

Digital Radio

Executive Report

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Highlights

- By the end of Q3 2008, cumulative DAB digital radio sales achieved 7.66 million, with final figures for 2008 expected to reach 9.1 million, according to forecasts from the Digital Radio Development Bureau (DRDB).
- DAB digital radio household penetration is predicted to hit 58.5% of all UK homes by the end of 2011, according to the DRDB.
- DAB sales success is expected to continue in the key sectors of domestic portables and audio systems, with DAB's share of domestic portables reaching 90% (of value) in 2008.
- Recent DAB digital radio sales for 2008 are 50% below DRDB's previous 2008 forecast, made in 2004.
- 18.3% of radio listening is via a digital platform (DAB, DTV, internet) with digital listening hours for Q4 2008 totalling 186 million hours per week.
- DAB is the most popular digital platform choice, with 11.4% preferring this platform, compared to the 3.2% that listen via their digital televisions and 2.0% via the internet.
- The world's first DAB enabled mobile phone was launched by Virgin Mobile in October 2006, but BT Movio disbanded in July 2007 due to poor uptake of the service.

Digital Radio Take-up: Current & Forecasts

UK

The UK has historically been several years ahead of the rest of the world in the roll out and adoption of DAB digital radio. Almost 90% of the country is now covered by digital audio broadcasting (DAB) with most of these households covered by three or more digital multiplexes.

Six years ago, penetration of DAB digital radios in the UK was just 35,000. However, by January 2009 it was over 8.5 million; see **Table 1**.

Figures from the latest Q4 2008 RAJAR release show that household penetration of DAB has reached 29.7%.

DAB digital radio is the only widely available digital platform currently offered in the UK that allows portable reception and is the leading digital radio platform with more listening through DAB than via the internet and TV combined, according to RAJAR.

FIGURE 1

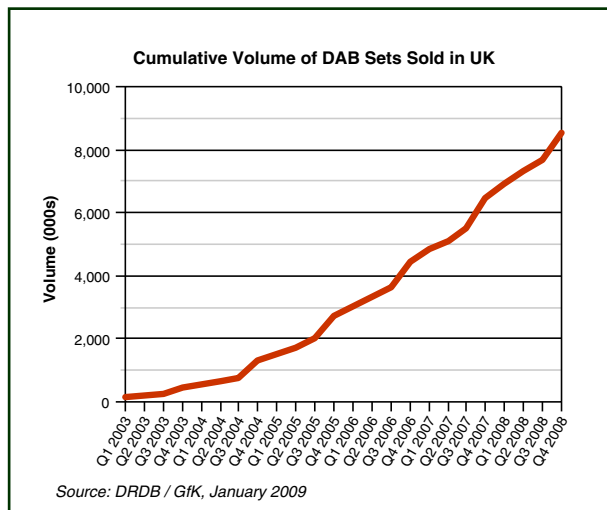


TABLE 1

DAB Radio Set Ownership

	Number of DAB Sets (000s)
Q1 2003	158
Q2 2003	197
Q3 2003	250
Q4 2003	433
Q1 2004	544
Q2 2004	646
Q3 2004	780
Q4 2004	1,290
Q1 2005	1,535
Q2 2005	1,740
Q3 2005	2,034
Q4 2005	2,715
Q1 2006	3,053
Q2 2006	3,340
Q3 2006	3,648
Q4 2006	4,444
Q1 2007	4,826
Q2 2007	5,125
Q3 2007	5,488
Q4 2007	6,452
Q1 2008	6,942
Q2 2008	7,299
Q3 2008	7,665
Q4 2008	8,530

Source: DRDB/GfK

DAB Ownership

The uptake of digital radio in the UK is increasing at a relatively healthy pace, with DAB radio ownership increasing seven percentage points year on year. The latest RAJAR figures for Q4 2008 showed ownership growing to 29.7% of UK adults; see **Figure 2**.

DAB sold over two million products in 2008, up 3% year on year with 8.53 million cumulative DAB sales to the end of Q4 2008, according to latest figures from DRDB and GfK. More than one quarter of all money spent on radio sets is now on DAB products, with DAB now commanding a 26% share of all radio sets sold, according to GfK.

DAB sales has grown at a fast pace over the last few years. It took five years to reach the first million sales, nine months to reach the second million and then just five months to reach the third (see **Table 1**). Growth in sales since the beginning of 2008 has slowed in comparison but nevertheless, DAB radio set ownership has surpassed 7.5 million.

During 2006 and 2007, sales of DAB portable “kitchen” radios outstripped sales of their analogue counterparts, with DAB now accounting for 89% of sales (Q3 2008).

As in the previous two years, Christmas 2007 provided a major boost in take-up, with sales totalling one million in the fourth quarter of 2007 and more than 550,000 sold in December alone. At one point in December, John Lewis reported selling six DAB digital radios a minute compared to five iPods a minute, according to the DRDB.

One reason for strong Christmas performance is the increase in range of DAB sets available to purchase. There are now over 350 different products on the market, compared to just 53 at the end of 2003. Another factor is the continued fall in the average price of DAB digital radio sets, with prices now starting below £30.

