

= Digital terrestrial television in Australia =

Digital terrestrial television in Australia commenced on 1 January 2001 in Sydney , Melbourne , Brisbane , Adelaide and Perth using DVB @-@ T standards . The phase out of analog PAL transmissions began in 2010 and was completed by 10 December 2013 .

Digital terrestrial television brought a number of enhancements over the previous analog television , primarily higher @-@ quality picture and sound , as well as datacasting and multi @-@ view services such as video program guides , high definition , and now @-@ and @-@ next program information . There are a number of additional channels , datacasting , as well as high definition services , available to digital terrestrial television viewers in Australia . Digital @-@ only content is subject to availability and differs greatly in various television markets .

Although approximately 96 % of the population had access to at least one digital service , take up was initially sluggish , with only 28 % of Australia 's 7 @. @ 8 million households having adopted free @-@ to @-@ air digital television by March 2007 . However , by August 2010 , 75 % of Australian households had made the switch . Analog transmissions began to be phased out in 2010 , and ceased to be available nationwide by the end of 2013 .

From 2009 , the free @-@ to @-@ air digital television platform has been promoted under the Freeview brand name .

= = History = =

= = = Planning = = =

Planning for digital terrestrial television in Australia can be traced back to 1993 , when a group of specialists was drawn from the then @-@ Australian Broadcasting Authority , Department of Transport and Communications , in addition to broadcasters and manufacturers . The ABA Specialist Group was intended to bring together studies taking place in a number of Australian forums and investigate potential options and policies relating to digital television .

In 1995 the group released a report , Digital Terrestrial Broadcasting in Australia , containing the preliminary conclusions of the group . It found that premature regulation of the new platform might stifle the market @-@ driven development of the service , that it should be based upon existing standards , and should not restrict the ability of broadcasters to tailor local content . It was too early at the time to make decisions relating to what standard should be used , when transmissions should commence , and whether analog television should be phased out .

The final report , of the same name , was released in 1997 . It recommended that Australia should adopt a single system following detailed trials of potential systems , that it should be implemented with high definition capabilities from the outset , that each licensed commercial or public service should have access to a full 7 MHz channel for its services , and that the eventual termination of analog PAL services should be driven by market factors and subject to regular review . The year 2000 was highlighted as a potential target date for the commencement of permanent digital terrestrial broadcasting .

= = = = Response = = = =

The Australian Broadcasting Authority 's response , titled Digital Terrestrial Television Broadcasting , recommended that the Australian Government support the early introduction of digital broadcasting as a free @-@ to @-@ air service with the loan of a 7 MHz channel for each broadcaster , in order to enable high @-@ definition television from the outset . The Federation of Australian Commercial Television Stations supported this , as well as freedom for its members to launch multi @-@ channel services . At the same time , the Australian Subscription Television and Radio Association , questioned the commercial viability of HDTV , was opposed to the idea of multi @-@ channeling , and argued for a competitive system that would allow the entry of new players .

The Australian Broadcasting Corporation stated that it wished to run up to four multichannels at different times of the day or alternatively offer an HDTV service . It claimed that up to \$ 100 million would be needed to prepare for these services , half of which would need to be government @-@ funded . Other interested parties , such as internet service provider OzEmail argued for the provision of spectrum for interactive services , while Telstra , shareholder in the subscription television provider Foxtel , supported ASTRA 's argument for a competitive bidding process for digital spectrum .

= = = Legislation = = =

On 24 March 1998 , Minister for Communications , the Information Economy and the Arts , Senator Richard Alston , announced the government 's decisions for the introduction of digital television . The plan allowed commercial and public broadcasters 7 MHz of spectrum free of charge for 8 years to simulcast services in both digital and analog , after which it was to be returned to the Commonwealth . Digital terrestrial television was to commence on 1 January 2001 in metropolitan areas , with expansion to regional areas to have been completed by the start of 2004 .

Following this , commercial broadcasters would be required to provide minimum levels of high definition content , would be required to pay fees if they chose to provide datacast services and would be prohibited from using their spectrum for multichanneling of subscription services . In addition , the prohibition on new free @-@ to @-@ air broadcasters would be extended until December 2008 .

Amendments were subsequently made to the Broadcasting Services Act 1992 and the Radiocommunications Act 1992 , which set out ownership and programming conditions for broadcasting licences (administered by the ABA) and regulated the usage of spectrum , respectively .

On 18 June 1998 , the Digital Terrestrial Television Broadcasting Selection Panel announced the choice of the European DVB @-@ T system for digital terrestrial television . The panel was a group of representatives from the country 's public , commercial and regional broadcasters , the Department of Communications , the Information Economy and the Arts , as well as the Australian Broadcasting Authority .

= = = Launch = = =

When digital television launched on 1 January 2001 , the majority of households did not know of or were unable to buy a set top box in order to receive the signal . Digital Broadcasting Australia was established in late 2000 to help make the transition to digital television as seamless for consumers as possible . It included representatives from free @-@ to @-@ air broadcasters , manufacturers , suppliers , and retailers and was intended to provide information about commencement dates , coverage , and the functionality and availability of equipment .

