointed that employees of Italian origin were not responding to invitations to attend retirement planning seminars which are conducted for all staff over the age of 50.

Mr. Vincent Volpe, an Italian speaking barrister and solicitor addresses a Telecom Retirement Planning Seminar recently held in Melbourne.

Investigation revealed that many Italian staff did not have a sufficient command of the English language to understand the often quite complex subjects discussed at Retirement Planning Seminars.

This can readily be appreciated with subjects discussed including Superannuation, Legal Matters and Estate Planning, Finance and Investments, Social Security, Benefits and Health.

To overcome these communication problems, Geoff Simmons from Telecom's Victorian Staff Welfare Section has designed a Retirement Planning Seminar specifically for staff of Italian origin.

Italian speakers and interpreters only are used to explain all relevant subjects.

The use of native speakers enables such complex subjects as those listed to be discussed in even greater detail than in the past.

Documentation given to participants is in Italian.

Geoff Simmons said that the response from employees of Italian origin had been excellent.

"The fact that the response has been so good is clear evidence that a new approach was warranted on the part of Telecom.

"Now I feel Telecom is reaching an important segment of its workforce, which in the past might have felt that it was being neglected".

(Attendance at retirement courses is voluntary).

Not the hottest news in town

Almost a year ago to the day, the Adelaide Techs-in-Training Year of 1956 held their Silver Anniversary Re-union and dispatched report and pictures of the event by express tortoise to your Editor in Melbourne.

The tortoise though slow was most dependable and here is the publicity the lads were after. Sure, we aim to please.

Mind you, there was a grain of logic in the delay. 25 years on from 1956 makes some time in 1981 but the function was held in November 1980 (for convenience).

Anyway, according to Peter Barber of Network and Operator Services Branch a good time was had by all 67 who attended including five former instructors — Max Osborne, Ossie Tancock, Jim Spurr, Graham Cameron and Charlie White.

A highlight was the presentation to each of a special silver anniversary year book. Then the lads lined up in their original first year lecture groups to be photographed as you can see here.

From left — back row: Arthur Rance, Barry Leedham, Barry Steiner, Bevan Jury, Peter Mulvihill. Middle: Ted Osborne, Bob Slater, Bob McLaren, John Whitehouse, Ray Wesson, Dean Radford. Front: Terry Fryar, Ian Rankine, Brian Hallam, Kevin Fitzgerald, John Leahy, Dean Bolte, Leigh Graetz.

Back: Ron Dyson, Bob Goodfellow, John Williams, Barry Phillips, Ken Hanson, Trevor Medhurst, Jim Brandford, Brian Pennifold. Middle: Bob Vianello, John Swift, Roger Williams, Ian Campbell, Malcolm Lang, Rod Scaife. Front: Bob Letcher, Graham Taylor, Barry Robins, Grant Sanderson, Geof Stephens, Graham Smithers, Laurie Wickham, Bob Goddard.

Back: Brian Fogarty, Malcolm Powell, Murray Green, Daryl Bedson, Trevor Jacobs, Vince Bayly, Malcolm Woods, Daryl Goss, John Geddie. Middle: Jim Huppartz, Brion Fanning, Bill Keane, Graham Oates, Don Bateman, Peter O'Malley. Front: Brian Wylie, Roger Ingram, Roger Trenwith, Brian Crichton, Don Scarce, Peter Barber, Vaughan Wilson. Seated in front: Peter Weir.

BALLARAT TELEPHONISTS

WANTED — ex-Ballarat telephonists. Ballarat telephonists are holding a reunion on March 13 next year.

Present telephonists are trying to contact former employees. If anyone can help, they should contact C. Sebire on (053) 37 0290 or write to C. Sebire, Ballarat Manual Assistance Centre, Cnr. Lydiard and Sturt Sts., Ballarat, Vic. 3350.

Task set for staff in Operation Life Save

Mr Brett is pictured carrying out the heart-lung resuscitation method under the watchful eye of Dennis Uren, one of Victoria's Engineering Training Section.

Telecom recently undertook the mammoth task of training all staff members in the techniques of heart-lung resuscitation and emergency first-aid treatment.

The programme provides the opportunity for all Telecom staff to be trained in modern techniques which could save a life.

State Manger for Victoria, Rollo Brett, joined the course in Victoria.

Members of State Engineering Training Sections have passed a certificate course with the National Heart Foundation and are now passing on this knowledge to other staff as part of the programme.

"I have decided to support the first-aid training programme because of the many benefits of such a policy. These benefits will be evident, not only in the work-place but this knowledge may also be required in other situations.

"First-aid training reflects the safety concern and obligations of Telecom. The programme could be described as a community service in that it provides basic knowledge which can be used to save a life," said Mr Brett.

CHEERIO!

