

A Short History of Australian Radio

The Early Days

We are able to 'listen' to the radio because the sounds made in one place can be transmitted to many other places through the use of **electromagnetic radiation**.

This phenomenon was first commercialised by the Italian Guglielmo Marconi. He patented the process of **wireless telegraphy** and introduced systems that allowed the transmission of Morse code (telegraphy) over the airwaves (wireless). The invention was mostly used to enable communication between ships and shore.

The sinking of *the Titanic* in 1912 showed the usefulness of the new technology when the ship sent distress signals over the air. Unfortunately it didn't save all 1500 passengers.

In Australia - a newly federated country - wireless telegraphy quickly came under the control of the new Federal Government through the *Wireless Telegraphy Act* of 1905. Since then broadcasting has remained the responsibility of federal governments. In this same year Marconi's company built Australia's first two-way wireless telegraphy station at Queenscliff in Victoria.

Marconi was almost monopolising the industry worldwide with companies in Europe, the USA (later to be renamed the Radio Corporation of America - RCA - in 1919) and Australia. In Australia Marconi and its main competitor Telefunken amalgamated to form Amalgamated Wireless (Australasia) Ltd. (AWA) in 1913.

The First World War

During the First World War (1914-1918), wireless telegraphy around the world came under the control of governments for security and strategic reasons. During this time De Forest and later Armstrong in the USA extended the development of the technology to allow the use of voice (radiotelephony) through the development of the **vacuum tube**.

Up until then, the invention was envisaged as being used to communicate from one point to another. In 1916 David Sarnoff of the Marconi Company in USA wrote a memo to his boss '*I have a plan that would make radio a household utility*'. He was one of the first to see radio as a potential medium for communication from one point to many (broadcasting) and for entertainment and information, as well as communication.

First Steps Towards Radio Broadcasting

Within two or three years there were hundreds of **amateur broadcasters** using the radio telephony medium to broadcast. In Australia for instance there were 900 such amateur users of the new invention. Most of these operations were very tentative affairs - single operators transmitting recordings and talking.

The first "broadcast" in Australia was organised by George Fisk of AWA on 19th August 1919 where he arranged for the *National Anthem* to be broadcast from one building to another at the end of a lecture he'd given on the new medium to the Royal Society of NSW.

In the USA the contenders for 'first station' included WGI (Medford Hillside, Mass., owned by the AMRAD receiver company, it first broadcast as 1XE); WHA (a college station in Madison, Wisconsin); WWJ (Detroit) and KDKA which benefited from having a massive publicity machine of its parent company, Westinghouse. In Canada, XHA (Montreal) insisted it was the first on the air.

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In the United Kingdom 2MT in Whittle went on air in 1922 and the British Broadcasting Company was incorporated in November of the same year. Its other station, 2LO in London, went on air in August that year.

The Sealed Set Scheme

The radio manufacturing industry in Australia, led by George Fisk of AWA, lobbied the Government for the introduction of radio broadcasting in these early years. In May 1923 the Government finally called a conference of the main players. This led to the sealed set regulations where stations could be licensed to broadcast and then sell sets to 'listeners-in'. The receiving device would be set to receive only that one station.

2FC in Sydney was the first to be licensed on 1 July 1923 but its opponent 2SB (later to be called 2BL) was first to go to air officially starting on 23 November that year. 3AR and 3LO went to air on 26 January and 13 October 1924 in Melbourne.

However listeners were reluctant to take to the sealed set scheme. Only 1400 people took out sealed set licences in the first 6 months of 1924. It was quite easy to avoid the licence fee by building your own set, or by modifying one you'd bought to receive more than one station.

'A' and 'B' Licences

The young radio industry realised it had made a mistake with the sealed set scheme. It lobbied the Government to introduce a two-tiered system, the 'A' licences to be largely financed by listeners' **licence fees** imposed and collected by the Federal Government and 'B' class licences to be offered to anyone else who wanted to broadcast. The 'B' stations would have to generate their own revenue through **advertising**.

