

## **The smartphone generation of community radio listeners: Is FM sustainable?**

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### **Abstract**

This article examines the current environment of audio transmission services in the UK with particular regard to the community radio sector. Community radio stations in the UK are having to consider the extent to which their audiences choose to listen on an FM analogue signal and whether this is sustainable for them. The number of new platforms that a listener is using to access audio programming now includes DAB, SSDAB, TV carriers and online services. There are also developments to the actual receivers that may be used, in particular the use of smartphones to listen via online Wi-Fi or 4G. Currently there are no plans for an FM turn off in the UK and a hybrid system of transmission and reception is the most likely outcome for the foreseeable future. The consequences of this environment for the broadcasters, the listeners and the audio content are discussed in turn. A sample group of twelve community radio stations have been studied to assess current practices. This group are the remaining stations from the original Access Pilot community radio stations that went on air in 2002 and so are the oldest and most established of the UK stations. This article provides baseline definitions where relevant and uses recent data from national audience research, regulatory and other bodies to assess what people are listening to and how, along with examples from public service and commercial radio, as well as community radio.

### **Keywords**

United Kingdom, community radio, FM, DAB, SSDAB, social media, smartphones

### **Introduction**

In the UK, community radio stations are delighted to start 'real' broadcasting on an FM analogue frequency. The realities and stresses of sustaining funding, equipment and broadcasting a schedule come later as the station gets on air. However, recently a further difficulty has arisen that community radio stations have to consider, which is that of audience reception to a FM signal. The number of new digital platforms that a listener is using to access audio programming has grown enormously including DAB, SSDAB, free-to-air digital terrestrial television (DTT, known as Freeview in the UK) cable, and satellite TV carriers as well as online and mobile data services. Along with the transmission platforms, there are developments to the actual receivers that may be used, in particular the use of smartphones to listen via online Wi-Fi or 4G. Even the major players in public and commercial broadcasting are being perplexed by recent developments, with youth (9–14 year olds) and young adult (15–24 year olds) audiences doing their radio listening on a variety of audio forms (Rajar, 2018; Rajar/Jamjar, 2018).

With the introduction of mobile phone handsets with FM receivers, community radio stations targeting young audiences, such as Takeover Radio in Leicester, found that often this was how they were listening to radio content. The UK Radio Joint Audience Research (RaJAR) started

specifically surveying radio listening on mobile handsets in 2005, but when Takeover Radio went on air in 2002 the manager Graham Coley noticed that its volunteers and listeners were using mobile handsets to tune into the stations (Coley, 2003).<sup>1</sup> A number of smartphone manufacturers, notably Apple, have now disabled the FM receiver from their mobile handsets, presumably encouraging phone owners to pay for a data service to listen to radio. This makes it a more expensive option for the community radio listener as well as the broadcaster who must fund the Internet streaming and additional copyright.

This article examines the current environment with regards to audio transmission services in the UK. It uses recent data from the national regulatory body and other bodies to assess what people are listening to and how, with particular regards to smartphone audio reception. Attention is paid to the age of the listener, since UK national broadcasters have noted this as being significant in terms of the change in listening habits.<sup>2</sup> Some baseline definitions of the various technologies are also included where relevant, to remind new scholars of old technologies and senior scholars of new ones.

A sample group of twelve community radio stations have been studied as examples of current practices with regards to how they are transmitting to their listeners. This group are the remaining stations from the original Access Pilot community radio stations (Everitt, 2003: 12–25).<sup>3</sup> They went on air in 2002 and so are the oldest and most established of the UK stations. The online site for each station was examined for their audio platforms and various ways of listening to the stations and contacting them were identified, including the major social media used, with particular attention given to the homepage. The results of this may be seen in Table 1 in the Appendix. The station managers were contacted and asked how their station is currently using and approaching new technologies. Other stakeholders were also contacted. Where possible, semi-structured interviews were conducted with them or an individual nominated by them. Managers were also given the chance to respond by email. The results are discussed with regard to the broadcasters' audio transmission, listeners' reception and the audio content.

The article concludes by assessing how recent developments are impacting on the sustainability of UK community radio stations and, based on the research, gives some suggestions as to how the community radio sector can sustain and serve its audience in this environment.

This study focuses on community radio within the UK, however the changes in listening habits and transmission and reception technologies are common more widely and so this work will be useful for other community broadcasters to consider.

## **Background**

In March 2018, Bob Shennan, BBC Director of Radio and Music addressed the Radiodays Europe conference in Vienna. He said:

We all once thought DAB was the only digital future for Radio. But audiences want choice. We now know DAB is very important but as a part of the story, along with FM and IP. We need to do more before we consider a switchover in the UK, and for that to be genuinely audience-led. We are fully committed to digital and we believe we should review the landscape again in a few years' time. Great progress has been made but switchover now would be premature. For now we believe audiences are best served by a mixed economy. Radio is better served by a mixed economy. (Shennan, 2018)

The share<sup>4</sup> of listening to the radio by any digital device in the UK has now reached 60% (Rajar, 2018).<sup>5</sup> According to the UK media regulator Ofcom annual Digital Report 2017, the plan for analogue switch off for radio originally devised in 2010 would be when

50% of all radio listening is via digital platforms; and when national DAB coverage is comparable to FM and local DAB reaches 90% of the population and all major roads. (Ofcom 2017e)

Radio listening on all digital platforms now exceeds 50%, home coverage of DAB nationally is approximately 90% and although major road coverage is only at 76% (ibid), it had been expected that an FM switch off strategy might be announced (DCMS, 2014: 6). However, if the public service broadcaster is not considering this as an option, the large commercial organisations are likely to want to stay on FM as well. How will this impact on community radio?

