



ABOUT EGTA

egta is the Brussels-based trade association of more than 130 television and radio advertising sales houses. egta's members are spread across 40 countries, mainly in Europe. Together, egta's TV members represent over 80% of the European television advertising market, whilst egta radio members collect 60% of radio advertising revenues in countries where they are active.

As sales houses of both public and private broadcasters, egta members commercialise the advertising space around audiovisual content available on platforms such as traditional radio sets, tablets, smartphones, PCs, Smart TVs and other Internet-connected devices.

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EXECUTIVE SUMMARY

This report examines online radio aggregators and the relationships between such services and radio broadcasters.

Based on desk research, a qualitative survey of egta radio member companies and interviews, the report seeks to provide readers with a better understanding of the most popular radio aggregators available in different markets. It also includes a series of recommendations for radio broadcasters considering the most effective strategy for developing relationships between their own radio stations and aggregator services.

While the landscape in which they sit is diverse and highly fragmented, radio aggregators can broadly be classified according to the owner of the service and the type of audio content available to users. Furthermore, aggregators may be described as open-access (available through web browsers, mobile applications and other open ecosystems) or device-dependent (available only through suitably equipped devices, such as WiFi radio sets).

With regards to ownership, some aggregator services have been developed by, or for, either a single radio broadcaster to host its own channels or for several broadcasters on a given market. The broadcasters have complete control over the content, whether live or on-demand, available on the service.

A larger number of aggregator services are independent, in that they do not have any ownership relationships with the radio stations to which they provide stream hyperlinks.

The content available on aggregator services ranges from simulcast streams of broadcast radio stations, Internet-only radio stations (including radio station brand extensions), curated playlists, algorithmically generated stations and playlists, on-demand radio shows, podcasts and on-

demand music.

This report highlights a number of user experience features developed by aggregator services, including the technical capability to switch between FM and IP radio signals, innovative user interfaces and the possibility to record and store radio content.

Direct revenue sources for aggregators include advertising (display, video, audio, sponsorship, etc.), subscriptions and one-off payments (for example, paid apps and access to premium content), white label solutions and licensing agreements with device manufacturers. Indirectly, some public service broadcasters' (PSBs) platforms are funded by licence fees or other taxation.

Where one, or a group of broadcasters, owns the service, those companies are typically the sole beneficiaries of any advertising or other revenues generated through its use. They also collect all data from users of the service and control the delivery of advertising and other content.

By contrast, the owners of independent services typically collect all data, advertising and – in some cases – subscription revenues generated from their users, and in most cases, there is little or no sharing of said data or revenues with the broadcasters whose stations are present.

The final section of this report provides a brief overview of the aggregator services available in different markets, including some specific issues pertaining to each.

INTRODUCTION

The landscape of radio aggregators is diverse, with a large number of services available in the desktop and mobile environments and – in some cases – Internet radio sets and other connected devices. They range from sophisticated platforms, using the latest digital technologies and backed by considerable financial, marketing and programming resources, to platforms that are very basic, based on outdated technologies and appearing rather as ghosts from the early days of the Internet.

Aggregators differ also in terms of the type of content they make available, the level of functionality they offer users and the advertising models they employ. Some aggregators are the direct result of cooperation between broadcasters, other operate in partnerships with some of the radio stations that appear on their interfaces, while many have no such relationships in place.

There are also some legally questionable practices that can be identified, and indeed that have been subject to legal challenges by broadcasters. The legal environment in which aggregators operate is complex, with different types of legislation holding relevance in different circumstances.

What is clear, however, is that the basic functionality of radio aggregators, which is to provide hyperlinks to publicly available radio station audio streams, is quite acceptable from a legal perspective.

// The view from the radio industry

To prepare this report, egta conducted a survey among its radio member companies to understand the relationships between radio broadcasters and aggregator services and to identify the challenges and opportunities they present.

On the one hand, aggregators offer additional audience reach for radio stations online, and indeed they may be a necessary intermediary in the case

of listening on closed systems, such as Internet radios, wireless speaker systems and connected car dashboards. They can introduce listeners to radio stations — either from other regions of their own countries or from abroad — that they could not access on FM. AM or DAB+.

On the other hand, independent, third-party aggregators present challenges for radio stations in terms of the data they can collect from that segment of their online audiences, which limits the opportunity to deliver targeted advertising to it, among other things.

It is clear from the responses to egta's survey that most radio broadcasters would prefer to have an established and transparent revenue and data sharing cooperation model with online radio aggregators, although that is not the case for most of them yet.

egta has compiled a non-exhaustive list of radio aggregator services and their basic feature-sets, which can be accessed at the following link:

http://bit.ly/egta_radio_aggregators.

STRATEGIES FOR APPROACHING THE CHALLENGES AND OPPORTUNITIES OF AGGREGATORS

1) Understand the online audio landscape your stations are competing in:

- What proportion of your station traffic is coming direct from your digital properties, what proportion through aggregator services?
- What devices are people using to listen to your stations, do you have a strong presence there?
- Why are listeners choosing to tune in to your stations via aggregators, rather than through your website or mobile apps?

2) Determine the financial impact of aggregators:

- Does the presence of your station streams on aggregators substantially increase the size of your audience – locally, nationally and internationally?
- Are you able to monetise that additional audience effectively? As part of your cume audience and/or
 as incremental reach/addressable impressions?
- Are there any implications to your revenues as a result of restricted data collection from aggregators, for example due to the lack of registered listening or limitations on your advertising technologies?

3) Decide on your preferred strategy:

- Allow aggregators to make your streams available with no input from your station and keep only server-side inserted/broadcast commercials simulcast advertising monetisation opportunities;
- Offer aggregators information, such as your updated station logos, stream URLs, etc. in order to support their marketing and promotional role for your station brand;
- Engage with aggregators and attempt to negotiate data and/or revenue sharing deals;
- Engage with aggregators and request that they remove your station streams;
- Pursue legal avenues to prevent aggregators from making your streams available:
 - » Copyright infringement of your property, for example unauthorised use of your logos;
 - » Infringement of your ability to monetise your content, for example by preventing pre-roll or instream advertising from being served to users.

4) Consider a two-tiered approach:

- Accept that some of your listeners will choose to access your content through aggregator services;
- Make only a simple simulcast service available there in order to convert to your own digital properties
 with a better variety of content offer;
- Actively encourage listeners to switch to your own digital properties by explaining the benefits, such
 as better user experience and higher quality.

