Retired Telecommunications Employees Association's
NEWSLETTER
RTEA - Proud of its Union Heritage
MARCH 2026

Welcome to your March 2026 Newsletter.

John Lane

Hello and welcome to the March 2026 newsletter. As many of you know, the *Retired Telecommunications Employees Association* held its Annual General Meeting in February, providing members with an opportunity to reflect on our progress and chart the Association's future direction.

The AGM likely marks our 41st year. It is somewhat ironic to reflect that, after 40 years in our former working lives, we would have reached the stage of planning retirement. Yet here we are, still going strong. We are fortunate to have many members who are still with us from those early days, and our Association's success is no accident; it is the result of the dedication and commitment of its members.

THANK YOU JOHN BRYCE

Speaking of our committee, it is a fitting opportunity to announce that John Bryce has retired from our committee after 25 years of service. John has been one of those members who has given of his time and effort that has contributed to the success of our Association.

I sincerely hope we will continue to see John at our monthly meetings, where we can still enjoy a glass of red wine after proceedings. For many years, John, the late John Hickey, and I would regularly stay after our lunch to enjoy a glass of red. We became known as the *"Three Johnies."*

I also want to thank John's wife, Agnes, for supporting both John and our Association. I have included a photo of me presenting John with our OBE ("Over Bloody Eighty") Award back in November 2022.

While we thank John, I am pleased to welcome Wayne Evans as a new committee member. I am sure Wayne will add value and guide our discussions. it is always great to have new people join and bring fresh ideas to committee.

CWU NSW/VIC BRANCH AWARDS - AN INVITATION

I also want to let you know about another celebration on Saturday, 28 March 2026. The CWU NSW/VIC Branch is inviting our members to celebrate Life Membership awards for three former CWU activists. One of the awardees is Lee Walkington, who serves on our committee.

Lee gave outstanding service to our former Union during a difficult period for the Union movement. You may remember that the Howard government introduced harsh employment laws, making it difficult for the Unions to do their traditional role improving and safeguarding their members' working conditions. It must have been a difficult time for Lee and other Union represntatives.

The function is being held at the **Petersham Bowling Club,** 77 Brighton Street, Petersham and commences at 1 pm. Please RSVP to 0419 605 000 by the 21ST March.

Notice of Motion - March 2026 General Meeting

The Retired Telecommunications Employees Association membership endorses a committee's recommendation to make a $250 donation to the Fred Hollows Foundation.

Retired Telecommunications Employees Association

MARCH 2026 MONTHLY GENERAL MEETING

Thursday, 26TH March 2026

Starts at 11:05 am

Petersham RSL Club (301 Trafalgar Street, Petersham,
an easy 150m walk from
Petersham Railway Station

The Meeting will also be held via ZOOM
Access details will be emailed
to members on Tuesday morning,
24th March 2026

