



department for
**culture, media
and sport**

REPORT ON ROLE OF OTHER DIGITAL PLATFORMS

Digital Radio Action Plan Report

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Section 1: Foreword

1.1 Introduction

- 1.1.1. The Digital Radio Action Plan (DRAP) sets out the process for allowing Government to make a well-informed decision on whether to proceed with a Radio Switchover, and if so how, it should be implemented.
- 1.1.2. The DRAP is delivered through four central working groups, covering technology, market preparation, coverage planning and government policy.
- 1.1.3 The Technology and Equipment Group (TEG) has been tasked to identify, investigate, report and make recommendations on the technology and equipment issues related to any future Radio Switchover, including both domestic and in-vehicle receivers. The priorities for TEG include the usability of radio devices, the development of a set of common specifications and testing regime to provide quality assurance to consumers. Due to the importance of digital conversion of car radios, there is a specific In-vehicle sub-Group which looks at the barriers to take-up and conversion options.
- 1.1.4. The TEG is chaired by Laurence Harrison, Technology and Market Development Director at Digital Radio UK. Membership of the TEG includes representatives from government, the BBC, Ofcom, trade bodies, manufacturers and consumer groups.

1.2 Scope

- 1.2.1. Action 2.8 of the Action Plan requires TEG to: *“Monitor and review the development of other delivery mechanisms for digital radio, including the internet, digital TV and mobile communications and make recommendations on how to use these technologies and the required infrastructure to drive take-up of digital radio and any impact on the minimum specifications and a certification mark.”*

Section 2: Steering Board Decision

The Steering Board considered the 'Role of other digital platforms' report in Quarter 4 2012. The Board noted that the report reflected a 'snap-shot' of the market at the time the report was written, November 2012, and that as technologies and consumer behaviour changes the report may need revisiting.

The Steering Board noted the recommendations of the report and agreed that digital platforms are likely to have an increasingly important role in the consumption and delivery of radio. Therefore, the Steering Board agreed with the recommendation to monitor the platform listening growth and to use the 'Go Digital Pilot' as a mechanism to review listener behaviour.

Section 3: Report on the Role of Other Digital Platforms – November 2012

1. Background

1.1. Technology & Equipment Group

As part of the Digital Radio Action Plan (DRAP), the Technology and Equipment Group (TEG) must identify, consider and make recommendations on the issues relating to the development of digital radio technologies and equipment. The TEG, chaired by Laurence Harrison, of Digital Radio UK (DRUK), comprises Intellect, BBC, RadioCentre, Bauer, Government, Ofcom, the Society of Motor Manufacturers and Traders (SMMT), Arqiva, PURE, Roberts and consumer group representatives (the Consumer Expert Group, CEG). All major retailers were invited to join TEG but did not propose any representatives.

1.2 Purpose of the report

TEG is required to monitor and review the development of delivery mechanisms for digital radio, other than the DAB family of standards. In considering these issues this report focuses specifically on the role specific platforms and technologies have in the context of a future digital radio listening. In each case, seeking to evaluate the platforms against four key considerations:

1. The current development and penetration of the platform/technology
2. Expectation about the future growth and changes for the platform/technology
3. Does the platform/technology in question have any implications on the Digital Radio Minimum Specifications for switchover?

1.3 Scope

This paper is investigating all digital radio platforms, apart from DAB. The following platforms and technologies will be included within the scope of this paper:

- Online (PC, including laptops, Internet radios and gaming devices)
- Mobile and tablet devices (including 3G, 4G and WIFI-only devices)
- Internet connectivity in-vehicle
- Digital television, terrestrial broadcast, cable, satellite and internet-connected TV
- Others: Satellite radio, DRM, HD Radio

Each delivery method has different strengths. Some key factors of importance to consider are:

- Cost of adoption
- Meeting audience needs in a technically challenged environment
- Ongoing cost of delivery
- Universal access
- Availability of equipment at affordable cost
- Free to air reception
- Robustness of access
- Portability/mobility
- Spectrum availability
- Energy efficiency
- Range of additional services
- Consumer expectations
- Conformity with an open European technical standard

2.0 Summary and current platform trends

Although DAB radio comprises the majority of digital radio listening, with 20.1% platform share of overall radio listening (RAJAR, Q2 2012), other platforms such as internet (Radio, PC, mobile and In-vehicle) and digital television play a significant role in digital listening. Notably, DTV and Internet platforms have 4.7% and 4.6% listening shares respectively.