Big day marks retirement of Paul Dubois

Nearly 200 of his colleagues attended a farewell for former Telecom Queensland State Manager, Paul Dubois, in Brisbane recently. Mr Dubois, who retired through ill health, had been State Manager in Queensland since Telecom's inception in September, 1975.

It was a happy night for Mr Dubois as he received presentations from nine of his senior officers — all the work of their departments or branches — and the Service Award from Jack Ahern, Chief Manager, Personnel and Industrial Relations, Headquarters.

Paul told stories about himself and roared with laughter as others told stories about his long service in Queensland.

To add to the pleasure of the evening, the appointment of Bill Pollock as Managing Director was announced in Canberra late that afternoon and Mr Pollock, during his speech, announced the appointment of Keith Petrie as Paul's successor as State Manager.

Mr Pollock commended Mr Dubois for his leadership of Telecom activities in Queensland.

"Telecom's Board of Commissioners has recorded its appreciation of his efforts in leading the telecommunication development of the State during a period of exceptionally high growth", he said.

Messages of best wishes were received from every State and Queensland district.

Mr Dubois, who joined the Commonwealth Public Service in 1934, was promoted to cadet engineer with the P.M.G. in 1936.

He served as an engineer in most parts of the State and in 1964-66 served n Thailand on an International Telecommunications Union project.

Mr Dubois held many senior engineer positions before his appointment as Telecom State Manager.

He said he had been fascinated by the introduction of many of the developments which had made the present system possible, and privileged to have been associated with them.

It was a case of congratulations all round at the retirement of Paul Dubois. Keith Petrie (left) has succeeded him and a few hours earlier Bill Pollock was appointed Managing Director.

Painting exhibition

Telecom engineer Charles Ludlow held a one-man exhibition of 30 of his paintings in Brisbane recently.

For Chas, Senior Engineer Customer Equipment Group, Network Service and Design Branch, it was no new experience. It was the 13th or 14th — he's not quite sure — exhibition of his works.

His latest exhibition in the McInnes Galleries in Brisbane was of 30 water colours following a trip to the United Kingdom, France, Greece and Egypt.

Chas Ludlow, who began art studies in 1959, is widely acclaimed as an artist. He is a trustee of the Royal Queensland Art Society and vice-president of the Half Dozen Group of artists.

His wife, Ada, is also a painter, with an exhibition coming up later this year.

Chas sold 12 of his paintings — "poor on previous years, but on a par with sales by other artists recently", he said.

Artist Chas Ludlow inspecting one of his paintings — A Street in Amboise (France) — during his one-man exhibition in the McInnes Galleries in Brisbane recently.

They move motions in morse at Morsecodian Fraternity meetings

by PETA PETER
Media Officer NSW
Picture: BEN CHANDLER
Telecom Photographer

Ancient posters, lovingly preserved, decorate the walls and there is a feeling of camraderie as the men — one hundred and ten in all — talk and laugh at some fondly remembered joke.

The Professor, the Slippery Eel and the Duck exchange pleasantries, while Spider, Two Bob and the Snake are ribbed by their mates.

These characters and many more are gathered tonight to celebrate the seventh reunion of the New South Wales Morsecodians Fraternity.

Over the general hubbub is heard the distinctive clackety-clack of the morse key.

This is an annual meeting with a difference.

The entire meeting is addressed in morse and, to the casual spectator, the applause and laughter that peppers the morse signals seem bewildering.

Yet, all the men present are experts in the field. Former telegraphists who have long since retired from the Knighthood of the key or whose life-style and careers have changed direction.

Jim Porter is here tonight. He will be 86 next January, and his memories go back to 1909, when he first joined the PMG.

Originally from the Snowy River, Jim's first job was as a telegraph messenger. Next he was promoted to clearing out mail boxes in North Sydney. This was done with a horse and cart, and although the PMG paid an allowance for forage, Jim had to supply his own horse, bridle and saddle.

In 1915 he successfully applied for a telegraphist's position.

In those days, the equivalent of a Higher School Certificate was needed and it was considered a prestigious profession.

In reality, however, it was a tedious occupation involving long hours, cramped muscles and loneliness.

Jim was posted to various country Post Offices on relief staff, until he enlisted in the Light horse Signal Corps during World War I between 1916 and 1919.

Returning to the PMG he was promoted to telegraph officer at the GPO in Sydney and his last position was as Traffic Officer at the GPO.

Another morsecodian who remembers the isolation many telegraphists encountered is Jack Baker.

At sixteen, Jack was located in Central Australia in a Post Office 30 kilometres form the nearest railway and 260 kilometres from his nearest neighbour. All he had for company was his horse, and the day the horse bolted was the day he demanded to be sent home.

Jim Porter, Bill Gorman, Gordon Hill, President Bob Moore, Hon. Secretary / Treasurer Roy Gamble and Ralph Thistlethwaite at the annual Morsecodian meeting.

Bill Douglas is another member of the fraternity who began his career in 1916. His memories include working for every newspaper in Sydney as a telegraphist.