In the UK community radio is defined by Ofcom as:

Community radio stations typically cover a small geographical area with a coverage radius of up to 5km and run on a not-for-profit basis. They can cater for whole communities or for different areas of interest – such as a particular ethnic group, age group or interest group. Community radio stations reflect a diverse mix of cultures and interests. For example, you can listen to stations which cater for urban or experimental music, while others are aimed at younger people, religious communities or the Armed Forces and their families. (Ofcom, 2016a)

Ofcom also noted that in April 2017 that there were 250 UK community radio stations licensed (Ofcom, 2017a). The stations operate on a not-for-profit basis, are run primarily by volunteers. The community radio stations tend to operate with much enthusiasm but often with few resources.

At present the majority of the 250 community radio stations in the UK transmit on FM frequencies, along with a smaller number, less than 20, on AM frequencies.<sup>6</sup> Following Shennan's announcement concerning DAB and the fact that the BBC were *not* going to be switching off FM in the foreseeable future, an argument posed by some community radio activists suggested that this was bad for the community radio sector because if the national stations had gone on to DAB, FM frequencies would have been released for community radio broadcasters. However, others felt that if the national stations, which command large audiences, were going to transmit solely on DAB they would take listeners with them and community radio will find itself in a technological, analogue *cul-de-sac*. Bill Best, the Operations Manager of the Community Media Association (CMA), is optimistic:

I think that the recent endorsement by the BBC and Global Radio of the FM platform as having a strong role to play in a DAB/FM/IP hybrid future is great news for UK community radio. It means that they can continue to broadcast on FM which reduces the possibility of a two-tier system developing: the major broadcasters being on DAB and smaller stations on the FM and AM analogue platforms. And there is still plenty of life in AM with a raft of new licences awarded only last year and a recent Ofcom report (April 2018) which says that listeners are not yet ready for an AM switch-off. Perhaps in around 20 years time, FM broadcasting might be seen as a heritage platform, with 5G networks rolling out from 2020-2030, but for the time being FM is still strong, growing and has plenty of listeners. (Best, 2018)

However, it is not simply DAB which community radio stations must look at in terms of developing their transmission systems, as there are other forms of broadcasting and new forms of audio listening and audio content. Radio stations are part of TV bundles and transmitted via Digital Terrestrial Television (DTT), satellite and cable. Radio stations are also available online via Wi-Fi access or a 4G signal. For listeners, there is a blurring of 'radio' content and this is now sometimes presumed to be 'popular music', or a form of audio automation or a downloaded 'podcast'. A

further confusion is who is paying for the audio received and how? Listeners tend to think of radio listening as a 'free' service to the end user.

### **The broadcaster: How are UK community radio stations transmitting at present?**

[Community radio] stations managers tend to react rather than manage. Their priority is to be sustainable on a day to day basis. The bigger picture and the bigger vision gets left by the wayside and there is no time for reflection. (Connole, 2018)

Ed Connole, the station manager of ALL FM in Manchester, is aware that community radio managers are not always fully cognisant of the current technologies and often do not have the time or funding to be developing new technologies. For community radio managers it is worth noting the national trends for radio broadcasters.

According to Rajar (2018), in the UK listening to traditional forms of live 'radio', national, local and community, is still very popular with live radio reaching 90% of the population tuning in by any means each week. Many listeners are listening on several different platforms, even within a day, depending where they are and what they wish to hear (for example, FM in the kitchen and DAB in the car), and 40% of the share of total listening is to analogue FM and AM signals and 40% on DAB, but it is not clear how many listeners are relying solely on an analogue signal for their listening. Significantly for all broadcasters is how the young adult audience 15–24 years old is choosing to listen. Although 83% of this group is listening to live radio each week, they also do about a third, 31%, of their listening to On Demand music services, such as Spotify. In addition, amongst this age group, 37% listen on smartphones and another 15% listen on computers or laptops. Just 14% of 15–24 year olds are listening on analogue radios Rajar (2018).

At its simplest, 'radio' is audio content that relies on a freely radiating signal, on the electromagnetic spectrum using an FM or AM transmission system, which is picked up via a suitable radio receiver. However, the technological hybridity is now so great, it is unclear what 'radio' is even from a transmission point of view. FM, AM, Digital Audio Broadcasting (DAB), DAB+ (an upgraded standard to DAB) and Small Scale DAB (SSDAB) are all methods of free-to-air radio transmission. Confusion occurs when a listener can also receive the station on their mobile smartphone or a computer and are listening to the station online. This makes little difference to the listener, but is an additional expense for a community radio broadcaster.