By July 1924 the Australian Federal Government accepted this compromise proposal. This system was an amalgam of the British system where the non-commercial **BBC** had a government-imposed monopoly and the USA where the 'free market' was the driving force. (The first radio advertisement was on WEAJ in New York in February 1922. A ten-minute talk by the advertiser cost him \$50 and recouped \$27,000 in sales!).

The 'A' class stations were the original sealed set stations, plus one in each other Capital City: 2BL, 2FC, 3AR, 3LO, 7ZL, 5CL, and 6WF.

By the end of 1924, the number of listener licences was close to 40,000. It doubled to 80,000 by the end of 1925. The two-tier system was working!

The first 'B' class station on air was 2BE in November 1924. It went bankrupt with the onset of the Great Depression in 1929. The oldest surviving 'B' class (commercial) station is 2UE, which went on air on Australia Day 1925. South Australia's first stations were 5CL (A) – 20 November 1924 and 5DN (B) - 24 February 1925.

When the British Government nationalised radio in 1926 by buying out the British Broadcasting Company and forming the **British Broadcasting Corporation** the Australian Government held a Royal Commission into Wireless Broadcasting. The Government didn't immediately follow the British lead but did encourage the 'A' class stations to amalgamate in order to maximise efficiencies and maintain standards.

The Australian Broadcasting Company

In 1929 the Government did nationalise the transmission facilities and contracted the provision of programming to the Australian Broadcasting Company a consortium of entertainment interests. This company was nationalised in 1932 by the Australian Broadcasting Commission (ABC) Act.

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So in 1932 the two-tier system was finalised; the national broadcaster, the ABC, with 12 stations and the commercial sector (with 43 stations).

The ABC was initially to be allowed to broadcast advertisements but this was dropped from the final Bill. It was funded entirely by **radio listeners' licences**. Licence fees for radio and TV were finally dropped in the seventies. ABC funding now comes from Federal Government appropriation.

It's worth noting that Australia was a leader in the use of short-wave broadcasting to transmit overseas. In 1927 AWA conducted a series of transmissions to Britain. These regular broadcasts were heralded by a kookaburra's laugh - a practice that's still used by Radio Australia today. **Radio Australia** was formally incorporated as part of the ABC in 1939.

Frequency Modulation – Not Here!

In the USA Armstrong had invented FM broadcasting - a much superior broadcasting medium - in the early 1930s. It was higher in fidelity, could broadcast in stereo and wasn't subject to electrical interference like the AM system. Armstrong was frustrated by David Sarnoff of RCA who had major investments in AM receivers and by then television. He didn't want to tool up for a new method of radio broadcasting.

However after much frustration FM was introduced in USA in the late 1930s at the frequencies of 42 - 50 MHz. In the early 1940s, RCA and other AM broadcasters realised that FM was going to take off. So they petitioned the FCC to utilise another part of the band (82 - 108 MHz). The FCC eventually accepted this argument. This made 400,000 FM sets obsolete. By 1946 the second launch of FM was established.

In Australia experimental FM broadcasts were commenced in 1948. However after an Inquiry into FM in 1957, where little interest was shown, the Government authorised the use of the international VHF FM band for television (Channels 3, 4, 5, 5A) in 1961.

The Golden Years of Radio

By the early 1940s the Australian radio broadcasting scene was established. There were about 130 commercial stations and a roughly equivalent number of ABC stations. The ABC had national commitments including news, education, parliamentary broadcasting, and culture (including five full orchestras). The commercial stations were much more local and community-orientated in nature. Their programming was responsive to the local community.

The late 1940s and early 1950s were the golden years of radio. Radio advertising budgets were large, and there was no competition from television. The regulatory body, the Australian Broadcasting Control Board (**ABCB**), created in 1948, maintained that there was no room for new stations on the AM band and the FM band had been allocated to (VHF) television, so effectively no new competition came onto the scene.

