Victoria
Mildura/Sunraysia switchover area
Switchover period 1 January – 30 June 2010

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This switchover area report was prepared by the ACMA and provided to the Department of Broadband, Communications and the Digital Economy (DBCDE) approximately 12 months prior to the end of the identified switchover window for this area. The early provision of switchover area reports to DBCDE, allows an appropriate amount of time for discussions between the government and broadcasters to address any identified issues prior to the switch off of analog television services. This report does not account for any subsequent Government policy decisions or changes in broadcasting infrastructure or programming since that time. For up to date information on the switch to digital television, visit the DBCDE Are you READY for digital TV website
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Executive summary

Having analysed all available information, prediction modelling and signal measurement results relevant to the Mildura/ Sunraysia switchover area, the Australian Communications and Media Authority (ACMA) is confident that digital television services are achieving the policy objective of providing “the same level of coverage and potential reception quality” as corresponding analog services in the area.

The Mildura region is serviced by one main transmitter situated at Yatpool, approximately 20 kilometres south of the Mildura central business district. In addition, there is one translator site situated at Underbool in the regional southern part of the switchover area. This translator was funded under the Federal Government’s Black Spot Program and is operated as a self help retransmission facility by the local council.

As required under the National and Commercial Television Conversion Schemes, broadcasters have submitted implementation plans (IP) for all planned digital transmitters in the Mildura switchover area. All IPs submitted to, and approved by the ACMA for this switchover area were prepared by broadcasters in accordance with specifications outlined in the commercial and national digital channel plans.

All planned digital services have been rolled out in the area with the ABC and SBS broadcasting the relevant national services. Prime is broadcasting Network Seven while WIN broadcasts Network 9 programming. WIN and Prime jointly transmit Network 10 programming under a broadcasting licence issued under Section 38B of the Broadcasting Services Act 1992 (BSA).

The ACMA conducted an intensive program of field strength measurements across the switchover area. The results aligned closely with prediction modelling and support the ACMA’s conclusion that the same coverage policy obligations under the BSA are being met by all broadcasters. However, it is foreseen that some regional parts of the switchover area currently receiving poor analog reception may receive correspondingly poor digital reception. In addition, there are residents currently receiving localised analog content who, dependent upon future government policy decisions, may no longer have access to this content after analog is switched off. It is foreseen that scenarios such as these, which fall outside the scope of the ACMA’s obligations in relation to the government’s switchover agenda, may generate complaints or concern in the area.

Presently the Underbool self help retransmission facility retransmits an analog content mix of local off air programming from the Yatpool main transmitter, along with satellite input feeds from the remote area broadcasters. Consequently, Underbool residents are currently receiving some local content but may be unable to do so when analog services are switched off at Yatpool. Further consideration will need to be given to how this facility will operate into the future once government policy positions around self help retransmission facilities are finalised. Future arrangements and ACMA consideration around self help retransmission sites such as Underbool will also need to allow for policy settings around the government’s proposed Satellite Subsidies Program.
A region of note in the switchover area is Ouyen and surrounding districts. The area has been identified as a poor or fringe analog reception area in terms of receiving localised broadcasts from the Yatpool transmitter. As Ouyen falls well within the overlap of the remote licence area, residents are able to access remote area satellite services. However, it is noted that a large number of residents are attempting to access localised content from the Yatpool transmitter by installing 10 to 30 metre high mast mounted antennas. It is presently unclear if Ouyen residents will be able to receive digital signals from Yatpool using current antenna configurations once analog is switched off, again possibly compromising access to localised content. Although residents are able to access remote area programming, it is foreseen that any possible future lack of access to localised content may generate issues or complaints in the area.
Mildura/Sunraysia digital television switchover area

The Mildura/Sunraysia licence area covers approximately 20,000 km² and covers parts of New South Wales and Victoria in the western part of both states. The major proportion of the population of Mildura/Sunraysia is concentrated along the Murray River with the main urban population being the city of Mildura. Other main population centres along the river include Wentworth and Dareton to the north, Red Cliffs to the south and Robinvale to the southeast. Less populated centres away from the river include Ouyen to the south and Underbool to the southwest of Mildura.

