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Developing digital radio for Ireland: emerging approaches and strategies

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Introduction

Ireland’s experience of the transition from public service broadcasting to public service media has gathered pace within the last year with new legislative arrangements for media regulation, the awarding of digital terrestrial television licences and renewed attempts to introduce digital radio broadcasting on the DAB platform. The national public broadcaster, RTE, has played a central role in these developments as it attempts to manage a range of technology platforms and to provide media services for an increasingly diverse and complex market.

This paper addresses the case of digital radio in Ireland and the prospects for a successful launch of DAB in 2008. Following previously stalled efforts, digital radio in Ireland is clearly entering a new phase of development: a trial digital service has been established as of 2007, a new licensing policy is in development, and a partnership of public and private broadcasters, *DigitalRadio.ie*, has brought together RTE and a number of leading commercial, independent radio stations, to raise the public profile of digital radio as a new service. Public awareness campaigns, buoyant sales in the consumer electronics retail sector for digital receivers, and the shutdown of the national Medium Wave broadcasting service have all served to call attention to the fact that radio is changing.

But is Ireland’s digital radio initiative is a case of ‘too little, too late’? The paper argues that the context for launching digital radio is very different to that of earlier attempted

deployments. A diversity of digital services is now well established and is likely to have a strong bearing on adoption of DAB technologies. Unlike the early 1990s when DAB as a platform was first developed, public expectations for new digital audio services have already been extensively formed through the use of interactive websites, online radio and personalised audio services, podcasting, file sharing and portable mp3 player use. Consequently, the paper will ask if public service media provision for digital radio broadcasting can meet audience expectations and if strategies can be evolved to avoid some of the pitfalls of previous failed implementations.

Digital Radio and the Public Service Interest

In order to set the context for the proposed digital radio deployment in Ireland, it is important to consider the European backdrop in which digital radio operates and the distinctive role that has been played by public institutions, primarily public service broadcasters in its development. Digital terrestrial radio broadcasting has been in development for over 25 years and despite substantial investment and significant attention by both broadcasters and media regulators, its adoption by the radio industry remains uncertain. What originally may have appeared to have been a fairly straightforward proposition of updating the transmission system, much like the transition from AM to FM at an earlier stage in radio history, now seems much more complicated. Digital radio now represents a complex and thorny problem for broadcasters, policy makers and regulators. There are competing platforms and different stages of development for the various technologies involved. There is growing fragmentation in the market place and disagreement among radio broadcasters and regulators about the best way forward for radio in the digital era. Setbacks such as the sale by GCAP of its digital radio holdings in the United Kingdom and the delayed launch of Channel 4's digital radio services allied with the recent bad press of digital radio unfavourably portrayed as the 'Betamax' of radio (Plunkett 2008: 21) have appeared to mark the demise of this phase of digital radio development.

Despite this, new services continue to be deployed and the DAB platform remains currently the only viable option for digitalization of analogue broadcast holdings. It is widely acknowledged that radio in the future will be digital. What form that will take or when the critical 'tipping point' in digitalization will occur remains deeply uncertain. What is

noteworthy in the European context is the prominent role played by public broadcasters in the promotion of digital broadcasting, particularly in radio. The development of Eureka 147 or DAB (Digital Audio Broadcasting), the best established of the available digital radio platforms, for example, may be viewed as a product of a public service commitment to digital radio development. Available historical surveys of DAB (See for example: Kozamernik 1995; Gandy 2003; Hoeg and Lauterbach 2003; Lembke 2003; Kozamernik 2004; Rudin, Huff et al. 2004; Rudin 2006), point to its roots as a European technology, a product of the 1980s high technology research and development environment in which government support through the Eureka programme sought to create a new broadcasting system that would achieve global standardization and new opportunities for European consumer electronics manufacturers.

The EBU, as the representative organization of European public broadcasters, has notably from the outset been central to technical development and co-ordination of digital radio broadcasting. It initiated the first series of studies on satellite DAB in the mid 1980s and supported the formation of the consortium for Eureka-147. EBU members were the driving force behind the consortium and the EBU's Technical Department actively participated in its various working groups. Crucially, the EBU as an international organisation provided the essential logistical support in promoting DAB at the International Telecommunications Union and in the preparations prior to the adoption of DAB as an ETSI standard (Kozamernik 1995: 10). EBU members, the public radio broadcasters, were and continue to be at the forefront of European digital radio services and are its driving force 'from technical testing, to content provision, to marketing and promoting the platform' (EBU-UER 2007: 8). More importantly, the EBU claims, public broadcasters have been to the fore in promoting the benefits of digitization to citizens and act as the social force underpinning the provision of services on a basis that commercial broadcasters would be unable and unwilling to do. As such, digital radio in the European context has always been closely associated with and allied to the institutional visions and infrastructure of European public broadcasting in both form and content, and as argued above, articulated through the actual architecture of a system suited to its needs rather than to other forms of broadcasting.