He clearly remembers Sir Frank Packer coming to the newspaper office as a schoolboy in short pants and recollects Eric Baume, the legendary radio and television figure, working as a night sub-editor on one of the papers.

Other memories include receiving telegrams from New Guinea that had been written on a variety of items, ranging from coconuts to toilet rolls.

Telegraphists belong in a fraternity of their own and their history is steeped in folklore.

They were masters of an extraordinary form of communication, one which has long passed into history.

The last morse message was sent from Halls Creek in Western Australia in June 1965.

Now the clack of the keys has been replaced by the clatter of the teleprinter and only the memories remain.

CRTB . . . Telegs' classic ode

It seems an appropriate time and place to reproduce once again this classic Australian telegraphist ode which first appeared in the 1920's and for which there are always requests for re-publication. It is necesary to explain that before the introduction of telexes, morse lines set up between chief telegraph offices and race courses carried very heavy press traffic and any teleg. working the races had to be able to "cut 'em up."

I well remember Charlie Teede
Who used to work the races
No need, indeed, to ask for speed
He'd pace it with the pacers.
Lord help the man who "broke" him once
Or questioned his creations —
On him a flood of scorn was turned,
The atmosphere with brimstone burned,
And Pitman, green with envy, squirmed
At his abbreviations.

"Te field got wl awa to ti
And as ty settld dwn
Te Shicer frst to brk te li
Ws flwd bi Jo Brown.
In close proxim ws Tired Tim,
Tn cme Arbtratn,
Bhnd te bunch ws Cntr Lunch,
Gd Luk and Hi Taxatn."
Tey whizzed along (and so did Charles)
Without te least cessatn.

"C r t b te topwt jumped
And got on trms wi Shicr,
Who tn and tre his bundl dumped
Wh labld him a twicer."
I scrambled after Charlie
Like a trailer round a bend,
Then gave OK — but queried
"C r t b" u send.
Now wot is tt in aid of?
Enlarge a bit, my friend".

The sounder nearly hit the roof
As Charlie scorched the line
"U orta b on te rabtproof
Or up at Doodlakine.
Chasin poddies rnd te yrd
Shld b ur chf pastime.
To tink u cdnt wrk tt out
It nrly mkes me sik
Ani ole gin or rousabt
Cd rite it wi a stik.

"Fanci a man wo calls hmslf
A tgst askg tt —
A record O S vacuum
Is located neath ur hat.
Dya want it in oils by Lambert?
Or carved on a marbl stone?
Ole "Winja" Mortill cd tke it
And ud nvr hr a moan,
Not spelt out li Ive dun for u
But cut down to te bone.

"Wl I mst sa its te bst displa
Of ignrce Ive hrd,
Of allte sqrts in W.A.
Ur certnly te bird
And ani harsh rmks Ive mist
Tey all cn b inferd.
'C r t b' — its known bi rote,
Wt wld u ha me send?
Its cmg rnd te bnd, u goat —
COMING ROUND THE BEND!"

GREENFINGERS BEAUTIFY BRISBANE H.Q.

A group of Telecom greenfingers are giving the gardens around Communications House in Brisbane a new lease of life.

Led by Vic Croyden, driver and Acting Assistant Transport Officer at the Passenger Vehicle Pool and probably Brisbane's most renowned home gardener, the group's first project has drawn praise from staff and visitors to the building.

A garden bed, best described as a colorless mass of spindly grasses, was transformed in a mere two days into an attractive show featuring the Telecom logo — in stones and pebbles — centred amongst 24 shrubs, 16 ground cover plants and rocks.

Vic's helpers on the project were Les Starkey, cleaner and yardman at the Spring Hill Line Depot; Jack McMurtrie, a truck driver at Spring Hill depot, and Dirk Kors, a lineman at the Fortitude Valley depot.

Vic was commissioned to lead a reorganisation of the Communications House gardens after Chief Manager, Finance and Accounting, Vince McCahon, visited Vic's home garden.

His half-acre garden at Arana Hills won the Pine Rivers Shire Council championship 10 years in a row and the Brisbane "Courier-Mail" award six years running.

Vic no longer enters the competitions — he's been seconded as a judge and also judges the annual Housing Commission garden awards.

The Croyden home garden, on which Vic and his family have worked since moving to Arana Hills 17 years ago, features rock pools and waterfalls.

For splashes of colour there are — amongst other plants and shrubs — 430 azaleas, 60 palms, 60 staghorns and elkhorns, 100 conifers, 100 king orchids, and numerous water lilies.

Vic's next target at the Queensland headquarters building is to redevelop the sunken garden and, later, brighten up the other garden beds in the courtyard.

Above: With the finished work from left: Vic. Croyden, Dirk Kors, Jack McMurtrie and Les Starkey.

NO MORE CASH SALARIES

As a result of the Review of Commonwealth Functions, the Government has decided to eliminate the cash mode of salary payment for staff employed by the Commonwealth as from December 3.

