

Latest Country Updates for DAB/DAB+/DMB

August/September 2007

Australia: The Australian government is currently drafting a framework for a digital radio policy and has set a launch date of 1 January 2009. Commercial services will be licensed on a market basis (with 109 licence areas across the continent). The commercial broadcasters have announced that they will use the DAB+ standard for digital radio in Australia. The public broadcasters will be licensed for national coverage. The Australian radio industry plans to invest \$400 million over the coming years to roll out digital radio across the country. A phased introduction is planned, beginning with 11 key cities including Sydney, Melbourne, Brisbane, Perth, Adelaide and Canberra. The first DAB+ test was launched in July 2007.

Brunei: Radio Television Brunei (RTB) is the public and main broadcaster. In 2007 RTB began a DAB trial, which will last for five years and will include simulcast services. A task force has been set up within RTB, which is working closely with AITI on the plans for a commercial launch.

China: The Chinese regulator, SARFT, announced in May 2006 that DAB was chosen for the industrial standard. DMB trials have been on going in many cities across the country including: Beijing, Shanghai, Guangzhou and Dalian. Guangzhou launched commercial services in 2007. This launch was followed by a highly anticipated decision by the Ministry of Industry and Information (MII) who have finally issued licenses for DMB in mobile phones. There are various DMB mobile phones already in the market in China. Chinese DMB manufacturers include: Lenovo Mobile, Aigo, Longcheer, BBEF and SIM. DMB PMP receivers are already available in Beijing for affordable prices around RMB2500 (250 Euro). Dalian Tiantu Cable Television Network has recently been issued with a license for Mobile TV and plans to launch 4 radio services and 1 video service this August using DAB/DMB. Many local industrial players believe that CMMB and DAB/DMB are a good combination of digital broadcasting services for the consumer; CMMB is seen as the ideal technology for national digital broadcasting coverage and DAB/DMB is seen as the best technology for regional coverage. Manufacturers have already created dual chipsets, which can decode both CMMB and DAB/DMB.

Czech Republic: The TELEKO Company, in cooperation with the public broadcaster Zesky Rozhlas, started a DAB+ trial in the Pribram region on August 2nd 2007. The service covers almost 130,000 people using channels 12D and LI. The transmission is provided from the same site in order to compare both bands and their coverage. It is expected that at the end of 2007 Channel 12 will be made available so that the Wiesbaden Plan for DAB national coverage can begin.

Denmark: Denmark has broken through the 1 million mark. More than 1 million Danes older than 12 years have access to a DAB digital radio in their homes. This is three times as many as only one year ago. The marketing continues and public broadcaster DR has just aired a TV, radio and net campaign to support the DAB Digital Radio platform. Ten new transmitters were put on air during June and July. The outdoor coverage in Denmark has now reached over 90%. The start of the new transmissions was supported by massive local promotion and marketing campaign including a 12-city road show.

France: The French government has recently announced that the Eureka 147 family of standards was chosen for its digital radio standard. In September 2006 the main French radio broadcasters, representing 95% of the radio audience joined together to form the 'Groupement pour la Radio Numerique' (GRN) to support the launch of digital radio. The CSA, the French regulatory body, has created a working group on digital radio and has now authorised eight trials to take place in France for a duration of six months; six in DMB, on in DAB+ and one in DRM. It is expected that calls for tender will

be issued by the Government authority in the coming months, probably before Autumn 2007. The licenses for digital radio could be given for a commercial launch at the beginning of 2008.

Germany: The DAB network in Germany covers nearly 85% of the country with over 180 different radio stations available. Regular DMB services are available in 16 main cities like Berlin, Munich, Hamburg, Düsseldorf, Frankfurt, Nuremberg, Regensburg, Stuttgart and Leipzig. The development in Germany is now stimulated by the results of the RRC 06, which offers the chance to install further multiplexes and to increase transmitter power to achieve a more efficient and reliable coverage. In 2008 a powerful Digital Radio re-launch is intended. L-band is now recognised as a well-suited frequency range to cover metropolitan areas and for implementation in handheld devices.

Ghana: In the Summer of 2007 Ghana Telecom in collaboration with Blackstar TV began the first mobile TV test transmission the OneTouch network in Ghana. The test is being held in the city of Accra and there is currently one channel available. The operators plan to broadcast six video, four audio and two data channels when the service commercially launches in October 2007. The commercial roll out with cover Accra and Ashanti followed by a nationwide roll out.

Hungary: An official tender will start this Autumn for a DAB multiplex in the VHF Band. The winners will most likely be announced in early 2008. DAB has been on air in Budapest for many years and it is currently possible to transmit eight programmes within the multiplex. The Hungarian government is currently performing a survey on which technology they should use for mobile TV.

Indonesia: The regulator and MNC (PT Media Nusantara Citra) launched DMB trials in Jakarta in 2006. In mid 2007 the PST Indonesian electronics company, PT Agis, IPTV systems integrator, Broadband Network Systems and Toshiba joined together to build a nationwide DMB service in Indonesia. A full commercial launch of the service is planned for 2008. A key benefit of using DMB in Indonesia is that a single frequency could be used to cover the country.