From the point of view of technology development policy, DAB has also been closely associated with various European institutions, such as the Eureka investment programme and

the European Commission.¹ Eureka was established in 1985 as an inter-governmental initiative to enhance the competitiveness of European industries and to align them more closely with European Union research and development policies. Europe's high technology development environment of the 1980s and 1990s, as described by Lembke (2003), was one which was focused on supporting European technology leadership at a global level, particularly in the field of consumer electronics. A key objective of European investment in technologies like digital radio, mobile communications and in satellite navigation systems was to enable standardisation at, firstly, a European and, subsequently, a global level in order to create opportunities for world leadership in high technology systems, thereby providing a counterbalance to the dominance of the electronics sector in the Far East (Lembke 2003: 212).

Strengthening the competitiveness of the European audiovisual industry has been a European policy priority since the mid 1990s with an emphasis on the development of a single market, support for regulatory harmonisation and an enhanced, centralised role for the European Commission in the communications sector (Kaitatzi-Whitlock 1996; Levy 1999; Harcourt 2002). While the focus of European policy has concentrated on the cinema and television sectors, for instance through the Television Without Frontiers directive and the MEDIA programme, a central aim of the participating partners in Eureka-147 was to lobby Brussels for an equivalent level of political attention and support for the digital radio sector. From its inception, the ambition of the DAB consortium was to be the defining global standard for the digital system to replace analogue AM and FM broadcasting. Within European policy terms, Eureka-147 was the radio industry's vision of its role within communications convergence and the digital revolution. Its successful early development and adoption as the first digital broadcasting standard, before rival systems such as DVB-H, suggested that little public intervention would be needed (Liikanen 2001). Its subsequent sluggish pace of adoption led to renewed calls for more direct European support. Michael McEwen, then chairperson of WorldDAB, argued to the European Commission in 1998 that the rest of the world was

¹ This is developed further in a forthcoming article, O'Neill, B. (2009) 'DAB Eureka-147: A European Vision for Digital Radio' in *New Media & Society* 11: 1/2.

looking to Europe for a lead in the roll-out of DAB: ‘If it is not led by Europe,’ it was argued, ‘then how can you expect the rest of the world to adopt a European technology?’ (European Commission 1998)

However, the European policy commitment to removing regulatory barriers, market intervention and the principle of ‘technological neutrality’ in liberalised communications markets, has meant in European Commission terms that, success or failure is primarily the responsibility of market players (Liikanen 2001: 4). The radio industry and the WorldDMB lobby group for Eureka-147 technology have attempted to argue that there is a ‘European’ dimension to digital radio, i.e., an element of public policy that could only be satisfactorily addressed at a European rather than at a national level, and that diverging regulatory frameworks and implementation strategies in the Member States would lead to fragmentation of the European market. Manufacturers, for example, strenuously argue that a fragmented and disjointed roll-out of digital radio, with successful implementation in some countries and very little in other, will continue to be a serious impediment to the development of a new market for digital radio receivers. The prevailing understanding that radio is a local medium, and the primary responsibility of diverse national and regional authorities, however, has worked against any further European co-ordinated action and as a consequence decisive European Commission support has always qualified.

Digital Broadcasting in Ireland – Context and Background

Digital broadcasting in 2008 comes at a time of considerable change and development in the Irish broadcasting and media context. It marks the 20th anniversary of the Radio and Television Act (1988), the legislation which established the modern broadcasting landscape in Ireland, and which led to the formation of the Broadcasting Commission of Ireland, and the development of the independent commercial radio sector. After considerable delay, new legislation in the form of the Broadcasting Bill (2008) now proposes a further reorganization of the broadcasting landscape. The Bill provides for the establishment of a single content regulator, the Broadcasting Authority of Ireland, which will assume the roles currently held by the Broadcasting Commission of Ireland (BCI) and the Broadcasting Complaints

Commission (BCC), as well as a range of new functions, primarily relating to the oversight of public service broadcasting.

Digital television, following previous false starts, is now firmly positioned for a launch in 2009, in order to reach a target deadline of 2012 for analogue switch-off.² The Department of Communications, Marine and Natural Resources launched a DTT Pilot Project in March 2007, while the Broadcasting Amendment Act, 2007 provides for the switchover to digital television. Under this legislation RTE, the Broadcasting Commission of Ireland (BCI) and the Commission for Communications Regulation (ComReg) are responsible for the development of DTT in Ireland. RTE is required to replace their analogue terrestrial platform with a new national DTT platform with the same coverage as the current analogue network and which will accommodate the RTE channels, TG4 and TV3. RTE's DTT network will provide near universal coverage of free-to-air digital television services throughout the country and will be available on one national multiplex. The BCI is responsible for the 3 commercial DTT multiplexes and has developed the relevant licencing framework. ComReg, the telecommunications regulator, is responsible for frequency planning for DTT and for issuing frequency licences to both RTE and the BCI.

