

## Why does radio need to go digital?

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There is a strong business case for radio to go digital, the opportunities for governments, broadcasters and listeners are described below.

Radio is a popular, accessible medium which plays a daily role in the lives of the local community. For its huge listening audience, radio reflects their culture, informs, educates and entertains them. Radio is a valued medium and one which governments and broadcasters need to invest in to ensure its ongoing relevance to the community.

With the rapid uptake of smart phones, and the availability of fixed and wireless internet streaming content from all over the world, radio faces unprecedented competition. Radio content from licensed public or private broadcasters is easier to control than streamed international content, so it is in both the regulator and the broadcasters' interests to invest in local broadcast radio to compete with other digital technologies and overseas digital content.

Only digital will allow radio to deploy a cuckoo's nest strategy: taking a side room in any daily used device in a digital world, complementing rather than competing. Having digital radio in an internet capable device provides a huge range of advantages to the broadcaster, advertisers, mobile internet and equipment providers. We discuss the significant advantages that such convergence brings below.

Digital radio is an investment in the future for both broadcasters and the government. For broadcasters it represents an opportunity to protect their business and to increase revenue, to the government it is a vehicle to provide improved services and efficiencies to the population that they serve.

### Why DAB+?

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DAB+ is the standard of choice for the digitalisation of radio services currently delivered using analogue AM and FM technology. Australia, Switzerland, Germany, Italy, Poland, Hungary, Malta and Hong Kong, have DAB+ services on air, China is endorsing the platform and countries in the Asia Pacific are planning for DAB+ trials or roll out in 2011.

- DAB+ is an open platform with no licence fees payable by broadcasters
- DAB+ is optimised for radio and is 2-3 times more spectrum efficient than the original DAB, this means existing broadcasters can offer more choice
- Up to 20 services can be transmitted on a single frequency, rather than each service needing its own frequency in AM or FM, so regulators are being highly efficient in allocating spectrum for DAB+
- DAB+ costs are shared amongst all the broadcasters in the multiplex so the costs are lower than for analogue
- DAB+ services use a robust but relatively efficient digital transmission system (Eureka 147) which results in lower power requirements per service for coverage roughly equivalent to FM services.
- DAB+ transmission equipment costs are falling and suppliers are supportive of countries looking to start trials



- DAB+ receivers are available from US\$60 and this price will continue to fall rapidly as lower cost chips come online in 2011 and more countries introduce DAB+ services. More than 85 receivers are currently in the market offering handheld, portable, HiFi, and car radio models.
- DAB+ is easy to tune from a list of stations and offers great audio quality as well as text and graphic features such as album art, news and weather
- DAB+ is being adopted by leading car makers and roll out will commence in 2011.

DAB+ is part of the DAB family of standards as defined in the lead ETSI standards document EN 300 401. The delivery of video services via T-DMB is also included in these standards.

## High level business case

Investing in digital radio requires a long term strategy, taking into account both the short term costs and longer term benefits. Investment in digital radio needs to provide a return for all of the stakeholders.

	Market share	Market growth	Other benefits
Government / Regulator	Maintain local services which serve the community and reflect local culture <i>Reach more of the population</i> Better communication with audiences, particularly in emergency situations (EWS)	Shared infrastructure and lower bandwidth means more services from existing broadcasters <i>Improve relevance of an important media sector</i>	Spectrum efficiency <i>Health/Education/Land care information is easily distributed to people with low literacy</i> Community feedback on radio content (in a connected environment)
Broadcasters	Niche offerings to better serve existing audiences <i>Better use of multimedia content will benefit proactive broadcasters</i> Defence against other technologies <i>Opportunity to grow audience share through more compelling service offerings</i>	Increased revenue opportunities from positive listening trends <i>Use interactivity to grow market</i> Added functionality to offer advertisers <i>Opportunity to provide data services such as TPEG traffic, financial and live news/weather feeds</i>	Better understanding of listener demographics allows targeted messages <i>Ability to reuse on-line content and features such as graphics, interactivity and downloads</i> Long term reduction in operating costs due to lower power per service, digital equipment reuse and reliability
Listeners	Maintained relevance for existing audiences. <i>Simple operation, low cost receivers, pause and rewind, text and graphics</i>	More choice <i>More features</i> Greater functionality	More information <i>Interactivity such as voting and use of promoted products and services when back channel is available</i>
Advertisers	More targeted audience <i>Flexible, low cost advertising medium which delivers mass audiences with increased effectiveness</i>	Better reach to audience <i>Ability to show logos, prices, pack shots, phone numbers and web addresses</i>	More effective advertising <i>Interactive back channel for e-commerce and direct response</i>
Content developers	Market share based on quality	More opportunities will encourage improved quality	Merging of internet, radio and possibly some TV content

## END-TO-END DIGITAL RADIO SOLUTIONS



Competition for both audience share and spectrum is increasing rapidly. Both public and private broadcasters need to defend their service position though demonstrated commitment to the digitalisation of radio.

Radio is a valuable medium with huge audience reach, the time is now right to pursue increased relevance through convergence with internet technologies. Analogue technology cannot compete with increasing internet service availability. Radio needs to provide the correct balance of broadcast delivery and individual feedback.

Digital radio receiver products are rapidly reducing in price while quality and functionality continues to increase. The introduction of products which include colour screen capabilities in 2011 from a number of new chip, module and receiver manufacturers will further drive this trend as the advantages of slideshow images (SLS) and Electronic Program Guides (EPG) become more widely recognised. This will be followed with TPEG traffic services, Broadcast WebSite (BWS), Interactivity and other dynamic service offerings, particularly through mobile phone attachments or built in capability, further capturing the listeners' imagination.

The convergence of broadcast delivery and mobile internet interactivity brings many benefits. Broadcasting provides delivery to a mass audience at the minimum cost. Broadcast receivers with internet back channel access allow users to respond to broadcast information such as advertising/e-commerce, emergency information or simply entertainment. This includes opportunities for low cost purchases, promotions and free product and service access, e.g. vouchers.

It is essential for broadcasters and the industries supporting them, including infrastructure and receiver product and transmission service providers to engage in forward looking development activities to demonstrate that their commitment to the deployment of digital radio is seen as real. Not acting on this opportunity could result in regulators and spectrum managers assigning the required spectrum to other industries such as television or mobile internet.

Industry wide cooperation between regulators, broadcasters and retailers which encourages competition on the basis of content has been proven to be successful formula. Embracing a digital radio future through proactive industry wide planning, trials and service rollout will ensure a bright future for the radio industry.

In coming months we will provide further information on:

- The value of broadcast spectrum (competing with internet delivery)
- Planning for DAB+/T-DMB trials
- Using interactive features to grow audience engagement and revenue

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For further information or assistance in planning for digital radio please contact

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