However, in order to ensure that no hardship will be suffered by a Telecom staff member who considers cash payment essential, discussions were held with representatives of major Associations covering Telecom staff and, on the basis that there will be co-operation between the Associations and Telecom in encouraging members to accept payment of salary by means other than cash, an exemption from the compulsory aspects of the arrangements was sought, and obtained, by Telecom.

Telecom has fostered the practice of payment of salaries into bank accounts in the interests of staff safety and in order to avoid delays due to possible interruptions of the operations of outside contractors, for example, in the enveloping and distribution of cash.

Also, the risk of a staff member losing a cash pay is eliminated and a payee does not need to make alternative arrangements when absent on pay day.

The facility by which salary is credited to an account held with some financial institutions has been extended to include any credit union or building society which agrees to receive net pay deposits.

VARIETY OF METHODS

This will ensure that a variety of payment methods are available for your convenience. Under the new arrangements staff may elect to receive their pay by one of the following payment options:

- **direct credit to a bank, cheque or savings account;**
- **direct credit to an approved credit union account;**
- **direct credit to an approved permanent building society account; or**
- **payment by cheque.**

Payment by cheque should be availed of only in special circumstances as, should the mail service be subject to delay or disruption for any reason, or a pay cheque actually lost, destroyed or misrouted, the payee may be seriously inconvenienced.

With the wide range of institutions now available to receive net pay, some of which make no charge for the facility and/or pay interest on the deposit, it is not necessary for staff to incur bank charges to take advantage of the facility.

Accordingly, the practice of reimbursing bank charges for staff who have their net pay credited to a cheque account will be discontinued.

Lightning: Predicting Where & When

Two direction finders installed by Telecom in Western Australia are helping to solve the problem of repeated lightning faults to the Port Hedland-Mount Newman and Port Hedland-Carnarvon coaxial cables.

The direction finders were installed by Telecom's Research Laboratories in November last year at Dampier and Tom Price and monitor an area of 250,000 sq. km, including a length of 600 km of the affected coaxial cables.

The system was developed by Lightning Location and Production Inc. USA which claims to reject cloud to cloud activity but detects 90 per cent of cloud to ground activity. The system is able to fix the location of the strikes and record the number and relative magnitude and the time and date of their occurrence.

The direction finder stations are each equipped with a loop antenna and an electric field antenna to fix the exact location of the strike. This information is processed and stored and available as hard copy or in the form of maps showing the location of all ground strikes in a particular time span.

The system has become extremely important to Telecom because of the amount of equipment containing solid state devices which are more susceptible to lightning strikes, thus Telecom's ability to predict the incidence and severity of the lightning strikes throughout Australia is vital.

THUNDER MAPS

Currently this information is available from the Bureau of Meteorology in the form of thunder day maps. A thunder day is defined as a day on which the thunder is heard and does not take into account the severity of the lightning or the period for which the lightning activity lasts.

With observation posts hundreds of kilometres apart, the level of lightning activity could vary considerably within an area of supposedly constant activity.

Flash counters have been used as an indicator of lightning activity but these cannot discriminate between the large number of cloud to cloud strikes which pose no threat to Telecom equipment, staff or customers.

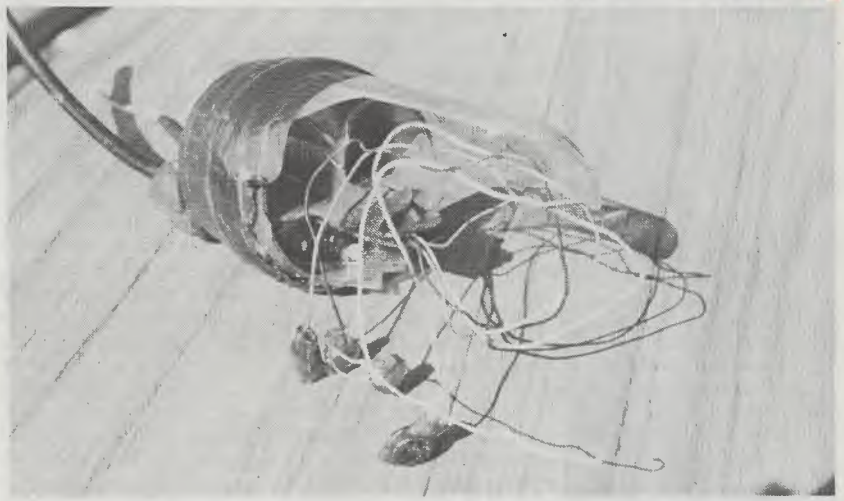
In the first five months of the operation of the direction finders a total of 48,000 cloud to ground strikes were recorded with a maximum of 3300 recorded in a single 24-hour period.

A large variation in strikes/unit area/unit time was observed, illustrating the inaccuracy of thunder day maps.