According to the BCI, the national priority is 'to ensure that after this date DTT will be established as a further digital platform available to the public and that those in Ireland who receive national terrestrial television services on a free-to-air, analogue basis will continue to have a non-pay option for receiving such services in the future'.³ The Broadcasting (Amendment) Act, 2007 gives the BCI responsibility for licensing DTT multiplex operators. In the first instance, the BCI will seek to license three DTT multiplex operators for the establishment, maintenance and roll-out of commercial DTT in Ireland, the aim of which is to ensure a diversity of services and providers in the Irish marketplace. In July 2008, the BCI awarded the first DTT multiplex contract to the Boxer DTT consortium. The consortium, set to launch in January 2009, was formed by Denis O'Brien's radio broadcasting firm

² For detailed analysis of previous efforts to launch digital television in Ireland, see Corcoran, F. (2002). "Digital Television in Ireland: Local Forces in a Global Context." JAVNOST-THE PUBLIC 9(4).

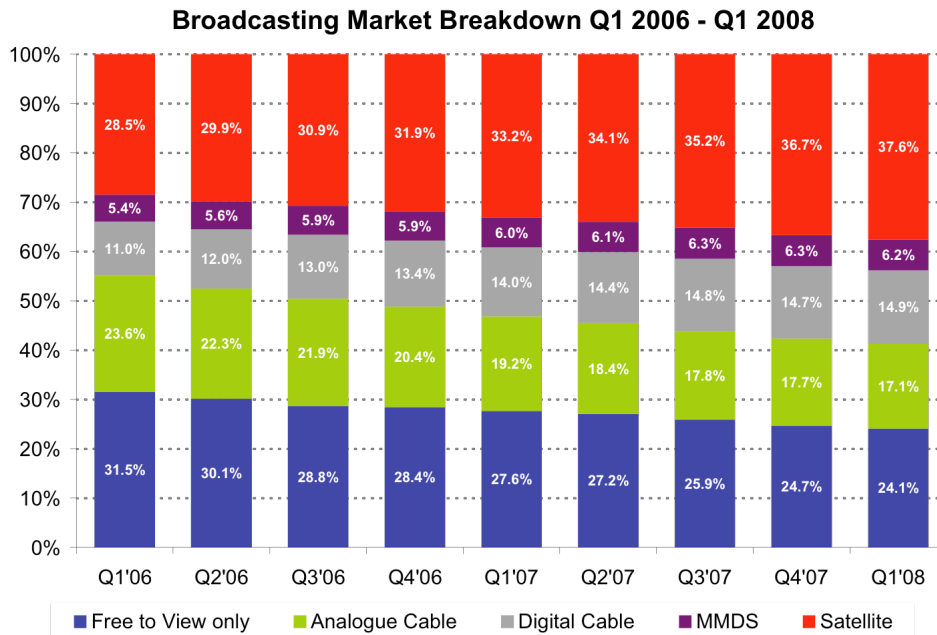
³ <http://www.bci.ie/DTT/index.html>

Communicorp and Swedish DTT operator the Boxer Group, along with BT Ireland. Separately under the 2007 Act, RTÉ has been assigned a single DTT multiplex to ensure the continued availability of the four existing free-to-air services in Ireland – that is, RTÉ 1, RTÉ 2, TG4 and TV3. RTÉ will establish and run this DTT multiplex independently of BCI-licensed multiplexes in fulfillment of its public-service obligations. A further multiplex for public service broadcasting is earmarked for future development.

RTÉ's strategic position in relation to digital broadcasting in Ireland is an important though complex one. First and foremost, RTÉ through its subsidiary RTÉ-NL owns and manages the national transmission network for radio, television and a variety of mobile communications services. It is responsible for building and implementing the national infrastructure for digital terrestrial radio and television.⁴ Secondly, with reference to its public service broadcasting remit, RTÉ is committed to reaching all audiences and being available on the many platforms that now distribute radio and television services (RTÉ 2005). This traditionally has been based on the terrestrial analogue network but now incorporates subscription options, both analogue and digital, through BSkyB, the Chorus NTL (UPC) platform, and MMDS operators. In difficult financial and political circumstances, RTÉ has had to maintain its presence in an increasingly crowded digital environment where pay-TV households, both analogue and digital, now represent 76% of all homes with a television. The rapid change in the delivery of broadcasting services, reproduced from the ComReg's Irish Communications Market report, is illustrated in Figure 1:

⁴ <http://www.rtenl.ie/aboutus.htm> : RTÉ NL distributes and transmits the programme services of RTÉ Radio and Television, TV3, TG4, and Today FM. It also provides transmission services to a number of local and regional radio broadcasters as well as site services to mobile telephone and broadband operators, private communications companies and the emergency services.

