

AUSTRALIA'S FIRST AUTOMATIC EXCHANGE

Australia's first automatic exchange was installed in the GPO in Sydney, in 1911, for internal use. But the first automatic exchange for public use was opened at Geelong in Victoria in the next year — in July 1912. It had 800 subscribers.

The "Geelong Advertiser" described its local exchange in these terms:

"Nothing could be nearer human: to see it work and grasp what it does, makes it seem supernatural. It is so ingenious as to almost beggar complete description".

This Geelong exchange was the first automatic exchange in the Southern Hemisphere and the second in the then British Empire — it was preceded only by the Epsom Exchange in England.

Melbourne's first automatic exchange was opened in the suburb of Brighton in 1914; the first public automatic exchange in NSW began operating at Newtown, Sydney in 1915; and Queensland's first was installed at South Brisbane in 1925.

1929 saw the opening of Tasmania's first automatic exchange in Hobart. an automatic telephone service. In June 1977, the manual telephone exchange at Swansea was replaced with an automatic service and made Tasmania the first State in Australia to have a fully automatic net-work.

FEDERATION IN AUSTRALIA

By 1901, when the six Australian States decided to federate, there were 32,767 telephones in use. Each of the States had, until then, built up its own telephone services. But Federation brought all telecommunications under the control of the Federal Postmaster General.

In 1911 there were 100,000 telephones in use. The rapid growth in the number of services reflected the growing popularity of the telephone as a means of reliable communication and the steady progress which the Post Office was making in the field of telephony.

The half-century following Federation saw the growth of automatic operation; a great extension of trunk line services; the introduction of radio, which was adapted to aid the expansion of the telephone service in several ways; and an enormous increase in the number of telephones in use. The more people who could be contacted by telephone, the more valuable and useful the telephone system became, so increasing the demand still further.

The automatic telephone contributed greatly to the early popularity of telephones in Australia. It was a quicker and more convenient way of communicating with another person on the same exchange — instead of having to go through tedious processes with the operator. From its introduction, the number of automatic telephones in operation grew to a remarkable extent.

In August 1885, the construction of the world's first commercial long-distance telephone line between New York and Philadelphia began. It made clear that people connected to one exchange could also speak to those who were connected to distant exchanges.

Australia was quick to make use of this new development; in 1886, the first trunk link — a 16 km line — connected the exchanges of Adelaide and Port Adelaide in South Australia.

Then, in 1907, the first inter-capital telephone trunk line was opened between Sydney and Melbourne. It was followed by a line between Melbourne and Adelaide in 1914. Sydney and Brisbane were linked in 1923, and Perth and Adelaide in 1930.

In 1930, the first overseas calls from Australia became possible with the introduction of a radio-telephone service to England, and through there to Europe and America. A similar service opened to New Zealand in the same year.

Initially, trunk channels linked different manual trunk exchanges. It was necessary for a succession of trunk operators to connect the appropriate channels together, one after the other, until the connection was made. As trunk traffic grew, the system became increasingly unsuitable. More trunk operators had to be employed and so labour costs increased. It was a tedious and slow way of making a long-distance call, and it was sometimes hard to hear, particularly when several exchanges were linked

With technical advances, trunk switching moved from manual operation through a partly automatic phase. Automatic transit switching equipment was used and only a single operator was required to connect a trunk call to a wanted automatic subscriber. Until well beyond the middle of this century, the majority of trunk traffic went through this single telephonist control.

In 1953, the number of telephones in use in Australia passed the one million mark. By then, the need for improvement in the automatic exchanges was becoming well recognised. The need was for a telephone switching system which would do a better job more economically than the conventional step-by-step exchange which, basically, still followed Strowger's principles.

This led to the adoption of the Crossbar system as the standard in automatic telephone exchanges. The first major installation of this type of equipment was at Toowoomba, Queensland, where a 6,300-line automatic telephone exchange began service in September 1960.

The introduction of Crossbar switching was a big step forward in the automation of trunk calls. It substituted automatic switching and charging equipment for the originating trunk operator and improved the quality of the system radically. Prior to the introduction of Crossbar, there were often very long delays in obtaining a booked trunk call, and the quality of sound was often very poor.

The new Crossbar exchanges had an electrical "memory" which took the number dialled all in one "gulp", instead of step-by-step. It then selected the best way to connect that number.

With Crossbar, Subscriber Trunk Dialling (STD) became a reality. A trunk call by STD was as easy to make and almost as fast to connect as a local call.