= = Content = =

= = = Additional channels = = =

The Australian Broadcasting Corporation launched the ABC Kids Channel and Fly TV in August 2001 . The two multichannels , available only through digital means , showed a range of programming targeted at children and teenage viewers . Similarly , the Special Broadcasting Service launched the SBS World News Channel in 2002 , a digital @-@ only service offering a number of foreign @-@ language news programmes seen in its morning WorldWatch timeslot .

Funding issues meant that in May 2003 the Australian Broadcasting Corporation closed ABC Kids and Fly TV . In the same year , Tasmanian Digital Television became the first digital @-@ only commercial station to be launched in the country , under Section 38A of the Broadcasting Services

Act . The new station was a joint venture between existing commercial networks Southern Cross Broadcasting and WIN Television . Tasmanian Digital Television , affiliated to Network Ten , was initially available only in Hobart , before expanding to Launceston and , by early 2009 , the remainder of the state . The introduction of this fifth channel resulted in significantly higher digital television takeup in Tasmania than other parts of the country .

ABC2 , the Australian Broadcasting Corporation 's second attempt at a digital @-@ only channel launched on 7 March 2005 . The service showed a range of repeated news , current affairs , children 's and educational programs originally shown on ABC1 as well as a number of original programs launched later on , such as Australia Wide , Short and Curly and Late Night Legends .

In the other market areas where there are only 1 or 2 broadcasters , digital @-@ only stations were created that transmit programming from the unrepresented broadcaster (s) in that area . These digital @-@ only stations are owned by joint @-@ venture , or by the sole broadcaster , depending on the area .

During September 2007 , the three commercial networks announced the introduction of high @-@ definition only channels later that year , becoming the first new commercial television channels to launch in metropolitan areas of Australia since 1988 . The Seven Network 's 7HD was the first to launch on 15 October and became available through Prime Television on 29 October . This was followed by the launch of Ten HD on 16 December . The majority of the programming on the high @-@ definition channels was simulcast from the parent channel .

From 2009 , commercial broadcasters were allowed to transmit an alternate standard definition channel . On 26 March 2009 , Channel Ten launched One , its SD multichannel as a 24 @-@ hour sports channel . One is also broadcast on Ten 's HD channel , replacing Ten HD . Nine later launched GO ! , as a general entertainment channel skewed towards younger viewers in August 2009 . Seven introduced 7Two on 1 November 2009 .

In July 2010 ABC launched its proposed news channel , ABC News 24 . In addition , the Seven and Nine networks launched their third channels in September 2010 : 7mate from Seven and channel GEM from Nine . Network Ten launched their third channel , Eleven , in early 2011 .

In November 2015 , Nine launched their fourth channel , 9Life , along with a relaunch of 9HD . In February 2016 , Seven launched their fourth channel , 7flix .

In March 2016 , Ten relaunched their HD channel , Ten HD . In May 2016 , Seven relaunched their HD channel , 7HD .

== = Amateur digital television == =

VK3RTV is an experimental Amateur Television repeater located on Mt Dandenong to the east of Melbourne . In late September 2009 the former single analog channel was converted to a 2 channel digital system . The output of the transmitter is on 446 @. @ 5 MHz which can be received on some set top boxes and digital televisions . Both channels are transmitted in standard definition .

Amateur Radio Operators are restricted in terms of the content they may transmit in that the transmission of entertainment is not allowed . However , Amateur Radio Operators are nonetheless able to transmit a wide range of educational material related to amateur radio & electronics .

== = Datacasting == =

A number of broadcasters , primarily commercial networks , have provided a number of digital @-@ only datacast or multiview services on separate channels - in particular during major sporting events . The Seven Network , for instance , provided two additional channels as part of its coverage of the 2003 Rugby World Cup - one providing alternate commentary , the other with statistics and game information . Seven also ran a similar service during its coverage of the 2004 Summer Olympics showing news headlines , a medal tally , and event results . Similarly in 2005 for the Melbourne Cup , Australian Open , Australian Open Golf , and the One Day International series from the United Kingdom , the Seven Network provided a multi @-@ view datacast service . As well as this , the Nine Network and NBN Television both provided a multi @-@ view service with additional text

information during Pompeii : The Last Day .

Digital Forty Four , a trial datacasting service , began in Sydney in 2003 . The service included at launch an electronic program guide , ABC News , Sport and Weather datacast service , the Australian Christian Channel , shopping channel Expo and a number of federal parliament audio streams . The service , licensed by the Australian Communications and Media Authority , ceased broadcasting at midnight on the night of 30 April 2010 .

Three metropolitan networks once provided video program guide datacast channels in addition to their standard and high definition channels . During ABC2 , ABC3 and ABC HD 's downtime , the ABC shows program information and weather , with music from ABC DiG radio .

Other channels were launched , such as TV4ME , Ishop tv , Extra , Gold , TVSN , Spree TV , Aspire TV and Fresh Ideas TV .