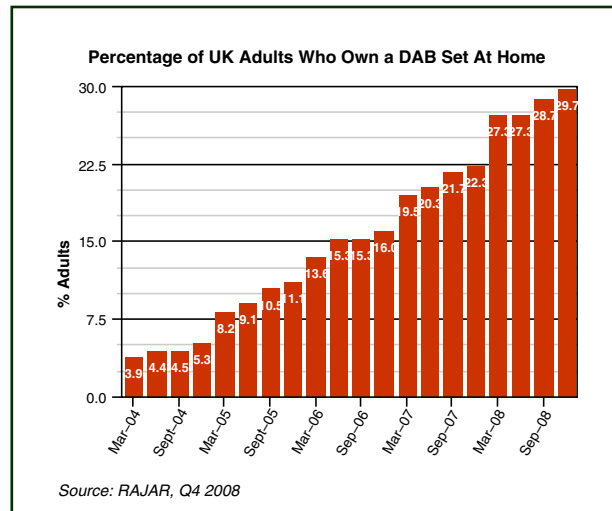
The demographic profile of a DAB owner is becoming younger as new designs come onto the market. Currently, 23% of DAB owners are aged 15-24 and 60% are under 44 years of age, according to BMRB’s Target Group Index.

Says Ian Dickens, DRDB chief executive: “We are starting to see DAB digital radio sales overtake analogue in some categories, particularly the portable/kitchen radio market. The average age of DAB set owners is now below the national average, the male/female split is closing, and repeat purchase is on the increase. DAB digital radio is enjoying healthy growth and moving swiftly toward mass market status.”

DAB Ownership By Market Sector

The portable kitchen radio market was the first to take off for DAB, with the introduction of affordable battery operated devices. There are now over 90 different devices on the market with prices starting at just £40. Volume sales in the market have grown 13% year on year. However the fastest growing sector is DAB clock radios, which has doubled in terms of volume sales in the last year.

FIGURE 2



There is huge potential for growth within the audio system market, as DAB only infiltrated this market in 2004. Already, some manufacturers have indicated they will stop producing analogue-only products. However, the most exciting market is that of MP3 Players, which appears to have grown at the expense of the boombox market, which itself has slowed drastically. This is currently a very small area for DAB, with only 0.01% of all MP3 players sold coming with DAB. However, MP3 docking stations teamed with DAB products are expected to show huge growth, especially in the run up to Christmas.

The in-car market is looking more encouraging, following the recent release of the plug-and-go in-car adaptor from PURE Digital. After several years with little growth, in the three months since the Highway was launched, DAB after-fit volume sales grew 14% year on year.

DRDB Forecasts

The Digital Radio Development Bureau's five year forecast shows DAB digital radio will continue to increase its market share over analogue. In its October 2007 forecast, the DRDB forecasts sales of 2.6 million in 2008, bringing the cumulative total to 9.1 million sets by the end of the year. This is likely to have been revised downwards to some extent to take into account the current economic downturn, but the DRDB have not published any revisions.

According to the DRDB's most recent forecasts (October 2007), household penetration is expected to reach 30% by the end of 2008, rising to 40% in 2009, 50% in 2010, and 58.5% by the end of 2011; see **Figure 3**.

DAB sales success will continue in the key sectors of domestic portables and audio systems, while significant growth is already happening in clock radios; see **Table 2**.

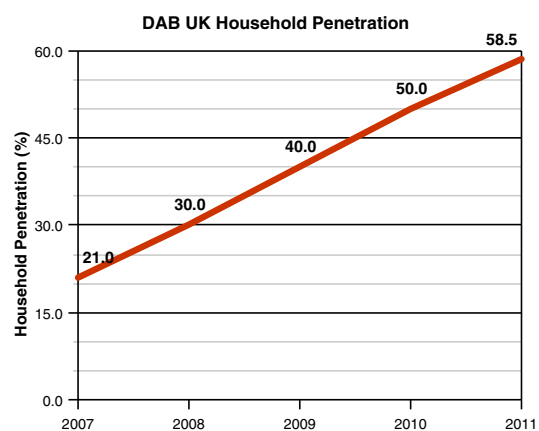
TABLE 2

2008 DAB Share Of Sales In Key Sectors

	Volume	Value
Domestic portables	69%	90%
Personal Stereos	40%	70%
Audio Systems	27%	32%
Clock Radios	28%	50%

Source: DRDB, October 2007

FIGURE 3



Source: DRDB, October 2007

There are indications from many sources – RAJAR, Ofcom, BBC, RadioCentre – that the traditional face of radio listening is changing. This is impacting significantly on the overall radio set sales market (analogue and DAB) with certain form factors, such as boomboxes, audio systems and personals, in decline, while others, such as MP3 players and docking stations (with radio included) are on the rise.

The above figures represent a base case scenario, but could increase significantly if DAB finds a good foothold in new form factors such as MP3/MP4 devices, adaptors, docking stations and, especially, mobile phones.

Says DRDB chief executive, Ian Dickens: "A number of manufacturers are already starting to see the value of

adding DAB digital radio to some of these new form factors. While it is important to continue to see successful growth in traditional radio products, DAB's longer-term future lies in the penetration of these new products, along with in-car and mobile phones. Over the coming months, the DRDB will be changing its shape and focus to ensure that radio moves swiftly down this road."

By the end of 2007, there were just under 6.5 million DAB radios in UK homes and a household penetration of 21%. These numbers, and the forecast released in October 2007, are important indicators for Ofcom, which has been considering a plan for analogue radio switch-off. The forecast is also designed to help manufacturers plan their product roadmaps according to potential market opportunities and retailers to maximise the depth and breadth of product available to consumers. It can also help broadcasters to plan future digital investment and marketing strategies to grow digital listenership.

Digital Radio - Facing A Crisis?

Although launched in 1998, digital radio services in the UK have not had the impact many commentators expected. With an anticipated household penetration of 30% by the end of 2008, DAB digital radio is significantly behind the UK's digital television penetration which currently stands at 85% of all UK TV homes.

It appears that the much vaunted 'tipping point' has yet to be reached. DAB digital radio sets are yet to be fitted as standard in new cars and, without an analogue switch-off date, listeners have no real pressing need to leave analogue.