FIGURE 01:

OVERVIEW OF RADIO AGGREGATOR BUSINESS MODELS, CONTENT OFFERS AND FEATURE SETS

Ownership	Content	Access	Platform	Revenues	Special features
Developed by a single broadcaster	Broadcast (FM, AM, DAB+) station simulcast	Open, free access	Web browsers	Licence fee	Find station by artist or song
Jointly developed by several broadcasters on a market	Broadcaster online-only brand extension stations	User login	Mobile apps	Advertising	Record content
Independent	Professionally produced web radios	Social log-in (e.g. Facebook Connect)	Smart TVs	Donations	Automatic source selection (FM, IP, etc.)
	User generated radio stations	Premium content (subscription)	Internet radio sets	Subscriptions	Innovative interfaces
	Automatic or user-initiated playlists	Premium app (one-off payment)	WiFi speaker systems	Paid apps	
	On-demand music		Connected car dashboards		
	Additional editorial content				

CHAPTER 01:

CLASSIFYING RADIO AGGREGATORS

// The owner of the aggregator

The range of stations available on any given aggregator is primarily a function of the entity that develops and owns the platform. Broadly speaking, radio aggregators can be classified as follows:

Service developed by a single broadcaster for their own stations

(plus some associated stations from other broadcasters)

Service developed / supported as a joint entity by several broadcasters on a market

Independent service that aggregates stations from several broadcasters

Openaccess Devicedependent

Service developed by a single broadcaster for their own stations

Many broadcasters, particularly those in the public sector (PSBs), operate a number of radio stations, and in recent years these have often been complemented with brand extensions (in many cases curated playlists) that are only available as online streams. Platforms that bring a single broadcaster's stations together, occasionally with those of a few selected partners, form the first type of aggregator considered in this report.

These platforms, usually available for use on web browsers and as mobile apps, present users with the broadcaster's live station streams, on demand content and other services. In the case of PSBs and commercial broadcasters with a significant focus on talk radio, news and current affairs, these usually take the form of a wider content portal, and they may sit alongside the broadcaster's stable of television channels as well.

In the commercial sector, iHeartRadio is the largest such platform in terms of its audience size and the number of channels it includes. Launched in 2008 to bring the more than 750 stations owned by Clear Channel Communications together in a single digital destination, iHeartRadio has grown to include hundreds of stations from partners such as Cumulus Media and NPR, as well as offering the possibility for listeners to create customised stations according to their own tastes. Clear Channel changed its name to iHeartMedia in a move that reflected both the success and prominence of its online platform as well as the company's desire to position itself strongly as a major digital player.

Service developed by several broadcasters on a market

The longest established platform of this type is the UK Radioplayer, which was launched in 2011 and is a non-profit partnership between the BBC and commercial radio broadcasters. Radioplayer is available as a browser-based platform and a set of mobile apps, and it has been integrated into a number of other connected devices. Radioplayer recently launched an in-car hybrid radio receiver that automatically switches between FM, DAB and streaming in order to deliver the strongest signal in any given situation. The product, called *Radioplayer Car*, takes the form of a voice-controlled aftermarket adapter that is designed to



be professionally installed in the car dashboard.

Under a separate company — Radioplayer Worldwide — the technology has been adapted for the radio industries of several territories, currently Austria, Belgium, Canada, Germany and Norway, with a version due to launch in Peru in 2017. In recognition of the sometimes subtle, but always significant, differences between the way radio operates from market to market, each iteration of the Radioplayer platform is adapted for the local environment. In Canada and Ireland, for example, Radioplayer exists only as a mobile app, while in Norway (Radio.no) the platform takes the form of a more general radio portal, with information about radio in the country.

Under the model employed by Radioplayer, the broadcasters themselves are responsible for selling audio, video and display advertising, and they receive the revenues thus generated. As Radioplayer, like other market-specific aggregators

launched as the result of cooperation between radio broadcasters, was designed solely for the benefit of radio broadcasters as stakeholders, the advertising and data technology is well integrated with that of the content producers. This – together with creating a single, broadcaster-controlled destination for all radio stations in the country – makes this industry-standard model advantageous over third-party owned and operated platforms.

Independent service that aggregates stations from several broadcasters — open access

In terms of the number of services available to Internet users, the third-party, independent model dominates. egta has identified at least 40 services of this type operating in the browser-based environment, in addition to dozens of Android and iOS apps.

The functionality, level of modernity and degree of cooperation between aggregator and

FIGURE 02: OPEN-ACCESS RADIO AGGREGATORS

RADIO BROADCASTER / ONLINE RADIO PUBLISHER



AGGREGATORS















WEB BROWSERS









MOBILE APPS & ECOSYSTEMS













LISTENER

FIGURE 03:

DEVICE-DEPENDENT RADIO AGGREGATORS

RADIO BROADCASTER / ONLINE RADIO PUBLISHER





AGGREGATORS





AGGREGATORS



Reciva Internet Radio is no longer active; servers remain operational and databases updated





DEVICE MANUFACTURERS



























DEVICE MANUFACTURERS

SONOS

Frontier Silicon manufactures radio modules, which power many radio devices





LISTENER

broadcasters varies enormously. Services such as Tuneln and radio.net (localised in Germany as radio.de) have considerable financial, human and technical resources at their disposal, allowing them to maintain updated directories and to offer innovative features to listeners. Both of these services offer both free and paid options, revenue streams that complement their advertising models.

TuneIn allows users to search for radio stations by name or keywords, such as genre or location. Searches return matching broadcast and online-only radio stations, podcasts and radio shows. Alternatively, users can browse for content by location or genre, for example different music or talk formats. Users can share or comment on audio streams and bookmark favourite stations and shows, when logged in. The TuneIn Radio app has a *Car Mode*, featuring a simplified interface and large buttons for the most commonly used features.

TuneIn Premium (\$7.99 or \$9.99, depending on whether the subscription is purchased online or through the app) offers listeners access to live sports commentary from American Football, Basketball and Major League Baseball games, audiobooks, commercial-free music and language learning. TuneIn also offers both a free mobile app, TuneIn Radio, and a paid version, TuneIn Radio Pro (\$14.99), that removes banner advertising and allows users to record radio shows for a one-off fee.

The radio.net PRIME app (\$2.99) is also available for a one-off payment. This version of the app is free of video or audio banner advertising by the aggregator, although it does not remove any advertising served by the radio stations themselves.

Independent service that aggregates stations from several broadcasters – device-dependent

A limited number of suppliers, including Pure, Frontier Silicon, vTuner and Reciva, maintain or implement Internet radio directory portals that are solely or primarily designed for use in WiFi radios and other connected devices. TuneIn also provides this type of service in some devices, for example Amazon's Alexa-enabled family of wireless speakers and Sonos HiFi systems.

