

EXECUTIVE SUMMARY: WorldDMB Global Update

Digital radio broadcasting using the DAB family of standards

Global overview

Digital radio is making significant advances across Europe with national services now firmly established in the UK, Norway, Switzerland, Denmark, Germany and Netherlands – all with coverage levels of over 90%.

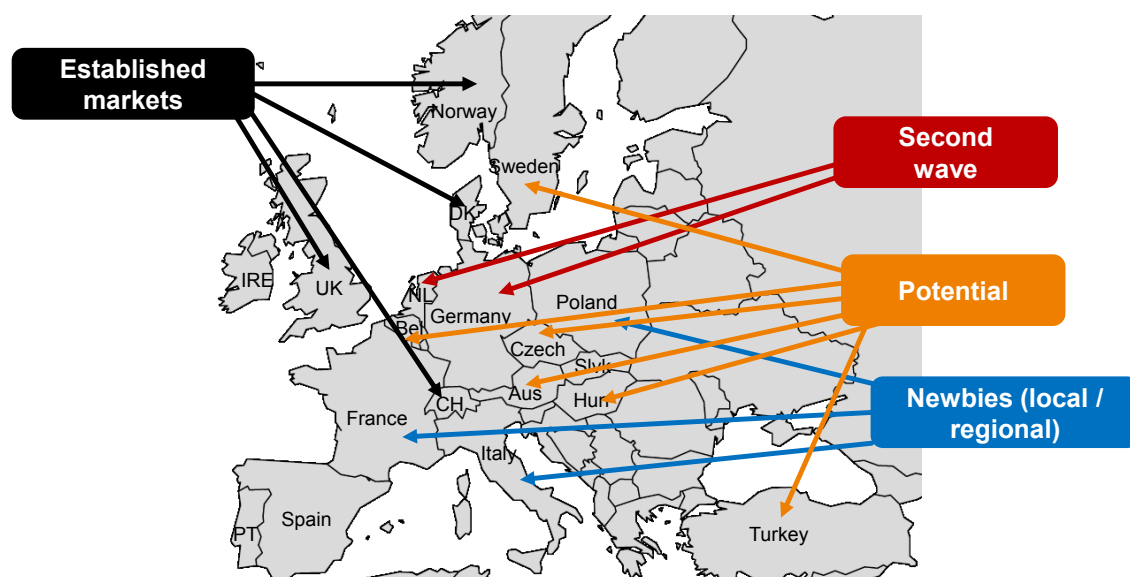
Recent months have seen several important developments for DAB digital radio:

- Norway has achieved the criteria required for Digital Switchover (DSO) in 2017 - Government decision scheduled for end of Q1 2015
- Switzerland has announced its plans for DSO (Digital Switchover) between 2020 and 2024.
- German public broadcaster ARD has confirmed its long term commitment to DAB+
- The Netherlands has seen the launch (Sept 2013) and strong marketing of national DAB+ services
- The UK has confirmed further roll-out of transmitters and will license a second national commercial multiplex in 2015
- In Italy, the regulator AGCOM has announced its plans to issue licences in three new regions
- In France, the regulator CSA has issued a report in favour of digital radio – with plans for services in several new cities (following the launches in 2014 in Paris, Nice and Marseille).
- In Sweden, the Government adviser has proposed a roadmap for DAB+
- In Poland, Polskie Radio has extended coverage of its DAB+ services to 38%
- In the Asia Pacific region, Australia continues to lead the way – with DAB+ household penetration rising to 23%

Europe

Pan-European support for digital radio is building. The European Broadcast Union (EBU) has called for the adoption of digital broadcast radio across Europe¹ and for the inclusion of digital receivers in all radio devices². At the same time, Government administrations are looking to build cross-border links to develop a European consensus about radio's digital future.