Figure 1:



Source: Quarterly Key Data Questionnaire, BSKyB

Market data for the broadcasting sector highlights a rapid decline of analogue television services, both free-to-air share and analogue cable, with a rapid uptake of digital cable and digital satellite services. 59% of all TV households in Ireland now receive their TV service via a digital television signal, based on either digital cable (inc. MMDS) or satellite. The dominance of the BSKyB platform now stands at 64% share of all digital households against 36% for cable and MMDS digital services.

The dependence on external service providers for digital television services has been a concern within Irish broadcasting policy. The market is one that has moved rapidly towards the uptake of digital platforms, the only providers of which have been cable or satellite operators. RTE's previous involvement in cable distribution ended in 1999 with the sale of its share of the multi-city cable provider, Cablelink, to NTL systems, in order to allow the extensive investment necessary to upgrade the network and to roll-out new digital services. After some significant delays, culminating in the sale of NTL's interests to Liberty Global Europe in 2005, thereby creating a monopoly cable network in Ireland, new investment in the network has now taken place and broadband digital services are beginning to be offered in the major urban population areas. Concern that analogue switch-off in the United Kingdom in 2012 would disenfranchise remaining non-Pay TV subscribers and leave Irish households

completely reliant private operators, hastened efforts to bring forward proposals for digital terrestrial television. The decline in households solely relying on free-to-air services, illustrated above, is a marked one and provides a difficult climate for new digital operators, to launch in early 2009. In other words, Ireland represents, at least in television terms, a relatively mature market in which existing private operators, in particular BSkyB and UPC cable, have had a number of years to develop their share of the market with little or no competition.

Against this background, RTÉ has little option but to remain platform neutral in the emerging digital services environment and to continue to make its case for digital free-to-air or free-to-the-consumer services. In its policy statement of 2005, it argued that this broadcasting model:

.. could be met through a combined platform approach, which could include the establishment of digital terrestrial television and radio services as well as a free-to-the-consumer satellite option, and broadband and mobile solutions, to allow for a blend of public service and commercial broadcasting. (RTÉ 2005: 6).

In practice, RTÉ supports a multi-platform policy of publishing content on analogue, digital, and increasingly online and to mobile. This includes RTÉ broadcast services on all free-to-air analogue networks operated by RTÉ-NL, trial digital networks, including two DAB multiplexes with a number of special interest digital-only services, a trial DVB-T service (which officially ended on July 31st), extensive web-streaming and on-demand listening and viewing of RTÉ programmes through its website, www.rte.ie, as well as new web and mobile services such as ‘RTE News Now’, a rolling news service available on the web and on mobile networks. RTÉ’s digital broadcasting policy is to some extent constrained by its funding model whereby it is reliant both on license fee and advertising revenue, necessitating that it acts as a commercial player in the marketplace while also pursuing its public service goals. RTÉ Publishing, for instance, operates as an Integrated Business Division of the RTÉ Group and is responsible for the provision of multiple media products and services across a variety of platforms, including weekly lifestyles and listing magazine, the RTÉ Guide, teletext service, RTÉ Aertel, and its media website, RTÉ.ie. The development of new digital-only services is not formally a part of its public service charter, and while RTÉ has played a leading role as the national broadcaster in promoting digital broadcasting, the limited resources that can be made available for what might be viewed as experimental or specialty-interest services, constrains its activities in this area. RTÉ’s Charter published by the Minister

for Communications in 2004 sets out the organisation's public service remit, its regional emphasis, social inclusion, accountability and provision of services, with performance targets, but does not include any explicit commitments to new technology platforms or programming innovation.⁵ This is in contrast to the BBC, for example, where 'delivering to the public the benefit of emerging communications technologies and services' is an integral element of the BBC Trust statement of purpose.⁶

Digital Radio in Ireland

Turning specifically to the case of digital radio in Ireland, it should at the outset be noted that, just as with the case of digital television, this is not the first time a digital radio roll-out has been attempted. Following allocation of frequencies for digital radio at Wiesbaden in 1995, RTÉ along with many European public broadcasters developed plans for the testing and implementation of DAB digital radio, ultimately with a view to replacing the analogue network. However, given the very early stage of development of independent commercial radio, there was still significant unused spectrum in the FM waveband, and consequently little interest was shown by the commercial sector in getting involved in digital radio. The initial trials were operated by RTÉ alone, as a result, and once the technical trials transmissions finished in 1999, there was little incentive to continue the deployment.⁷ As observed by Lax, ala-Fossi et al (2008), Ireland's position towards DAB deployment stood in marked contrast to the situation in the United Kingdom where a strong model of partnership between public and private broadcasters, combined with regulatory incentives and near-national coverage provided the impetus for one of the early, more successful implementations. Ireland, on the other hand, adopted an official 'wait and see' policy and withheld endorsement of DAB or any digital platform as the designated future development