Pure is a device manufacturer that offers a range of hybrid (FM/DAB+/Internet) radios and wireless speaker systems, as well as in-car DAB+ adaptors. Internet radio services on the company's devices are powered by its *Pure Connect* portal, which claims to offer access to more than 200,000 radio stations and over 200,000 podcasts and radio shows on-demand. *Pure Connect* is a re-branded version of Frontier Silicon's portal.

Frontier Silicon produces a range of hardware and software products that can be found in many radio devices. One of the longest established technology companies in this field, Frontier Silicon's modules power radios from several brands, including Roberts Radio, Goodmans, Revo and Sangean. Frontier Silicon is partnered with vTuner for its radio station database.

vTuner offers a white label Internet radio aggregator service to device manufacturers and other partners, including Bose, Denon, Samsung and Audi.

Reciva Internet Radio was, until recently, a leading provider of Internet radio aggregation for device manufacturers. Following a succession of acquisitions in 2014 and 2015, Reciva exited the market, although its servers and its radio station database are being maintained, the latter mainly by volunteers.

// The type of content available

Each aggregator service is differentiated by the type of content available and its set of features, depending on who owns the platform, its purpose and the relationship that exists – if any – between the aggregator and the publishers present. The streams available through aggregators can be classified as follows:

		Automatically			
Broadcast	Internet-only	generated			
radio station	radio stations	radio	On-demand	Podcasts	On-demand
simulcast	and curated	stations and	radio shows	Poucasts	music
streams	playlists	personalised			
		playlists			

Broadcast radio station simulcast streams

The primary function of radio aggregators is to provide online access to radio stations that can be locally received on FM, AM and DAB+ sets. Radio is streamed online using a variety of audio coding formats, predominantly MP3, AAC and AAC Plus (HE-AAC), with some broadcasters using more advanced technologies than others.

Radio streams are usually available without any listener restrictions in the broadcaster's home country, and in many cases they can be freely accessed by listeners elsewhere in the world. Some broadcasters geo-block listening from abroad, although this is comparatively rare, and some aggregators may link to these broadcasters' unprotected streams and allow access. Absolute Radio, for example, blocks listeners outside of the UK, preventing them from accessing the station on Tuneln, radio.net or the UK's Radioplayer. However, the station can be accessed freely via the aggregator services Streema, RadioLine and Radiowebsites.org, to name just three.

The same situation applies to broadcasters that have taken a strategic decision not to appear on aggregator services. The Belgian (Francophone region) public broadcaster RTBF, for example, requested TuneIn to exclude its stations, unhappy that the aggregator sold advertising around its

streams, and Tuneln agreed to do so¹, but many other aggregator services do make RTBF's links available.

Internet-only radio stations and curated playlists

The Internet has brought the entry barriers for producing and distributing radio programming so low that anyone with a computer, the necessary software and a broadband connection can do so. While some services focus either on broadcast or Internet-only streams, many aggregators (including Tuneln, radio.net and the device-dependent services) offer both.

The broader category of Internet radio stations can be split into three main sections: online-only broadcast radio brand extensions (e.g. NRJ Webradios), professionally produced online-only stations (e.g. Hotmixradio) and usergenerated web radio stations (e.g. created using Radionomy, SHOUTcast, Laut.fm, InternetRadio or RADIOGUIDE.fm).

Automatically generated radio stations and personalised playlists

This type of streaming, made popular in particular by Pandora (restricted access outside the US, Australia and New Zealand), can occasionally be found on radio aggregators. The user starts a



UNDERSTANDING RADIO AGGREGATORS

James Cridland, Managing Director, media.info

egta: From the work you've done, and the interactions you've had, with operators and platforms, is there advice that you'd offer to broadcasters in terms of how to approach aggregators, how to make the best of their existence and use them to their advantage?

James Cridland (JC): The way the BBC did it is probably a nice way to consider. If you were an aggregator, and you wanted to link to BBC content, you had to provide them with certain information, which then meant that the BBC had email addresses of the people behind the service and could actually notify them when changing streams, making sure a decent quality logo was used, exercise some control over how the stations were presented and so on. I think it's about actually talking to the radio aggregators, beginning to build up useful conversations with them.

Particularly for things like on-demand content, there are no standards for sharing on-demand content. The way Capital FM does it in the UK is very different from the way the BBC does it, which is very different from the way that talkSPORT does it. If you're going to offer on-demand content to aggregators, you need to talk to them and share best practices.

Having said that, I would suggest that the best way of appearing on aggregators is firstly to make sure that your information is up-to-date and correct, but secondly, not to give them special treatment, not to give them access to your on-demand content, not to give them access to a high bitrate streams, all of that kind of stuff. Focus instead on allowing your radio station to be there, because it's important for you, but promote on your radio station what your real app is. And make sure that people end up using and downloading that.

You have all of your own data to make your own app experience amazing, way better than TuneIn can ever be, so use that data and that information as much as you possibly can!

egta: One area of considerable interest is the legal constraints of radio aggregation. From our understanding, it's perfectly legal for anyone to make a hyperlink to broadcasters' public simulcast streams, but do broadcasters have some means of countering aggregators?

JC: Yes, absolutely, linking to a stream is fine, legally. You'll have noticed most aggregators display the logos of the radio stations. Actually, there is very different law around copyright for logos, which is interesting. Radio stations – and I wouldn't recommend it – if they wanted to get off an aggregator, they actually have better opportunities in terms of stopping unauthorised logo use than they do of stopping unauthorised linking to a stream.

But it is possible, and some broadcasters are doing it, to actually protect streams. If you think of Netflix, clearly its job is to protect the streams that it has and make sure that only those that have paid for them can access them. And that is the right choice for a radio station that really wants to stop people from tuning into them on these other services. But the better choice is to make a decent app for yourself, and then people will use that instead.

egta: It is interesting that some stations have decided not to be present on some aggregator services. You said you would not recommend this choice, maybe you could elaborate that viewpoint for us?

JC: I think, at the end of the day, if you have an FM radio, it picks up every single station on the dial, and wouldn't it be crazy if you had to go out and buy six different FM radios so you could pick up six different radio stations on them? From a marketing point of view, from the point of view of just people tuning in – and this relates to audience measurement – if a listener is marked down as a listener regardless of how they tune into a radio station, which is the case in the UK as one example, then it shouldn't actually matter what platform they are using. Yes, you will have a certain amount of people who use TuneIn or other services to find your station, but if TuneIn is a better experience than your own app, that's where the problem lies.