The amount of data recorded to date is very large and requires further detaled analysis. However, the information has already proved helpful in analysing the causes of coaxial cable faults in W.A.

The system is capable of tracking thunder storm formations and will eventually provide correlation between the lightning incidence in a given area and the number and type of faults encountered.

It is intended to extend the system into other areas of the network to assist in the formulation of protection policies and in the planning and design of new installations.



Top left: Cable completely severed by lightning flash. Above: A cable joint exploded by a strike.

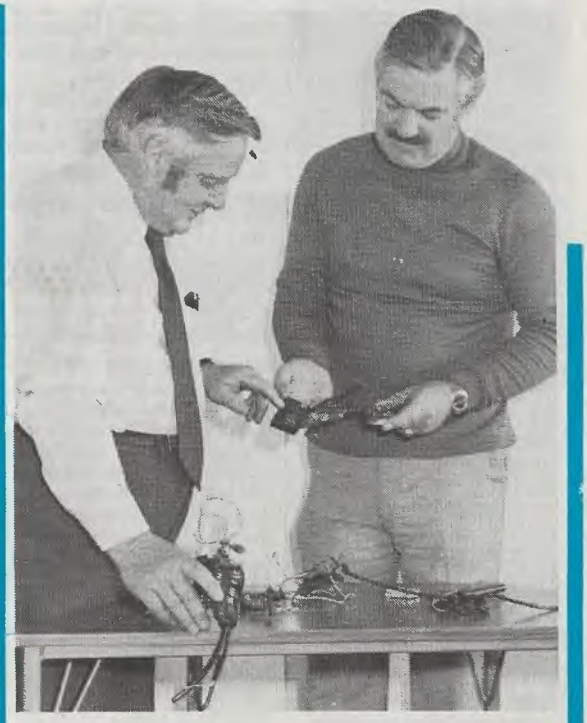
Switchboard for blind

Christine Corbould, 16, of Launceston, isn't blind, but even if she was it wouldn't stop her operating this switchboard.

It has been specially adapted for blind telephonists.

It works with a sensory probe that gives off different sounds for different numbers. The switchboard was part of a display of equipment modified for handicapped people at the Northern Regional Library, Tasmania.

The display included touch phones and a porta printer for deaf telephonists and was organised, with the help of Telecom, by local members of the International Year of the Disabled Persons Association.



SLO Keith Brown and LO Des Trott examine equipment damaged by lightning in a recent violent storm at Deloraine in Northern Tasmania.

Every issue of "Telecom News" throughout 1981 has contained at least one item relevant to International Year of Disabled Persons. It is hoped that these, together with the numerous other activities undertaken by Telecom during 1981 have, in some small way reflected the aims of the year — full participation and equality.

IYDP 1981 AND BEYOND

Many of the projects undertaken by Telecom as part of its IYDP Program are however, long term ones which will not cease at the end of 1981. For example:

- Commercial Services Department activities will continue in relation to: Porta Printer; Access Dialler; Coin Telephones for the Disabled; Display and Advisory Centres
- Personnel Department will continue with the: Pilot Work Station for Mildly Mentally Retarded All Staff Survey of Disabled Persons (piloted in Croydon Victoria) Education of Staff in the Needs of the Disabled.

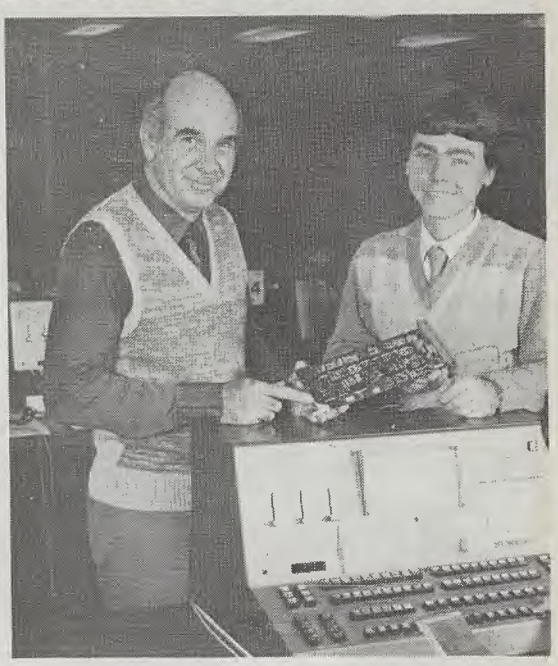
At Commonwealth Government level the Prime Minister has asked that in the development of any new policy proposals particular attention be paid to the effect on the well being of disabled people, especially in the areas of employment and access to facilities.

Limited numbers of the following produced for IYDP are still available from Kathy Hancock (03) 630 7792.

● Telecom's IYDP Program ● Posters ● Booklet "Employment of the Disabled in Telecom — A Guide to Specific Disabilities." ● Guidelines for interviewing Disabled People.