Italy: Following a successful DMB trial, RAIWAY, the public broadcaster, has indicated that the operator in Italy wants to use DMB for mobile TV instead of using DVB-H. This is due to the significantly lower network costs and the lack of frequency for DVB-H. RAIWAY will therefore extend coverage in 2007, reactivating a number of old DAB sites. The recent emergence of DAB+ has also helped paved the way for DAB based services in the country. It is expected that DAB+ will be rolled out throughout Italy by the end of summer 2007. On July 25th 2007 Club DAB Italia launched the first DAB+ trials in Italy, broadcasting five audio channels. Vatican Radio has also recently announced the start of a DAB trial in the Pope's State from 1st June 2007.

Kuwait: A DAB trial has been on going in Kuwait City since March 2007. Six audio programs are broadcast from Liberation Tower on Band III, covering almost the whole country. This experimentation led by Kuwait Radio could evolve to T-DMB and DAB+ trials in the coming months. A decision could then happen for a commercial roll out.

Malaysia: A DMB trial was launched in August 2007 and will last for approximately two months. DAB+ has been submitted to the Malaysian regulator as an attachment to the previous DAB/DMB standard application, which is now under public scrutiny.

Malta: In early 2006, the Malta Communications Authority awarded the country's four terrestrial DAB frequencies. Coverage is expected to reach 95% of the Maltese Islands, and the licence runs for eight years, subject to review after six. The operator, DIGI B, expects to adopt DAB+ for audio services and DAB-IP for mobile TV services. DAB+ commercial rollout is expected by the end of 2007.

Netherlands: There is currently 70% DAB population coverage, which is expected to rise to 90% in 2008. The Dutch Government is preparing the issue of commercial DAB licenses for two more multiplexes in late 2007. MTVNL, Mobiele Televisie Nederland, together with T-Systems and MFD, launched a six month DMB trial on the 11th July 2007. The trial covers the area of Den Haag using L-Band. There are currently four video channels being broadcast during the trial. The National Public Broadcaster, NOS, currently broadcasts on DAB multiplex in the Netherlands.

New Zealand: Kordia have been operating a DAB pilot service in Auckland and Wellington since October 2006. Currently nine audio programmes are being simulcast. It is expected that DAB based coverage will be increased in the coming months. Kordia is looking to implement DAB+ in order to demonstrate more value added services as part of their ongoing engineering and consumer trials.

Norway: There are currently two national DAB multiplexes, one of which is split into seven regions. The coverage is more than 70% and will be increased to 80% during late 2007. The networks now carry 14 radio channels and EPG. Eight channels are DAB-exclusive, and DAB is already established in more than 20 road tunnels. There are also plans to continue DMB tests, which were performed with earlier success.

Singapore: DAB currently can be received by 99% of the population. Mediacorp, the public broadcaster, recently announced that they have purchased DMB equipment to update their current DAB infrastructure. This equipment will allow for new multimedia applications to be broadcast, which could possibly include Mobile TV. Mediacorp are also evaluating the feasibility of introducing DAB+ services.

South Korea: As the first country to commercially launch mobile TV, South Korea has also seen surprising growth in the number of DMB receivers which is now well over 5 million. This number is expected to rise even more with an increase in coverage, which has already begun earlier this year. These numbers make South Korea the world's most successful mobile TV market in the world!

Sweden: In addition to the 5 unique digital radio audio services there are also a few data services available which include: SR Plus, a BWS service which contains a condensed version of the SR web and SR EPG, a trial version for testing electronic programme guides and SR TPEG, which is a test service for future TPEG streams. There have also recently been test broadcasts of eight Danish digital radio programmes across the Stockholm area.

Switzerland: A major network 'overhaul' was done in the French speaking part of Switzerland at the end of February 2007, which increased coverage of the French speaking population from 60% to about 75%. New transmitters are currently being put up all over Switzerland almost every week. There are between 30,000 and 50,000 accumulative sales by the end of 2006 in Switzerland. These figures are expected to increase as a recent poll by Radio Swiss Jazz showed an increase in DAB listening from 3% to 11% from 2005 to 2006. This is an increase of almost 300% within one year!

UK: DAB has yet again continued its growth in the UK with over 5 million DAB receivers sold. Ofcom, the government regulator, has also recently announced the award of the second DAB national radio multiplex to the 4 Digital Group Limited. Shareholders in this group include Channel 4, Sky News, Emap, UTV, The Carphone Warehouse & UBC. This multiplex license will allow the 4 Digital Group to broadcast radio and multimedia services. There are also plans to provide a selection of pod casts using DAB+. BT Movio have recently announced their withdrawal from the Mobile TV market as handsets from the major manufacturers were not readily available for their DAB-IP service. Slideshow trials are currently on going in the London area.