I've heard radio broadcasters claim that services like TuneIn are stealing their streams. And that to me is just wrong. They're not stealing streams, they're delivering more listeners to your radio station, and it's up to you – just as you do on FM or on DAB – to convert them to a P1 listener and get them to download your apps.

But on the other side of the coin, I shake my head when I see radio stations that actively go out and promote TuneIn as a way of tuning into their radio station. Because I think that's wrong too!

egta: We don't have empirical data, but when we asked our members to estimate the share of listening via aggregators on their market, the numbers were quite high, up to 80% in some cases.

JC: Wouldn't it be interesting to find out why audiences are doing that? It might just be that it's easier to click into something like TuneIn, for example, because you know it's going to work, rather than some of the less than impressive players on individual station sites.

egta: Looking at the range of device-dependent and open-access aggregators on the market, do they essentially operate in a similar way from a technical point of view?

JC: Yes, pretty well. There are about 30,000 radio stations across the world that matter, and there are lots of different ways of finding the online streams for those stations. Sometimes the aggregator will deal directly with a broadcaster to make sure they're getting the right one, but in most cases, what they will actually do is have a listen to that stream online, either via the radio station website or by going to one of their competitors and looking at the connections that their computer is making to the streaming server and then working out what that stream actually is. If you try this, for example, on TuneIn, it takes probably about 20 seconds to find out what the actual streaming address is that TuneIn is using for a radio station, so it's not that hard to actually do.

But it takes time, and partially one of the difficulties is that there are lots of different ways of streaming radio out there, and typically most apps will prefer specific ways of streaming. Take for example HLS and MPEG-DASH, which are two things the BBC uses a fair amount. At the moment, HLS is not necessarily supported by some pieces of radio receiver technology or some apps, particularly well. Android has a particular issue with it. Therefore, radio aggregators probably prefer versions of streams that work with as a wide a variety of their devices or apps as possible. That's one of the reasons why, for example, the BBC is still streaming in some quite old formats, purely because some devices are not capable of receiving their brand new formats.

egta: Is there a normal, standard method or format of streaming that would be picked up by aggregators?

JC: The difficulty is really that there isn't a normal format, but most people use streaming MP3. The format essentially consists of two things – there's

a codec and a transport layer. The codec may be MP3 or AAC, for example, and the transport layer could be HTTP, RTMP or various other entertaining acronyms. But essentially the easiest for anyone to decode is an MP3 stream, ideally, that is HTTP streaming.

Now, actually, for broadcasters, AAC+ is preferred, because it's better quality and you can therefore get away with lower bandwidth, which is the element that costs, and using a transport layer of HLS or MPEG-DASH, which are more resilient.

One of the difficulties of radio aggregators is that they don't necessarily use the ideal stream that a radio station is making available, and similarly they are also not necessarily giving them back the information in terms of data, in terms of people tuning in, that the radio stations would like. And, of course, to go one step further, many radio stations are looking at bespoke personalised advertising, which really works well in a broadcaster's own app and doesn't really work anywhere else.

egta: So, using the UK Radioplayer as an example, is it correct to say that personalised instream advertising works there because there's better integration between the technologies of the aggregator and the broadcasters than would be the case with third-party services like Tuneln or radio.de?

JC: Yes, the fundamental thing there is that the Radioplayer was built by the radio industry for the radio industry. Tuneln is now built by venture capitalists out of San Diego who don't care about radio, they care about their business. A lot of the work Radioplayer has been doing has been specifically to help radio broadcasters monetise in the way they want to, to capture the data, and even to use a bespoke player. And I think the fundamental difference is, when you're listening online on desktop, or indeed on mobile, the images and information that appear on the screen are actually coming direct from the radio station, using the radio station's code on the radio station's

server. So, that actually means that if I'm a radio station and I'm on Radioplayer, and I want to put a piece of Javascript on there that can monitor all kinds of things, then I can do that because it's actually appearing on my server. You can't do that with any of these other services.

egta: Could you explain why there are quite a lot of differences between the various national versions of the Radioplayer?

One of the things that Radioplayer Worldwide has discovered is that every single radio market is different, and the point of Radioplayer is to reflect what that individual market wants to do. So, Radioplayer Canada is organised in a different way to radioplayer.de, and they both work in a slightly different way to the Irish version, which is essentially the UK one but only available as a mobile app.

egta: Was there a strategic decision of the radio broadcasters in Ireland to maintain their own players for the desktop environment and use Radioplayer for the mobile environment?

JC: In Ireland, I think they see the desktop environment – which, by the way, is becoming less and less important – as being an area where they can compete, whereas they see a benefit in there being an overall Radioplayer app that works alongside their own apps. The UK worked in a different way, realising that it makes sense to have a super quality player on desktop as well, because that has benefits too.

Most people will have their P1 radio station, the one they listen to the most, and they will probably download the dedicated app for that. But for the P2 and P3 stations they might also listen to, ideally, they will download the Radioplayer.

Radioplayer has done a lot of work around voice control, getting into Amazon Echo, Android Auto, Apple CarPlay, etc. All of this is only really possible because they have the data – what a radio station

is called, where it is transmitted to and so on, controlled by the broadcasters. Frankly, if you're a smaller station in the UK, being on Android Auto would be nice, but you're not going to spend a lot of cash on something you know that Radioplayer actually offers anyway. So, there are benefits over and above that it's just an aggregator with its own app; it's also a whole R&D service for the rest of the industry and it does offer opportunities in terms of Chromecast, Ford cars and other things that individual stations probably couldn't afford to

egta: There are some platforms, such as Radio Garden and on.radio, that have quite unusual interfaces. Do you think broadcasters could benefit from these innovations?

JC: You have a lot of these aggregators that are doing interesting new bits of user experience and interesting new ways of navigating radio stations that the incumbent broadcasters haven't really thought of. That's one of the reasons these sites are good, because they are thinking up new and interesting ways of getting you tuning into radio stations. Both on.radio and Radio Garden are very different ways of navigating into a station, but I've used on.radio in the past to find bands that I really like, and then stuck with those stations, because why wouldn't you? The wider question is how you monetise.

unique playlist from a single starting point, for example by selecting a seed song, artist or genre, with subsequent tracks chosen by an algorithm. The user often has the ability to influence the selection of music by reacting with a "thumbs up" or "thumbs down", which will either promote or suppress that particular track. In some cases, the user may be able to skip songs they do not want to hear

Personalised radio stations offer an infinite stream of music (or in some cases talk content), which the user may be able to skip through or adjust by preference. A playlist, by contrast, usually refers to a finite group of pre-selected tracks.

iHeartRadio introduced custom music stations on its platform in 2011, extending the feature to talk radio content in 2013. While the vast majority of other radio aggregators do not offer users this customisable listening experience, there are a few that emulate this feature by allowing the user to skip to an alternative station stream, OnRad.io being one example.