In terms of a timeline, AM transmission is the oldest broadcasting system and involves the sound wave being introduced to an oscillating frequency. The amplitude of the frequency is modulated by the sound wave, hence Amplitude Modulation (AM). Generally the sound quality of an AM service is not as clear as the other radio transmission systems and AM suffers more from interference particularly after dark. In the UK, some community stations have AM frequencies, particularly where FM frequencies are in short supply such as in urban areas (Ofcom, 2017a). For example, Desi Radio in Southall, west London, broadcasts on 1602kHz AM as well as online and on satellite to the Punjabi community, both locally and to the UK generally (see Table 1 in the Appendix). They would like to broadcast on SSDAB as Lawrence Galkoff, their technical advisor, notes:

Desi Radio is very keen to be on SSDAB. They would like the opportunity to be on more than one multiplex, but it's got to be economical for community radio! DAB should be cheaper than FM. One transmitter and one power source can run several stations on a multiplex.(Galkoff, 2018)

A SSDAB licence will give an improved audio quality to Desi Radio's local AM listeners and be more economical than broadcasting on satellite, even if they were to be on more than one 'multiplex'.

However, FM transmission is the most common system for UK community stations. FM works by introducing a sound wave to the transmission frequency and modulating it, hence Frequency Modulation (FM). At present it is the commonest form of radio transmission and reception, providing a good quality sound within its transmitter range. In the UK, FM community radio stations are allocated a frequency by Ofcom as well as a power limitation, for example 25 watts. This effectively restricts the station's FM signal to about a 5 kilometre radius for most stations.

The problem faced with FM transmission is that each station needs its own frequency. A frequency may be reused elsewhere but geographically the stations need to be distant to ensure that they do not interfere with each other's signal. DAB uses a system which is a much more effective use of spectrum, with one frequency able to transmit a number of stations on each 'multiplex'. In September 2018 listening on a DAB device had reached 50.2% of the adult population, and 40% of the share of listening nationally was to DAB at some point in the week (Rajar, 2018). However, the costs involved have made DAB an uneconomical transmission system for community stations. Not only is the technical set up expensive, but the rental on the multiplexes, which are run by commercial companies dealing primarily with the large radio groups broadcasting to wide geographic areas, has made the system financially impossible for community stations to use. Nevertheless, due to technological advances, in 2015 Ofcom set up a small-scale DAB (SSDAB) trial and a number of community stations were involved in this, either as a licensee or as part of a multiplex (Ofcom, 2016b).

Angel Radio, a community station based in Havant, in the south of the country, is a SSDAB multiplex license holder for West Sussex, Hampshire and the Isle of Wight and also broadcasts on SSDAB multiplexes in eight other areas. Angel Radio serves a community of interest of people over 60 and plays music from 1959 and earlier. It has gained an SSDAB audience from across many areas of the UK where it is on a multiplex. Tony Smith's Angel Radio says:

In 2015 Angel Radio's small-scale DAB came on air. In addition to the 20 radio services we carry which are produced by other radio companies ... Small-scale DAB has also enabled Angel Radio's coverage to grow. We now have audiences who interact with us via our free-phone telephone number or via email in the other cities we now broadcast to on DAB or DAB+, in London, Brighton, Cambridge, Bristol, Birmingham, Woking, Norwich and Aldershot. (Smith, 2018)

At present, the charge to be on a SSDAB multiplex outside London is around £2,000 per annum. Inside London and the urban areas this tends to increase due to its desirability and the transmitter site rents. To set up a SSDAB transmission system is comparable with an FM system, around £10,000 depending on the type used, but after the initial purchase, the cost is shared by the multiplex users (Hallett, 2018).<sup>7</sup>

For the trial, the licensees were also supported by Ofcom who gave them technical equipment and advice. Despite these trial advantages, SSDAB technology is still cheaper than the previous DAB technology for the broadcaster to buy and use. Along with a greater number of listeners able to receive DAB, this begins to look like a good option for community radio stations, particularly those with a community of interest. The SSDAB trial was carried out between 2015 and 2016, and there were 10 licensees and around 70 multiplex users (Ofcom, 2016b). As well as Angel Radio, several other community stations were licensees providing the transmitter and sites and many more took part on the trial multiplexes providing their own content. This included Resonance, an arts and music community radio station which broadcasts on two multiplexes giving them an audience reach beyond central London where they are based. Although the trial has finished the stations involved have had their licenses extended and can continue broadcasting on SSDAB until 2020 pending competitively awarded licenses. (Ofcom, 2018). Stations such as Desi Radio in Southall, west London, Awaz FM in Glasgow and Cross Rhythms in Stoke-on-Trent are all community of interest stations and are very keen to be on one or more SSDAB multiplex.

This would mean that they could not only broadcast to the Punjabi, Asian and Christian communities locally, but would reach similar communities of interest elsewhere in the country if they were on a suitable SSDAB multiplex. As Awaz FM's Javed Sattar said:

We would like to be on SSDAB when it comes available ... Currently I see multiplatform as a way listeners will engage with Awaz FM ... With new technologies like Alexa etcetera I see more and more will be using these devices to preset Awaz FM and I guess this is what other community radio stations will be doing. (Sattar, 2018)

Voice-activated assistant devices such as Alexa are currently using online streaming radio services to play their users' choice. Javed Sattar correctly alludes to the issue that the Awaz FM listeners expect to be able to receive their community station on a number of audio platforms, in the way that they can listen to larger, national stations. However, a high take up of listening via voice-activated assistants would mean that community stations had to extend their concurrent streams and would incur higher music copyright costs, as it will be discussed further below in the article.