Figure 1: Digital radio in Europe



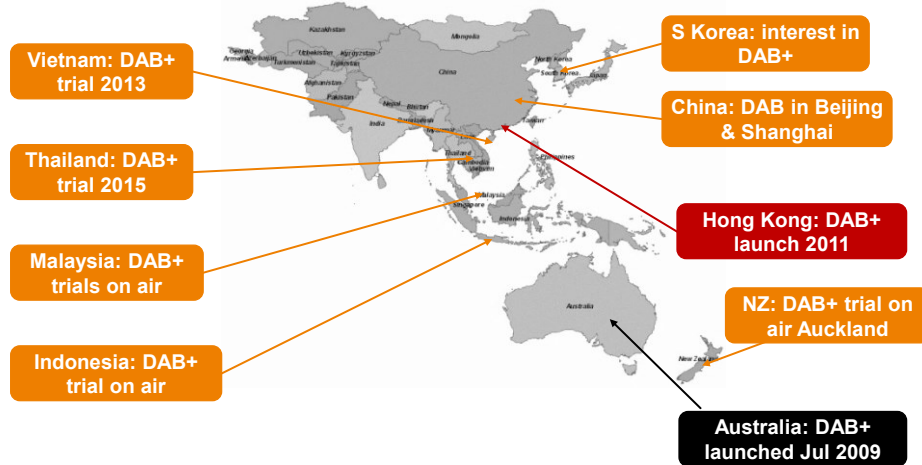
¹ Recommendation R138 <https://tech.ebu.ch/docs/r/r138.pdf>

² <http://www3.ebu.ch/cms/fr/sites/ebu/contents/programming/radio/digital-radio/welcome-page/about-euro-chip.html>

Asia Pacific

In Asia Pacific, a similar pattern is emerging. Australia successfully launched DAB+ in 2009, followed by Hong Kong in 2011. Several other markets, including Thailand, Malaysia, Indonesia and Vietnam are now investigating digital radio options. WorldDMB has organised workshops in each of these countries.

Figure 2: Digital radio in Asia Pacific



Digital Switch-Over

Several European markets are considering their long term plans for broadcast radio, including potential Digital Switch-Over scenarios. In November 2013, WorldDMB established a working group focused on DSO – the aim being to co-ordinate activities and share best practice. The second meeting was attended by representatives from Czech Republic, Denmark, Germany, Norway, Poland, Sweden, Switzerland, The Netherlands and The United Kingdom.

Automotive

WorldDMB has established an automotive taskforce, focused on persuading car manufacturers to install digital radio as standard across Europe and beyond. In Norway 63% and the UK 62% of new cars come with DAB/DAB+ and with territories with digital radio now accounting for 50% of all new car sales in Europe (60% if Italy is included), the time is right to focus on this area.

Figure 3: Percentage share of European new car sales in markets with DAB / DAB+



Marketing and Receiver Specifications

These DSO and automotive initiatives are being supported by closer co-operation between broadcasters and industry focused on the marketing of digital radio and receiver specifications.

An informal group has been established to encourage the sharing of ideas in the areas of branding and promotion. Digital radio is fighting for attention in a world increasingly dominated by players of global scale, e.g. Apple and Google – the aim of these “sharing” initiatives is to help strengthen DAB’s positioning as an international standard. This is particularly important when addressing vehicle manufacturers and the smartphone industry.

In parallel, a group has been established to discuss the creation of consistent receiver specifications in different countries. This is building on work already undertaken in the UK and Germany. Consistent specifications are important for receiver manufacturers. They also offer countries the opportunity to use schemes, such as the UK’s Digital Tick, as a means of demonstrating that receivers are future-ready.

Europe – listed in alphabetical order by stage of development (Established, New, Emerging and Potential)

Established markets

Denmark: population 5.6 million

Current position

- Target date for DSO: 2019
- DAB coverage: 98%
- DAB receiver penetration: more than 45% of households
- More than 13% of radio listening is on DAB (Source: DR Media Research)

Prospects

- The latest parliamentary Media Agreement 2012-2014 stipulates that the FM band will close by the end of 2019 if at least 50% of radio listening is on digital platforms by that time.
- There is a plan to build a new regionalised multiplex for commercial radio – launching in spring 2015.
- No later than 2018, the national single-frequency DAB block now used by public service broadcaster Danish Radio may be swapped for two DAB regional frequency blocks presently employed for a single commercial multiplex.
- The proposed frequency swap will also mark the switch-over of all Danish DAB transmissions to DAB+. This increases the total transmission capacity of Danish Radio enough to migrate its nine regional FM-only stations to DAB, and allow the commercial multiplex to develop further.
- A public information campaign will start in 2015