Pressure for Change

In 1961 the experimental FM stations were closed down as the VHF band had been allocated to television. This led Dr. Neil Runcie in Sydney to form the Listener's Society of NSW, which had as its major objective the establishment of subscriber-supported FM fine music stations. In the same year the University of NSW was given a licence under the Wireless and Telegraphy Act to broadcast lectures over a non-broadcast frequency VL-2UV.

These were two of the founders of a movement to provide more diversity in Australia's radio broadcasting. Ultimately this movement led to the establishment of the third tier of broadcasting in Australia, the public or **Community sector**.

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To understand the genesis of this movement it's necessary to look at Australia in the 1960s. There was dissatisfaction with the Government in not introducing the quality of FM broadcasting.

This emanated mainly from people who wanted fine music on the airwaves. Secondly there were some Universities lobbying to be allowed to broadcast educational material (VL-2UV was already on-air but not on the broadcast band). The Open University experiences in the UK and the educational stations in the USA largely motivated this group.

The third prong of this movement came from Australia's ethnic communities. Australia had undertaken the biggest program of immigration in the world after the Second World War. The country's population had almost doubled in 20 years. By the late sixties this large group of immigrants, many of them from non-English speaking backgrounds, was becoming more vocal. Ethnic leaders were critical of Australia's media, which was then almost totally white Anglo-Saxon.

The radio industry was particularly bad in this respect. The ABC was very much caste in the BBC mould. The **commercial sector** was discovering the advantages of format programming and was following the youth generation programming developments of the American industry. Pop culture was just being invented.

So the ethnic communities were pushing for more access to the airwaves. The commercial sector previously had provided some ethnic programming on a **user pays** basis to the larger ethnic communities mainly Greek and Italian. In 1964 the ABCB had allowed for up to 10% of broadcasting time to be in non-English languages. 2CH and 3XY in particular utilised this provision for revenue. As the commercial sector increasingly succumbed to the format programming concepts of the USA this outlet was gradually decreased until in 1972 2CH dropped its 17 ethnic programs altogether.

The fourth group seeking change to the status quo was the politically active generation of the 'swinging sixties'. In the late sixties, the 'draft' protestors in Melbourne and Sydney that each mounted pirate broadcasts exemplified the desire for a more open media. In Brisbane, the limp response by the mainstream media to the Springbok rugby tour demonstrations in 1971 led students to look at forming their own radio station (ultimately 4ZZZ).

Each of these four different groups had one thing in common - they all wanted access to the airwaves!

FM Again

The Australian Broadcasting Control Board held another inquiry into the introduction of FM broadcasting in 1971/72. This eventually recommended the introduction of FM but on the UHF band rather than the internationally used VHF band. Significantly the inquiry also recommended the introduction of public access broadcasting. The then Liberal Government accepted this report in October 1972, but was succeeded by the Whitlam Labor Government on 3 December that year.

The Whitlam years were characterised by social reform and structural change. Public broadcasting was ultimately introduced in the process.

The radio broadcasting industry (as in 1957) wasn't interested in spending a lot of money on re-tooling for FM and resisted its introduction. So when FM was introduced at the same time as the introduction of public (community) broadcasting in 1972/75, it was ironic that the commercial broadcasters were initially prohibited from accessing the new medium. The first use of FM in Australia was for public broadcasting - 2MBS and 3MBS - the fine music stations. The ABC entered the medium in 1976 with the establishment of ABC-FM based in Adelaide.

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FM was eventually introduced on the VHF band - the internationally recognised FM band – rather than the UHF band as recommended by the Australian Broadcasting Control Board in 1972. This was a victory of common sense. The ABCB had been swayed by the radio manufacturing industry, which wanted to introduce FM on UHF. This would protect the Australian market from overseas imports. To this day, we are still slowly removing television stations from the VHF band (Channels 3, 4, 5, 5A) to allow the full implementation of FM broadcasting in Australia.

