TELECOMMUNICATION TO AND FROM ALBURY

From talks by Bill Stirling, Regional Manager of Telecom ("Telecommunication at the Crossing Place", presented at A&DHS General Meeting, October 1986 and reprinted from A&DHS Bulletin No 539), Greg Ryan ("Smoke Signals to the NBN," presented at A&DHS General Meeting, March 2015) and Joe Wooding ("Albury & the Telegraph" presented at A&DHS General Meeting, March 2015)

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TELECOMMUNICATIONS AT THE CROSSING PLACE

In 1856 a telegraph line was erected in Victoria which ran from Sandhurst (now Bendigo) and branched via Kilmore, Longwood, Benalla, Wangaratta and Beechworth to Belvoir (now Wodonga). The line was connected to Belvoir in December 1857. The line did not stop at Wodonga but continued a few kilometres to the bank of the Murray River opposite Albury. This was as a result of an understanding that the NSW Government would build a line from Sydney to Albury to link up with the Victorian line.

A committee chaired by Sir Henry Parkes had recommended in December 1856 that immediate steps be taken to connect the cities of Melbourne and Sydney by electric telegraph. An amount of £38,000 was provided by Parliament in 1857 for this construction, and a contract was let in May of that year.

Buildings were needed for the telegraph system and it was recorded in the official Statistical Register of 1860 that a building was in the course of construction in Albury at a cost of £950. This station next to the Court House was finished in 1860, but the cost had risen to £1967 (these problems were apparent in those days too).

As a result of public subscription by the Albury inhabitants, enough money was raised to have Wodonga established as a telegraph office. A public meeting was held in March 1858 and an offer by Mr Nicholls to provide two rooms adjoining his hotel [the Rose Hotel] was accepted. The office was opened for communication in April 1858.

The first telephone exchange was opened in NSW in late 1881. In Albury, two early private lines which preceded the telephone exchange were from T H Mate & Co's bond store to the Custom Office, and a line from the Council Chambers to the waterworks pumping station. In 1898 the first telephone exchange was opened in Albury with seventeen subscribers.

Shortly after Federation in 1901, a larger switchboard was installed and a line was built connecting Howlong and Corowa. Connection was also made with Sydney and Melbourne. Three attendants operated the exchange until 1903 when continuous service was given and the telephonist staff was increased to six.

The number of services connected in 1899 was 30, 52 in 1901, 194 in 1910 and 529 in 1925.

This is a very brief history of the era of communication in this district with the installation of the first telephone exchange. In the early 1950s when there were some 1600 subscribers connected. There was an operating staff of telephonists, approximately 60 ladies and one male supervisor. There were also two "night boys."

Albury, including Lavington, now [1986] has in excess of 17,000 lines connected by two automatic exchanges. There are also some 10,000 services in Wodonga. These exchanges are

connected to the national network by the coaxial cable which has a capacity of 9,000 lines, and was installed at a cost of around $11 million in 1960.

A new optical fibre cable is now being installed [1986] which will also connect the Albury district to the national network. This cable is costing in excess of $20 million and will provide the equivalent of 60,000 trunk lines.

The Albury-Wodonga area now has some of the most modern equipment available in the world.

A computer controlled exchange has been recently installed [1986] which will accommodate initially 1000 lines and provide for the connection of further computer controlled exchanges at Wodonga, Lavington and Jindera.

Albury already has an optical fibre cable operating between the exchange and Eastern Hill. Many different types of services are available to the people of Albury/Wodonga such as telex, data, facsimile, video services, radio paging, and shortly mobile radio telephone. [1986]

These services have been made possible with the advent of new technology, but this will never completely replace the operator. We still need assistance and information from time to time and in Albury this is still given by a small staff of telephonists now called manual assistance operators. Equipment has been replaced by a modern computer controlled exchange this year. [1986].

SMOKE SIGNALS TO THE NBN

2015 has been designated as the "Year of Light and Light-Based Technologies" by the United Nations. Prior to telegraph, light was the only means of effective rapid communication over large distances (eg smoke signals, flags or semaphore).