⁵ www.rte.ie/about/organisation/psb.pdf

⁶ http://www.bbc.co.uk/info/purpose/public_purposes/communication.shtml

⁷ A fuller discussion of this first phase of digital radio deployment is given in: Lax, S., M. Ala-Fossi, et al. (2008). "DAB: the future of radio? The development of digital radio in four European countries." *Media Culture Society* 30(2): 151-166.

platform for radio. Indeed, as Lax, ala-Fossi et al note, the low level of commitment to DAB was reinforced in 2005 when the communications regulator, ComReg, recommended that the spectrum allocated to DAB should in fact be used for the DVB digital television standard, rather than digital audio alone. In its submission to the government consultation on frequency spectrum planning policy, ComReg suggested keeping all technological options open, and argued that:

It may therefore be prudent to leap-frog the Eureka 147 DAB system and implement newer technologies that better utilise the spectrum, can deliver a variety of services including television, are hence potentially more attractive to consumers, leading to take up by consumers and achieving the goals set by Government. (COMREG 2004).

The first phase of digital radio in Ireland, therefore, proved highly inconclusive with no agreement within the radio sector on the supposed benefits of digital technology; a lack of coordinated policy on its implementation, and no clear commitment from the government, the regulator or from broadcasters on when or how digital broadcasting technologies should be implemented. It was only with the threat of losing unused frequencies at the ITU's 2006 Regional Radio Conference (RRC06) that renewed interest was shown in advancing digital broadcasting in Ireland (RTÉ 2005: 14). A second phase of digital radio implementation is now underway that presents new opportunities, competing options and a range of public expectations that are considered further in the remainder of this paper.

In May 2007 digital radio was re-launched in Ireland with a new round of DAB trials, led by led by *DigitalRadio.ie*, the new industry group set up to explore the development and promotion of digital radio in Ireland. With leading input and support from RTÉ Radio, the group also includes commercial stations and content producers including 98FM, Digital Audio Productions, FM104, Newstalk 106-108 FM, Phantom 105.2, Q102, Radio Kerry, SPIN 1038 and Today FM. A trial digital radio service began in March 2007 on two multiplexes with 11 stations, six existing national stations and five Dublin stations. This trial covered the Greater Dublin and North East area with coverage of approximately 36% of Ireland's population. RTÉ's objective in supporting the initiative is to bring all radio broadcasters into the *DigitalRadio.ie* grouping and develop a partnership-based industry strategy for the digitalization of radio. In June 2007, RTÉ began broadcasting six new DAB-only stations as part of the trial. In March 2008 the trial was extended to the cities of Cork and Limerick, extending coverage to 44% of the population. There are now 22 services on-air

including ten new digital only Irish stations, with a further station (RTÉ Playback) promised for later in the year.⁸

Provisions for the licensing of digital radio are contained in the new Broadcasting Bill (2008) and propose as an incentive to the take-up of digital radio licences, an extension to existing sound contracts of up to four years for those ‘relevant incumbents’ who undertake digital simulcasting of their analogue services. RTÉ under the Bill will maintain and operate up to two national multiplexes for digital terrestrial broadcasting with further provision for national and regional digital broadcasting for commercial radio operators, managed under the new Broadcasting Authority of Ireland (BAI). Following an application by RTÉ for a permanent licence, ComReg, the communications regulator, has announced the launch of a consultation on the proposed conditions for licences that will be issued to RTE and to the Broadcasting Commission of Ireland under the Broadcasting (Amendment) Act 2007.⁹ The consultation while looking at specific technical conditions such as the duration of the licence term, encoding standards, and carriage requirements for audio services, also offers an opportunity to assess the national situation and preparedness for a digital radio launch in the immediate future.

In this context, a number of key questions arise with respect to the choices being made on technology, policy and marketing fronts. Issues that arise include the question of launching digital radio on the original DAB platform; assessing the level of interest from commercial and other private radio broadcasters; and the extent to which this re-launched phase of digital radio development has the capacity to meet expectations of a listening public who have grown accustomed to a wide variety of multi-platform digital audio services through means other than digital terrestrial broadcasting.