Adelaide modification allows dial testing of Touchfone 12

A modification to the FDC test console in the Adelaide Central Fault Despatch Centre now allows dial testing of the new VF touchfone — Touchfone 12.



The modification work was carried out by David Hibbert, one of Telecom's recently graduated engineers, and Graham Smithers, a TO1 who was seconded from PABX Acceptance Testing for the project.

The work involved the purchase, modification and integration of a tone-to-dial pulse converter card into the existing FDC test console.

The need for the modification arose because the dialling system in the VF touchfone is quite different from that in a normal decadic phone.

Instead of a sequence of direct current dial pulses being produced upon dialling, the VF touchfone produces a pair of VF (voice frequency) tones for each number dialled.

However, the FDC test console tests the dialling system by counting the number of direct current dial pulses, hence the need for the card that converts a VF tone pair into the appropriate number of direct current dial pulses.

The card also has the facility of being transparent to a normal decadic unit. In other words, it allows dial pulses to pass through unaltered.

The test consoles, themselves only three years old, allow a wide range of tests and measurements to be performed on subscribers' lines and equipment.

They will, with the inclusion of a converter card, be even more versatile in that the dialling performance of not only decadic units but also that of VF touchfone units can be measured.

Furthermore, the console operator need not know which type of telephone is under test because the test procedure is identical for both types.

At this stage only one console has been modified, but the remaining five in the Central Fault Despatch Centre will be similarly modified soon. It is hoped this will also occur at Metro South.

Tales — fishy and tall

There was a feast of crayfish tails — and a host of tall tales — at the recent reunion of the 1955 Linemen — in Training at Frankston, Vic.

Fourteen members of the 20-strong group attended the reunion. Members unable to attend included Dennis Scammell (Mareeba, Qld.) and Geoff Dunn (Nhill, Vic.).

It was almost a dual reunion because the linemen did their National Service training together. One of the reunion organisers, Colin Swindells, is still a member of the Army Reserve at Frankston.

Those who attended were Graham Boxhall, John Teagle, John White, Bernie Harrington, Fred Gurin, Ed Farrell, Col. Swindells, Kevin McCartin, Brian Yurisch, Barry Astbury, Kevin Corbett, Kevin Rankin, Dennis Delaney and Pat Matthey.

New Telephone — Conference Aims

Telecom's Research Laboratories are investigating a new way to enable telephone conference of eight or 10 people.

The aim is to develop a system which can be operated automatically by a customer using a dual tone push-button telephone (Touchfone 12) or a special signalling attachment if the customer doesn't have the Touchfone 12.

The proposed facilities would allow a customer to call the conference number and dial in the telephone numbers of these people who are to be included in the telephone conference. The equipment would then call the numbers automatically and establish the conference. Charges would be recorded in detail and included on the caller's account.

A prototype conference bridge and the computer control program have been developed. The equipment will undergo laboratory and field trials.

Further work will be needed on the important aspect of user protecol, allowing the customer to learn the procedure without extensive training.

ACCIDENT PREVENTION:

LOST TIME ACCIDENTS ON DUTY

ACCIDENT FREQUENCY RATE

Telecom's Accident Frequency Rate at Period 5 1981/82 30.7

Target Accident Frequency Rate at Period 5 1981/82 29.7

BY STATES	HQ	NSW	VIC	QLD	SA	WA	TAS
Target A F R	8.9	35.9	29.5	31.5	24.1	19.4	22.1
Actual A F R	9.9	36.3	30.6	32.8	27.8	19.5	22.3

Holograms fascinate at the Mt.

Telecom continued its show exhibition successes in South Australia with a most interesting display at the three-day Mount Gambier Show — the biggest provincial show in the State.

From left: Ashleigh Lorraine, Customer Services Manager, Mount Gambier, Ian Giles, manager, 5MG, radio and television personality Judith Barr, and Dennis Wall, Mount Gambier District Telecommunications Manager.

Telecom based its exhibit on the award winning stand used at the Royal Adelaide Show.

The record crowds at the Mount Gambier Show were fascinated by the array of specially imported holograms and the big cylindrical radio booth, so popular at the Royal Show.

The radio booth, which highlighted Telecom's role in maintaining radio and television towers and transmitters, was manned by ABC personalities from Adelaide and Mount Gambier.

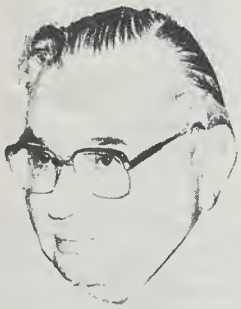
Other parts to the show stand were a TBO counter with give-away sample bags and balloons, a Yellow Pages promotion and a cable jointing exhibition manned by staff from the district.

"It was one of our best efforts yet," said Ashleigh Lorraine, Customer Services Manager for the district.

"We were extremely popular with the crowds. There were always queues to see the holograms and people crowded around our jointing team and the radio booth.