### **The listener: How do UK community radio audiences listen to their stations?**

To put community radio into the context of other listener options, BBC Radio 1 is taken as an example. It is a UK public service, national station targeting a teenage and young adult audience. A listener who wishes to hear the station can receive a freely radiating signal on FM via traditional radio receivers that are stationary in a house or on the move in a vehicle or using a suitable portable device. This does include some mobile phone models, in particular less expensive varieties and those which might be purchased by outdoor users. Notably there are models branded by tool manufacturers such as the 'JCB Tradesman 2 Tough Mobile Phone' and 'CAT Rugged B25 Smart Phone', both of which have FM receivers and headphone sockets. This is necessary, as the headphone cable acts as the radio aerial.

The national BBC radio stations are part of TV packages and so may be accessed by DTT, cable and satellite TV. All the BBC stations are also on DAB and can also be received via the Internet, so accessed on a computer, laptop, tablet, voice assistant or a suitable smartphone. This varied range of listening and receiver options is common for all of the UK national free-to-air stations and most of the major UK local public service and commercial stations. Using the method of reception as a definition for 'radio' is no longer relevant, but it is worth detailing a little more from the listener's point of 'hearing' the station and this can be divided into static and mobile receivers.

In terms of static receivers, it is surprising to note that a TV set has become a regular method of listening to radio for 5% of listening share (Rajar, 2018). Listeners still use traditional and more recognisable radio receivers, these may also be embedded in other devices for example an alarm clock. Online radio reception may also be static, on a desk computer or on a Wi-Fi device such as a laptop. New to the listening public are home voice-activated assistants such as the Amazon Alexa and Google Home. In December 2017 this only accounted for 1% of listening (Rajar, 2017) but by September 2018 accounted for a 3% share (Rajar, 2018); this is likely to expand as the technology becomes more commonplace.

Many radio listeners are on the move, frequently in vehicles (Ofcom, 2017: 103). Broadcasters consider this area of radio reception as one of the most important, and considerable discussion takes place with car designers and manufacturers. It is notable that each new transmission system becomes acceptable and commonplace amongst listeners, once it is in standard family cars, for example AM to FM and FM to DAB. Car radios are for many listeners their first experience of DAB and the take-up of DAB has been linked to the take-up of DAB sets in high-end and then standard family cars. Significantly for community radio broadcasters, several manufacturers, in particular Mercedes, have developed cars which become mobile Internet hot

spots and can support up to four devices at a time, providing Internet reception for in-car radio listeners (Mercedes-Benz USA, 2016: 31). Community broadcasters may believe it rare that their listeners drive Mercedes cars, however the Vauxhall Astra, a more modest car, now has this option too.<sup>8</sup>

Listeners who are not in a car but still away from their static receivers may choose to listen on their smartphones, which can pick up radio online transmission via Wi-Fi or a 4G signal.<sup>9</sup> To stress the importance of this in a global context, there are now as many mobile subscriptions as people on the planet, two thirds of the world own a mobile handset and around two billion use smartphones.<sup>10</sup> A smartphone acts as a personal computer and can access and download various forms of data as well as being a communications device for text and voice communications (ITU, 2017a). The data services include the Internet and through this other forms of communication, such as email, social media and downloadable software applications, 'apps'. This is important for community radio broadcasters as it gives a simple link to their station and the ability to make contact with it. Angel Radio, in the south of England, specialises in serving an older audience. They discovered that they have an overseas audience online:

A note about our international audience ... because Angel Radio is unique in its use of older presenters playing vintage music mixed with chat about the 'good old days' we are newsworthy as a 'novelty' item. Often a foreign media company contacts us for a novelty news story but then discover that we produce a whole range of positive outcomes for our audience and our staff ... so then they actually play down the novelty aspect and instead produce proper stories about our work, which then attracts many more people to tune in to us in those countries. (Smith, 2018)

Despite serving an audience which might be assumed to be less familiar with current technologies, on the home page of their website, Angel Radio offers a wide range of methods of listening (see <http://angelradio.co.uk/>).

In the ITU ICT Development Index rankings (ITU, 2017b) the UK ranks as one of the most ICT savvy countries globally, a very close fifth after Iceland, South Korea, Switzerland and Denmark. The UK communication regulator, Ofcom, conducts regular high-quality research, including a long-term study of Children's Media Literacy (2017d), and this shows that the UK teenagers are some of the most media literate of the population (Ofcom, 2017d: 2). Young British adults are using their smartphones to access audio content, whether 'Radio' or other audio services.

In the UK, the mobile phone market is considered mature, with 95% of the population owning a mobile phone and 85% of users having a smartphone, although smartphone ownership is still cascading from the young across to older users. In 2017, 96% of respondents aged between 16 and 24 reported owning a smartphone (Statista, 2017). As these young adults grow older it is expected that they will continue to use a similar or improved technology and further mature the smartphone market.