Retired Telecommunications Employees Association

OFFICE BEARERS

President - John Lane

a-lane@bigpond.com 0427 238 687

Vice President - Colin McQueen

colin.mcqueen@bigpond.com 0429 151 209

Vice President - Bruce Coxall

webadmin@rtea.net.au 0418 414 658

Secretary/Treasurer - Alan Bassman

alanbassman53@gmail.com

0407 502 553

46 Lyle Street,
Girraween NSW
2145

Assistant Secretary & Newsletter Editor - Paul Rewhorn

pdrewhorn@me.com 0418 626 625

Welfare - Peter Hack

0408 969 530

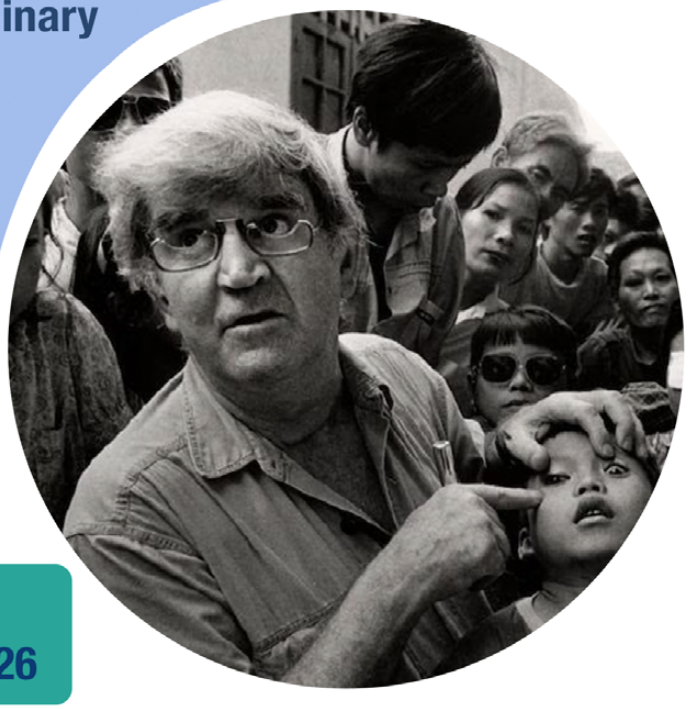
Committee

Trevor Anderson, Wayne Evans, Bob Hamblion, Vince Haywood, Terry Livingstone, John McAuliffe, Arthur McCarroll, Barry Robinson, Terry Robonson, Garry Masman, Ron Milosh, Bruce Noake Warren Morley, Peggy Trompf, Lee Walkington.

Special Guest Speakers from the Fred Hollows Foundation

RTEA March 2026 - General Meeting

An Iconic Image, An Extraordinary Story



Thursday, 26th March 2026

Michael Amendolia will be among the guest speakers from the Fred Hollows Foundation at our March General Meeting.

Michael was a newspaper photographer who, in 1992, travelled to Vietnam on his first overseas assignment to photograph Professor Fred Hollows during a surgical training visit in Hanoi. During that trip, he captured the now-iconic photograph of Fred Hollows examining the eyes of eight-year-old Tran Van Giap in the courtyard of the Hanoi Institute of Ophthalmology.

Tran Van Giap was scheduled for surgery the following day after Fred Hollows examined him. The operation restored his vision and transformed his future.

Join us at the March General Meeting to hear the story behind the photograph and learn what became of the young eight-year-old.

Welcome to your March 2026 Newsletter (cont'd).

SOCIAL EVENTS

Now I turn to our upcoming social events. We are starting the year with lunch at the Bundeena Community and Services Club on Thursday ,19th March. The lunch has proved popular, and there is the opportunity to do some sightseeing before or after. This month's newsletter has train and ferry details.

In April, we will have a tour of Sydney's Conservatory of Music and lunch afterwards at the City of Sydney RSL. I would like to share more details with you now. However, Peggy Trompf, who is organising the tour, is currently in hospital having shoulder surgery. Peggy tells me that our day will include a tour of the Conservatory followed by a recital. Once we have more details, we will email them to you. Best wishes to Peggy for a speedy recovery.

Our big social event of the year is the annual trip away in October. Member Bob Bartley has been.doing the research for trip away, *"Gilgandra and Beyond"*. Bob is a Gilgandra local who knows Gilgandra and the surrounding areas well. There is still some work to be done, and I hope to share all the details with you in a few weeks.

FRED HOLLLOWS FOUNDATION - MARCH GENERAL MEETING

During our March committee meeting, we discussed our plans for guest speakers in 2026. We decided to invite guest speakers who will share knowledge on home care assistance, wills, power of attorney, and guardianship. Warren Morley and Vince Haywood have contacts in mind , and once confirmed, we will publish details together with dates.