"Our DTM Dennis Wall and I were on-air talking about Telecom and its involvement in the district. The joint venture with the ABC really made the show stand work."

A replica for Rosy



When Jeff 'Rosy' Rosewarne (R) retired as a technician at Kadina, South Australia recently, his colleagues were not going to let him go without a pertinent reminder of his career with Telecom.

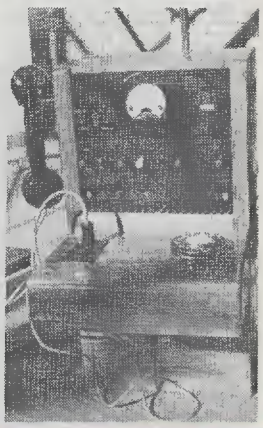
His mates presented him with a working miniature model of the trunk bench board to which he was so attached over the past 10 years.

Jeff joined the PMG in Adelaide on November 4, 1940. He transferred to Snowtown in 1945 and then to Kadina in 1952.

For the past 10 years he has been a trunk desk operator. Prior to that Jeff was in cable fault finding and was recognised for his expertise in external plant fault finding.

He left Kadina in 1954 to work at Adelaide Airport as a radio observer, operating and maintaining radar equipment used to track weather balloons. He returned to Kadina in 1956.

He was presented with his test desk at a barbecue send-off in appreciation of his 41 years of service.



An intriguing Adelaide museum exhibit

THE WORLD'S FIRST INTEGRATED CIRCUIT?

One of the most interesting exhibits in Adelaide Telecommunications Museum is a tube, the Loewe type 3NF made in Germany in 1925.

It was described in an article by one author as the world's first integrated circuit. It contains in one envelope three separate triode tubes and all resistance - capacitance coupling components for a simple wireless receiver.

The only external components required are antenna tuning circuit, loudspeaker and battery power supplies.

Each resistor and capacitor is separately encapsulated in glass, presumably to preserve the vacuum against out gassing of these components.

The circuit provides an object lesson in economy of components to enable the tube to be mounted on its six-pin base. The base has sliding contacts (not plug in) and uses a bayonet fitting base with three staggered locating dowels.

In the 1920s in Germany there was a tax on the use of broadcasting receivers, the amount of tax being determined in part by the number of tubes in the receiver.

The Loewe Company capitalised on this condition and designed a series of multiple tubes which were shown at the Berlin Radio Exhibition in 1926.

Sales of the OE 333 receiver which was designed around the 3NF tube are reported to have reached one million in 1926.

The tube operated with a filament voltage of four volts and a plate voltage of 135 volts.

There are two of these tubes in the museum and one is known to have been brought to the Baressa Valley by a German settler about 1927.

Concluding: 25 years of Australian TV

TELECOM SCIENTIST'S PLANE MADE 1ST TEST CRICKET TV RELAY

In 1953, a Television Act was passed, which authorised the Post-master General to prepare for a national network of television channels, and to issue licences for commercial television stations.

The following year the ABC was appointed the national television authority, on the recommendation of a Royal Commission, and the ABCB invited applications for licences to operate commercial television stations.

By JOHN BARTH Historical Officer
Telecom Victoria
Photos: Courtesy PAUL CALLEJA,
Photographic Section HSV7

Jim Fisher, meanwhile, had left the PMG's Department the same year to join the ABCB, in Melbourne, as Engineer, Television, the first engineering job created specifically for television.

And it was in that job that he drafted the first set of standards for technical equipment and operation of television stations in Australia — an area where it might be fairly said that Australia led the world.

This bright-eyed Melbourne University High School girl little realised she would rise to the top of world entertainment as she waited to audition for a talent show at a Melbourne TV channel a few years ago.

You will probably more readily recognise her (right) as Olivia Newton-John pictured on TV early in her career.

Jim Fisher, former PMG engineer, who is regarded as 'father' of Australian TV technology.

It was the ABCB who had the job of controlling and planning the Australian television services, and the number of stations, and by now plans included two commercial stations, and one national station, in both Melbourne and Sydney, with transmitters on Mt Dandenong and Gore Hill.

Things were now hotting up, and in 1955 the first commercial television licences were issued for two stations each in Melbourne and Sydney.

But the ABCB was to be without Jim Fisher, who in the same year left that organisation to join HSV 7, whose licence was issued in May 1955.

The television team

at HSV 7, by today's standards, was small indeed.

It consisted of Keith Cairns, (formerly Chief of Staff at The Sun newspaper) as Manager, Jim Fisher, as Chief Engineer, Lyle Lloyd, (Formerly of EMI in England, and 3DB), as Assistant Chief Engineer, and Janet Salmond, as Secretary to Keith Cairns.

These positions were the very first Australian appointments to television, even before those at the ABC.

It was now time for television to start, and the first television station on air, TCN 9 Sydney, opened on 16th September 1956, with Melbourne's HSV 7 following suit on 4th November 1956, with the first regular broadcasts in Victoria.