Community stations need to consider the importance of smartphone apps and websites that are suitable for smartphones. Of the sample stations ten out of the twelve have mobile phone sites, but not all have apps. Awaz FM, based in Glasgow and serving an Asian community have taken apps very seriously as their manager explains.

[Awaz FM] have iOS and Android apps ... from experience this is important during Ramadan as a way of people listening for the opening of the fast where the radio signal doesn't reach clearly ... listeners found it easier to open the app. (Sattar, 2018)

Takeover Radio, in Leicester, targets the youngest community of under 18-year-olds. It is notable that within the sample stations, they have clearly displayed iOS and Android apps and a mobile website.

### **Audio content: What makes it 'radio'?**

Having described the audio transmission and audio reception systems, it must then be considered what makes audio content 'radio'. The classic 'radio' broadcast is point to multipoint that is one broadcaster to many listeners. For FM and AM only the geographic transmission area limits the number of listeners, anyone with a radio tuner can listen. Yet, there are many variations on this now which arguably tend to be point to point, that is one transmission service to one individual listener, but otherwise retain essential radio qualities. This may be a station's 'listen again' option or an extended programme as a podcast. These both rely on the listener's access to the Internet. Online live radio streams are also restricted in number and the audience of concurrent listeners is decided upon by the broadcaster, who will pay for suitable bandwidth and, if relevant, the music copyright. The price of online broadcasting increases with every concurrent stream, that is every listener. Fifty concurrent streams is part of the standard package, commonly used by UK community stations and might be consistent with a point to multipoint broadcast, until the fifty-first listener attempts to join the broadcast and finds they cannot.<sup>11</sup>

In May 1999, scholars on the UK Radio Studies Jiscmail list<sup>12</sup> considered whether a 'radio' station disseminating audio on the Internet was a 'radio' station. What emerged from this debate was that 'radio' was not simply the disseminating technology. The term implies a particular form of curated audio content, often with an announcer's or presenter's voice to guide the listener. Alan Beck argued eloquently:

'What is radio?' must be twinned with 'What uses do people make of it?'. If those who listen-in to Internet radio, or to audio on satellite, or a televised radio programme on a satellite station use these as radio, then it is radio. The alternative, that radio is defined only by 'wireless' broadcast, is technologically determinist and, I would argue ... reductionist. (Beck, 1999).

This debate was again put to radio scholars by the author in March 2018 and although the conclusions were not unanimous, again, content rather than methods of dissemination did appear to be a key feature. Terry Lee summarised many of the views:

For me 'radio' covers any audio that is created by a person/people to be listened to by an audience beyond those who know the creator. Yes, this includes podcasts, and even programmes that have not yet been broadcast. I don't think it includes Spotify, or other streaming services – although I accept some students may argue otherwise. The common theme is the creation of a widely available noise, designed by someone (not an algorithm – although maybe this could change) for a group of people to listen to. ...I feel podcasting is an evolved radio practice – primarily it serves the same purpose as radio but with more user-control & engagement, and less regulation/barriers. As much as podcasters might reject the link to radio, ours is a medium that includes a wide range of voices, focuses and business models – I don't think podcasters can detach themselves quite that easily ... yet. (Lee, 2018)

Ethically, a community radio listener will usually expect content based on a set of production values as well as abiding to cultural norms of taste and decency. The listener may not be aware of these production values, until they are startled by, for example, offensive language or adult content and they are suddenly conscious of these inherent values. This is one of the differences between broadcast radio and podcasting, which is less regulated.

It could be suggested that 'radio' content is curated at some point in its production by a human being, as Lee (2018) suggests above, 'not an algorithm'. However, the production human being may not be physically present at the time of the listener's reception to the radio content. It is quite usual for community radio stations along with other radio stations to transmit pre-recorded programmes or repeat ones previously transmitted. A community radio station may also use

automated music tracks, particularly overnight either with or without voice track presentation. These are all clearly 'broadcasts', that is point to multipoint. A listener will be experiencing the 'radio' programming simultaneously with other listeners. But should they wish to listen at a different time to the programme, a number of stations, seven of the group studied (see Table 1 in the Appendix), provide an online listen-again service of previously broadcast programmes or downloadable 'podcasts' of programmes already broadcast, thus providing a point to point listening experience for an individual audience member.

Listen-again programmes need an Internet service the whole time the listener accesses them but podcasts are audio files that may be downloaded from the Internet to a computer, laptop or a mobile device, such as a tablet or mobile phone and then listened to later. A podcast may also be a slightly different version to the one broadcast or may be a new and original 'programme' not 'broadcast' at all and only to be heard if an individual listener wishes to download it. According to Rajar (2018), 13% of adults (15 years and older) in the UK listen to podcasts on a weekly basis:

6.9 million adults or 13% of the adult population use a Podcast in an average week. Over two thirds of podcasting hours are listened to via a Smartphone (67%). Podcasting hours are mainly consumed whilst Working/Studying (29% share) Driving/Travelling (25% share). (Rajar, 2018).