At our March General Meeting, we are delighted to welcome our first guest speakers from the ***Fred Hollows Foundation.*** Many of you will recognise the powerful photograph featured on the poster in this newsletter; Professor Fred Hollows alongside a young Vietnamese boy, Tran Van Giap. The image captured a life-changing moment, before Professor Hollows restored the boy's sight.

We are especially pleased to have Michael Amendolia, the photographer behind this iconic image, joining us as a guest speaker. Michael will share the story behind the photograph and update us on Tran Van Giap, now an adult. It is a truly moving and uplifting story—one I am sure you will find both inspiring and memorable.

I would also like to draw your attention to a notice of motion to be considered at the meeting. The proposal seeks approval for our Association to make a donation to the Fred Hollows Foundation.

Here in Australia, we are fortunate to have access to quality eye care, particularly as we grow older. In many parts of the world, however, people are not so fortunate, with preventable blindness often the result of poverty and limited access to treatment. The Fred Hollows Foundation continues to do remarkable work in these communities, restoring sight and transforming lives for those who would otherwise remain in darkness.

Our Association is not the only group that takes advantage of Petersham RSL's excellent dining and hospitality. For a long time, our former training school instructors have been coming to Petersham RSL. Back on the 19th of February, many former instructors gathered for a reunion. I have included a group photograph of them; they all appeared to be enjoying themselves. Among them were some who are also on our Committee, Barry Robinson, Ron Milosh and Arthur McCarroll.

Finally, a reminder that our March 2026 General Meeting will be at the Petersham RSL on Thursday, 26th March 2026, starting at 11.05 am. I look forward to seeing you there.

Gambling Advertising Reform: Once there was enthusiasm for Reform: *Now a wish for it all to would go away*

In our February 2026 Newsletter, we announced our campaign to persuade the federal government to implement the recommendations of the House of Representatives Standing Committee Report ***on online gambling and its impact on those experiencing gambling harm.***

Before explaining our future actions regarding this matter, I would like to explain why the prevalence of gambling advertisements is an important issue and why it is causing harm within the community.

The Association is not opposed to gambling per se; rather, our concern lies with the sheer volume and normalisation of gambling advertisements that have become so prevalent across Australian media. These advertisements are now difficult to avoid and are increasingly shaping community attitudes, particularly among younger audiences. It is this constant exposure and its potential to cause harm that has prompted our concern and our call for action.

The unchecked proliferation of gambling advertising, and its growing impact on the community, that compels us to take a clear and principled stand.

Online gambling companies advertise so much because it works. Online gambling has deliberately marketed itself alongside sport. If you take notice of the gambling advertisement content, you will learn the content's objective is to normalise gambling as fun, harmless and a social activity. The standing committee made the finding that gambling advertising is grooming children and young people to gamble and encourages riskier behaviour, encouraging audiences to gamble online, which is easy to do these days with a smartphone.

The gambling industries had the opportunity to put their case against restrictions on gambling advertisements. The industry was joined and partnered by the large sporting codes and broadcast media. As you will read in this article, to date, they have been successful in using lobbyists (*see the February 2026 newsletter*) and fostered a close personal ties that the heads of online gambling and sporting codes have with government ministers.

Gambling Advertising Reform Timeline
From Inquiry to Stalemate

September 2022

The House of Representatives Standing Committee on Social Policy and Legal Affairs begins an inquiry into online gambling harms, chaired by Peta Murphy.

The Inquiry members comprised a cross-section of political parties from the House of Representatives.

May 2023

Opposition Leader Peter Dutton proposes banning sports betting advertisements during live sports broadcasts and for one hour before and after games.

The Opposition Leader's support for a ban on gambling advertisements offered the prospect of cross-party support for reform, not a politically divisive issue.

June 2023

The standing committee releases its report "You win some, you lose more", making 31 unanimous recommendations, including a three-year phased ban on online gambling advertising.

December 2023

Committee chair Peta Murphy dies from cancer while the government is still considering its response to the Standing Committee's report.