After the invention of telegraph, electric current was used for over one hundred years as the main method of long distance communication, sending coded signals along copper wires, initially for the telegraph service and then the telephone. The telegraph used Morse Code invented by Samuel Morse in 1838. The Sydney-Melbourne telegraph link was operational in 1858. By 1861 Australia's eastern colonies had 110 telegraph stations and over 122,000 messages were sent that year.

The first telephone was invented in 1876 by Alexander Bell and in 1898 Albury's first telephone exchange opened with 17 subscribers. As the country became more prosperous telephone lines were strung out along roads and railway lines connecting the cities, small towns and the outlying farms. Telephone exchanges employed many women as telephonists who had to manually connect the subscriber to the person with whom they wanted to speak. Eventually new digital technology replaced these exchanges and many still lie empty today.

Coaxial Cable revolutionised telecommunications in Australia. The Sydney/Melbourne link officially opened 1962 after the laying of the cable built in Germany which cost $12 million. Coaxial cable improved communication by allowing thousands of calls to be made at the same time; enabling Subscriber Trunk Dialling (STD) across Australia; it can also carry television programs (eg the 1962/63 Ashes series) and computer data; the cable is well shielded so there is less leakage and less electromagnetic interference.

Microwaves are a form of electromagnetic radiation with wavelengths between 1 mm and 1 metre and travelling at the speed of light (300,000 km/s). Microwave transmissions further improved the volume of data transmission with Melbourne and Sydney being linked in 1959. They can carry telephone signals, television programs and computer data. Linked to satellites, microwave transmissions linked the world to Australia - the first international satellite broadcast between Australia and the UK took place in 1966 and to the US in 1967.

MICROWAVE TRANSMITTERS/RECEIVERS - EASTERN HILL ALBURY

Further improvements in the volume of information that could be transmitted came with three important developments:

- Digital (binary) coding of information - these codes have just two characters, usually represented by 0 and 1. A binary signal via electric current has current on (1) or off (0) and via radiation (eg microwave or light) has pulse on (1) or pulse off (0).
- Lasers - beams of light that lose very little energy over large distances and can be directed through:
- Fibre optic cables - flexible, transparent fibre made of glass or plastic, slightly thicker than a human hair.

Fibre optic communication became commercially available in 1970, with Telstra's first fibre optic links in place in 2000.

Information is transmitted from one place to another by sending pulses of light through an optic fibre cable using either Light Emitting Diodes (LEDs) or Lasers. Fibre optic cables have many advantages over copper wire: they can transmit significantly more data with less leakage over large distances, with little or no electromagnetic interference; they are very thin, so more can be packed in a cable than copper wire; there is no corrosion so lower maintenance costs; multiple channels can transmit on a single strand, each at a different frequency - currently one single fibre can simultaneously handle about 31,000 telephone calls (a single copper wire can handle about 3000).

The National Broadband Network (NBN) is a project to upgrade the existing fixed line phone and internet network infrastructure of the nation. The NBN will replace copper wires carrying electric current with optic fibres carrying pulses of light.

NBN in Albury - at the end of February 2015, NBN wireless was connected to Walla Walla, Jindera, Baranduda, Gerogery and Culcairn and the build had started in many other areas including Yarrawonga/Mulwala, Howlong, Yackandandah and several rural areas; NBN fibre is connected to several new estates in both Wodonga and Albury; the NBN build was expected to be completed in three years [from March 2015].

ALBURY AND THE TELEGRAPH

A Telegraph Office opened in Albury on April 9, 1858 after Mr John Nichols, landlord of the Rose Hotel, Kiewa Street, provided a room free of charge. The locals covered by subscription the cost of bringing the wires into town as the authorities had made no provision to service the population of some 700 – 800 people with a telegraph connection when constructing a line from Melbourne to Sydney. By the end of the year, the government took over, leasing the office at the Rose with Mr H Lay appointed as the first master, but he left the service shortly afterwards to be replaced by Mr CWE Kraegen.

In 1859, the site for a permanent office on the corner of Dean & Kiewa Streets was allocated and tenders called. Mr Thos Allan was announced as securing the contract for building the two storey granite stone office on August 22, 1860, at a cost of £1650 to be completed in 6 months. At the time, Mr Allan had all but completed the new Courthouse next door.