Norway: population 5 million

Current position

- Criteria for DSO in 2017 have been achieved – Government decision expected Q1 2015
- DAB coverage: 99.5%
- DAB receiver penetration: 53% of households
- Rapid growth follows launch of new digital only station (P1+) in September 2013
- 75% of the 20 most popular car models in Norway offer DAB as standard or optional. 63% of new cars have DAB. There are approximately 3 million cars in Norway, and over 17% of these have a DAB radio.

Prospects

- DSO expected in 2017, subject to the following conditions (which were achieved in November 2014)
 1. Public broadcaster must achieve coverage of 99.5% by 2015. Commercial broadcasters on the national network #1 are required to reach 90% of the population.
 2. 50% of listeners must daily use a digital platform in 2015.
 3. There must be reasonably priced, reliable in-car adaptors on the market by 2015.
 4. Added value for the listeners.
- Digital listening: in Q4 2014, 53% of daily listeners were using a digital device, of that 36% were using DAB (TNS Gallup Digital Radio Survey October – December 2014)
- The Ministry of Culture will assess whether these requirements have been met
- If the conditions are not met in 2015, the switchover date will be 2019.

Switzerland: population 8 million

Current position

- DAB coverage: indoor 96%; outdoor 99% - all main tunnels fitted by 2016 - 2019
- DAB receiver penetration: 49% of households
- Over 70 services available – German, French and Italian
- All stations are on DAB+. Until 2015, there will be three stations simulcast on DAB
- 45% of new cars come with DAB+ as standard.
- Industry and regulator have reported to Government a detailed switchover plan

Prospects

- Industry and the Swiss regulator have announced plans for digital switchover to take place between 2020 and 2024. This will be preceded by a four year marketing campaign to prepare audiences for the switch.
- Coverage of highway tunnels will be finished in 2018/2019

United Kingdom: population 64 million

Current position

- National coverage of DAB: 95% of population (rising to 97% by end 2015)
- DAB receiver penetration: 49% of households (RAJAR)
- Digital listening: 38% share of total listening
- Cars: 61% of new car registrations have digital radio as standard (CAP/SMMT December 2014), up from 43.5% in Q4 2013. DRUK estimates that 3.2 million cars on the road are able to receive digital radio (9% of all cars).

Prospects

- Government has stated “the future of radio is digital”
 - The criteria for setting a date for DSO are:
 1. Digital listening to account for 50% share of all listening hours
 2. Digital coverage for national services must be comparable to FM and local DAB should cover 90% of the population as well as major roads.
 - Current trends suggest the 50% digital listening target will be achieved in 2017
 - Following commitment to build 162 new transmitters for national services and 200 new transmitters for local services, coverage targets are expected to be achieved by the end of 2016.
 - In July 2014, UK media regulator Ofcom announced that it was inviting bids to run a second national DAB digital radio multiplex - providing capacity for a further 15 national radio stations and more stations exclusive to DAB.
 - A digital tick for “future ready” devices has been set up and is managed by Digital Radio UK
 - A target date for DSO of ~2020 may be feasible.
-

New markets

Germany: population 81 million

Current position

- Launched DAB+ in August 2011
- Combined coverage of the ARD (regional) and the national multiplexes is 83% of the area and 91% of the population. The ARD multiplexes cover 75% of the area and 86% of the population. The national multiplex currently covers 63% of the area and 77% of the population.
- 7.7% of the German population now own an average of 1.7 DAB sets (TNS Infratest 2014)
- Sales of digital radios in Q4 2014 were up 63% year on year (source: GfK)

Prospects

- In November 2014, the ARD confirmed its long term commitment to DAB+ as a core element of its radio distribution strategy. In its statement, the ARD highlighted the need for the co-operation of policy makers, regulators and private broadcasters to help secure this digital future. Initial indications about this co-operation are encouraging. Further announcements are expected in 2015 – with final decisions expected in Q1 2016.