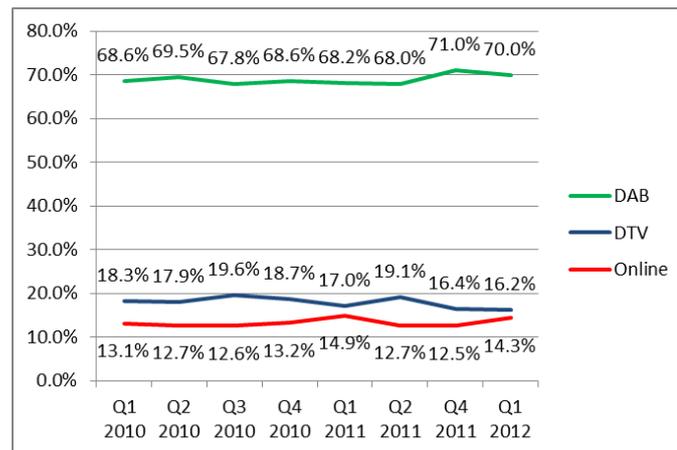
DAB is the predominant digital platform. It remains relatively stable at around 70% of all digital listening (excluding digital unspecified – see chart below). In Q1 2012, the digital platform split was as follows, excluding digital unspecified (Rajar):

<i>DAB</i>	70%
<i>Online/apps</i>	14.3%
<i>DTV</i>	16.2%

Note, online (PC, internet radio) listening is subsumed into internet and app listening by Rajar, so it is impossible to differentiate listening figures by device. However, it is assumed that, of total internet radio listening, a proportion is via online (PC).

The chart below shows digital listening split by platform, excluding digital unspecified, since Q1 2010. While DAB remains stable, DTV shows signs of an overall decline, and online is trending upwards.

Digital platform split (since 2010 Q1)



Further take-up of the online and DTV platforms will form an important segment of digital radio listening through a Digital Radio Switchover.

3.0 Available Platforms

The following section describes each available platform/technology in the UK - the current development and penetration of the platform/technology and expectation about the future growth.

3.1 Internet – PC, laptop, radio and gaming devices

3.1.1 Background and current penetration

Current listening and penetration:

- Online streaming of radio now accounts for 4.6% of all listening hours. This equates to 14.3% of digital listening¹
- 80% of UK households have access to the internet via a PC or laptop²
- Over half of all UK households have three or more internet-enabled devices³
- Over 600,000 internet radios have been sold to date in the UK⁴
- 52% of UK households have a games console, such as Sony's Playstation 3, Microsoft's Xbox 360, and Nintendo's Wii. Gaming devices are the second most popular type of internet-enabled device⁵

According to Ofcom, currently 16% of households use the internet to listen to the radio (2012). This proportion of internet listening is compared to 7% for streaming

¹ Rajar Q2 2012

² Ofcom communications market report July 2012

³ Ofcom communications market report July 2012

⁴ GfK

⁵ Ofcom communications market report July 2012

services such as Spotify and Last.FM. BBC's iPlayer increased by 32% between Q1 2011 and Q1 2012, with live listening proving to be the most popular.

Listening on a PC or laptop is also important for people listening at work. According to Rajar, 23.4% of all people listen to radio at work, and of that 10.2% (5.4 Million people) listen to digital. Of this, 2.3 million people listen on DAB and 2.2 million (4.2% of all people) listen online or via an app.