In addition, the DRDB's forecast sales for 2008 are a massive 50% below what the DRDB previously forecast for 2008, back in 2004. The cumulative sales for 2008 will also be below the figure previously forecast - by around 18%. Cumulative sales for 2009 is also down, by around 30%.

Sales are now so far behind previous expectations and with year on year sales growing comparatively slowly, the DRDB's forecasts now only look to predict sales in 2008 - in 2004 the DRDB forecast sales for the following five years. In addition, back in 2006, the DRDB expected the cumulative sales of DAB digital radio sets for 2007 to hit well over 7 million units, this figure has now been reforecast to 6.5 million.

However, with sustained growth and commitment from broadcasters, the DRDB claims DAB is on track to reach 50% household penetration by 2010.

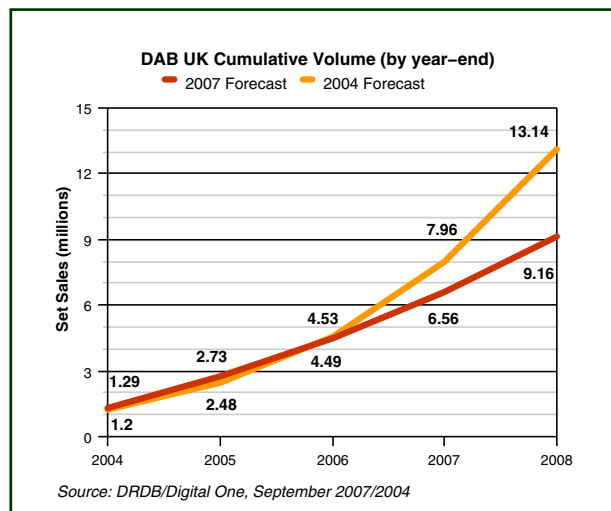
In October 2007 Mandy Green, head of communications at the DRDB, said that digital had struggled across commercial radio, although she added that things are improving. She said: "Broadcasters need to find a way to monetise the technology, and consumers want to see innovative formats to entice them into digital radio." But, she pointed out, broadcasters cannot overcome the barriers to growth alone. "We cannot solve the in-car issue ourselves but we do expect to sell a million DAB radio sets this Christmas". Indeed, Christmas 2007 saw DAB digital radio continue its Christmas tradition of strong sales, with one million products bought in quarter four, 2007. More than 550,000 DAB radios were sold in December alone, up 22% on December 2006. Best sellers were portable kitchen radios, MP3/DAB personals, DAB hi-fi systems and, with a particularly strong result, DAB clock radios.

With the current retail environment being extremely volatile nobody is sure how consumers will behave this Christmas and, as a result, the DRDB do not want to publish forecasts which are based on so many intangibles. Any downturn, however, will be wholly attributable to the economic downturn and should still give a year-on-year growth of around 13%. The DRDB anticipates the overall consumer electronics market will be down year-on-year, so DAB digital radio will be bucking the trend to come in with growth over the year.

Speaking at ASI's 2007 European Radio Symposium held in Barcelona last November, Paul Brown, chairman of the RadioCentre, pointed to a number of key reasons why digital radio was not making the same progress as digital TV. Radio broadcasters have often been disinterested - the digital future was "uncertain, expensive and possibly more competitive," said Brown. The BBC got a head start, pinning its expansion to the licence review, and largely moving existing services to digital initially.

When commercial radio got moving in 2000, it launched new services, which prompted the BBC to do the same. Commercial services were "not very good at the outset and inhibited by the high cost of the infrastructure," said

FIGURE 4



Brown. Confusing technical developments had also held the medium back, leaving the consumer often waiting for “something better round the corner.”

Thirdly, there was a “lack of political drive,” stated Brown. “Radio is seen as a secondary medium,” often owned by TV companies as well, so secondary within the business as well as in the politician’s eye. “It is an enormously high mountain radio has had to climb - and still is, but the latest RAJAR data shows signs of it coming right, with all digital and DAB reach figures each up two points, whilst listening via the internet is slightly down.”

DAB Digital Radio: A Global Perspective

Europe

Although the UK has traditionally always been ahead of the rest of Europe in terms of DAB digital radio sales, there are now encouraging signs in the countries deemed as 'key territories' by the European digital radio industry - Denmark, Norway, Belgium and Switzerland. While these territories are not necessarily the largest countries within Europe, they are showing the greatest progress in DAB digital radio take-up. These countries are also more willing to set analogue switch-off dates.

In Denmark sales of DAB digital radios exceeded expectations, from 125,000 in 2005 to 250,000 by the end of 2006. DAB now has 10% household penetration, with listening figures doubling by the end of 2006, according to DRDB.

Switzerland is seeing its DAB coverage expand ahead of schedule with total population coverage expected by the end of 2008. To promote the service, the Swiss public broadcaster embarked on a strong marketing campaign at the end of 2006.

In the last year, the sound quality of DAB was brought into question. As more bandwidth hungry television and radio services are launched, the spectrum available to DAB services has been decreasing, diminishing the sound quality. Other technological solutions have been sought and in some countries they are choosing not to roll out their own DAB networks, preferring to investigate newer technologies instead. Germany, for example, has recently commissioned two major DMB (Digital Multimedia Broadcasting) trials focused around the World Cup. These continued over the whole of 2006, even though DAB audio services have been broadcasting in the country for several years.

In a global survey of 50 countries, Eureka Research found that commercial broadcasters in western Europe have put digital radio back on their agendas following the publication of the GE-06 plan by the ITU which guarantees DAB coverage at strength levels sufficient to provide portable indoor reception. Subsequently, regulators in several European countries expected to issue licences in 2006 and 2007. There is also increasing interest in eastern Europe with several public broadcasters expected to launch commercial services in the next twelve months and others starting their first trials.