Netherlands: population 17 million

Current position

- DAB+ launched in Sept 2013
- National coverage of DAB+: >95% population coverage
- 28 national services: 18 commercial (9 digital-only), 10 public (5 digital-only)
- Joint marketing campaign “let’s get digital” launched Q2 2014 supported by public and commercial broadcasters and the Ministry of Economic Affairs.

Prospects

- Regional DAB+ (public and commercial) to be launched in Sept 2015
 - 2016: review on the development of digital radio.
 - Depending on success of digital radio, DSO is possible – with potential date of 2023.
 - Public broadcaster NPO will switch off AM on the 1st September 2015.
 - Important indicators: >50% of the households own a DAB+ receiver and developments in other European countries.
-

Emerging markets

France: population 66 million

- Digital radio services launched in June 2014 in Paris and Marseille. Services in Nice launched in September.
 - independent services only
 - almost all on DAB+
- In January 2015, the CSA published a report outlining its support for digital radio. The CSA's report includes plans to issue licences in several new cities, such as Lyon, Nantes, Strasbourg and Lille.

Italy: population 61 million

- Three regular national (two commercial and one public), six regular regional and 1 trial multiplex on air. Coverage is 68% of the population including 4500 km of motorways.
- Regular services started December 2012 in the Trentino region.
- In December 2014, Agcom published Resolution Number 602/14 which outlines the rules for three new regions to be covered by DAB+ digital radio - in the regions of Valle d'Aosta, Torino & Cuneo Province in Piedmont and Umbria. The Italian Government has 60 days, from December 23rd, to assign the frequency blocks for these regions.
- Club DAB Italia and Rai have announced a network extension plan to be completed within 2015. EuroDAB was recently awarded the second national commercial licence (in Trentino).
- An industry-funded heavyweight advertising campaign to promote digital radio to consumers, retailers, car vendors, car dealers and other stakeholders has been under way for over a year.

Poland: population 39 million

- Regular multiplexes launched by Polskie Radio so far in ten cities.
 - Current national population coverage is 38%.
 - Services in a further seven cities are to be launched by the end of 2015 – bringing population coverage to 49.4%.
-

Potential markets

Austria: population 11 million

- Digital Radio Austria (Verein Digitalradio Österreich) will apply for a DAB+ trial licence and hopes to receive approval to begin broadcasting DAB+ test transmissions by April 2015. Two transmitters will operate as a single frequency network, with one transmitting a 10kW signal. This test mode is scheduled to last a year.

Belgium: population 11 million

- Currently one layer in operation (two regional multiplexes – for the Northern and Southern parts of the country). There are currently 16 DAB and 3 DAB+ trial services on air and current population coverage is 95% (mobile).
 - North (Flanders + Brussels): 9 DAB channels (Flemish public broadcaster VRT) and launch in spring 2015 of a second layer in DAB+ in Brussels and the surrounding area with 6 commercial radio stations as a first step in a community-wide deployment.
 - South (Wallonia + Brussels): 7 DAB channels (5 from the French speaking and 2 from the German speaking public broadcasters, RTBF and BRF) and 3 DAB+ trial channels (RTBF). Public funding request to upgrade the current RTBF DAB network to DAB+ to ensure deep indoor coverage of Brussels and Wallonia and to have a potential massive public launch in 2017 or 2018.

Czech Republic: population 11 million

- Coverage of DAB is now 58%, offering 40 services in Band III and L-Band, with both DAB and DAB+ services on air. 29 unique programmes are on air.

Gibraltar: population 30,000

- DAB+ ensembles operate on Blocks 12B and 12C from December 2012. Four Simulcast DAB+ services from the public broadcaster are currently on air and population coverage is 90%.

Hungary: population 10 million

- Hungary has chosen DAB+ for its digital radio standard, and there is currently a test multiplex on air broadcasting seven DAB+ radio programs to the Budapest area.