At present, the majority of UK broadcasters make available their services online, almost entirely as a simulcast of their existing broadcast services. However, many broadcasters also provide additional content alongside their audio stream, such as news, programme information, audio clips and videos.

As well as using PC's or laptops, consumers also have the choice to purchase internet radios with FM and/or DAB. Although we cannot be certain of the level of internet listening through these devices there has been strong sales growth over the last year. GfK analysis shows that 208,000 internet radios were sold in the year July 2011 – June 2012. This was a 37.5% increase on the previous year.

Another potential point of access for online radio services is via gaming devices. For example, currently, BBC iPlayer is available on the Microsoft Xbox 360, Nintendo Wii and Sony PlayStation 2. BBC analysis shows that listening to radio is currently low: 'radio' requests on these devices constituted 0.2% of all requests (this was over one week and only relates to BBC radio).

3.1.2 Radioplayer and internet portals

In March 2011, UK based radio broadcasters launched the Radioplayer – an online audio player which gives users access to live, on demand and podcast radio on their PC or laptop from hundreds of stations in the UK – bringing several listener benefits to online listening:

- A common user experience across multiple UK radio stations
- Ability to search for content across radio stations
- Personalised consoles (with the ability to save presets)

At the time of writing Radioplayer aggregates 330 UK stations and there are currently 6-7 million listeners tuning into Radioplayer every month. In March 2012 the console registered a unique audience of 516,000 (Ofcom). Radioplayer will launch a mobile app in October 2012.

3.1.2 Future growth and impact

At a global level, IP delivered audio and radio will continue to grow strongly. Take up is to some degree restrained by the less than universal access and take-up of broadband, the limited access to broadband in a portable and mobile form and, for some listeners, the additional technical challenge of accessing content in this way. However delivery via IP enables audio services to be offered with a wide range of enhancements to both streamed, on demand and downloaded services. The success of 'catch-up' services, such as iPlayer and 4OD, shows that ever increasing numbers are happy to access broadcast content in this way.

With the use of IP comes both a range of opportunities and challenges to broadcasters. Unlike broadcast media, in which the total range of services available is limited largely to local, regional and national content, IP presents no such boundaries. Similarly, unlike broadcast media, where the range of services on offer is limited by spectrum restraints (and the regulatory processes that are in place largely due to that limitation) IP gives almost limitless capacity. With this also come new powerful competitors and new potential gatekeepers to broadcast audiences.

Whilst early users saw radio and other media access as an attendant feature of other 'desktop' functions, access to 'broadcast' services via IP is now regarded as a much more independent activity; audiences seek from the experience not just the enhancements IP offers but also the features such as good quality of service, mobility, portability, and audio quality to which conventional broadcasting has made them accustomed.

When considering future growth it is important to consider that online listening is not free at the point of access, due to broadband costs. Over time, it is possible that charges by network operators will come down but for some it will remain a barrier.

It is also important to note that the internet is not yet a suitable one-to-many broadcast platform. Research conducted by Arqiva in 2010 estimated that, on average assumptions of household radio listening, the estimated cost to broadcasters of using the internet as the main broadcast network would be £35m per annum.

However, online listening has increased 37% year on year, from 34 million hours to 47 million hours in Q2 2012. Online listening (including apps) is now 4.6% of all radio listening, up from 3.9% from Q1 2012 and 3.2% in Q2 2011 (RAJAR). Contributors to this report felt that online listening would continue to grow strongly in the coming years on a number of devices. For example, DRUK predict that online/apps listening to more than double to a 9% share of all listening by the end of 2016.

3.1 Internet - Mobile and tablet

3.2.1 Background and current penetration

This section refers to mobile telephones, smart phones (eg HTC, Apple iPhone) and tablet computers (e.g. Apple iPad, Samsung Galaxy) accessing radio over wifi, 3G and 4G. While these devices also receive the content through online technologies their mobile characteristics make them more akin to traditional radio devices and as such we believe merit separate consideration.