⁸ Country profile information available at: http://www.worlddab.org/country_information/ireland

⁹ http://www.comreg.ie/publications/licensing_digital_terrestrial_radio_-_digital_terrestrial_sound_broadcasting_multiplex_licence_conditions.583.103186.p.html

The Technology Choices

The decision by RTÉ to seek a licence for digital terrestrial broadcasting service on the original DAB platform has, at least in an international context, been greeted with some surprise. DAB technology was developed nearly 20 years ago and uses the relatively old audio encoding technology MPEG-1 Audio Layer II (MP2). An upgraded version of the DAB system was released in February 2007, called DAB+, using the more advanced coding standard of MPEG-4 or Advanced Audio Coding (AAC). DAB+ is more efficient than DAB and can carry twice as many services as DAB for a given broadcast quality. It also offers more robust reception. DAB+ is not backward-compatible, however, and only receivers that support the new standard will be able to receive DAB+ broadcasts. Internationally, much of the focus for new digital radio deployment has focused on bringing the family of DAB standards, including DAB, DAB+, and the multimedia-capable T-DMB, to the marketplace and locating digital audio services within the most technologically advanced platforms available. The launch of digital radio in Australia in May 2009, for example, will use the DAB+ standard and a strategy has been developed whereby the entire radio industry has been granted spectrum to bring their services onto digital platforms.

One of the main reasons offered in support of the decision to opt for a DAB only launch in Ireland is on the basis of proximity to the UK radio marketplace.¹⁰ DAB services have been offered in the United Kingdom since 1995. Approximately 7 million receivers have been sold and a wide range of affordable receivers is available throughout high street retail outlets. Latest research data (RAJAR Q2 08) shows that 27.3% of adults (15+) own a DAB receiver and digital radio has a 10.8% share of all radio listening.¹¹ A second national DAB digital radio multiplex was awarded in July 2007 to the 4 Digital Group and despite uncertainty on the financial viability of some of the offerings, there is a concerted effort across the sector to continue the momentum of digital radio. In this regard, the radio industry, alongside manufacturers, retailers, legislators, the car industry and chip makers, have been working

¹⁰ J.P Coakley 'The Digital Dilemma', Presentation at *EBU Digital Radio Conference*, Cagliari, September 2008.

¹¹ http://www.worlddab.org/country_information/united_kingdom

with the government's Digital Radio Working Group to identify and overcome barriers to further growth of the UK DAB market and the Department of Culture, Media and Sport is expected to give a statement by the end of 2008 on a clear route forward for DAB in particular and digital radio in general.

Proximity to the United Kingdom has always been an important consideration for broadcasting in Ireland. Ireland is a very small media market when placed next to the highly dynamic media environment of the UK, with a population of just 4.3 million. Yet Irish media has developed a strong culture of local broadcasting, loyal audiences for indigenous programming, and a growing independent media sector, while under the shadow of its more powerful neighbour. Close cooperation on matters such as spectrum planning particularly in relation to broadcasting in Northern Ireland, is an important political priority where availability of Irish broadcasting in the North and spillover of UK signals in the Republic has become an accepted and valued feature of the broadcasting landscape. There is also a long tradition of cooperation also between RTÉ and British broadcasters; the media landscape in press, radio and television in both countries is quite similar; and there has a history of extensive involvement of British media interests in Ireland, with companies such as Emap and Granada both once prominent players. Furthermore, the prominence of UK high street retailers in the Irish market also makes the country part of a single market for consumer electronics. In consideration of the above, conforming to models operating in the UK is to this extent understandable.

Yet for other reasons, the decision to launch digital radio on the DAB platform does not make sense. In contrast to analogue signals, there is little or no signal spillover in digital broadcasting and the extensive range of UK digital radio services are not available in the Republic, even in border areas. Neither, given the propagation characteristics of digital audio broadcasting, will Irish radio services be available north of the border. Geographical proximity in this instance raises far fewer issues for broadcasters than is the case in the analogue realm. Looking at the situation in the UK more closely, however, there is clearly a dilemma for digital radio policy in that having brought the sector to an advanced stage of development, it will now be more difficult to plan a transition onto the more efficient DAB+ platform. Ofcom has suggested that adoption of DAB+ would lead to consumer confusion and legacy issues for the consumer DAB equipment already in the market. A move to DAB+

now, they suggest, for existing services would disenfranchise all existing DAB listeners, forcing them to buy new sets, or more likely to abandon the technology altogether.¹² This is not a situation that pertains in Ireland. It is estimated that at most 10,000 receivers have been sold to date, over the course of the digital radio trial. This has been a successful adoption rate for the purposes of the trial but does not yet constitute what might be considered an established receiver base for an officially endorsed platform. To proceed with a launch on older DAB technology in the face of a growing trend towards an alternative and demonstrably better technology does, however, risk alienation of the audience on a much larger scale. The announcement by WorldDMB, the European Broadcasting Union and EICTA, the European digital technology industry association, for an inter-operable pan-European standard for Eureka-147 digital receivers, has addressed many of the concerns of obsolescence and backwards compatibility.¹³ In practice, all receivers from December 2008 will be compatible with this new standard profile, leaving the Irish decision out of step with such developments, and for no obvious benefit.