February 2024

Independent MP Zoe Daniel asks Prime Minister Albanese whether the government will honour Murphy's recommendation for a full ban.

2 July 2024

The government circulates a confidential compromise proposal: Authored by Minister Michelle Rowlands.

Details are:

- A maximum two gambling advertisements per hour on television
- No gambling advertisements one hour before or after live sport
- Ban on betting advertisements across social media and digital platforms

8 July 2024

Details of the proposal are leaked publicly; the Prime Minister declines to confirm the plan.

August - October 2024

Sporting codes, broadcasters, and reform advocates—including the Alliance for Gambling Reform—intensely lobby the Federal Government against a ban on gambling advertisements.

The Australian Football League writes to the Prime Minister raising concerns about advertising restrictions

Past 18 Months
Stalemate & Silence

The Case Against Gambling Advertisement

The Standing Committee on Social Policy and Legal Affairs released the report ***"You win some, you lose more"*** in June 2023. This report focused on online gambling and its effects on people harmed by gambling.

With this article, you willl find a timeline showing how the federal government responded to the report's findings and recommendations.

At first, there was strong support from both sides of politics. A year later, the government responded to the Standing Committee Report, seeming ready to take reform action on gambling advertisements. But just a week after that, there was silence. The Prime Minister has refused comment of the Standing Committee report's findings. Instread refer to past initiatives in respect to gamblings. The Standing Cimmittee report found these past initiatives were proving inadequate. ***Today, nearly two years later, the issue has gone ignored, it seems, the government is hoping it will simply disappear and forgotten.***

SO, WHAT HAPPENED?

As I mentioned in last month's newsletter, lobbyists and the gambling industry, with help from sporting bodies, have worked hard to shut down this issue. Unfortunately, this is all too common in politics today, no matter which party is in government. Before writing this article, to understand why the report's findings have gone ignored, I have read media reports about what has happened since the "You win some, you lose more" report was tabled in parliament. I found that lobbyists and leaders from gambling and sports organisations quickly reached out to the Prime Minister and senior cabinet ministers. Sadly, their efforts are proving sucessful.

In contrast, when our Association sends emails and letters, even though many of our members and supporters are from the Labor Party, we are mostly ignored and do not receive replies.

I have read the Standing Committee's report "You win some, you lose more" . You do not have to read too far into the report to understand how important are the reports fndings and recommendations are for the welfare of Australians, particularly young Australians. The Committee received powerful evidence from people with a lived experience of online gambling harm, and from academic and health experts, peak bodies, community organisations and concerned individuals about the harm online gambling is causing to everyday Australians.

The committee found that Australians outspend the citizens of every other country on online gambling. Further, it is wreaking havoc in our communities. Members of our Association who work with charitable organisations have confirmed the committee's findings as to the harm that gambling can cause.

KEY FINDINGS

The Standing Committee made these key findings:

- Online gambling is unlike other forms of entertainment because of its potential to cause psychological, health, relationship, legal and financial harm to individuals and those around them, and tragically, gambling is a key risk factor for suicide.
- ***A person's gambling can progress to the behavioural addiction of gambling disorder, which is like substance addiction.***
- There are currently few safeguards to protect people with gambling disorder from online gambling harm, and many find it difficult to ask for help because the stigma associated with harm from gambling is silencing them. Those who do seek help find it difficult to access appropriate treatment and support.
- Australians lose the most to online gambling because Austrlia has a weak and fragmented regulatory framework, ***which places all the onus for reducing harm onto the person who gambles.***
- Despite gambling harm being a major public health issue, we do not treat it like one. Instead, ***our policies and regulations encourage 'responsible gambling', which absolves online gambling platforms of much of the responsibility for the harm their products cause.***

In our representations to our parliamentary representatives, we made the point that Australia had successfully reduced smoking take-up. It is interesting that the ***"You win some, you lose more"*** made the same point. The report reminded that sporting bodies had argued that the tobacco industry was an essential part of their funding.