Music listening is a particularly rich source of development using a smartphone, with personalized, on-demand music streaming services such as Spotify being accessed by 51% of 15–24 year-olds and 39% of 25–34 year-olds (ibid). Both groups still access live radio in various ways, but the growth in listening to streaming services has increased considerably, rising in two years from 40% of 15–24 year-olds and 26% of 25–34 year-olds in 2016 (Rajar, 2016). The logical implication being that these young adults have access to personal audio receivers via their smartphones and other devices and are choosing to listen to streaming music rather than more traditional 'radio' services.

Ed Connole, the manager of ALL FM in Manchester, is uniquely positioned to observe a wide age range of listening and production choices since All FM has 130 volunteers aged between 10 and 80 years old. He is very impressed at the way in which the children and young volunteers listen to the radio and select material. They are listening widely online and globally, then will gather unusual audio for use on ALL FM: 'Children listen differently. They will listen online to a station in Canada and then download a music track they hear and like' (Connole, 2018). These young volunteers are going to have an expectation of listening to music beyond Manchester or the UK. These services have meant that listeners have access to a wide range of music if they choose to experiment.

Streaming music services operate on the Internet, where their users and subscribers can access a wide range of musical tracks in various genres. Having selected their personal favourite genres, artists and musical styles, the streaming service plays that variety of music for the listener. The initial services are free but at a limited bandwidth and with adverts. Once the listener pays a subscription they may listen to their choice of music in better quality and without adverts. The names of the biggest services are well known by users: Apple with 38 million subscribers is competing heavily with Spotify's 70 million subscribers, and both are global services (Statista 2018a and 2018b).

It is easy to dismiss music streaming as not being real radio. But it should be remembered that many community broadcasters and larger stations use an automated music service overnight and at other quiet times. So if we are prepared to accept that a radio station broadcasting automated music using software such as Myriad is still radio, how does a personal music streaming service fit in to the mix; is it 'radio'? As Lee (2018) notes above, a number of its younger users would certainly term it as such. It is audio content and is curated, primarily by the listeners

themselves. Although the service is not generally broadcast to a group of listeners at one time, point to multipoint, much of the music content is shared with other users and ironically, for young users, if they are not paying the subscription which removes the commercial advertising, they will also share the advertising with other users no matter how eclectic their own musical taste.

There is still a strong youth and young adult radio audience, a weekly 83% reach for 15–24 year-olds and an 86% reach for 25–34 year-olds (Rajar, 2018), but on-demand music listening is growing and often accessed on smartphones. Logically, there are only so many listening hours in a week. The result is that the major public service and commercial radio stations targeting a young audience are developing and using a range of provisions which mobile phone listeners can use and which are giving ‘value added’ to the audio. These can be accessed on a smartphone via either an Internet Wi-Fi connection or 4G data allowance. It is common for stations to have apps for both Apple and Android phones, which will take a listener directly to the station’s mobile site. There are frequently ‘listen again’ functions, podcasts, a range of social media and videos. Some community radio stations are considering how they might respond to this demand. Cross Rhythms is a Christian community station based in Stoke-on-Trent. They were very concerned that they were losing their younger audience, as Jonathan Bellamy explains:

Currently we are developing a new online platform for UK teenagers ... many youth consume music and media visually – particularly through YouTube. As a result we are close to launching a new website and social media service that comes with a Visual Radio Station – where all our programming and material is video based. (Bellamy, 2018)

As can be seen in Table 1 in the Appendix, Cross Rhythms have also developed social media. This is so widely used that description seems unnecessary. However, an attempt at definition is illuminating, particularly in the current climate of consideration of privacy, protection of young users and prevention of its use as a device for harm and malice, which a community radio station would seek to avoid. Obar and Wildman (2015) attempt to bring together common definitions:

- 1) Social media services are (currently) Web 2.0 Internet-based applications,
- 2) User-generated content is the lifeblood of social media,
- 3) Individuals and groups create user-specific profiles for a site or app designed and maintained by a social media service,
- 4) Social media services facilitate the development of social networks online by connecting a profile with those of other individuals and/or groups.

(Obar and Wildman 2015: 746)

As an indication of its popularity, in the UK in January 2018 there were 44 million Facebook users (Statista, 2018c). Facebook is the most widely used of the social media with a 64% market share, followed by Twitter with a 15% market share and YouTube about 4% (Statista 2018d). The age group with the highest number of Facebook users in the United Kingdom is 20–29 year-olds with almost 11 million users (ibid).

For UK community radio broadcasters, an examination of the success of national broadcasters in using social media is again of value. Ben Cooper, the controller of BBC Radio 1 recently said that they were receiving 10 million views a week on their YouTube channel (Cooper, 2018). Cross Rhythms may not be able to command quite such numbers, but are giving their listeners the value added that they have come to expect.

### **Conclusion: Is FM community radio sustainable?**

Broadcasters are aware of the modes of transmission and of the limitations of each. Free to air services, including FM, will have the ability to gain a larger audience. Online will have a smaller audience and a podcast, just an individual who chooses to listen when they wish to. Listeners

appear less aware of the differences of how they receive audio content are and, as Alan Beck (1999) notes above, accept many forms of audio content as 'radio'. Ease of listening in a particular location and personal preference as to content will be deciding factors. For community radio broadcasters the FM signal gives their listeners a shared, curated content, which is appropriate to that community and of value to them. However, there will continue to be migration by listeners from FM to other modes of audio reception and these listeners may not even realise that they are doing it. There is a blurring of digital radio modes, particularly between DAB and online delivery.