Channel 9 was opened by Bruce Gyngell, then a programme manager, and Channel 7's opening programme, as many will remember, was compered by Eric Pearce.

Programmes on Channel 7 that day included Variety from the Tivoli Theatre, together with films.

NATIONALS OPENED

The two national stations also opened that year, with ABN 2 Sydney, on 5th November, and ABV 2 Melbourne on 18th November 1956.

Later, another two commercial stations opened, ATN Sydney on 2 December 1956, and GTV Melbourne on 19 January 1957, to complete Stage One of the television development plan.

And all these Australian stations operated on 625 lines, as opposed to the British 405, and the American 525 lines.

A long way from Logie Baird's original 30 vertical lines, and for that we should be thankful.

With its 625 lines, Australia led the world in television standards.

America still has its 525 lines, and only recently has Britain begun to catch up, by introducing its 625 lines service at the time of colour television.

The lead that Australia had with its 625 lines, however did not come easily, and was produced despite much opposition, which was mainly directed towards the question of compatibility.

BETTER STANDARDS

But the search for ever better standards continues.

Both in America and Japan tests are being conducted with between 1000 and 2000 lines, primarily for use in theatres and cinemas, and in France tests were once conducted over both 441 and 819 lines, although in the French case the 441 lines performed better than their 819.

But while television was now started in Australia, it was the Olympic Games of 1956 that put it on a firm footing.

For those who cannot remember so far back, television sets in those days were very expensive, a true luxury item.

However, the decision by the television stations to cover the Olympic Games of that year, was the catalyst that encouraged people to buy sets, and thereby properly establish a worthwhile audience.

NETWORK EXPANSION

Further expansion of the network came in 1959 and 1960, when Stage Two of the television plan was implemented with the opening of television stations in Brisbane, Adelaide, Perth and Hobart.

Stage Three of the national television service was introduced in 1961 with the opening of the first country stations, and at this point an interesting piece of equipment, rather than a person, makes its mark.

Pioneer of commercial TV Keith Cairns first manager of Melbourne Channel 7, seen here with his wife and actor Effram Zimbalist Jnr.

The piece of equipment was a television relay receiver, the first in Australia, which the PMG's Department had bought in 1958 from Siemens and Halske AG., of Munich.

In 1961 it was used as a monitoring receiver in Tasmania, before being used for off air pick-up and re-transmission during the opening of Australia's first country station, GLV in the Latrobe Valley, of the Federal elections.

Dr Albert Seyler, as Assistant Director, Pulse Technology Branch, was then responsible for its next ingenious use.

The receiver was placed in a DC 3 aeroplane, which flew at 7000 feet on a pre-arranged flight path between South Australia and Victoria, to relay the Test Cricket at Adelaide to Melbourne.

NO COLOR CORRECTION

It ended its life at Darwin, where it came out of service in 1976 because it had no colour correction, but it had served its purpose.

This television relay receiver, I am told, so impressed the PMG engineers with its quality and durability, that it led to Siemens being asked to tender for telephone switching equipment.

Meanwhile, colour was the next major innovation in the development of Australian television, and was introduced on C Day, 1st March, 1975.

The choice, however, for a colour standard rested between three main systems, NTSC (the American National Television System Committee), SECAM (the French Sequence a Memoire), and PAL (the German Phase Alternation Line).

To the engineer and television consultant, Joe Roisen, the choice was straightforward.

A youthful and slender Bert Newton.

His famous saying, as remembered by Jim Fisher, was that NTSC stood for 'Never twice the same colour', SECAM for 'Something essentially contrary to the American method', and PAL for 'Peace at last'.

It will come as no surprise, therefore, to relate that it was the PAL system that was introduced into Australia.

Which brings us to the state of affairs today, where Telecom is still involved in television, by operating and maintaining the National transmitters, as well as all inter and intra state relay bearers, whilst the Communications Department owns the National transmitters, and allocates all the frequencies for both television and radio.

The story of Australian television, therefore, may be 25 years old, but it is by no means over yet, and it is a story that should be known, in tribute to those early engineers, as 25 years of technical excellence.

Much loved radio and foundation Australian TV performers Bob and Dolly Dyer. Right: Ernie Sigley comperes his programme Teenage Mailbag around 1962.

THE GOODIES IN SANTA'S BAG

Not every citizen would see Telecom Australia in the role of Santa Claus as do our Western Australian Public Relations people who hit upon this topical way to display the telecommunications goodies today available to the public. They include the new clever Commander small business system seen atop Santa's bag and one of the new Trimfones, the Gondola, held in his right hand. Assistant Tech. Syd Kerr of Perth North Telephone Installation Depot made a convincing Santa Claus (should have had a moustache, say the purists) and delightful three-year-old Amber Howard of suburban Bayswater was there, they say, to order a Commander for her doll's house.