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The Case Against Gambling Advertisement

PAST EXPERIENCE AND OVERSEAS EXAMPLES

I can recall back in the early 1970s, the Australian Cricket Board claiming that the "Benson and Hedges" sponsorship was critical to their survival. Time proved that other sponsors moved in to replace the "Benson and Hedges" sponsorship. Cricket in Australia has never been in a healthier position.

First, the ban on tobacco advrtisement applied to broadcast media, then print media and finally came plain digarettee packaging.

The report found specifically that the above restrictions on advertising deprived the tobacco industry of 'its path to normalisation via marketing and sponsorship, making it less likely that smoking would be casually accepted and socially desirable.

The committee also found that other countries had placed limits or prohibitions on gambling advertisements; these are

- Italy - prohibits all gambling advertising and sports sponsorships.
- Finland - prohibits gambling advertising on all radio, television and cinema platforms l
- Belgium prohibits all forms of gambling marketing.
- Spain prohibits gambling advertising on radio, television and video exchange platforms from 5 am to 1 am.

NEXT STEPS

Our Association undoubtedly has a challenge to persuade the current federal government to adopt the ***"You win some, you lose more"*** report's recommendations. We will continue over the next few weeks, writing to members of parliament on the crossbench and to trade unions, requesting their support. We certainly will not be concealing our disappointment with the Labor Party, which should know better.

You can also assist by writing to your local member, the articles in this month's and last month's newsletters will assist you.

RETIRED TELECOMMUNICATIONS EMPLOYEES ASSOCIATION

LUNCH AT THE BUNDEENA COMMUNITY & SERVICES CLUB THURSDAY, 19TH MARCH 2026

JOIN US FOR OUR ANNUAL BUNDEENA LUNCH AT THE BUNDEENA COMMUNITY & SOCIAL CLUB. FOR THE THIRD YEAR RUNNING, WE LOOK FORWARD TO WELCOMING BOTH FAMILIAR AND NEW MEMBER FACES. A GREAT START TO OUR SOCIAL CALENDAR FOR 2026!

Our day starts with a scenic ferry ride from Cronulla to Bundeena, followed by a relaxing stroll along the Bundeena Art Trail. We then gather for a delicious, affordable lunch at the Bundeena Community & Social Club, where good company and a friendly atmosphere await.

A CRONULLA-BOUND TRAIN DEPARTS FROM CENTRAL AT 10.19 AM FROM THE EASTERN SUBURBS & ILLAWARRA LINE - PLATFORM 25. THE SAME TRAIN DEPARTS SYDENHAM AT 10.26 AM, WOLLI CREEK AT 10:29 AM, HURSTVILLE AT 10.40 AM AND SUTHERLAND AT 10.53 AM. THE TRAIN ARRIVES AT CRONULLA

THERE IS AMPLE TIME TO WALK FROM CRONULLA STATION TO THE FERRY WHARF IN GUNNAMATTA BAY. THE BUNDEENA FERRY LEAVES AT 11.30 AM. THE FERRY DEPARTS FROM CRONULLA ON THE HALF HOUR THROUGHOUT THE DAY. THE RETURN FROM BUNDEENA IS ON THE HOUR. AT 11.08 AM.

Telephone Exchanges through Time

Paul Rewhorn

In Part 1 of our article, "*Telephone Exchanges Through Time*", we looked at how telephone exchanges in Australia in type, number and size up to the beginning of the Second World War.

In the early days of telephony, every call required an operator to connect it. At first, telephones were viewed as a luxury item, a device used mainly by businesses and the wealthy. As telephone use spread, the manual switching of calls became progressively more cumbersome and less practical.

To make a call, a user picked up the receiver and signaled the operator. When answered, the caller stated the desired number, and the operator connected the call by plugging cords into the correct jacks. there were occurences where more than operaor was required to make the call connection taking more time.