There are no plans at present to switch off FM in the UK, but for the community stations already on FM, is it sustainable in terms of serving its community of listeners in terms of their expectations and can this be done economically? The great advantage that community radio stations have is that they are not market driven. They do not need to turn a profit as commercial broadcasters do, or justify receiving the TV licence as the BBC does. Community radio has to serve its community in the best way it can and many stations have had to be inventive in the ways they have found to fund themselves (see Gordon, 2015, 2016). Radio listeners use all methods available to them and this hybrid reception is the environment that community radio stations are now and will continue to be operating in. To do so they will need to find ways to make it economically viable.

Of the two stations in the sample currently on DAB, Angel Radio and Resonance have been able to serve a wider geographic community of interest by their SSDAB presence on multiplexes outside their FM areas. The four stations serving a geographically local community, ALL FM (Manchester), Bradford Community Broadcasting (BCB), GTFM (Pontypridd, Wales) and Wythenshawe FM (WFM, Manchester), feel that they will be serving their community well by having a SSDAB presence, but they must consider that their audience is a very local one and not derive a great advantage from it. Unlike stations serving a community of interest such as Awaz FM and Desi Radio, who, if offered SSDAB, will reach their communities outside their geographic analogue transmission areas.

All the sample stations are online and so, in theory, may be received anywhere with Internet access globally and, importantly, can be set up on a voice-activated assistant. The problem with this is that whereas FM and SSDAB are free to air and listeners are unlimited with new listeners able to tune in to the station without incurring extra costs, increasing the online listenership has a cost, both in terms of the number of streams and music copyright fees. Commercial stations use 'programmatic advertising' for their online audience. This is advertising targeting an individual listener based on their Internet use and is paid for by the advertiser to reach niche audiences and those with particular needs and interests. Community radio does this well and might investigate this income source, with a view to a thoughtful and sensitive use of the promotion of services or advertising for their listeners. Clearly there are ethical considerations to this, but it is worth investigating. Programmatic advertising means that the broadcaster can fund extra online streams by listener usage.

Community stations need to make their web pages easy for listeners. It is evident that a good website is an essential first point of contact for community radio volunteers and listeners. It can clearly explain what the station does, the methods to receive it and how to contact key individuals on the station to volunteer, seek training or make a music request. The website needs to be automatically mobile 'friendly' when it is accessed from a smartphone. Android and iOS apps should also be available as the sample group showed. These are in such common use, volunteers and listeners may feel the station is out of date if it does not have them.

Social media links on the website and mobile website are an excellent method of demonstrating a vibrant station attitude and are cheap and cost-effective. Facebook is the commonest form of social media and it is worth every community radio station having the link on the home page. Twitter is used by national and commercial stations as a way of listeners

contacting programmes and presenters having public off air engagement with listeners. Again, if it is not already there, community radio will find this a simple way of giving their audience an interactive space. Both of these forms of social media need curating and prompts put up regularly, but are good ways of demonstrating the community engagement of the station. YouTube is becoming increasingly common for stations to use, but does need to be good quality. Amongst the sample group, YouTube was used to record key events that the station had been involved with and so used for promotion of the station and acknowledgment of the work of the volunteers. It is worth considering what a listener would like to view (rather than a volunteer). What gives value added to the community radio station's audio output? What do listeners value seeing? The back of the studio desk is not very interesting, but a live track from a local band could be!

Station websites are also where listeners can access the 'Listen Again' facility and podcasts. The sample group of stations tended to have a selection of programmes and key interviews, which listeners could hear again. This is relatively straightforward to organise and not expensive. It gives added value to volunteers' work and a sample of 'best bits' for new listeners. It is also possible for stations serving a community who, for example, do not have English as a first language to have podcasts on issues that may affect them such as health or housing. Although podcasts do not need to abide by the same regulations and ethical values as on-air radio, community radio stations would do well to use the same standards that their listeners expect in terms of taste and decency, and strong and offensive language. Podcasts on the station website should also adhere to broadcast standards in terms of court reporting and libel.

Above all the station needs to have good audio quality, whether this is online, on analogue or on SSDAB. There is an old radio adage, 'It's OK leaving me!'. In other words, the audio signal will never improve, it only degrades as it passes from the studio onwards, so it must start out as good as possible. Again this is not expensive to do; the costs involved are already paid.

The problem for community stations is that there is an additional cost with each mode of broadcasting, so hybridity is expensive. Community stations may feel that it is not viable to broadcast on multiple platforms and will need to choose:

Of course we are all in the same boat. Established broadcasters, coming to terms with the challenges of the Internet age. I remain convinced we can prosper in this hybrid future, but we will more likely do so if we join forces like never before. (Shennan, 2018)

FM analogue transmission is sustainable for the next few years, but the writing is on the wall for FM as a standalone approach. Systems are being developed for vehicles that will switch between differing radio transmission systems depending which is the strongest, a hybrid system. Voice-activated assistants are likely to make listeners believe that they can listen to any radio station, anytime.