Internet radio listening is currently 4.6%. Mobile and tablet listening is subsumed into internet and app listening by Rajar, so it is impossible to differentiate listening figures by device. Additionally there are challenges in measuring mobile listening because of the proliferation of devices and platforms. For example, on a smart phone someone could be listening via an FM receiver, via an aggregator app, via a station app, or via DAB receiver. However, it is assumed that, of total internet radio listening, a significant proportion is via mobile and tablet.

The Rajar MIDAS 9 survey (November 2011) shows that:

- Almost all UK adults have a mobile phone: 97.4% of adults 15+, or 22.8 million people
- Over half, or 56.3% of mobile phone owners (12.85 million) have a mobile capable of receiving FM radio
- Over one third (34.9%, or 7.97 million people) use their mobile phone to listen to live radio. Of these, 3.8% or 871,000 listen every day
- 35.5% of mobile phone owners have a mobile capable of receiving radio streamed from wireless internet
- 55.9% of mobile phone owners have a smart phone, 12.75 million people
- Of all smart phone owners (12.75 million) 81.8% (10.43 million) have downloaded an app, and 43% (4.48 million people) have downloaded a radio app

Further research by other groups shows:

- Smartphone ownership is predicted to rise to 77% by 2015 (FutureSource Consulting)
- Around 15% of UK adults own a tablet – this is predicted to rise to 31% by 2015 (FutureSource Consulting)
- 55% of iPad owners have used it to listen to live radio (May 2011, Imano)
- 13% of listening is done via mobile phone, up 3 percentage points year-on-year (Ofcom, 2012)

3.2.2 Future growth and impact

Mobile offers potential for exciting and engaging content to reach new audiences and is becoming increasingly prevalent as the media consumption device of choice, especially for audio content. 17% of listeners now listen to FM radio via their mobile phone. A key objective for the UK radio industry is to work with manufacturers / mobile operators to include DAB in all mobile handsets.

Some of the contributing factors to future mobile listening growth include:

- Availability of radio apps - There are already aggregator apps providing easy access to digital radio via an IP connection on either a smart phone or tablet. For example, TuneIn positions itself as the “global radio tuner”, with 20 million sessions per month in 2009, 75% of which were done via a mobile platform. (insert latest figures) Radioplayer will also be launching a new mobile app later in 2013. The range of station and broadcaster apps should also grow, adding to the existing range of apps such as Absolute Radio, BBC iPlayer, Capital Radio, Kiss and Smooth Radio.
- The development of enhanced features, such as EPG and visualisation. Technologies such as RadioDNS, which combines broadcast radio and IP data services, will play an important role in the future connecting broadcast with internet. This type of enhanced feature relies on using free-to-air DAB for broadcast radio and fixed or mobile broadband networks for accompanying data (e.g. visuals, interactivity).

- 4G – The introduction of a 4G mobile network should make streaming radio apps a better experience. 4G can deliver significantly faster speeds than 3G and should mean less buffering when streaming radio on a mobile device. Network operator EE have also announced they intend to build out their national 4G coverage to 98% of the UK population by the end of 2014. Other network operators will follow once the licences have been awarded by Ofcom. Furthermore, questions have been raised about how consumers would be affected by the fact that, due to buffering, internet listening may not be live.
- Cost – As mentioned in the previous section, a significant issue for the consumer could be the data allowances and rates applied for out of allowance 4G data by the network operators. This cost could be dramatically reduced if mobile devices were to take a hybrid DAB/Internet approach to digital radio. At the time of writing, rates for EE are £36 for the lowest tariff, which has an allowance of 500Mb. That would allow about 17 hrs per month if not used for anything other than radio (at a bit rate of 64kbps).
- Access – it has been suggested that there is a possibility mobile operators may be inclined to prevent broadcasters streaming radio content over 3G. Although there is no evidence to support this, it is a possibility.

It is clear from the data available that digital listening on mobile devices will increase over time and have an important role to play in a Digital Radio Switchover. Furthermore, given the high levels of device penetration and use, radio's growing presence on mobile platforms is vital to the industry's future.