Before and just after the First World War, Australia began the tentative transition to installing automatic exchanges using Strowger technology.

In this article, we continue the story, exploring how Australia's telephone network grew and modernised following the Second World War and then through the 1950s, 60s and 70s.

THE POST-WAR TELEPHONE BOOM

After the Second World War, Australia was experiencing a booming economy. Most capital cities expanded rapidly after the war as suburbs spread far beyond their pre-war boundaries. People were also becoming a little better off.

Through the 1950s and into the1960s, getting phone service could have a prospective subscriber waiting anywhere from six months to a year before seeing a telephone in their home. For residences already with a telephone service, many had to share a telephone line with a neighbour (a party line). In rural areas, there were cases where six subscribers shared a single line.

Rising wealth and a building boom meant new suburbs were spreading across capital cities, especially in Sydney and Melbourne. In the 1950s and 60s, people's aspirations were to own home, buy a television, and have a phone.

I remember my family receiving a letter from the PMG around 1963 informing them that, due to changes in the local exchange, more telephone services had become available in their area. My mother was at the Post Office the next morning, completing an application form.

A couple of weeks later, an ivory-coloured phone sat in the hallway. Soon my mother's friends discovered she had a phone, and our home must have gone on to witnessed the world record for the longest phone conversations being broken time and again.

The worst circumstance in our home was my mother taking a call around 5.30 pm, dinner would then take place around 7.30 pm. She would pause the call to ask me to turn down the oven and to take that expression off my face.

Fortunately, local calls were not charged by the minute; we would have been poor.

EXPANDING THE NUMBERING SYSTEM

The Australian telephone network had historically struggled to keep pace with demand for additional telephone services.

When automatic exchanges were introduced, a five-digit numbering scheme was adequate for the few thousand telephone subscribers. Documents at the time noted that subscribers might have difficulty remembering a long five-digit number.

As more people requested telephone service, it was not too long before a larger phone numbers became necessary. Longer telephone numbers enabled more number assignments, allowing more people to access telephone service.

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Telephone Exchanges through Time (cont'd)

First, thre was the transition to six-digit telephone number. By the 1950s, particularly in the capital cities, it became clear that even a six-digit number was no longer sufficient in many areas, and a seven-digit telephone number was needed to cater for growth. With Step-By-Step technology, expanding the numbering system required adding another switching stage to the Step-By-Step network. a major and expensive undertaking.

In the past, piecemeal solutions would suffice rather than pursuing a large-scale, expensive one. The Australian Post Office deferred the expansion to a seven-digit number plan for one more time. Instead, the Australian Post Office (APO) reorganised the telephone network's main exchanges; the large central switching sites. The APO increased the number of main exchanges in Sydney and Melbourne from eight to nine. The hope was that the main exchange changes would allow the six-digit scheme to continue to meet demand for another 20 years.

Relying on this plan made sense. Migrating to a seven-digit number plan while staying with the Step-By-Step (Strowger and Type 2000) technology would be expensive undertaking. Such a move would require more switches, added building costs, and extra staff resources for installation and ongoing maintenance.

Along with the abovementioned changes to main exchanges, the Australian Post Office became serious about network modernisation and was prepared to invest heavily. The prospect of having more subscribers assured the Post Office that it would receive a healthy return on its investment.

The investment required more than constructing more telephone exchanges. It also involved laying new cable and increasing the trunk circuit capacity. Another need was to improve rural services, which had been largely ignored in the past.

To allocate their investment, the Australian Post Office first had to understand what a future telephone network would look like. There had been earlier studies but these lacked coordination.

The Post Office decided an overall plan was necessary. Australian Post Office formed an Automatic Network and Switching Objectives (ANSO) Committee to help plan effectively.

ANSO produced the Community Telephone Plan. A plan that guided telecommunications planning in Australia over the next 20 years.