The current ComReg consultation on the technical conditions for digital terrestrial broadcasting, while designed to be technologically neutral, observes that in the medium term DAB technology is likely to be superseded. The proposed licence conditions are so designed that any of the existing Eureka 147 technologies, DAB, DAB IP, DAB+, and DMB, or indeed any combination of them can be supported within one multiplex (Herrmann, Erismann et al. 2007). ComReg further observe that newer technologies such as DRM+ will have the advantage using existing FM spectrum and may ultimately offer a more cost effective and attractive way of migrating radio audiences to a digital environment. The ultimate choice of technology solution however is left to the operator who has to balance the investment required in developing the new digital network against the potential for viable services for listeners.

¹² <http://www.ofcom.org.uk/consult/condocs/futureradio/summary/>

¹³ http://www.ebu.ch/en/union/news/2008/tcm_6-63049.php

The Policy Choices

A further dimension to the proposed re-launch of digital radio in Ireland that raises questions is in relation to the preparedness and commitment of the sector to a concerted effort towards making digital radio implementation work. Based on the numerous international experiences of trials, successes and failures, the optimum model for a successful implementation of digital radio is now clear, according to WorldDMB. A successful implementation, it is said, should incorporate three main elements of firstly, an encouraging regulatory framework; secondly, specified advantages for broadcasters such as greater capacity, and flexibility on use of the spectrum; and thirdly, a strong consumer proposition in offering exciting new content, enhanced quality and robust reception.¹⁴ It is unclear if the Irish proposition for digital radio at this point meets any of these criteria.

The policy framework for digital radio is in the case of Ireland still at an early stage of development. A licencing regime is in development but is not complete. There was some disappointment that the Broadcasting Bill (2008) did not do more to promote DAB or specifically mention Digital Audio Broadcasting as the preferred way forward, leaving its status in a limbo situation.¹⁵ While the Minister has noted that DAB is likely to evolve as the platform for Irish radio, he argues that the role of government is not to prescribe the technologies involved. Radio stations are to be offered an incentive to migrate to digital platforms with a four year extension to their contract. This is much less than the 12 year extension granted to British broadcasters, and in any event arises at a time when many of the sound broadcasting contracts have been recently renewed, thus rendering the incentive less valuable from the point of view of the broadcaster.

The stated goal of RTÉ in developing the initiative for digital radio, is one of providing leadership for the sector as a whole and establishing DAB as the primary digital network for network as the necessary foundation on which to build for the future. The combined public and private partnership model required for effective digital radio deployment is a well

¹⁴ Quentin Howard, WorldDMB 'The Digital Debate', Presentation at *EBU Digital Radio Conference*, Cagliari, September 2008.

¹⁵ 'Airwaves buzzing but reception is unclear', *Irish Independent*, May 22, 2008.

established one and has been a feature of previous policies in the UK, Australia, Canada and elsewhere. RTÉ, in the Irish context, has undertaken to operate and develop one national multiplex but requires the private sector to take up and operate the second national commercial multiplex. While currently commercial operators are part of the digital radio trial, the assumption that there will be long-term interest in forming a commercial consortium to operate a national multiplex is far from certain and doubts remain about the commitment of commercial operators to digital radio. Presentations to this year's conference of the Independent Broadcasters of Ireland (IBI) were largely negative about the push towards DAB in Irish broadcasting, particularly at a time when commercial investment in the UK was being reconsidered with concern being expressed about committing to unproven technologies.¹⁶ Reflecting on the realities of working in the marketplace, the IBI claim that listeners are happy with FM, and that unlike television, the prospect of an analogue switch-off is remote.

Digital Radio – meeting public expectations

One of the key questions to arise from the current stage of development of digital radio in Ireland is the extent to which it meets public expectations for advanced digital media services. This undoubtedly is a question that affects all digital radio but is especially acute in the Irish context.

One of the concerns noted in the ComReg consultation on licence conditions for digital terrestrial radio is that the current DAB trial uses encoding parameters that are set at a level audibly inferior to the standard analogue FM service (ComReg 2008: 21). The audio quality is such that digital distortions are audible and quantifiable, ComReg notes, even without direct comparison to FM. Accordingly, in order to advance the acceptance of digital radio with the general public, bitrates for audio encoding need to be set to offer the consumer at least an FM quality digital service, with consequent implications for channel capacity. While DAB+ provides better audio quality at lower bit rates, in order to achieve acceptable audio listening quality levels on the current DAB provision will restrict multiplex capacity to a maximum of 5 channels. At best this suggests that services will be a simulcast of what is

¹⁶ 'IBI Discusses Broadcasting's Future', *Irish Marketing Journal*, April 9, 2008.

currently available on FM with minimal additional capacity for new content. Furthermore, RTÉ is restricted in its ability to invest in new content channels and promoted the concept of low-cost digital channels requiring minimal investment. Current services on the RTÉ digital radio trial consist of in addition to existing FM stations jukebox-type services such as RTÉ2XM and RTÉGold, and an archive-based playback channel, RTÉ Choice.