3.3 Internet connectivity in-vehicle

3.3.1 Background and current penetration

This refers to in-vehicle IP-connected devices. As above, due to the importance of in-vehicle radio listening (20% of total radio listening is done in the car (RAJAR), this has been given separate consideration.

In addition to the statistics in the section above Rajar (Q2 2012) stated that 413,000 people every week were listening to radio on their smart phone in the car.

There are two main methods of listening to IP-connected digital radio in-vehicle:

- Line-fit internet radio
 - Connecting via its own circuitry to a 3G or 4G network (requires SIM card in the radio) network
 - Connecting via a WIFI hotspot generated in the car by an ancillary device such as a mobile phone or mobile broadband adapter
 - Connecting to an external wifi network while stationary eg while outside home or a restaurant
- Aftermarket digital radio

- DIN unit (e.g. Parrot Astroid)
 - Connecting via its own mobile network connectivity or
 - Via a USB 3G/4G dongle or
 - Via a wifi hotspot generated by an ancillary device
- Audio delivered to the vehicle radio/sound system via a dock, 3.5mm jack cable or Bluetooth by a 3G or 4G device ie a Smart phone or tablet

All the major vehicle manufacturers have a connected car strategy and in 2013/14 connectivity in new vehicles will become more commonplace. These will allow users to listen to digital radio via either a 3G/4G or WIFI hotspot generated by a mobile device or external WIFI network whilst stationary.

There are several products available in the aftermarket, which have been specifically designed for listening to IP-connected radio. For example, the Parrot Asteroid is the market leader for IP-connected unit and provides IP radio via a TuneIn app (content aggregator) over 3G.

Many aftermarket products can connect to an external device (mobile smart phone, tablet) via a dock, 3mm or USB cable. Some of these provide features designed to support online radio (e.g. the Kenwood 4654SD). This device connects to any android smart phone or tablet and allows users to control their digital radio app via the existing controls.

3.3.2 Future growth and impact

Due to the nature of listening on the road, broadband and 3G/4G coverage⁶ signals are intermittent, and in rural or coastal areas may be non-existent. Plans for 4G roll-out could improve the listening experience and coverage should also be UK-wide. This could lead to an increase in listening in the car.

Unlike current vehicles where radio is prominent on the dashboard, in a connected environment there will be many other services which will compete with the radio button on a colour screen eg on-demand audio, enhanced traffic and travel, location-based services, video. UK broadcasters are now working with the vehicle industry to develop an optimised in-vehicle radio app that will make best use of the connected environment and deliver an enhanced radio experience, without causing any driver distraction.

This work, and the trend in the automotive industry towards greater connectivity and a better smart phone integration in the car, means that IP radio listening will become a better experience and more commonplace over time. Given the analysis in the Mobile and tablet section of this report on smart phone penetration and the current roll-out of the 4G network, it is likely that listening to internet radio in the car will rise, although cost may remain an barrier to high usage.

⁶ To see 3G coverage maps please see here:
<http://consumers.ofcom.org.uk/2009/08/mobile-broadband-coverage-checker>

3.4 Digital television

3.4.1 Background and current penetration

This section refers to the consumption of radio via digital television platforms, including terrestrial television (DTV), satellite, cable and internet.

- DTV now accounts for 16.2% of digital listening and Ofcom research⁷ this year showed that 27% of people who own a digital television have listened to radio on it.
- As TV switchover completes this year and with only two small regions yet to switch, 100% of TVs will be digital and therefore capable of receiving digital radio over DTT, satellite or cable. Internet-connected DTVs now also offer radio services and connectivity is increasingly becoming a standard feature on new sets.