Gareth Owen, research director at Eureka Research, said: "The GE-06 plan guarantees that spectrum will be available to enable analogue radio to make the transition to DAB and removes a significant degree of uncertainty regarding the adoption of DAB in the minds of governments and regulators in many countries. The existence of such a plan will make it considerably easier for countries across the whole EMEA region to introduce DAB."

US

In the US, digital radio uptake has been much slower than in the UK. US radio stations have previously been unwilling to pay for digital transmitters until more consumers owned digital receivers - but manufacturers were reticent to produce more digital radios until there were more digital broadcasts, according to USA Today.

In addition, the cost of 'going digital' is currently substantially higher than receiving satellite radio. Satellite radio in the US had 14.1 million subscribers by the end of 2006 according to industry analysts eMarketer, with this figure set to reach 35.6 million subscribers by 2010.

However, the future for US digital radio is looking more positive, with more than 250 radio stations already broadcasting in digital and a further 2,500 having made the commitment to upgrade to digital. Research from In-Stat suggests that once table-top units drop below \$100 each and are built into cars as standard, adoption of the medium will increase significantly. In-Stat expects the US to have achieved large scale adoption of digital radio in the next two to three years. However, the forecaster anticipates that it will take between 10

and 20 years before all 750 million analogue radios in US homes and cars are replaced by digital.

Global

Worldwide unit sales of digital radios are expected to increase more than three-fold from 2006 to 2011, according to a new report from In-Stat. Recent developments include the availability of the new, enhanced Digital Audio Broadcasting (DAB)+ standard in the UK, an increase in the number of DAB trials throughout Europe and Asia, and the introduction of mobile devices with integrated DAB support, the high-tech market research firm says.

“From a regional standpoint, DAB technology is close to mass-market appeal in the UK, and is the pervasive digital radio technology throughout Europe,” said Stephanie Ethier, In-Stat analyst. “Satellite radio remains the leading platform for digital radio in the US, despite notable progress in HD Radio awareness.”

In-Stat also found that the global market for digital radio will grow from 9 million units in 2006 to almost 32 million units in 2011.

In 2005, 57% of respondents to an In-Stat consumer survey in the US were aware of HD Radio. This percentage had grown significantly to 77% by 2007.

Eureca Research forecasts a global market of 145 million DAB radios by 2012. DAB digital radio can now be heard in nearly 40 countries from Canada to Australia; there are more than 500 million people worldwide within range of a DAB digital radio transmitter, and there are nearly 1000 services on air.

South Korea has the potential to be a massive market for another technology standard, DMB, and has had an encouraging start since its launch in December 2005 with around 1.5 million receivers sold.

China is a key market for the DAB, DMB and DAB-IP family of technology standards and the adoption of DAB in China will have a huge effect on the worldwide development of DAB. Trials are under way in several parts of the country with broadcast licences issued covering Guangdong Province, Beijing and Shanghai, while commercial DMB services were due to launch over 2006.

Meanwhile, Australia is due to launch commercial services at the beginning of 2009, while New Zealand is conducting a 12 month trial in Auckland.

“DAB’s progress in the last three years has been quite impressive” said Gareth Owen, Eureca Research, “but the adoption of the Eureka-147 DAB standard for mobile TV services in large countries such as China, India and possibly Russia - in addition to several other European and Asian countries - over the next three years could boost its commercial prospects significantly, and guarantee its future as a dominant global broadcasting standard for radio, mobile TV and multimedia content.”

Digital Radio Listening

There are three ways of listening to digital radio in the UK; through DAB digital radio, through digital television (requiring access to digital satellite, digital cable or Freeview) or via the internet using a PC with speakers.

RAJAR introduced new methodology in January 2007, measuring radio listening via platform (analogue and digital). The most recent set of findings were released in Q4 2008, revealing 18.3% of listening is now via a digital platform (DAB, DTV, internet) with digital listening hours for the quarter totalling 186 million hours per week.

Of those listening via digital, the majority chooses DAB digital radio, with 11.4% preferring this platform, compared to the 3.2% that listen via their digital televisions and 2.0% via the internet; see **Table 3**.

TABLE 3

Platform Shares (%)

	All Radio
AM/FM	68.6
All Digital	18.3
- DAB	11.4
- DTV	3.2
- Internet	2.0
- Digital Unspecified	1.7

Source: RAJAR, Q4 2008

TABLE 4

Digital Listening

	Weekly Reach (%)	Total Hours (millions)
All Digital	32.2	186
- DAB	18.9	116
- DTV	10.9	33
- Internet	6.0	20
- Digital Unspecified	6.9	17

Source: RAJAR, Q4 2008

Digital Radio Listening Via TV

Digital radio listening via DTV has shown strong growth over the last five years. Over 40% of UK adults have ever listened to the radio via the TV, according to RAJAR, up from around 13% five years ago.

Frequency of listening to the radio via DTV has also shown huge growth over the last five years, increasing from just 7% of UK adults listening at least once a week to over 22% in 2007, according to RAJAR.

Latest figures from RAJAR show that digital listening via DTV totalled 33 million hours during Q4 2008; see **Table 4**.

Digital Radio Listening Via Internet

The internet is also fuelling consumer interest in radio, with listening to the radio through the internet now a regular occurrence. Digital listening via the internet has a weekly reach of 6.0% of all radio listening.