On-demand radio shows and podcasts

As with music streaming, pre-packaged ondemand content can be found on a multitude of services, and there are aggregators that are specifically designed for this type of material. The use of the term podcast has morphed somewhat in the years since the phenomenon first appeared, and it may now refer either to dedicated pieces of audio content that have been recorded and made available for downloading (and, more recently, streaming), or to archived chunks of broadcast radio programming that users can access ondemand.

The device-dependent aggregators described above allow users to access libraries of on-demand radio shows through Internet radio sets, and this is also a core functionality of the Radioplayer family of aggregators. TuneIn and Orange Radio, which is

primarily focussed on the French radio market, also offer on-demand radio shows and podcasts, and while they are not particularly easy to find, there are podcasts associated with some stations on radio net

There are a number of aggregators that focus on spoken-word content, either from a single broadcaster or from a variety of radio and other publishers. NPR One, which exists as a fullyfeatured app and a more limited browser-based platform, offers a large range of shows and podcasts from public service radio stations across the US. Stitcher brings together audio content from radio networks, including NPR, Public Radio International (PRI) and Fox News, media personalities, print titles and political bloggers, among others. Stitcher offers both free and subscription tiers, the latter removing advertising and including access to exclusive content. Users can create personalised streams of podcasts and other on-demand audio content on the Otto Radio service, including programming from media brands, radio and television broadcasters.

On-demand music

On-demand music services generally do not aggregate broadcast radio stations. However, some services that established themselves as aggregators of broadcast stations, curated or personalised playlists have introduced subscription tiers that blur the lines between aggregators and pure music services like Spotify, Deezer or Apple Music. Services of this type include *iHeartRadio All Access, Slacker Radio Premium* and *Pandora Premium*, all of which are priced at \$9.99 per month.

The advantage the aforementioned services claim over their pure on-demand music competitors is their backgrounds in playlist curation, whether human or algorithmic, and their effectiveness as music discovery platforms.



CHAPTER 02:

INNOVATIVE FEATURES OF RADIO AGGREGATORS AND OTHER ONLINE AUDIO SERVICES

Digital platforms give publishers new ways of making content available to listeners, and both radio broadcasters and aggregators have developed interesting innovations in this field.

// A comprehensive radio and music ondemand service: iHeartRadio

According to its parent company, iHeartRadio surpassed 90 million registered users in 2016². As new and more complex features have been added

over time, iHeartRadio has moved beyond a simple aggregation service to offer functionalities seen on personalised radio services, such as Pandora Internet Radio, including the possibility to start customised radio streams based on any song in iHeartRadio's library, thumbs-up and thumbs-down feedback, song-skipping and on-demand content. The two paid subscription tiers — *Plus* and *All Access* (in partnership with Napster) — place iHeartRadio closer to music streaming services, such as Spotify, Tidal and Apple Music.

// Combining broadcast radio with online: NextRadio

NextRadio is a smartphone/tablet app developed by the American broadcasting group Emmis Communications and powered by the company's radio cloud data TagStation subsidiary. NextRadio is designed to improve the radio user experience on smartphones by combining broadcast delivery via a device's FM chip with supplementary information and services, such as album art, programme information, metadata, station feedback and other interactive features, over the Internet. NextRadio is not restricted to Emmis radio stations, as the smartphone's receiver can pick up any that are broadcasting over FM frequencies in the user's geographical area.

While many smartphones include built-in FM receiver chips, these are often deactivated. NextRadio was launched through a radio industry agreement with the mobile network operator Sprint in 2013, and it is now supported by several device manufacturers and network operators.

The main advantages of NextRadio are its dramatic reduction in the amount of mobile data a smartphone user needs to expend listening to radio, claimed by the service to be about 92% of the data used by Internet streaming radio, and improvements to battery life when listening via FM compared to streaming. However, the technology does face some limitations: users can only use NextRadio when a set of wired headphones – which act as the FM antenna – are plugged into their device, ruling out the use of wireless headphones or the smartphone's in-built speakers, and the audio quality is dependent on the strength of the FM signal. NextRadio also does not offer listeners the vast range of radio stations they can stream through online aggregators.

// Innovative user interfaces

Les Indés Radio Wall of sound

Les Indés Radios is a French consortium of more than 130 local, independent, commercial radio stations. The stations can be found on a unified online platform that greets users with a *Wall of sound (Mur du son)*, which displays the record covers of songs currently being played on the group's FM and web radio stations. Rather than

selecting a particular station (for example Radio STAR in Marseilles), the user chooses the song they want to hear (for example *Crazy* by Gnarls Barkley) and the station playing that song will start streaming. Unless the user chooses a different song from the wall, or an alternative station, they will stay tuned in.

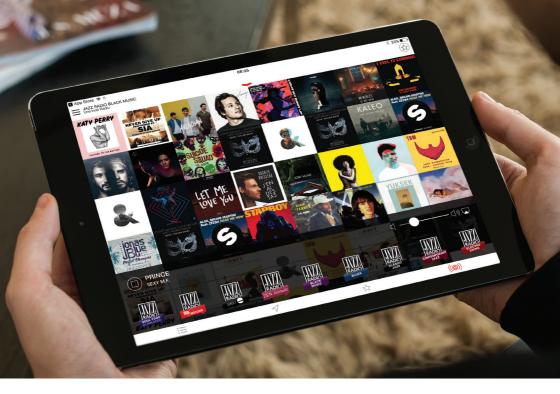
The platform also includes a feature called *Social Radio*, which brings up social media content from the station playing, where available. This enhances the important local connection radio stations offer to their audiences, for example by displaying tweets of news, weather or traffic updates. The Les Indés Radio platform can be accessed via browsers, as a mobile app and on television settop boxes.

Radio Garden

Radio Garden is an interactive website that allows users to select radio station streams from around the world via a rotating globe, with each station shown as a glowing dot. The website was developed by two Amsterdam-based design studios and coordinated by the Netherlands Institute for Sound and Vision, part of a wider research about radio called Transnational Radio Encounters that involved universities in Germany, Denmark, the Netherlands and the UK.

On Rad.io

OnRad.io is a radio search engine that finds stations by songs or artists. If the user wants, for example, to listen to *Chained To The Rhythm* by Katy Perry, OnRad.io will bring up a list of stations currently playing the song and automatically play the most popular of these. If the song is not currently playing, the user can be notified when it next comes up on some station's playlist. The listener may therefore find themselves tuned into KDOG, a local CHR station broadcasting to the American city of North Mankato, Minnesota, a publisher they would have otherwise been unlikely to discover.