The lease of the office at the Rose elapsed before the new building was completed and the telegraph officials moved into a room in the newly built Courthouse until the new Telegraph office opened on August 26, 1861, almost a year to the day since its inception. I have been unable to ascertain why it took 12 rather than 6 months. The file shows Mr Allan made numerous requests for payment. The *Border Post* reported, July 10, 1861:

> This building is now all but completed, the chief part remaining to be done being the painting, plastering, and other inside "tiddliewinking" work. Though not very ornamental, the erection appears to be substantial and commodious. It consists of two separate dwellings for the attaches of the Victorian and New South Wales branches respectively, with the offices in the centre. The mast for the time ball is also in a forward state, so that we shall soon have a better authority for regulating our watches and clocks than the dinner bells of the various hostelries.

The *Border Post* wrote that Mr Robert Owen had the contract of placing

> that great log of rough Howlong Pine into its perpendicular resting place, assisted in his task by the combined intelligence of a lot of town folk who were present to witness the operation. Our Police Magistrate too, had a finger in the pie, and seemed to enjoy what was going on, giving orders with the greatest sang froid, and with the air of one accustomed to life on the quarterdeck.

The Time Ball first operated on July 20, 1861 and will continue to do so regularly every day. It will be hoisted at 5 minutes before 1, and fall precisely at that hour. The ball was between 3 and 4 ft in diameter, formed of canvas, stretched on a wooden frame, and painted in alternate stripes of black and white.

Some confusion has evolved over the years regarding a Post Office being incorporated in the new building, however this did not occur until May 1, 1870, when the Postal Department moved into the recently vacated Telegraph Office, remaining the site of the Albury Post Office ever since.

A quote from the *Albury Banner* of March 27, 1861, provides some explanation for the confusion. The quote begins as follows: "The New Telegraph Office Approaches Completion. One part of it is to be used as a Post Office and an

Albury Post Office c1870, the Globe Hotel in the background.
Photograph Courtesy Albury LibraryMuseum.

officer will be appointed independent of any other business." The report however, ends with: "The Government should erect a separate building for the new Post Office, the new Telegraph Office will be but accommodation sufficient for that department only."

The authorities only 6 years later, decided to build a new Telegraph Office which opened in April 1868 with Mr Kraegen still in charge. It was a single storey, shingle roofed building which was to become the site of Albury Town Hall in 1907 and in 2015 is being re-developed as the Regional Art Gallery.

The Time Ball was re-located at the rear of the new office but a proposal 6 months later, to add 10ft to the spar and place it in a more conspicuous position has eluded my attempts to verify that that actually occurred, as has just how long the time ball operated in its second location. The Post Office was rebuilt and in November 1879, the clock as we know it, struck for the first time.

Mr Kraegen, having left Albury, lost his life from thirst early in 1872 while working on the overland telegraph connection in South Australia.

The early 1880s again saw the telegraph authorities looking to build yet another office. A proposal to cram a building into the space between the new Post Office and St. Matthew's Church in Kiewa Street, was seriously considered, as was re-claiming the block where the National School first stood, now known as Mates Corner, from Mr TH Mate. Finally, the corner of Dean and Olive Streets was decided upon, but not without some problems. This was part of Market Square which had been ceded to the Borough Council in 1864. A resolution was reached in September 1882, when Council and the government agreed to swap the existing telegraph building for the vacant Dean/Olive Street corner of the Square. This impressive 2 storey building opened in 1886, and in 1898 it incorporated the Telephone Exchange. In recent times it has been the Murray Conservatorium since 1981.

The Borough Council met for the first time in the re-decorated and re-vamped old Telegraph Office on Wednesday, December 8th 1886. During discussions relating to a Town Hall in 1896, it was discovered that the land had never been vested in Council and in fact was still Crown Land. The Telegraph Office was again re-located, along with the Telephone Exchange, this time back to the Post Office in 1904, thus giving Albury six locations for the Telegraph service over the years.