The area is served by a primary transmitter situated at Yatpool, approximately 20 kilometres south of Mildura, servicing the entire licence area. There is one self-help translator located to the south at Underbool which serves the immediate vicinity of the town. This translator facility was funded and licensed under the Federal Government’s Black Spot Program and, depending upon signal availability, retransmits off air content from the main transmitter at Yatpool, as well as programming from the remote area satellite broadcaster services.

The nature of the terrain in the area is generally without any significant raised surface features. Undulations below 100 metres are the most pronounced geographical features.

Population disbursement

According to 2006 Australian Bureau of Statistics (ABS) census data, the population for the licence area is approximately 59,900\(^1\). Of the total population approximately 55,500 people or 93 percent of the population reside in the corridor along the Murray River.

Licence area overlap

The Mildura/Sunraysia licence area is overlapped by the Remote Central and Eastern Australia TV1 and TV2 licence areas (see Appendix B). While covering a geographically large portion of the licence area, in actuality the remote licence area services a very minor percentage of the sparsely placed population in the wider regional and remote parts of the switchover area.

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\(^1\) Population is assumed to be evenly distributed within an Australian Bureau of Statistic “Collection District” based on the 2006 Census.
Coverage evaluation

The ACMA’s coverage evaluation program methodology

Figure 1. ACMA program methodology for coverage evaluation

Figure 1 outlines the multi layered methodology for the ACMA’s coverage evaluation program (CEP). This program seeks to assess whether the same coverage objective has been met by relevant broadcasters in a particular switchover area.

The CEP also seeks to determine the boundaries of digital terrestrial coverage, identify areas of marginal or inconsistent digital terrestrial coverage and verify the planning technical specifications and assumptions provided by broadcasters in their implementation plans. In addition, the program provides essential feedback on the accuracy of the ACMA’s initial desktop propagation modelling.

Digital channel plans

National and commercial Digital Channel Plans (DCPs) are developed by the ACMA in line with the *Digital Terrestrial Television Broadcasting Planning Handbook – March 2005*, in accordance with the ACMA’s obligations under the *Broadcasting Services Act 1992* (BSA). DCP’s determine which channels are to be allotted to each area, the assignment of channels to each broadcaster in that area and the technical characteristics of those allocated channels.
Part 2 to Schedule 4 of the BSA lists a number of policy objectives relating to the conversion of the transmission of commercial television broadcasting services from analog mode to digital mode. DCPs are developed to provide broadcasters the maximum envelope in which to plan their digital transmission coverage for an area with a view to achieving the policy objective of “same level of coverage and potential reception quality” in digital mode as is achieved in analog mode within any given switchover area.

Both national and commercial DCPs for the Mildura/Sunraysia switchover area were made on 14 March 2002. The commercial DCP was amended in both January and February 2005 in consultation with broadcasters. The variations facilitated the addition of technical specifications for various services throughout the switchover area.

Implementation plans

As per the National and Commercial Conversion Schemes prepared by the ACMA under Schedule 4 to the BSA, commercial and national television broadcasters are required to prepare implementation plans (IP) relating to the conversion over time, of the transmission of their services from analog to digital mode. IP’s represent a commitment by broadcasters to provide a television service in digital mode from specified sites to cover specified areas by specified dates so as to achieve the same coverage in SDTV digital mode as is provided by that service in analog mode. This objective is to be achieved as soon as is practicable after the simulcast period begins.

As previously stated, the ACMA has received and approved IPs for all expected digital services in the Mildura/ Sunraysia area. All IPs approved by the ACMA for this switchover area were prepared by broadcasters in accordance with specifications outlined in the DCP.

Planning reports

As part of its methodology for assessing same coverage and potential reception quality, the ACMA undertakes desk top coverage modelling of a market area taking into account local conditions and terrain, any relevant complaints from viewers within the area and where possible, technical specifications of transmission facilities as outlined in implementation plans provided by broadcasters. At the time of writing this report, the ACMA had received one complaint regarding reception in the switchover area in the 3496 postcode. It was concluded by the ACMA that the problem was more likely to be related to antenna or other equipment deficiencies as opposed to signal coverage.