OnRad.io works by scanning thousands of radio stations' currently playing artists and songs every few seconds and linking to streams that correspond with the user's search terms.

// Recording radio content: DAR.fm

DAR.fm allows users to find and record radio shows or stations by genre, location or popularity. The service can be considered a kind of PVR for radio (indeed, DAR stands for Digital Audio Recorder), where logged-in users can schedule upcoming shows to be recorded and access their library of recorded content.

DAR.fm does not carry advertising, and the recording feature is only available to paying subscribers. Five subscription tiers are available, ranging from \$39.95 per year to \$299.95 per year depending on the number of shows the user can schedule to record and the amount of hours of

content they can store.

DAR.fm is associated with OnRad.io and UberStations/UberTalk, a search engine for radio stations and shows.

CHAPTER 03:

REVENUE MODELS AND ADVERTISING FORMATS

The primary revenue models for open access radio aggregators is advertising, supplemented in some cases with subscription plans or paid apps, while device-dependent aggregators are primarily funded through partnerships with radio device manufacturers. The beneficiary of any revenues generated by open-access aggregators depends on who owns and operates the service and whether there is any revenue sharing agreement in place between the aggregator and the stations that it makes available.

	Radio- dependent aggregators				
Advertising: all revenues benefit radio publishers	Advertising: revenues shared between aggregator and radio publishers	Advertising: revenues generated by the aggregator benefit the aggregator alone	Subscription plans and paid apps	White label solutions and licensing agreements with device manufacturers	White label solutions and licensing agreements with device manufacturers

// Revenue models

Under the industry-developed aggregator model, broadcasters are usually responsible for selling advertising around their content, and they are the beneficiaries of any revenues thus generated. The costs of developing and maintaining the aggregator, which includes development for new devices and operating systems, are covered by the stations who are present on the platform via a licensing arrangement. These broadcasters may also be shareholders of the aggregator platform, as is the case for the UK Radioplayer, for example.

Third-party aggregators do not typically share revenues automatically with the broadcasters whose radio stations appear on them. While there is usually no interference with the stations' streams, and any audio advertising content inserted by the broadcasters is therefore delivered to the listener, the aggregator may sell display, video or audio advertising around the content. In some cases,

broadcasters have been able to negotiate revenue sharing arrangements with aggregators, although these are rare and are restricted to a small number of services.

In some cases, for example Kronehit and radio.de, broadcasters have reached agreements to connect their ad servers to enable them to monetise their streams directly, for example by pre-rolls delivered by the broadcaster rather than by the aggregator. Display advertising remains solely a source of revenue for the aggregator, as they have control over the web interface.

The authors of this report are not aware of any instances where broadcasters receive any compensation from third-party aggregators, either open-access of radio-dependent, beyond advertising revenue sharing.

// Advertising formats

Radio aggregators may sell any of the advertising formats commonly available for digital marketing. The range of formats sold is largely a function of the aggregator's technical sophistication. Typical formats include:

Display advertising (outside player)			Pre-roll advertising				
Banners	Video	Rich media and other formats	Page takeovers	Audio	Video	Mobile	Sponsor- ship and branded content

Display banner advertising served through programmatic exchanges and ad networks is the prevalent format found on third-party aggregators accessed via web browsers. Mobile banner advertising is frequently found on third-party aggregators' mobile apps.

However, many aggregators developed by broadcasters that are not advertising-funded, as well as some commercial platforms, have no display advertising present.

The use by third-party aggregators of pre-roll video or audio advertising, employed for example by radio.de, is controversial, as the advertising is directly linked to accessing the radio streams themselves. This is particularly an issue where the aggregator replaces pre-rolls that would otherwise be served by the broadcaster with its own advertising (see the case study of Kronehit and radio.de on page 30). Alternatively, it may result in two pre-rolls being served before the radio stream starts, one from the aggregator and a second from the broadcaster. This doubles the advertising burden placed on the listener and may cause the user to stop the session altogether.

It is technically possible for an aggregator to strip a broadcaster's pre-inserted advertising, for example spots that are a simulcast of the FM or DAB+ stream, and replace them with spots sold by the aggregator itself. This was the practice of Moskva.FM, a Russian aggregator, in the past, but changes in the country's legislation gave the radio stations power to prevent this from happening. The authors of this report are not aware of any third-party radio aggregators that currently substitute broadcasters' audio advertising in this way.

Aggregators developed bν broadcasters themselves clearly offer the best opportunity for sophisticated advertising and integrated marketing executions, such as sponsorship, page takeovers and other forms of branded content, although broadcasters with the technical and financial resources to do so may have more flexibility on their own digital platforms. Under this model, the broadcaster has control over the relationship with the advertiser, the audio content and the platform used to deliver brand messages. By offering a combination of standardised ad formats and a high degree of flexibility, the Radioplayer-type model offers broadcasters the best of two worlds; the ability to leverage networked advertising across several stations together as well as the opportunity to deliver formats specifically tailored to their clients' requirements.



A SPOTLIGHT ON THE GERMAN MARKET

Frank Bachér, MD Digital Media, RMS

egta: What is your relationship with radio aggregators in Germany?

Frank Bachér (FB): For us as a sales house, it's a big challenge due to the wide reach of aggregators in Germany. The reason is quite simple. We see traffic coming through aggregators, but the key point for us is that we want to start our own data product, our own data-driven advertising platform. One of the biggest hurdles is that around 80% of the traffic is coming through aggregators or what we call "stupid devices", such as Sonos and other WiFi speakers. Currently, only around 20% of our traffic comes from the websites or apps of our publishers.

Currently, we do not have enough touchpoints to collect data. If you have around 80% traffic that you cannot really identify, where you do not know who's the user in front of a smartphone or loudspeaker, that's a huge challenge if you want to offer a data-driven advertising product. Also, making sure that we maximise the CPM for our publishers is one of our main targets for the next one to two years, and that is why we are working on a strategy to ensure that our publishers can grow their web and app traffic instead of focusing on increasing the reach through aggregators.

egta: Do you have any legal means to stop third-party aggregators using your publishers' streams?

FB: That's not what we are aiming for, and that's not my main interest. We need to find a solution that gives all parties the opportunity to achieve higher revenues. That's why we have started a conversation with the biggest aggregators in Germany on how far we can share or collect data through them.

Achieving a higher CPM through targeted campaigns is a win for everyone. The publisher and, respectively, the sales house make more money and the aggregator delivers relevant traffic for the publisher and has additional opportunities to monetise that traffic.

egta: If listeners currently prefer to go to an independent aggregator, and you cannot stop them from doing so, is that part of your strategy to make them prefer your publishers' own platforms?