Current Market Indicators

There has been significant consolidation within the UK radio industry ever since the merger of GWR and Capital Radio to form GCap Plc 1995, and there has been yet further consolidation among the radio groups. In April, GCap Media accepted a £375 million takeover bid from rival company Global Radio. Global Radio, headed by former ITV chief executive Charles Allen, paid 225p per share, with the conclusion of the deal heralding an end of four months of negotiations. In June, Virgin Radio owners Scottish Media Group confirmed the sale of Virgin Radio to a consortium including The Times of India Group for £53 million. August of this year saw Bauer Media and Guardian Media Group in talks with GCap and Global Radio over the acquisition of Midlands stations BRMB and Heart 106.

In November it was reported that former Chrysalis Radio chief executive, Phil Riley, is being tipped to win the £30m race to acquire Global Radio's five Midlands stations. It is said that Riley is part of a consortium bidding for Global Radio's West Midlands assets BRMB, Mercia, Wyvern, Beacon and its East Midlands station Heart 106. The bidding is now in its second round with a group asset price tag believed to be approximately £30m. Global Radio is selling the assets as a single package. Other known bidders include Bauer Media, headed by Dee Ford, radio group managing director, and Premier Digital Broadcasting. Guardian Media Group dropped out of the running and never submitted a formal bid.

Riley's consortium has emerged as the favourite to win the race as it is thought likely he would keep the stations' national sales contracts with Global Radio. A senior radio figure said: "Riley is well placed to take this operation over and would probably leave the national sales contracts with Global.

UTV, owner of talkSPORT, has reported group revenue growth of 6% in the first ten months of the year. Its UTV ITV franchise for Northern Ireland saw a 6% fall in revenue year on year for the period and the company forecast a further 10% fall in November and December. UTV splits its radio operations into Radio Ireland and GB Radio. GB Radio's performance was flat year on year in the first 10 months, compared with a market down about 10% and said it believed it could maintain this in November and December. The Irish radio operation had year-on-year growth of 50% in the first 10 months of 2008 due to significant gains from acquisitions and currency effects, with actual like-for-like growth of 3%.

UBC Media has reported a 15% decline in revenue to £6.4 million for the six months to September 30. The radio group blamed an "extremely challenging" few months for the fall. UBC, one of the shareholders of 4 Digital, invested £150,000 into the digital radio consortium which was abandoned by Channel 4, its majority shareholder, last month. UBC said that it had implemented an annual cost savings scheme totalling £500,000 a year.

Simon Cole, the UBC Media chief executive, said: "This has been a testing six months for UBC and I am immensely proud of the determination shown by our senior management and staff in making the tough changes necessary to position the company correctly.

"We have reduced our losses from continuing operations and implemented substantial savings in our central overhead which should deliver further improvement."

In its interim management statement, UTV criticised Channel 4 for pulling out of the 4Digital consortium in October of this year, saying its decision has scuppered the launch of any digital radio services for the "foreseeable future."

UTV said it was surprised by Channel 4's move to pull out of launching digital radio services on a new multiplex owned by 4Digital, in which the broadcaster was the largest shareholder, and that the decision was "unilateral". This decision undermined the business model upon which the consortium's application was based and, consequently, it would seem unlikely that the multiplex will launch in the foreseeable future," UTV said.

Channel 4 decided to close down its radio division due to its current funding crisis. Channel 4 was originally planning on launching three digital radio stations, and was also the majority shareholder of the 4 Digital Group, which owns the licence to operate the second national commercial DAB multiplex — dubbed Digital Two, or D2 — which was expected to launch back in July.

This is disastrous news for DAB, because the DAB industry was banking on the fact that Channel 4 launching its three new stations, along with the inevitable heavy cross-promotion of the radio stations on C4's TV channels, could have led to DAB's lamentable sales finally picking up. And the air of optimism amongst the DAB supporters was summed up by Ofcom's Director of Radio, Peter Davies, who considered that the launch of the second national DAB multiplex, and in particular C4's new stations, were a chance to "re-launch DAB", which he considered would lead to "DAB's Freeview moment".

Mobile Radio

Virgin Mobile launched a DAB-IPTV enabled phone service in October 2006, allowing users access to DAB digital radio and mobile TV. Using the Lobster 700 phone, subscribers were able to access up to 50 digital radio stations straight to the handset together with crystal clear sound, through BT's new Movio service, broadcast via Digital One's existing national DAB network as well as several mobile TV channels.

However, the service failed to take off and BT announced at the end of 2007 that it was disbanding the BT Movio business and subsequently cancelled its contract with GCap Media, the company which owned the service spectrum.

Reports in the trade press claimed that fewer than 10,000 handsets had been sold by the beginning of 2007, despite a £2.5 million advertising campaign. Virgin Mobile's chief executive, Alan Gow, said that mobile TV was still in its infancy and sales had been hampered by the fact there is only one handset on offer.

Trials that were held for the BT Movio service in 2005 demonstrated the popularity of DAB mobile radio, as users watched an average of 66 minutes of TV each week but they listened to 90 minutes of radio.

Radio is already an option available on many mobile phones, but mobile digital radio, like mobile TV, is still in its infancy. With the right handset, service and promotions, the mobile digital radio market has the potential for huge growth. Greater work hours, and a desire to make the most out of their leisure time has led to the creation of an increasingly 'mobile' consumer; a consumer spending more time out of home, on the move. The BBC Daily Life Survey indicates that more people (in particular young audiences, Londoners and working adults) are spending more time out of home than they do awake in the home.

The portable and auxiliary nature of radio leave the medium ideally placed to capture the 3rd Space, and complement the busy lifestyle of the 'mobile consumer'. Whilst other media compete as primary media, radio is characterised by being auxiliary. It is the only medium that can be consumed whilst involved in other activities, e.g. driving or working.