There are now over 250 community broadcasters in the UK, broadcasting to a sizeable audience. FM as a transmission system is sustainable for the present, but the smartphone generation of listeners is growing in number and also growing older, and few are listening to FM. Community radio is an industry sector in its own right. As a sector, it can use the advantages of broadcasting to niche audiences, specific communities and those deemed 'hard-to-reach' by local and national services. The community radio sector can command revenues, which other media sectors are already accessing. Community broadcasters can develop technologies that suit the sector and develop appropriate systems for the community radio arena.

Radio listening patterns are changing, listeners have a wide variety of alternatives in terms of methods of reception and content. Community broadcasters are not immune to these changes. *'Alexa, play my local community radio station!'*

## Appendix

TABLE 1 – Transmission modes of sample UK community radio stations

Name & Location	Target community served	AM/ FM	Online	FB	You Tube	Twitter	Listen again	Text	Pod cast	Website www.	Mobile site
<b>ALLFM Manchester</b>	Local Community	96.9 FM	Y Radioplayer Tune in			Y	Y			allfm.org	
<b>Angel Radio Havant</b>	Older people 60+	89.3 FM DAB	Y Radioplayer Tune in	Y						angelradio.co.uk	Y
<b>Awaz FM Glasgow</b>	Asian Community	107.2 FM	Y on mobile site Tune in	Y	Y	Y		Y	Y	awazfm.co.uk	Y
<b>BCB Bradford</b>	Local Community	106.6 FM	Y Radioplayer Tune in	Y		Y	Y		Y	bcbradio.co.uk	Y
<b>Cross Rhythms Stoke</b>	Christian Community	101.8 FM	Y Radioplayer webcam Tune in		Y	Y	Y			crossrhythms.co.uk	Y
<b>Desi Radio Southall</b>	Punjabi Community	1602am Sky Channel 0169	Y Tune in	Y	Y	Y	Y			desiradio.org.uk	Y
<b>GTFM Pontypridd</b>	Local Community	107.9 FM	Y Tune in			Y	Y			gtfm.co.uk	Y
<b>New Style Birmingham</b>	Afro-Caribbean Community	98.7 FM	Y Tune in			Y				newstyleradio.co.uk	Y
<b>Radio Faza Nottingham</b>	Asian Community	97.1 FM	Y Tune in	Y		Y				radiofaza.co.uk	Y
<b>Resonance FM London</b>	Eclectic music and arts	104.4 FM DAB	Y Radioplayer Tune in	Y		Y	Y			resonancefm.com	Y
<b>Takeover Leicester</b>	Under 18s	103.2 FM	Y iTunes Tune in	Y	Y	Y				takeoverradio.com	Y
<b>WFM Manchester</b>	Local Community	97.2 FM	Y Tune in	Y	Y	Y	Y	Y		wfmradio.org	

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## Notes

- 1 Graham Coley (2003), manager of Takeover Radio, Leicester, personal communication. Sadly, as this article was being researched and written, the death was announced of Graham Coley, the founder and manager of Takeover Radio. His work with young broadcasters was formidable and his sensitive and energetic work in the community radio sector will be sorely missed.
- 2 The data used is up to date at the time of writing, December 2018.
- 3 There were originally 16 Access pilot stations. Of the original group, one did not intend to continue after the pilot period, one has become a local TV station and two closed due to financial problems.
- 4 'Reach' is the percentage of the potential population who listen to radio each week. e.g. 90% of the UK total population. 'Share' is the proportion of listeners tuning in to that particular output or using a particular receiver, eg 40% of total listening is done on a DAB receiver.
- 5 Radio Joint Audience Research, Rajar, Audio listening device share: AM/FM = 40%: DAB = 40%. Listening to radio via: Any TV= 5%: Desktop/Laptop = 4%: Smartphone 4%: Voice activated speakers = 3%: Wifi radios and Tablets = 4% (Rajar Autumn 2018)
- 6 See Ofcom List of Community Stations (2018): <http://static.ofcom.org.uk/static/radiolicensing/html/radio-stations/community/community-main.htm> and Map (2015): [https://www.ofcom.org.uk/\\_\\_data/assets/pdf\\_file/0018/36423/community-map.pdf](https://www.ofcom.org.uk/__data/assets/pdf_file/0018/36423/community-map.pdf).
- 7 Lawrie Hallett Future Radio, Norwich (November 2018) Future Digital Norfolk was an SSDAB licensee and part of the SSDAB trial. Personal communication.
- 8 Vauxhall Connected, <http://www.vauxhall.co.uk/onstar/index.html#connected>
- 9 DAB uses considerable power to receive it. This is not remarkable in a house or car, but at present there is only one DAB mobile phone handset the LG Stylus 2, which supports DAB+.
- 10 GSMA Intelligence (April 2018) Global Data, <https://www.gsmainelligence.com/>.
- 11 Canstream is an Internet streaming service offered by the UK's Community Media Association, CMA. They offer 50 concurrent streams as a part of the standard packages. Stations can extend this at an extra charge. See <https://www.canstream.co.uk/packages/>.
- 12 Jiscmail offers email discussion lists for the UK Education and Research communities, see <https://www.jiscmail.ac.uk/groups/>.