== High @-@ definition ==

At a minimum , all digital television broadcasters in Australia provide a 576i standard @-@ definition service , in addition to high definition . The 576p50 format is also considered a HDTV format , as it has higher vertical resolution through the use of progressive scanning . When Australia started DVB @-@ T in 2001 several networks broadcast high @-@ definition in a 576p format as this could give better quality on 50 Hz scanning CRT TVs and was not as demanding on MPEG @-@ 2 @-@ bit @-@ rate . Since many modern television sets have an interlace to progressive scan conversion there is little difference in picture quality . MPEG @-@ 2 encoders have also improved so the more conventional 720p and 1080i formats are now used .

WIN Television in South Australia and Griffith , as well as Southern Cross in Port Pirie are the only stations that broadcast in digital but do not provide a high @-@ definition service . This is due to multiple services using the same digital frequency : WIN Television , WIN Ten and WIN Nine in SA , WIN Television and Prime in Griffith or GTS / BKN , SC10 , SC9 and ELEVEN in Port Pirie .

All other commercial stations have 1080i high definition services which , since 2015 , simulcast their main channel from standard definition . Prior to this , HD broadcasts are shown as a multichannel providing some differing content from the main SD channel . For instance , ABC Television has a 720p high definition service , which used to run as ABC @-@ HD (simulcasting ABC1) , but now operates as ABC News 24 . Currently , SBS Television , the Nine Network and its regional station NBN Television , Network Ten , and WIN Television broadcast a 1080i high definition simulcast of their respective main channel . The Seven Network also has a relaunched HD channel , yet it isn 't implemented as the primary channel 's HD simulcast across all metropolitan stations to allow the games of the Australian Football League be broadcast in HD . Only the Melbourne and Adelaide stations received its channel on its purpose ; Sydney , Perth and Brisbane stations , meanwhile , continues to air digital multichannel 7mate in high definition through 7HD , with the former downgraded to standard definition by default .

Quotas on high definition content ? a minimum of 1040 hours per year ? were imposed by the Australian government in July 2003 on broadcasters in Sydney , Melbourne , Brisbane , Adelaide and Perth . The same requirement was extended in April 2005 to stations in Darwin , regional New South Wales and regional Queensland , and in January 2006 in Mildura . As of 13 July 2007 commercial television networks in Australia were permitted to provide a separate standard definition and high definition channel . As of January 2009 , they were permitted 2 standard definition channels in addition to the high definition channel ? the networks planned to launch these via Freeview (Australia) . However , in August 2015 , the government finally lifted the SD Primary Channel mandate , allowing broadcasters to simulcast their respective main channel programmes in high definition .

== Transition to digital television ==

The transition from analog to digital television was co @-@ ordinated by the Digital Switchover Taskforce operating under the federal Department of Broadband , Communications and the Digital

Economy .

Until the switch @-@ off in the respective areas , free @-@ to @-@ air broadcasts were simulcast , along with digital @-@ only channels like ABC2 . Cable television networks began simulcasting in 2004 and analog cable services were switched off in April 2007 .

= = = Freeview = = =

In November 2008 , all free @-@ to @-@ air broadcasters (both metropolitan and regional) joined to launch the Freeview brand name as a consistent marketing platform for digital broadcasting to compete against subscription television in Australia , with the actual Freeview service commencing in March 2009 .

= = = Government labelling scheme = = =

In April 2009 , the government released a new labelling scheme for digital television devices , to help people buy the correct equipment in the transition from analog to digital television . Televisions had the following labels :

Digital TV Capable - for analog TVs which required a set top box

Digital TV Ready (Standard Definition) - for TVs able to receive SD broadcasts

Digital TV Ready (High Definition) - for TVs able to receive HD broadcasts

The government labelling standards were in addition to the Freeview labelling standards endorsed by the major commercial and public broadcasters and which contributed to confusion between Freeview and government digital TV standards . Freeview devices had to meet the High Definition Digital TV Ready standard .

= = = Controversy = = =

Perth community station Access 31 's closure was partially blamed on viewers and revenue lost to increasing digital television viewership . The analog @-@ only station had been campaigning with other community television stations for support from the Federal Government that allowed them access to the digital broadcast spectrum . On 4 November 2009 Communications Minister Stephen Conroy approved a Digital TV only licence for West TV in Perth , which allows them to broadcast as a digital @-@ only community television station as a replacement for the now defunct Access 31 . Digital services were available in most areas , however parts of Western Australia and Central Australia had yet to begin transmissions in 2007 .

= = = Household assistance scheme = = =

To aid the digital television switchover , households receiving government assistance payments were eligible to have a set @-@ top @-@ box provided free of charge to convert to digital television . In addition to set top boxes , the assistance included any necessary cabling or antenna upgrades needed to achieve a reliable digital signal .

= = Analog switchoff = =

In October 2008 , the Digital Switchover Taskforce announced the timetable for analog @-@ switchoff , as follows