Radio content and services have been available on digital televisions since 1998. The range of available stations is listed on the Electronic Programme Guide and varies on digital television listings, dependent on the platform in question. Platforms based on DTV such as Freeview, Top Up TV, Talk Talk TV and BT Vision offer over 20 radio stations. Freesat⁸ offers over 30 radio stations and both Freesat from Sky and Sky subscription packages include over 80 radio stations. Virgin Media carry over 30 radio stations and most cable packages include radio stations.

Most major manufacturers are now building IP features into their TV products enabling listeners to access digital radio and television services via the internet. The IP connected television (IPTV) market is growing rapidly. At the time of writing, many manufacturers have launched products in the UK, including:

- Samsung (IPTV)
- LG (IPTV)
- Panasonic (IPTV)
- Sony (IPTV & connected Blu-ray players + Google TV set-top box)
- Toshiba (IPTV)
- Humax (Freeview, Freesat & YouView set-top boxes)
- Apple (set-top box)

Absolute Radio is the only station to have launched an IPTV radio service app (pictured below). The Absolute Radio app gives users one-click access to all eight Absolute stations, with tabbed navigation that makes it easy to switch between stations. Just like their apps on PCs and mobile, users can also see what's playing now, who's up next, and get Twitter updates from the on-air presenter.



⁷ Ofcom communications

⁸ See: <http://www.freesat>

July 2012 saw the launch of YouView, the new DTV-based IPTV platform developed by the BBC, ITV, Channel 4, Channel 5, BT, Talk Talk and Arqiva. At the time of writing there are over 20 stations available on YouView and content from most BBC radio channels is also available on demand including via the reverse EPG. This allows selection of programming broadcast during the previous week.

3.4.2 Future growth and impact

Contributors to this report noted that DTV's share of digital listening hours is limited by its fixed location, as radio listening can only occur when it is convenient for listeners to be in the same room as the TV (typically the living room). IPTV listening is subsumed into internet and app listening by Rajar, so it is impossible to differentiate listening figures by device. However, it is believed that, of total internet radio listening, only a small proportion is via IPTV.

Other variables affecting the take up of radio listening via IPTV are:

- Cost of launching services, either as a portal/app or as a radio aggregator
 - It has been noted, that these cost barriers may be felt by the smaller broadcasters, rather than larger stations and broadcast groups. As a result, it is likely that smaller, local stations will be unable to launch on a DTV platform
- Cost of remaining up to speed with the changing technologies of IPTV platforms and competing across multiple platforms
- Strong additional service/functionality offering (EPG, Red button etc)

Although radio listening on DTV has shown signs of decline it is possible we could see a minor rise in listening share in the future, particularly if more radio services come on to the platform, either via broadcast, dedicated apps or via the new IPTV services currently rolling out to the latest generation of Freeview HD products.

4.0 Other platforms / technologies

4.1 WiMax 4G

WiMax has been developed as a telecommunications technology able to deliver wireless broadband of up to 70Mbits/sec in both directions based on a cellular array of transmitters similar to those used for mobile telephony. It can be used as 'the last mile' technology to bring broadband to the home or, increasingly, to give Internet access to portable and mobile users in a more effective, and ultimately cheaper way than existing mobile telephony. It has been supported by key players such as Sprint Nextel and the chip manufacturer Intel who have seen the UK as a possible early market.

However, despite deployment in some parts of the UK, it is apparent that the Long Term Evolution (LTE) is fast becoming the 4G network of choice for mobile broadband access.

4.2 Satellite Radio

Satellite Radio is a prominent platform in the US delivering radio via satellite to home and mobile listeners. Satellite coverage is well suited to the task of reaching those remote, sparsely populated areas where terrestrial delivery can be difficult and / or costly to achieve. Satellite systems do however face significant technical challenges if reception indoors and in densely built-up urban areas is to be achieved. In such circumstances coverage has to be augmented with a network of terrestrially based filler transmitters. Satellite radio is not free to air and has a monthly subscription charge from \$10+. There are a number of receivers available in the US with the majority built into the car.