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Telephone Exchanges through Time (cont'd)

THE CROSSBAR ERA

As mentioned earlier, planners at the time recognised that Step-By-Step switches (a technology in which calls are connected through a sequence of mechanical steps using electrical contacts) was not the way forward.

Fortunately for the Australian Post Office, a new telephony switching technology had come on the horizon: the crossbar switch.

Around 1959, the Australian Post Office (PMG) decided to standardise on Ericsson's crossbar system, a radically new type of telephone exchange switch. The decision followed an international evaluation and trials held in Australia. The local trials were the Ericsson crossbar system in Toowoomba and the Pentaconta system, another crossbar switch technology, in Kew, Victoria.

What was a rare decision, unlikely to be taken today, the federal government insisted that the manufacture of crossbar switches would be undertaken locally. Perhaps past shortages of imported Step-By-Step equipment influenced the decision.

Local manufacture was then undertaken by STC (Standard Telephone and Cables) and TEL (Telecom Equipment Ltd), under license to Ericsson, who later established its own factory. The government allowed Ericsson to undertake initial installations of crossbar exchanges. Later, the Whitlam Labor government mandated that only Australian Post Office staff could undertake telephone installations.

Crossbar was like Step-By-Step in that it used electromechanical components, such as relays (electrically operated switches), to connect calls. Imagine a grid where horizontal and vertical bars cross, like a chessboard. When someone made a call, the bars moved to meet at the correct point, creating a direct path for the call.

The physical design of a crossbar switch was significantly better than that of the Step-By-Step switch. A crossbar switch needed less regular maintenance, with fewer moving parts to wear out.

Another key improvement was the innovation of a 'common control' component. This was a separate part of the system that could store and check the entire phone number before setting up the call, making the process faster and more efficient.

After the first crossbar exchange installation in Toowoomba in 1960, crossbar exchanges with "Common control" were progressively installed throughout Australia.

Crossbar switching, with common-control registers (devices that store the entire dialled number), allowed the exchange to store the complete number before selecting the most efficient call route.

By contrast, Strowger, or step-by-step switching, built the connection progressively, moving the call through switching stages as each digit was dialled. Crossbar used with the faster MFC (multi-frequency coding). This system uses different audio signals for each digit to forward the number from the common control to the crossbar switch or the next exchange.

Crossbar technology with common control facilitated the introduction of subscriber trunk dialling (STD) to the Australian Telephone Network. The article will explain subscriber trunk dialling later.

The introduction of the crossbar allowed the telephone network to expand relatively seamlessly, unlike the Step-By-Step technology. Later, crossbar technology, with its common control component, would pave the way for computer-controlled switching in the late 1970s. Crossbar exchanges marked the peak of electromechanical switching design, as the relay-based common control systems they relied on would soon be replaced by computers performing the same functions in software.

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Telephone Exchanges through Time (cont'd)

RURAL TELEPHONE EXCHANGES

This article is not centred only on capital city networks. Country or rural telephone exchange development was slow and uneven. Federal governments had shown reluctance to intervene or invest heavily in rural telephone networks. As mentioned in part one, residents and businesses in the country often relied on their own resources to install and maintain their telephone lines.

Despite initial government disinterest, by 1939, nearly every country town and large village had an exchange. Most exchanges were small, using magneto switchboards with capacities of 10 to 200 lines. Only a few exchanges exceeded 200 lines and needed multiple operator positions.

The Second World War and equipment shortages afterwards stalled the conversion to automatic exchanges. Country subscribers still had to provide substantial telephone infrastructure themselves. Under the circumstances, they resorted to cost-cutting measures, such as using iron wire and earth-return circuits. Multi-party lines were common, with up to six subscribers sometimes sharing a single line.

Providing telephony in rural areas was a financial challenge for the Australian Post Office. Rural services were subsidised by profits from other areas of the telephone network. By 1960, there were 539,718 rural services: 63% were magneto manual exchanges, and 37% were automatic exchanges.