Bandwidth Demands Diminish Sound Quality

Reports in the press last year suggested that the original claims of "CD quality" sound for digital radio were becoming untrue. However, with the demand for space on the digital airwaves at a premium, the only way to fit in more channels is to reduce the broadcast quality of others.

An article in the Guardian claimed the digital versions of BBC Radio 1 and 2 are now broadcast at much lower bandwidth levels than when they were first launched, with streaming at 60% of the level expected for "CD quality" sound, according to audio engineers. Accordingly, if you receive good FM reception it would be better

quality than DAB.

The BBC has been lobbying Ofcom to allocate more spectrum space for digital radio, which could potentially be used to improve audio quality.

The Digital Radio Development Board have recognised that there is a problem and Ian Dickens, chief executive, commented: "Everybody has a view and an opinion, but if you offer digital radio and all you get when you turn it on are the same stations, that's not an attractive proposition. It's an issue of the number of services versus the quality of services. Consumers are very comfortable with the technology as it stands. That suggests the quality is perfectly acceptable."

An advert relating to DAB digital radio was reported to the ASA (Advertising Standards Authority), after claims that the words "great sound" relating to DAB digital radio were misleading. A complainant challenged whether "great sound" and "digital quality sound" misleadingly exaggerated the quality of digital radio in the UK. However, the ASA rejected the complaint and accepted that "great sound" is an expression of opinion and "digital quality sound" is representative of users' general experience of digital radio in contrast with that of analogue radio.

The issue was addressed at MediaTel Group's 2006 *Future of Radio* seminar, where Simon Cole, chief executive of UBC Media replied to accusations that the sound quality was becoming an issue for the medium, saying: "The audio quality on DAB digital radio is not an issue to anybody except journalists with a great pair of headphones. There are no customers except some people with extremely expensive headphones who think there's anything wrong with the quality of digital radio."

He went on to mention that DAB broadcasts at an audio channel of 128kb per second while the current best-selling audio device in the world, the iPod, delivers audio at 64kb per second. "A music file on an iPod is a far less quality music file than a file listened to over digital radio, but you don't see people writing about how terrible audio quality is on an iPod."

Satellite Radio

The number of satellite radio subscribers in the US is expected to increase from a predicted 14.1 million in 2006 to 35.6 million in 2010, according to research from industry analyst Frost & Sullivan. Satellite radio's growth, in part, reflects its focus on providing advertising-free music content, a popular feature with listeners.

Advertisers are starting to move more of their budgets over to satellite and internet radio, although it is not expected to overtake traditional network buys in the near future. It is estimated that a third of national radio advertisers have doubled their spending on internet and satellite radio over the past year, with the medium now receiving 10% of the radio budget.

US satellite radio giants Sirius and XM completed their merger in July of this year after winning a lengthy battle with regulators over concerns about market competition. The new company formed by Sirius Satellite Radio's buyout of XM Satellite Radio, will be called Sirius XM Radio Inc. The combined company has more than 18.5 million subscribers, making it the second-largest radio company, based upon revenue, in the country.

Sirius expects to end 2008 with 19.1 million customers. That number is projected to rise to 20.6 million in 2009, 22.1 million in 2010, 24 million in 2011, 26.2 million in 2012 and 28.4 million in 2013. Revenue is forecast to climb to \$2.7 billion in 2009, \$3.0 billion in 2010, \$3.4 billion in 2011, \$3.8 billion in 2012 and \$4.1 billion in 2013.

Transportable devices will dominate the market with plug and play and hand held units comprising 60% of all satellite radio sales up to 2010. Meanwhile, in-car device sales will grow to 6.9 million units in 2010.

The forecasters suggest that to achieve greater growth, Sirius XM Radio Inc needs to integrate satellite radio into other devices such as mobile phones. XM launched new handheld devices with Pioneer and Samsung in 2006, which combine satellite radios with MP3 music players.

Ted Schadler, research vice president at Forrester, said: “Consumers want to listen to what they want, when they want, on the device of their choosing. New formats like online radio and podcasting, where downloadable content is sent directly to an MP3 player, give consumers more programming and ultimate flexibility. If radio and music executives can successfully shift their thinking to embrace new audio delivery methods, both industries will benefit from new revenue streams and increased customer loyalty over the next several years.”

To succeed in today’s fragmented, consumer-driven market, radio should take note of the lessons learned in the TV industry when cable entered the programming mix. According to Forrester, music and radio executives must adopt subscription-based models, on-demand delivery and ad targeting strategies for radio to successfully maximise its new formats. For example, in addition to rolling out high-definition radio (HD), broadcasters like Clear Channel and Infinity Broadcasting should move quickly to both ad-supported and subscription-supported online delivery and subscription-based programming and services to HD receivers to accommodate varied consumer demand.

Schadler thinks that in order for companies to adapt to the new technology they should open as many content channels as possible, investing in devices such as podcasting and high-definition radio. Forrester predicts podcasting to reach 12.3 million US households by 2010.

In order to grow steadily beyond 2010 - when satellite’s prime market segment (higher-income, entertainment-oriented, technology-optimistic households) will become saturated - satellite providers should consider offering multi-tier subscriptions to reach the more than 85% of all US households that fall outside this wealthier, early adopter segment.

Demystifying Digital Radio

Ofcom’s Communication’s Market Report demonstrated that the main reason for people not having taken up digital radio is their satisfaction with the current radio networks available, with 78% of respondents citing this as their reason. Other reasons ranged from not listening to much radio (8%), frequency concerns (7%), expense (6%) and understanding (6%).