As yet there is no pan-European digital satellite radio available but some interest has been expressed by a separate satellite radio company. An important challenge facing any delivery of digital satellite services in Europe is of course the range of languages, national regulators and differing market conditions that exist; this complexity makes the establishment of DSR in Europe more challenging than in the US. It is unlikely that any satellite radio service would be free to air.

4.3 Digital Radio Mondiale (DRM) and DRM+

DRM was developed as a digital broadcasting technology for use in the bands of spectrum currently used for AM (short wave, medium wave and long wave) to complement the role of DAB. It has now been standardised in Europe, and it is likely that India and Russia will adopt DRM.

DRM is the replacement for SW/MW radio and provides better audio quality using low bit rates. A BBC consumer trial in 2007 found that whilst the service was more resilient than MW during the daytime, reception at night-time suffered from interference.

A version of DRM (known as DRM+) is also being developed for use in the VHS bands including the Band II frequencies currently used by FM radio. Trials of the DRM system are ongoing. DRM+ offers a 'multiplexed' version of the original DRM standard, principally as a candidate technology for the long term replacement of services in the FM bands.

There are no current plans to use DRM+ in the UK.

4.4 HD Radio

HD Radio has been adopted in the USA. It is available for domestic and in-car listening delivering additional broadcast clarity and content to terrestrial radio at a low price for broadcasters and manufacturers. HD Radio is an FM enhancement that is set to replace traditional terrestrial broadcasts in the US. It allows FM stations to broadcast digitally as well as in analogue.

There are no current plans to use HD radio in the UK and transmissions are not likely to be compliant with UK spectrum usage planning.

5.0 Implications for Minimum Specifications

Many of the devices discussed above are compliant with existing international standards governing their connectivity and how they should operate eg Wi-Fi, Digital Video Broadcasting (DVB), the Internet Media Device Alliance (IMDA). In other areas, international industry standards are in development for in-vehicle internet access such as through organisations like the Connected Car Consortium and Genivi.

Feedback from industry suggests that given these existing standards, as well as the difficulty of specifying technological performance at a local level and for a service that is not their main use, it is not possible or desirable to specify minimum technical requirements for these platforms.

However, as they are all likely to play a significant role in a switchover there is still a communications challenge to ensure consumers are aware of the platforms, the fact they can access digital radio and how to get it. This will have implications for the switchover communications and for the switchover certification mark.

6.0 Conclusions

Following the analysis above it is clear that Internet listening in all its forms, and DTV listening, will have an important role to play in a future switchover.

In particular, listening on the internet and on mobile devices is set to grow considerably, albeit from a relatively small base. Contributing factors will be:

- Continued growth in penetration of mobile devices and internet radios
- The roll-out of a new 4G networks
- Listening to radio on mobile devices becoming more commonplace once 4G coverage has improved
- The availability of more radio apps and the launch of the Radioplayer app making radio more accessible on a number of devices (in-car, mobile and hybrid receivers)
- Vehicles increasingly becoming internet connected either with embedded connectivity or via a smart phone or mobile device.
- Consumer awareness of other platforms to access digital radio

However, it is clear that neither fixed-line nor mobile internet networks are currently suitable as a one-to-many digital radio broadcast backbone for the UK. Furthermore, due to network subscription and/or bandwidth costs, services are not free at the point of access and consumers will need to consider this in making their listening decisions.

Listening over terrestrially broadcast DTV is unlikely to grow significantly due to the cost and availability of broadcast capacity. Radio over IPTV services such as YouView or via gaming devices could see future growth, mainly driven by availability and awareness among users of the services available.

7.0 Recommendations

The following recommendations should be considered by government and industry:

- Consider how raising the awareness of other digital platforms is included within switchover consumer communications. This should include how other platforms are communicated alongside a switchover certification mark.
- Continue to monitor platform listening growth. MIDAS has recently revised their research questionnaire which will include use and behavioural impact of other platforms and devices.
- The Digital Radio Action Plan Go Digital trial, which will understand and record the listener experience of various household conversions from analogue to digital-only, should include the use of other platforms.