The Advent of Public Broadcasting

5UV in Adelaide predates the MBS stations as Australia's first public station. It went to air in June 1972 just off the AM band. It converted to the AM band (530 kHz) in March 1974.

Public broadcasting as the third tier of broadcasting in Australia differs from the other two sectors through the community involvement in both the management and programming of the station. The 'community' here can be a geographically defined community or a community of interest (i.e. special interest - ethnic, educational, fine music, Aboriginal, Christian, etc.). Public broadcasters are non-profit and community owned. They don't receive government funding and are only allowed limited advertising.

Since the revolutionary Whitlam years public broadcasting has grown from 12 stations in 1975 (the Cass Dirty Dozen), to over 140 in 1994. It is now almost as big numerically as the other two sectors.

The Special Broadcasting Service

As mentioned earlier the ethnic communities of Australia were pushing for access to the airwaves throughout the early seventies. This lobbying assisted in the implementation of community broadcasting in the mid-seventies. Ethnic community radio is a strong component of community radio in general with five full-time ethnic community radio stations and about 45 others broadcasting some ethnic programming.

However, whilst this process was unfolding, a number of other approaches were also tried. The ABC had been encouraged by the Whitlam Labor Government to open an 'access' station in Melbourne in 1975 (at the same time as it opened 2JJ in Sydney). This station, 3ZZ, rapidly became a de facto ethnic broadcasting station.

There was a lot of tension between the ABC bureaucracy and the ethnic communities in the early days of 3ZZ as the nexus between access broadcasting and ABC bureaucracy played itself out.

In 1975 Al Grassby, the colourful Minister for Ethnic Affairs, and later Consultant to the Government on ethnic issues, talked the Government into opening two experimental stations in Sydney and Melbourne to broadcast information to ethnic communities about Medicare. These stations, 2EA and 3EA, eventually stayed on air and when the ABC showed reluctance to take them on board as part of its charter, the Fraser Government in 1976 set up the Special Broadcasting Service (SBS) to run the EA stations.

Later SBS television also was established. The Fraser Government forced the ABC to close 3ZZ down in 1976.

Commercial FM

After realising it had missed the boat with FM in the early seventies, the commercial radio sector pushed for access to FM. It wanted all its AM stations to have the right to simulcast on FM but this was not accepted.

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Instead in 1980 the Government offered a limited number of FM licences (2 in Melbourne and Sydney and one each in each other Capital City - the same as in 1924 when the 'A' class licences were first introduced!). These 'licences to print money' went to new players, including some eminent media people rather than the existing stations.

The first FM commercial stations (including SA FM in Adelaide) very quickly became profitable and held ratings leads in most markets. There was and still is a lot of discontent amongst the original AM stations.

After much lobbying, in 1980 the Government allowed a chosen few AM stations to convert to FM. The resultant bidding war to win the right to convert upset the economies of the commercial sector radically (e.g. 3KZ paid \$30 million to convert, 5DN, \$6 million). In fact the industry is still suffering the effects of this today. Through the latter part of the eighties the radio industry got caught up in the media buying madness that accompanied the prevailing entrepreneurial boom. Many stations changed hands.

One outcome was the creation of two major networks on the FM band (Austereo and MMM) which are winning the ratings but encumbered with large financial debt.