In New South Wales, 37% of lines were on magneto, 20% were on common battery, and 43% were on an automatic exchange. However, Canberra and Newcastle networks accounted for over a quarter of the automatic lines. Over the next 20 years, most medium- and large-sized country exchanges converted to automatic.

I recall working in a country planning section in the early 1970s, a time when open wire aerial junctions were being replaced by underground cable and rural automatic exchanges were replacing manual exchanges.

I found that conversion over to automatic exchanges was not always greeted with enthusiasm in rural communities. The operators in manual exchanges came from the local community, providing employment and adding to a town's economy. At the time, most of my work in planning concerned the replacement of open wires circuits, unrelated to the automatic exchange conversion programme. However, visits from our section to some towns would create unease among the operators in the weeks that followed our departure.

SUBSCRIBER TRUNK DIALLING

Apart from expanding the telephone exchange network, the Australian Post Office faced another challenge: introducing subscriber trunk dialling (STD). The lack of long-distance circuits made making a trunk call an expensive option for subscribers. The quality of a trunk call was often poor.

Not only were trunk calls expensive, but subscribers often had to book their trunk call in advance, and time limits were frequently imposed on calls. For everyday Australians, making a long-distance call before the introduction of STD was often a slow and frustrating experience. To speak with someone over a long distance, a caller would typically have a caller dial an operator, state the destination and number, and then sometimes having to wait, a considerable time, until a circuit became available before the operator manually connected the call.

Fortunately, transmission technology was advancing, trunk circuit capacity was increasing as more and larger carrier systems were being installed. Advances in carrier systems now allowed dozens, or even hundreds, of calls to travel over a single cable. Basically, a carrier system combines telephone circuits over different frequencies. Almost at the same time as carrier systems improved, the transmission medium was changing: microwave radio and coaxial cable systems replaced many earlier open-wire transmission routes, allowing the carrier system to carry thousands of calls over a single bearer.

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Telephone Exchanges through Time (cont'd)

Crossbar, with its common control, faster signalling and multimetering capability, along with increased trunk circuit capacity, made subscriber trunk dialling possible. The cost of a trunk call was reduced. Telecom, at the time, used clever marketing, offering trunk calls to anywhere in Australia for one dollar on a Sunday evening. The telephone network, once dormant at that time would bounce to life on a Sunday evening.

STD transformed the telephone network. Subscribers could now dial the full long-distance number themselves at any time, without operator assistance. The experience was faster and more private, as people no longer had to involve a third party when making calls.

STD also eliminated the need to 'book' calls ahead of time, and people could now call friends or family in other states as easily as making a local call, with charges clearly recorded by the automatic equipment. For ordinary users, subscriber trunk dialling brought control, convenience, immediacy, and modernity to long-distance calling.

A little later, international subscriber dialling was introduced; Australia was assigned the international country code **61**, which callers overseas dial before the national number.

CHANGING TELECOMMUNICATIONS WORKFORCE

As mentioned in part one of the article, the staff who installed and maintained the telephone exchanges referred to themselves as Telephone Mechanics. This changed after the Second World War. The terms technician and, later, the designation "technical officer" were used. as change came, staff had to understand more complex circuitry, particularly with the introduction of the crossbar switch.

Technical staff had to undertake extensive retraining across all aspects of telecommunications,still continuing with computer software and router devices.

LOOKING AHEAD

This is where our article's history concludes around the late 1970s. Telephone exchanges were to change and migrate to a new technology once more, and possibly for the last time. But who knows for certain? Today, for many people, the fixed telephone in the home is no longer, replaced by each household member having their personal mobile phone.

Since the arrival of the smartphone in 2007, voice calls themselves have become less central to communication, with text messages and social media taking their place. Yet the modern digital networks that support today's services evolved from the vast telephone exchange infrastructure built during the twentieth century.