Ireland: population 4.6 million

- National Public Broadcaster RTÉ operates a full-service Multiplex covering 52% of the population in the main cities.
- Commercial trials are on air in Dublin, Cork and the South-East of the country carrying a mix of simulcast and exclusive services.
- Over 400,000 devices have been sold to date and household penetration is 12%.
- Legislation has been in place since 2009 to enable commercial broadcasters to engage with DAB but the broadcasting regulator has not addressed the issue of establishing a regulatory framework to date. It is expected that Ireland will adopt the DAB+ standard.

Malta: population 0.4 million

- Over 40 services on the two national multiplexes which include unique digital only stations, MOT, EPG and DLS applications giving 100% coverage.
- By the end of 2012, over 25% of Maltese radio listeners were tuning in via DAB+.

Monaco: population 36,000

- In April 2014, Monte Carlo Radiodiffusion began a trial of DAB+ in the Principality of Monaco covering the Principality and the coastal areas of France from Menton to Cap d'Antibes.

Romania: population 21 million

- A trial DAB multiplex broadcasts six radio services from public broadcaster Radio Romania in Bucharest.

Slovenia: population 2.1 million

- Slovenia's public broadcaster, RTV Slovenia's DAB trial completed Nov 2013. The trial covered the capital city of Ljubljana and central Slovenia and coverage was 22.5%.
- The Post and Electronic Communications Agency of the Republic of Slovenia has setup a public debate regarding the future of digital radio. According to the announced roadmap the national agency will publish a public tender for a digital radio network in DAB+ with national coverage, expected in 2015.

Spain: population 47 million

- A total of 18 DAB audio services are on air. Population coverage is currently 20%.
- Spanish Broadcaster Radio Maria started DAB+ test transmissions in Madrid and Barcelona in December 2014.

Sweden: population 10 million

- Strong support for DAB+ from Government, public broadcaster and the two major private broadcasters (June 2013)
- On 2 October 2014 the Swedish Broadcasting Authority awarded 21 national and 4 local / regional commercial radio licences for DAB+. Licences are valid from October 2014 until September 2022 and broadcasting is to begin no later than October 2015.
- In December 2014, the Digital Radio Industry Co-ordinator (appointed by the Government) issued her proposals for DAB+, including a roadmap for a Digital Switch-over from 2022 to 2024. A Parliamentary decision is expected in Q4 2015.

Asia Pacific and Rest of World - listed in alphabetical order by stage of development (Established, New, Emerging and Potential)

Established markets

Australia: population 23.13 million

Current position

- Launched 2009 – with services in five major cities: Sydney, Melbourne, Brisbane, Perth and Adelaide (65% of population, 95% of roads in the five metropolitan cities with DAB+ have coverage).
- DAB+ receiver penetration: 23.3% of households in the five cities. 260 different DAB+ devices on sale. 125k cars with DAB+ as standard have been sold.
- DAB+ listening: 21.4% of total listening
- Trial services taking place in Darwin and Canberra (extended until 30 June 2015)
- Automotive line-fit as standard in several models. 13 Vehicle Manufacturers now include DAB+. Vehicle Manufacturers are promoting DAB+ in marketing collateral and publicity as a selling tool.
- Published a guide to launching a DAB+ trial.

Prospects

- Sixteen on channel repeaters will be rolled out across the five mainland capital cities which currently have a single high powered transmission (to address coverage gaps).
- Commercial Radio Australia (CRA) and the public broadcasters are working with the Federal Government on a timetable for regional roll out.
- CRA has developed a “best practice” automotive document which addresses some of the implementation/User Interface issues that have been evident in some of the earlier models.

Hong Kong: population 7.2 million

- Regular DAB+ services launched in August 2011. Population coverage is currently 80%. More than 300,000 devices have been sold.
- There is one regular national multiplex with a total 17 DAB+ audio services on air, four of which are simulcast and 13 exclusive services.

Potential markets

Brunei: population 0.4 million

- In 2007 RTB (Radio Television Brunei, the public and main broadcaster) began a DAB trial, originally to last for five years to include simulcast services. Five RTB stations currently broadcast on DAB in Brunei.
- A task force has been set up within RTB, which is working closely with AITI (Authority for Info-communications Technology Industry of Brunei) on the plans for a commercial launch.