A New Act

Another feature of the eighties was economic rationalism - a concern for putting an economic value on everything. In broadcasting this meant seeing the broadcast spectrum not so much as a valuable community resource but more as an asset that had monetary value. This led to the FM auctions referred to above and also to a re-think of the fundamental philosophy of Broadcasting & Television Act, which had originally been enacted in 1942. There had been major amendments to the Act in 1948 (to establish the Australian Broadcasting Control Board), 1956 (to introduce television), 1976 (to change the Australian Broadcasting Control Board to the Australian Broadcasting Tribunal and allow for introduction of FM and public broadcasting) and 1977, so it was well and truly time to give the Act a thorough refurbishment. But the resulting Broadcasting Services Act promulgated in October 1992 took the concept of economic rationalism - free market forces - to the extreme. The new Act is deregulatory in tone. A lot of the community service orientation of earlier legislation is now replaced with a philosophy of deregulation and economic rationalism. For instance the requirement for radio stations to play a percentage of Australian music has gone. And many of the Standards of broadcasting are replaced by industry generated self-regulation codes.

The major change though has been the introduction of six classes of broadcasting licence:

- (a) The National Sector (The ABC & SBS)
- (b) The Commercial Sector
- (c) The Community Sector
- (d) Subscription Broadcasting
- (e) Subscription Narrowcasting
- (f) Open Narrowcasting

The three new class licences (d, e and f) are available 'over the counter' and are not subject to any public interest or commercial viability criteria.

The word 'Services' in the new Act is a clue to the Government's intention to make the new legislation technology-free, to concentrate on the service rather than the mode of delivery. However this is not as easily done as said as can be seen in the ongoing Pay TV debate.

Another significant change introduced by the new Act is the creation of the Australian Broadcasting Authority, which takes over the planning, and regulation roles of the Australian Broadcasting Tribunal.

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Although the Act is deregulatory in emphasis the Australian Broadcasting Authority is required to keep a watching brief on the self-regulation of the industry and to manage the allocation of frequencies to new players.

In line with the philosophy that the radio spectrum is no longer a scarce resource and that market forces should reign, the ACCC will now be expected to play a role in regulating the industry. For instance the former Trade Practices Commission stopped Austereo buying MMM in 1993 when the MMM network went into receivership, the reason being that such a deal would limit the competitiveness of the industry. (Village Roadshow eventually bought MMM.)

Another change introduced with the BSA is that commercial radio station proprietors can now own two stations in each market. (Jeremy Cordeaux now owns 5AD and 1323 AM in Adelaide).

Narrowcasting

Narrowcasting class licences allow for services that have a limited appeal in terms of period of broadcast, type of service, etc. The word indicates the nature of the service. These licences are available over the counter. Already a large number of tourist information services, horse racing stations and other narrowcast services have been licensed.

The largest radio network in Australia is the Vision FM network of terrestrial stations broadcasting low power Christian programs in regional areas. They receive their signal from the Optus B satellite. The signal originates in Brisbane.

The word 'open' narrowcasting signifies that the service is openly receivable, i.e. on the broadcast band with no encryption. Subscription narrowcasting services will be encrypted or require the purchase of some sort of 'black box' to pick them up.

Narrowcasting services are not constrained by the advertising or other restrictions of the Act that apply to commercial and community broadcasting.

One of the conundrums arising out of the 1992 Act is the blurring of the difference between some types of community licence and open narrowcasting. Already a number of open narrowcast licences have been issued to groups that would otherwise have sought community licences.

Digital Radio Broadcasting (1 January 2009)

A new chapter in radio broadcasting history is now being written regarding the introduction of Digital Radio Broadcasting in Australia. See the Australian Communications and Media Authority (ACMA) web site (www.acma.gov.au) for details.

Digital Radio Broadcasting services will initially operate in the VHF Band III (174 – 230 MHz), although the use of additional spectrum such as L-band (1452 – 1492 MHz) or 'channel 13' (230 – 240 MHz) will be considered at a later stage, as will planning for transmission repeater sites. Digital radio will be based on the Digital Audio Broadcasting plus (DAB+) technology, which gives scope to licensees to provide additional services and enhanced features, including slow-speed text and images.

The ACMA has already called for licensees to operate multiplex licensees to commence and continue to provide digital radio services in the state capital city markets on or before 1 January 2009. These initial licenses are as 'foundation' licences, and will be made available only to incumbent broadcasters.