In general, the ‘strong consumer proposition’ advocated by WorldDMB is far from clear in the case of current DAB provision. Without being overly critical of what is a trial, the DAB platform as presented to Irish listeners offers an experience with less content at a generally lower quality than is currently available on local FM services. It is because of DAB’s inherent limitations that relevant international interests have promoted the idea that in order to be effective digital radio must offer an enriched and noticeably better media experience, whether through offering additional visual or multimedia content, interactive opportunities, increased content choices, and better, more reliable reception. The slogan for the digital radio launch in Australia, for example, reads: “It’s radio as you know it, plus...” and includes in its promotional literature the promise of:¹⁷

- Clearer sound and improved reception
- Extra features such as extra channels, pause and rewind radio, downloadable music, more details about the advertised product, slideshows, scrolling text, Electronic Program Guides, updated news, sports and racing information.
- Extra channels potentially doubles the number of commercial stations
- Tuning by station name, not frequency, making it easy to find favourite stations
- A wider choice of shows and program highlights better meets the needs of niche audiences

Unlike the early 1990s when DAB as a platform was first developed, public expectations for new digital audio services have already been extensively formed through the wide availability and use of a whole variety of digital audio services, such as interactive websites, online radio and personalised audio services, podcasting, file sharing and portable mp3 player use. This is particularly the case with internet radio whereby web-streaming, podcasting and on-demand listening has begun to make serious inroads into digital listening. According to RAJAR

¹⁷ <http://www.digitalradioplus.com.au/>

research, radio listening via the internet is growing, with more than 14 million people in the UK listening to output on the web and more than 9 million downloading podcasts on a weekly basis (RAJAR 2008). An important feature of internet radio is that it is complementary to terrestrial radio rather than directly competing with it, and is helping to extend the life of radio programmes through ‘Listen-Again’ or download facilities, thereby adding to the total amount of radio listened rather than acting as a substitute for live radio. In the RAJAR research, the average user of Listen Again services listens to 1.8 programmes each week. Three quarters of Listen Again listeners say the service has no impact on the amount of live radio that they listen to; however, 13% claim to now listen to more live radio while 7% say they listen to less. Almost half of Listen Again listeners said they are now listening to radio programmes that they didn’t previously listen to as a result of the Listen Again service.

Most radio broadcasters have enthusiastically embraced web-streaming and podcasting as an essential element of their digital strategy. Constraints still remain in terms of the IP and rights issues involved and it online is in each case a secondary rather than a primary delivery network for terrestrial broadcasters. More directly, digital radio technologies have begun to address the gap between digital terrestrial radio broadcasting platforms and online radio delivery, by incorporating elements of internet-connectivity into receiver design. The joint EBU/WorldDMB interoperable receiver profiles, for example, include a wifi-enabled design, merging the wide variety of content available through internet radio with the dedicated, high quality service provided by DAB or DAB+. The popular PURE Evoke DAB receiver will also be released in a new design incorporating Wi-Fi technology providing seamless access to FM, DAB, DAB+, internet radio, podcasts, and streamed music libraries stored on a Wi-Fi-enabled PC.¹⁸ Arguably, listeners and users have become accustomed to being able to access content, on-demand, across multiple networks, supported by increasingly ubiquitous broadband connectivity and this rather than broadcaster-driven delivery to particular provides the template for future radio provision.

¹⁸ <http://www.pure.com/products/product.asp?Product=VL-60896>

Conclusion

The context for digital radio deployment in Ireland ostensibly offers an opportunity to establish a new phase for what has been an important and successful period of development for the broadcasting industry in Ireland. Digital broadcasting, in Ireland as elsewhere in Europe, has provided public broadcasters with the opportunity to provide leadership in the deployment of innovative digital technologies, and the provision of new appealing content that meets a public need. The public broadcaster has acted as the catalyst in bringing the next generation of digital broadcasting services onto the public agenda, creating the necessary policy and political framework, and stimulating demand for new digital services through its trusted relationship with the listening and viewing public. This arises in the context of strong performance in a difficult and highly competitive environment, and a digital environment which to date has been largely served by private service providers.

In contrast to the situation for digital television where the proposed roll-out involves a concerted political and regulatory effort to ensure meeting the requirement of an analogue switch-off deadline for 2012, digital radio lacks some of these fundamental ingredients. There are missing elements of industry partnership, there is lack of clarity on the policy and regulatory framework, and little evidence of an investment of resources into the kind of content that will prove sufficiently attractive to reach anything like market viability. One of the greatest risks of the current strategy is the potential alienation of the audiences through a further failed launch with the consequent damage to the reputation of the public broadcaster and its longer term status and capacity as an actor in the digital space. Risks of this magnitude may be too high a price to pay.

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