The increasing penetration of digital radio is making the industry a ‘complicated business’, with research from the BBC identifying the difference in levels of knowledge and awareness in the digital market. The research is helping to identify what consumers want from the DAB spectrum, how they use it and how the industry can further the influence of digital technology.

Simon Nelson, controller for BBC radio and music interactive, stated in 2006 that it is the BBC’s job to persuade listeners without knowledge of digital radio of the benefits, with the research emphasising the lack of public awareness concerning the technology. He said: “Radio as an industry has to go digital if it is going to survive; quite simply, digital radio is better radio.”

Although awareness was shown to be relatively high in the BBC’s research, respondents were unable to describe the benefits of digital radio, with the price of equipment remaining an issue and consumers found to be nervous of the new technology.

Nelson added: “We’ve got to make sure we don’t aggravate people who just want to listen to radio, but if we move now we can ensure that radio stays in the centre of the dial.”

Looking Forward

As mobile phone/portable media player DAB products develop in the market, tight integration of DAB into the native platforms will be needed to reach commercially attractive price points. By 2009, there could be considerable upside from DAB sales in these product segments. However, there is currently insufficient evidence of consumer demand and of the product/service value proposition to quantify this. As a result they have been omitted from DRDB/Digital One forecasts.

New technology will drive an extra 10% growth in listening hours over the next 5 years. It is anticipated that between 2-4% of these additional listening hours will come from more choice - as digital listeners are able to find a station that fits their taste/needs throughout the day. In addition, better quality sound and ease of tuning should also result in an increase in listening hours.

The ubiquity of digital radio - with radio able to capture the '3rd space' as listeners tune in during travel and leisure time - is predicted to add another 3-5% growth in listening hours.

Finally, the control exercised by the listener using digital radio - listeners have the ability to choose when to listen to favourite programmes as well as having access to a 'back-catalogue' - is expected to add up to 1% in terms of listening hours.

Currently 12.3% of adults are using their mobile phones to listen to the radio, an increase of 2.9% points since Q4 2007; see **Figure 5**.

For everyone to buy into digital radio there needs to be critical platform mass, critical mass in volumes and thus in price, and possibly even critical mass in content and services. There does not need to be a single 'killer application' but there does need to be, as Freeview and digital satellite have shown in television, a sufficient combination of services, technology, simplicity and price or discount to provide a value proposition for the consumer. It is widely believed that digital radio is likely to be able to meet these conditions.

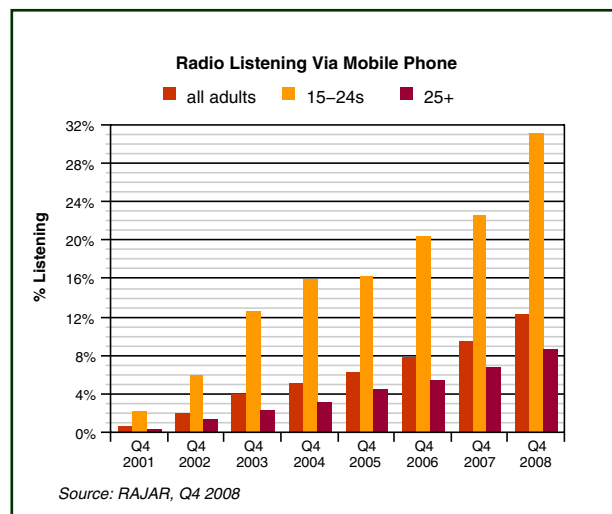
Technological Advancements

Eureca Research predicts that, over the next 4 years, DAB deployment will grow rapidly due to a combination of factors: the availability of new spectrum, the mobile TV factor and the increasing convergence in the media world which is changing traditional analogue radio business models and forcing broadcasters to seek new revenue-generating digital services.

During the 2006-2012 forecast period, DAB will move from being a virtually audio-only platform into a fully interactive multimedia and mobile TV platform. In addition it will be capable of delivering a range of revenue-generating services such as subscription radio services, live TV services, music downloads, visual radio content (graphics, images) and pay-podcast services.

Although the UK digital radio market is dominated by DAB, developments around the world suggest that other technology could challenge its dominance. The availability of DRM (Digital Radio Mondiale), HD Radio (mainly used in the US), Japanese ISDB-TBS (Integrated Services Digital Broadcasting) as well as developments in DAB itself mean that broadcasters around the world will have a choice of technical standards in the future.

FIGURE 5



Digital Radio Mondiale uses the AM spectrum and is very robust. It can deliver CD-quality sound, however it does require large bandwidths and currently no manufacturer builds compatible radio sets. However, it has already drawn some fans; Australian authorities are now reserving space for DRM broadcasting and Ofcom has been consulting on whether it should follow suit.

Commenting on DRM's opportunities in digital radio, Gareth Owen, research director at Eureka Research, said: "In the short-term, it faces the same challenges faced by DAB in its early years: persuading broadcasters to introduce compelling DRM content and manufacturers to produce a broad range of inexpensive receivers."

Meanwhile, within the DAB family of standards is both DMB (Digital Multimedia Broadcasting) and DAB-IP, both of which deliver broadcast digital television services alongside audio DAB.

South Korea, which often leads the way in technological terms, has been quick to adopt DMB, saying it insulates the medium against future developments, rather than relying on heavy investment in several separate systems for audio and video. More than a million mobile devices using the technology have been sold in the past six months.

Another technology is wireless broadband radio. With an estimated 10,000 radio stations now available on the internet, some manufacturers have begun producing standalone radio products that can receive the radio signals from the internet in a wireless environment.

Since it is not necessary for the PC to be on, or to sit in front of it, for the radio to work, and as the signals are technically narrowcasted, there is a possibility for advertisers to tailor ads directly to the household or listener.

