

More platforms than Grand Central Station

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RADIO

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Radio does not fear its detractors

Michael Moore, the American writer and film-maker, berated his fellow liberals for setting up Liberal Radio, rather than a TV network or Internet site: "What a stupid waste of time! Radio? Are you serious? What century are you in?"

Twenty-five years before Moore, the British pop group, The Buggles, had their one and only hit with "Video Killed the Radio Star." Indeed, it sometimes seems as though ever since John Logie Baird – or Philo T. Farnsworth, according to whom you believe – invented television, radio has had no shortage of detractors. Until now, that is.

"This is one of the greatest technology comebacks of all time," says Nick Wood, the managing director of the British electronics retailer, Dixons. "A century after Marconi's invention, the



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loud and clear message is that radio is still a massively popular format. It's thanks to the new generation of digital radios, currently one of our best selling products."

The phenomenon is not restricted to Britain. In the US, the home of Hollywood and the world's biggest TV networks, radio reaches more than 90 per cent of the population every week. Americans spend nearly 20 hours a week listening to their favourite stations. According to this recent study undertaken by Arbitron, "These numbers have remained relatively steady across recent surveys, despite a growing number of consumer media options. Radio clearly remains a popular media choice among consumers."

Obviously, radio's continuing success has a lot to do with gifted broadcasters making clever content and providing listeners with plenty of choice. This can only sustain radio in the short term, however, because choice is not only restricted to what, but also is about how, why, when and where you listen. That is where the new generation of digital devices comes in. Up until relatively recently, radio was like a small town railway station with only two platforms – AM and FM transmitters – but nowadays it has more platforms than Grand Central

Station. Alongside the traditional analogue offering, which is usually only available in real-time, there is a host of new platforms offering a variety of services in both real time and on-demand.

Broadcasters in Europe and elsewhere are beginning to migrate to these new platforms, in much the same way that AM stations moved to FM many years before. They are adopting a multi-platform strategy, using multiple delivery paths to provide their listeners with more options.

What, where, when

As for choosing what to listen to, digital radio can usually squeeze more stations into less spectrum. But choice must also be understood in terms of "place" and "time." Audiences may be in "fixed" environments, such as the home or workplace; they may be on the move; they may be abroad and beyond the reach of over-the-air reception. Listeners are likely to base their choice of device on which of these "places" they occupy. You might listen to a kitchen radio at home, a mobile phone radio when commuting to work and Internet radio might be the only way to get access to your favourite show when you are abroad. Similarly, most broadcasters understand that audiences crave

control of their content. Given the choice, consumers would rather listen to what they want, when they want, than have to build their lives around the schedules. Podcasting is a simple but growing system that allows you to record and store programmes from the Internet, and play them back when you want on your MP3 player. It is one way that radio audiences can "time and place shift" content: a podcast starts when the listener wants it to, not when scheduled by the broadcaster. In this respect, it is like PVRs for television. EBU members who are already podcasting include the BBC, Cadena Ser, Radio Netherlands, Swedish Radio and VRT.

Of course, broadcasters also stream their content on the Internet: the BBC says that it serves up more than 10 million hours of radio online every month. Earlier this year, the corporation re-launched its Radio Player to make 95 per cent of its programmes, including music, talk shows, dramas and documentaries, available live and on-demand for seven days after broadcast. One of the most useful features of the re-launched Radio Player is that it allows you to stop a programme at any time and then resume listening from the same point the next time you switch your computer on.

However, British consumers are likely to remember 2005 as the year when the first DAB sets with Electronic Programmes Guides arrived in the shops. The new receivers enable listeners to browse listings information and to select programmes for either scheduled listening or timed recording to SD memory cards. There are also tweaks like pause and rewind. Models with miniature hard drive, once they become widely available, will do for radio what TiVo has done for television – consumers will be able to record thousands of hours of broadcasts. And it will work just as well in your car as at home because unlike FM, DAB does not suffer from “multipath,” where signals bounce off buildings or mountains and cause distortion. This is because DAB is designed to make positive use of

signals coming from different directions, rather than let them distort the sound.

In the US, software such as Griffin Technology’s RadioShark provides analogue listeners with features like pause, rewind and record, but only if they listen to radio on their computers. Another offer, RadioTime, provides a TiVo-like programme guide of local radio broadcasts that consumers can access on their computers using a sold-separately radio tuner.

That consumers want more stations is demonstrated by the success of XM and Sirius satellite radio. Each broadcasts more than 100 channels of advertising-free radio via satellite and via terrestrial fill-in repeaters, so enabling consumers equipped with

special radios to pick up a signal even when a satellite is not in sight. The rise in listening figures for XM and Sirius has encouraged some companies, including WorldSpace, to look into the feasibility of establishing a subscription radio network across Europe. However, SES Global, the world’s largest satellite operator, is said to be struggling to find a business partner to help realize its vision of using six “spot” beams, from three satellites, to deliver subscription radio to Eastern and Western Europe.

This may be because the entry barriers are simply too steep. For example, there is the high cost of the terrestrial fill-in repeaters, as well as the fact that the US market has one common language, in contrast to multilingual Europe. Furthermore, in order for



Satellite Radio

FM

satellite radio to succeed in Europe, hundreds of thousands of consumers would have to buy new radios for their homes and cars. In the US, you need separate radios to pick up XM or Sirius, although eventually radios that receive both may be made.