FB: That is part of the strategy and it's what we are currently discussing with our publishers. And on the other side, talking about the data strategy, we have to make sure that we get much more information from our publishers. In many cases, they do not really collect data. For example, listeners can still call in via phone for promotions, so they don't need to visit the station's website. There are no log in areas, no community, no e-commerce shops, so we don't get any information about the user.

Having said that, even if we have 20% of the users that we can reach through the web and app traffic, we do not have enough touchpoints with those users.

egta: As FM radio is particularly regional in Germany, and one role of aggregators is to help people discover new stations, do you have any anecdotal evidence to suggest that people use aggregators to listen to major radio stations from parts of the country that they could not hear on FM?

FB: Aggregators help regional publishers reach a wider audience, and we have many publishers with a surprisingly high share of national or international users. For our data-driven advertising platform, we have two goals: we want to help our publishers improve their website and app, grow the traffic and start collecting more data. We also want to collaborate with aggregators to make sure that we offer a comprehensive digital audio data-driven platform for advertisers and media agencies.

egta: Are most of your publishers using similar streaming technologies, standards and protocols, or is this a challenge you face as a central sales house?

FB: You can imagine that especially because of the regional structure, things are not homogeneous on the technical side. Within our publishers, we do have different technology providers and different tech set-ups.

Last year, we started standardising and optimising the technical set up with many of our publishers, and the results are amazing. Some publishers were able to double their revenue throughout the year, independent of the overall market growth.

CHAPTER 04:

THE ADVANTAGES AND CHALLENGES OF AGGREGATORS FOR RADIO BROADCASTERS

Broadcasters face several considerations when determining how to approach listening to their stations on platforms that they do not control. On the one hand, additional audience can often equate to higher advertising revenues, depending on how the broadcaster monetises its content, the national rules around audience measurement and so on. Broadcasters have an additional opportunity to reach listeners online, including people who would otherwise be beyond their FM or DAB+ distribution, and they may be able to persuade them to tune in via their own websites or download their proprietary apps.

On the other hand, aggregators present a number of challenges to broadcasters. The proximity of other radio brands, including those that are not usually available on the local broadcast spectrum, significantly increases competition for any given radio broadcaster. Even more importantly, by losing control over the platforms their streams are accessed through, broadcasters are unable to collect rich data about their users and deliver user-based targeted ads, non-audio advertising or promotional messages.

// Aggregators as a research and development service for the industry

The cost of developing apps and other technologies to reach listeners on the ever-increasing range of connected devices and closed ecosystems beyond the smartphone and tablet is prohibitive for even major broadcasters, and individual companies lack

the clout to influence important stakeholders such as the automotive industry.

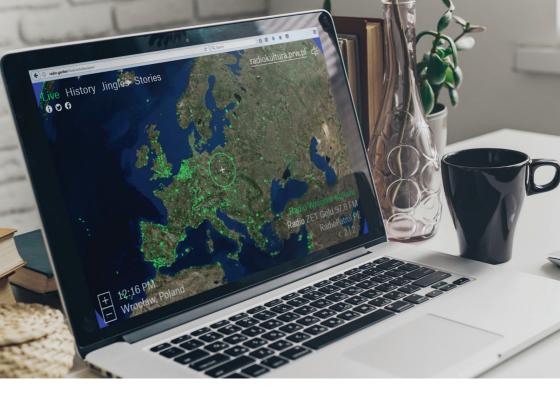
Aggregator services, particularly those developed specifically to serve broadcasters and the better known third-party services, have a valuable role to play in getting radio into harder to reach devices. The UK Radioplayer, for example, has been very active in discussions with automotive manufacturers, bringing the full weight of the country's broadcasters behind attempts to secure radio's position in the connected car dashboard of the future, and the organisation worked with Amazon to integrate its platform into the Alexa ecosystem.

TuneIn is also available on Smart TVs, wireless HiFi systems and games consoles, and it is the default radio skill within Alexa (Amazon's name for apps on its voice-controlled platform).

By excluding themselves from the most popular aggregators in their market, radio broadcasters risk limiting the opportunity for some people to find them on the devices of their choosing, although it is worth noting that online still makes up a very small proportion of radio consumption overall. While listeners may be able to find workarounds to listen via, for example, connected TV sets, the key issues are accessibility, findability and ease of use. Aggregator platforms may simply suit a given user better in some environments than broadcasters' own services – for example by offering a better adapted app interface for use when driving—making them valuable touchpoints for delivering incremental audiences

// Aggregators as a station discovery platform

Radio remains a very local business, with the vast majority of people listening to stations from their own country online despite the availability of thousands of other alternatives. Indeed, listeners



tend to stick with just a handful of stations, regardless of whether they are tuning in via broadcast or accessing online.

Aggregators can, however, play an important role in introducing listeners to stations from their own country that they might otherwise not be able to hear. Countries such as France, Germany and the UK have fragmented FM radio landscapes, with many – or all, in the case of Germany – only broadcasting to particular geographic regions. By recommending stations with a similar profile, an aggregator can introduce listeners to others in different parts of the country.

These listeners, would, naturally, be interesting for national advertisers, so long as the aggregator's technology allows them to be identified and targeted. This is an advantage when the aggregator is delivering data back to the publisher, as in the case of a service jointly developed to serve a country's radio stations, but can be

considered a missed opportunity for incremental revenue increases where there is no data sharing arrangement with the aggregator, as is the case for most third-party services.

// The negative impact of aggregators on radio stations

Broadcasters have very little control over the environment their stations appear in when accessed through third-party aggregators, and their data collection and activation capabilities are heavily restricted. They may also be unable to deliver certain types of advertising, such as display ads on the station's home page and media player, video or audio served as pre-rolls or dynamically inserted in-stream spots. They also cannot use registration and social login technologies to acquire first-party data about their listeners, which is increasingly important for targeted advertising. Unless a specific data-sharing arrangement has

been reached with a third-party aggregator, the only data the broadcaster is likely to have about this part of its audience is the limited data it can collect from its own server log files.

On their own digital properties, broadcasters can discover rich information about their online listeners, even when they are not registered, such as how they are accessing the stream, where they are listening from, the strength of their Internet connection and other things that can be used to provide an optimal user experience or improve advertising targeting. Third party aggregators prevent broadcasters from leveraging technologies such as JavaScript to enrich the data on their audiences.