One device, produced by Acoustic Energy is claimed to be the first which is capable of accessing over 99% of the world's internet radio stations. In addition it will play media stored on a wi-fi enabled PC, either through the built-in speakers, headphones or straight into a hifi.

Due to the nature of the technology being based around broadband, which is a huge growth market, some in the radio industry consider that it is wireless broadband radio that is the future of radio, and not DAB.

Digital Music Downloading

UBC Media launched a new digital music technology that allows listeners to buy music from radio stations via a handheld mobile device in December 2007. The technology was first demonstrated by Simon Cole at MediaTel Group's 2005 Digital Radio Seminar

Named Cliq, UBC Media's instant music download service has since suffered a major blow with the closure of its loss-making mobile phone platform in June of this year. The company has blamed the closure on the slower than expected takeup of the mobile phone service and the restricted availability of mobile phones with built-in digital audio broadcasting - DAB - radios.

UBC said no further funds would be invested in Cliq, which allows users to download a song they have just heard on a radio station and has cost around £2m to develop. But UBC added that it would continue to try to incorporate the new technology in other platforms, including Wi-Fi digital radios.

"I remain convinced that transactional revenues will be an important part of the radio industry in the future," said the UBC Media chief executive, Simon Cole.

"For a variety of reasons, including the delay by manufacturers in bringing DAB-connected devices to market, we have tried to lead this process in the interim on the Java mobile phone platform and have not succeeded," Cole added.

"However, the technology, intellectual property and pending patents that we have developed during this

process remain within the business. We believe we can exploit these without the need for the high-risk, high-cost exposure to a consumer service.”

In the year to the end of March 2009, UBC expects to make savings of £1.2m after closure costs of £1.1m.

Podcasting

RAJAR published its Podcasting and Radio Listening via the Internet Survey in July 2008, which revealed six million people have downloaded a podcast, up from 4.3 million in November 2007.

The survey also found that 9.4 million people listen to the radio via the internet in an average week, either live or through a listen again service. Half of listen again users said they now listen to radio programmes which they did not previously and three quarters said the service had no impact on how much live radio they listen to.

The survey also found that 15% of podcast users listen to more live radio since they began downloading, while 39% say they also listen to new radio programmes.

iTunes remains the most popular software for podcast users, while comedy and music continue to be the two favourite genres of podcasts. Although podcast listening occurs throughout the day, the study shows there is an evening peak when 44% of users press play.

Music companies are tending to make 15% on podcast materials instead of the 3% for radio airplay, making the medium potentially very profitable in the future.

Analogue Radio Switch-Off

As audiences began to migrate to digital technology, the prospect of switching off the analogue radio signals was raised by the government for the first time in the summer of 2004. Tessa Jowell, Secretary of State for the Department of Culture, Media and Sport, claimed in the second DAB digital radio report that: “Later this year [2004], I will be reviewing the take-up of digital radio and considering how long it would be appropriate for sound digital broadcasting services to be provided in analogue form.”

However, four years on it remains unlikely that analogue radio signals will be switched off in the near future and there has yet to be a date set for an analogue switch-off (as has happened with the analogue television signal). The amount of analogue spectrum freed up by a switch-over would be much less than with TV.

Stephen Carter, then chief executive of Ofcom, explained in his speech at a Social Market Foundation seminar on Digital Radio, that nobody knows exactly how many radios there are in the country, with best estimates at somewhere between 110 million and 150 million sets; that is 5 or 6 for every household. According to Carter, this is a positive thing for the industry and the public, but has implications for the move towards a fully digital world in radio.

Radio is, by and large, in good health in the UK. Over the past three years, the share of all radio listening gained by UK-wide national commercial stations has grown. Much of this growth has come from new, nationally-available digital stations; vindicating those in the commercial sector who were ready to make the investment in new digital services at a time when prospects for digital radio were much more uncertain than they are now. Nor is this growth in new digital radio stations a zero sum game - the radio audience listens to almost 9% more hours now than six years ago, according to RAJAR. So rather than cannibalising the audience for established services, these new services are actually increasing the total size of the cake.

Carter believes that the radio industry talking broadly about ‘switchover’ is not entirely accurate. Ofcom believes we should be thinking about and talking about how to get digital radio for and to everyone. In other words, how to get the radio audience to want the analogue signal to be switched off.

There are three important factors that will accelerate the provision and availability of digital radio for everyone. Firstly, certainty about reliable coverage and scope for new services. Secondly, creating a technical and economic framework that enables the smaller analogue stations to convert to digital transmission in a commercially affordable way. The third factor is the extent of the digital to analogue price differential in radio compared with television.

The pace of digital radio switchover is not anticipated to be fast, despite calls from the radio industry for the Government to announce a definitive switch-off date for the analogue signal. Indeed, a date has yet to be set by the Government, but the issue is likely to become more prevalent as the switchover to digital television draws nearer.

Speaking at December’s MediaTel Group seminar in 2007 on ‘The Future Of Radio’, Ralph Bernard, chief executive of GCap Media, said that digital radio cannot flourish unless Ofcom sets a date for switching off the analogue radio signal.

He added that there is a £10 million loss per annum on digital and the industry “won’t sit and accept that for another 10 years.” Bernard also said that while it currently costs GCap £8 million a year to run its analogue stations, it costs £15 million to run its digital stations. “Where’s the logic in that? It can’t be sustained,” he said.

This led him to reveal that GCap is seriously considering whether to continue to invest in digital stations, adding that it has already decided to stop investing in Life and Core.

Panelist Phil Riley, former chief executive of Chrysalis Radio, agreed that the “costs of digital transmission are huge” but said that he felt it was unlikely we would be getting a switchover date any time soon.

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