Audio quality

Much of the early publicity surrounding the launch of DAB, in the UK, focused on its CD-like quality, although there is now some debate about whether it actually sounds an awful lot better than FM, because radio stations have largely used lower bitrates than the purists thought were needed. The original proposal was to use over 200kbps per radio station. The reality is that in the UK, for example, some music stations

broadcast in stereo at 192kbps, but most have a bitrate of 128kbps. Speech radio is usually in mono at between 64 and 80 kbps.

The first Digital Radio Mondiale (DRM) consumer sets are expected to be in the shops, across Europe, in time for Christmas. The receivers will offer close to today's FM sound quality on all AM broadcasts: short wave, long wave and medium wave. Not content with this, the DRM Consortium recently announced plans to develop a version of DRM for the FM broadcasting bands at VHF band II, 87.5 to 108 MHz, though many in Europe are sceptical that it will be possible to switch off FM broadcasts in the near future to make way for such a DRM system. DRM uses very low bitrates - 4.8 to 72kbps, with typical bitrates in the range of 14 to 34kbps. Although the sound quality is less good on short-wave frequencies, it is about FM quality and eliminates the fading, crackle and hiss. DRM sounds best on MW frequencies, although the quality is very good on all AM frequencies.

iBiquity's HD Radio is a system, offering near CD-quality audio, that is making significant inroads in the US. It uses technology called In-Band On-Channel (IBOC) broadcasting that has the significant advantage for the US of allowing radio operators to piggyback a digital signal on their analogue transmissions, with no need for any additional spectrum. This solution is possible in the US because FM station allocations are 200KHz apart - twice as wide as in Europe. When you tune in on an HD Radio, you get the analogue version for several seconds, while the radio buffers the digital version. If digital reception is obstructed, IBOC switches back to the analogue version. The downside is that HD Radio cannot offer Americans extra

choice since it is restricted to existing frequencies, and it will never be possible to switch off analogue radio to enjoy the full efficiency benefits of digital broadcasting.

It is ironic that far from killing the radio star, video, or at least digital television, is fast becoming one of radio's most important platforms. Digital Satellite Television has much more bitrate available than DAB. So has Digital Terrestrial Television, like the UK's Freeview service, and both can deliver high-quality audio together with dynamic text and graphics on-screen.

Rosy future

Digital cable often distributes from digital satellite and has a similar audio quality, although some degradation may occur because of the transcoding process. Cable networks can have substantial bandwidth available. This has enabled some radio stations to provide not only schedules and programme information, but also pictures, webcams and news to complement programmes.

In the future, we are likely to see a lot more text and pictures on the displays of our digital radios. Research by the University of Loughborough, for Britain's dDAB consortium, suggests that adding visuals and interactivity to radio broadcasts makes messages up to 45 per cent more memorable. Researchers gleaned the results from trials, in which consumers listened to live audio channels



DRM

while at the same time viewing synchronized visual content via DAB radio data streams.

Of course, Internet radio has been the trailblazer in terms of providing genuine interactivity. Radio station websites offer the possibility to interact with the programmes, the presenters and other listeners through chat rooms and message boards.

Today, kitchen radios can offer EPGs, news headlines, weather and traffic reports, possibly generated by TPEG technology, and information about the music that is playing. Soon consumers will be able to download podcasts, buy theatre tickets and read electronic newspapers on their radios.

The mobile phone is another important platform for radio. Earlier this year, Finland's Kiss FM became the first radio station to start broadcasting on the Nokia-developed system, Visual Radio. The system, which runs on Nokia mobile phones, provides visual information on the song being played on an FM radio station, including artist and album details, as well as allowing listeners to take part in polls and competitions, buy ringtones and book concert tickets. You could also see a weather map during a forecast and access news while songs are playing. Nokia predicts that worldwide there will be 100 million Visual Radio-enabled phones by the end of the year.

Thanks to the two-way radio connection between the mobile phone and the radio station, broadcasters will be able to use free software provided by Nokia to produce statistics of who is listening. Although Visual Radio currently works with FM radio, there are plans to extend



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the service to digital services at a later date.

What is clear from all this is that the future of radio is a multi-platform one. Forrester Research claims that by 2010, 20.1 million American households will listen to satellite radio, while podcasting will have an audience of 12.3 million (The Diffusion Group puts this figure at 56 million Americans). Most people own more than one radio, but it will become increasingly difficult to say what a radio is. You could be listening through a digital TV, a mobile phone, a PDA, a computer, or on any number of other devices.

Of course, this has implications for broadcasters' strategies. The successful ones will reflect not only the fact that live content can flow over several platforms simultaneously, but also that content can be delivered in both real-time and on-demand. They will exploit fully the advantages and opportunities provided by different

platforms. Above all, they will focus on listeners getting easy access to their programmes wherever they are.

The future of radio has never looked rosier. Every week, more than 200 million Europeans tune into their favourite stations for an average of three hours and this number looks set to grow. Podcasting, the Internet and digital television will take radio into new places in the home, the workplace and on the move. To all those who over the years have predicted the demise of radio, the continuing surge in listening figures is sending a message not unlike the one that Mark Twain sent to the New York Journal on reading his obituary. "The report of my death", he said, "was an exaggeration."



Radio "LobeMan"