China: population 1.3 billion

- DAB is on air in two cities (Beijing and Guangdong in Band III). Population coverage is 4%. Coverage in Beijing is 20 million people and in Guangdong 30 million people.
- Beijing: 17 radio services (13 of which are simulcast), four video services, and one Push Radio service, two other data services by Beijing Jolon (commercial broadcaster) on Band III. Beijing Communication Radio is broadcasting traffic information on DAB via TPEG.

Chinese Taipei: population 24 million

- Digital radio services have been launched in Chinese Taipei. A DAB single frequency network (SFN) trial is operated by SuperFM (the commercial broadcaster) and covers major cities including Taipei and New Taipei. Coverage is currently at about 21% of the population or about 5 million people.

Indonesia: population 250million

- A decree issued by Ministry of Communication and Informatics Republic of Indonesia (MCIT) states that Indonesia will use DAB+ as its official digital platform on Band III.
- Since August 2013, a DAB+ trial undertaken by the Ministry of Communication and Informatics (MCIT), public broadcaster RRI and the radio broadcasters association has been on air in Jakarta. This trial is to help prepare regulation for digital radio broadcasting (e.g. frequency planning) and broadcasting business models. The first stage of the trial is in Jakarta only – with future plans for RRI to develop its coverage and number of programmes.
- In September 2014, RRI with the support of MCIT will perform an evaluation of the transmitter and coverage in the Jakarta area.

Kuwait: population 3 million

- Following a DAB trial that has been on-going in Kuwait City since March 2007 by the public broadcaster Kuwait Radio, preparations are now under way for the second phase of the trial. A decision regarding commercial roll out is expected once all the trials have been completed. Population coverage is currently 90%.

Malaysia: population 29 million

- There is one trial local multiplex on air in Kuala Lumpur broadcasting 12 DAB+ simulcast services (7 from RTM and 5 from commercial stations).

New Zealand: population 5 million

- One trial local multiplex is on air and covers Auckland and central Wellington. Population coverage is 22% and content is currently broadcast in a mixture of DAB and DAB+ formats.

South Africa: population 53 million

- A licence for a high powered DAB+ trial has been granted to the SABC by the regulator ICASA. The trial which will run for a period of 12 months commenced on the 3rd November 2014 and Sentech is the signal distributor. The licence was applied for by the SADIBA/NAB Digital Radio DAB+ Trial Working Group. 21.5% of the population will be covered by 18 radio channels allowing 40 radio services from the Public, Commercial and Community sectors to participate.
- The Joint SADIBA/NAB Digital Radio DAB+ trial Working Group is currently meeting on a regular basis with members from the automobile manufactures to encourage their participation by providing a number of vehicles fitted with OEM DAB+ receivers.

South Korea: population 49.8 million

- A DAB+ trial on Channel 10B has been on air in Seoul since December 2013. Between four and eight channels are broadcast at 2Kw power. The trial was approved by the Korean Communications Commission (KCC). The tests are performed by Electronics and Telecommunication Research Institute (ETRI), and the process and results of the test are governed by digital radio committee which has members from government, broadcasters, receiver manufacturers, research institutes, and universities.

Thailand: population 67.01 million

- Thailand is currently developing policy. Thailand originally had plans to roll-out digital radio in 2015 preceded by a year-long DAB+ trial. However these plans have been delayed to 2016. The Thai regulator, NBTC, is working on the technical aspects to determine how many licences would be made as well as how to launch the multiplexes. Thailand's digital radio will be provided on Band III and the number of digital radio licences should be enough to cover the existing radio broadcasters. Thailand also proposes that in the future Community radio should be on low power FM.
- NBTC, together with MCOT, the Public Relations Department (PRD), and the Royal Thai Army will conduct a year-long trial for digital radio in 2016. NBTC is planning to subsidise the cost of radio receivers.

Vietnam: population 89.7 million

- Public broadcaster, Voice of Vietnam trialled DAB+ in Jul 2013. The roadmap for digital broadcasting radio and TV 2020 was granted by the Prime Minister in 2009. Currently VOV is working on a comprehensive project on improving national digital radio transmission until 2020 and anticipates that the roadmap for radio will come after that of television which will be completed on 2025. Currently no services are on air.