The findings of the desktop modelling process are articulated in a preplanning report which informs the ACMA Field Survey Measurement Program. The Mildura/ Sunraysia switchover area preplanning report provides specific directions to the ACMA’s field staff on predicted fringe or potential deficient reception areas where field measurements within the switchover market
Field survey measurement program

The ACMA’s Field Survey Measurement Program enables the ACMA to acquire precise technical and signal data associated with analog and digital TV coverage and reception quality within a switchover area. The program is part of the ACMA’s wider, multi layered methodology for assessing same coverage and potential reception quality. The program seeks to verify the planning assumptions and the technical specifications provided by broadcasters in their implementation plans. The field survey measurement results are also used to provide valuable information to help the ACMA further refine its pre-planning processes and desktop propagation modelling.

Planning grade survey measurements were taken in the Mildura/ Sunraysia switchover area in August 2008. For the purposes of the ACMA’s coverage analysis, the switchover area is broken into 37 sample areas. The planning grade measurement results have been analysed and compared against the most appropriate prediction models for the area. Based on these results, the ACMA concludes that the same level of coverage and potential reception quality has been satisfactorily achieved.

The main survey measurements taken across the switchover area are as follows:

**Mildura, Red Cliffs and Nangiloc**

Mildura, Red Cliffs and Nangiloc lie in the population heart of the licence area. The combined population of these areas is estimated at 47,300.

One set of measurements was taken close to river level at Gol Gol on the NSW side of the Murray River across from Mildura. The aim of this measurement was to test the reception close to the waterline of the river about 10-15m below the general ground level as there are residences along the river at this height. Despite a slight reduction in field strength from the measurements taken at Mildura, there is more than adequate field strength to provide coverage in this area.

Measurements in this region exhibited high analog and digital picture grades and indicated that the “same level of coverage and potential reception quality” has been achieved in this area.

**Wentworth and Dareton**

Wentworth and Dareton are located to the north west of Mildura. Population for this area is estimated at 3,450. Measurements in the areas of Wentworth and Dareton exhibited high analog picture grade levels and both analog and digital reception grade outcomes indicated that the “same level of coverage and potential reception quality” has been achieved in this area.
Robinvale and Euston

Robinvale in Victoria and Euston in New South Wales lie on opposite sides of the Murray River and to the east of Mildura. The combined population is estimated at 4,700.

The results of the measurements taken in this area indicated there was a slight reduction in field strength when compared to those received in the neighbouring Mildura, Red Cliffs and Nangiloc area. Even so, measurements and analysis indicated that the “same level of coverage and potential reception quality” has been achieved for this area.

Conclusion

Terrain across the majority of the Mildura/ Sunraysia licence area is generally flat and conducive to accurate signal coverage prediction. The ACMA based its conclusion that the same coverage policy objectives had been met on an intensive initial program of planning grade field survey measurements in the switchover area.

Subsequently, following the initial field survey activities in the area, the ACMA returned to Mildura/ Sunraysia and conducted a further set of measurements. These additional measurements, while further vindicating the first round of results in the area, were taken primarily to assist the ACMA to develop a statistical methodology that will be used in conjunction with predictive modelling, the measurement program and ongoing engineering evaluations, to provide the most robust and accurate coverage assessments for all future switchover areas.

Given the robustness of the ACMA’s preplanning processes, the benign nature of the terrain and the intensiveness of the field survey measurements taken in the area, it was unnecessary in this instance to undertake further intensive risk assessment procedures.

As previously noted, while certain factors outside the ACMA’s same coverage assessment obligations, such as future access to local content, antenna installations or inadequate viewer equipment may generate concern or complaints in the area, the ACMA is confident that all expected digital television services have commenced and are achieving the policy objective of the “same level of coverage and potential reception quality” as analog services in the switchover area.
Appendix A

Mildura Digital Television Switchover Area
Appendix B

Licence areas overlapping the Mildura /Sunraysia digital television switchover area
Appendix C

Measurement Locations in the Mildura/Sunraysia digital television switchover area