CHAPTER 05: THE RELATIONSHIP BETWEEN AGGREGATORS AND RADIO BROADCASTERS

In most cases, there is little if any systematic contact between aggregators and the broadcasters whose stations can be accessed through them. However, there are instances where broadcasters have, on the one hand, been able to remove their streams from aggregators through negotiation, legal challenges to their practices or, on the other hand, engaged in mutually beneficial cooperative models.

In its survey of egta radio members, broadcasters indicated that, for the most part, their streams are made available by aggregators without their explicit consent. In some cases, egta members reported that the most significant aggregators in their respective markets do have their explicit consent, and that they have some form of relationship. This might simply be providing the aggregator with up-to-date logos, station information and the most appropriate stream URL to be used, which gives the broadcaster some control over the user

experience of listeners accessing their streams via the aggregator's platform.

In some cases, broadcasters have negotiated revenue share arrangements with aggregators, and there are also examples of aggregators working with broadcasters to offer premium content. TuneIn has entered into a partnership with the British station talkSPORT to distribute audio commentary of English Premier League football matches in English, Spanish and Mandarin. The deal, first announced in 2012, initially included territories outside of the UK, the Republic of Ireland and the European Economic Area, and was extended in 2014 to include European countries. Tuneln also has deals with the German radio station SPORT1.fm to distribute commentary of Bundesliga matches in the US and with the American broadcaster Westwood One for football, basketball and baseball coverage as part of its premium subscription package.

Broadcasters have a fairly robust tool for preventing some listening through aggregators: the use of geo-blocking. While this does not affect users in the station's home market, it does limit the amount of listening from abroad, which in turn eliminates much of the streaming costs for a part of the audience that is unlikely to be monetisable in the absence of an agreement with the aggregator to access relevant data and the technical opportunity to serve ads to international audiences. This also protects radio stations from breaching any rights agreements they may have in place, for example in relation to sports broadcasts.

However, some aggregators appear to be able to access unprotected streams, allowing users to listen from abroad. Technically savvy users can also use software solutions, such as VPNs, to circumvent geo-blocking.



// European radio broadcasters' preferred relationship with aggregators

In egta's survey and in discussions, European radio executives clearly expressed a desire for fairness in the relationship with third-party aggregators. Broadcasters have little or no legal or technical means to prevent their streams from appearing on aggregator platforms, which in some markets can account for more than 50% of online radio listening, yet they have to bear the costs for royalties and streaming. Therefore, their preferred model is to be able to get at least data, and in the best-case a share of revenues from aggregator services.

Allowing broadcasters access to data, and integrating advertising technology components would mitigate some – but not all – of the business challenges associated with aggregators. While the

targeting opportunities available to broadcasters using their own players might remain somewhat restricted, this would at least allow stations to collect some information about who is listening, which in turn could be used both to improve the advertising offer and to tailor the user experience. Listeners could, for example, receive promotional messages about the advantages and features of the station's digital platforms, potentially driving traffic back to their own environment.



KRONEHIT VS. RADIO.DE:

A LEGAL JUDGEMENT
ON THE LEGALITY OF AN
ONLINE RADIO AGGREGATOR
MAKING A BROADCASTER'S
STREAMS AVAILABLE AND
ADVERTISING AROUND IT

During the course of 2015, and with a final decision delivered in February 2016, Austria's leading private radio station brought a legal case against the online radio aggregator radio.de. Kronehit's argument was based on the unauthorised use of its radio streams and the loss of revenues from the video pre-roll advertising that the broadcaster uses to monetise listening to its online simulcast and brand extension streams. When accessed via radio.de, these pre-rolls could not be delivered by Kronehit's ad server.

Initially, Kronehit approached radio.de and demanded that the platform stopped making Kronehit radio streams available. When radio.de refused to comply, Kronehit initiated a law suit, which was ultimately largely successful.

Three court rulings

Kronehit's case led to three judgements in the Austrian courts: the Vienna commercial court (Handelsgericht Wien³), appeal court (Oberlandesgerichts Wien⁴) and, finally, the Supreme Court (Oberste Gerichtshof, OGH⁵).

The Supreme Court ruling addressed the various legal arguments put forward by the two parties and ruled that while there was nothing to prevent radio.de from linking to Kronehit's publicly available streams via its platform, it was acting illegally by preventing the broadcaster's pre-rolls from being delivered.

The first part of this decision was based on earlier rulings by the European Court of Justice on whether providing hyperlinks to content constituted a breach of copyright law. In this case, it was found that radio.de was not, in fact, doing anything illegal since aggregator had not circumvented any technical barriers to access Kronehit's streams.

However, on the second – and arguably more important – point, the court found in Kronehit's favour. A publisher may require payment for access to content in the form of a subscription, as Netflix or Spotify do, for example, or alternatively the payment may take the form of the listener's exposure to advertising including a pre-roll spot, as is the case with Kronehit's online audio streams. In effect, Kronehit's pre-rolls serve as a form of payment for listeners' access to the broadcaster's programming.

By making Kronehit's streams available to listeners without the broadcaster's pre-rolls, radio. de was effectively preventing this payment of time and attention as a prerequisite for consuming the content.

Ad server connection allows Kronehit to monetise streams on radio.de

The Supreme Court ruling, which is the final stage of the legal process, means that radio.de can only make Kronehit's streams available if the broadcaster's pre-roll spots are served. At the same time, there are no legal barriers for radio.de

to sell display advertising on their page where the link to the radio stream is placed. As a temporary and provisional arrangement between the two companies, Kronehit enabled radio.de to connect its ad server, which in turn allows the pre-roll advertising to be delivered. This allows Kronehit to monetise its simulcast and web-only radio streams when listeners access them via radio.de on top of in-stream advertising served directly from Kronehit's server into the streams.

"I don't have a problem with aggregators generally, I only have a problem with aggregators that ignore us!" explains Dr. Ernst Swoboda, CEO of Kronehit. "If we have a contract, a revenue sharing agreement or a deal of some kind, that's OK, but they are our streams and we want to decide about them."

As for any future arrangement between the two companies, Dr. Swoboda reserves the possibility to rescind this agreement and thereby remove Kronehit's streams from radio.de, for example to channel more listening through the Austrian radio industry's own platform, Radioplayer.at.

In terms of advice to other radio broadcasters, Dr. Swoboda notes the importance of determining objectives. "Do you want that the aggregator does not host your streams, or do you want them to pay you money? Everyone must decide that for themselves, and the way to achieve these objectives is different, of course."

CHAPTER 06: BRIFF MARKET OVERVIEWS

// Austria

The Austrian Radioplayer (Radioplayer.at) brings together the majority of the country's private FM stations and their online radio brand extensions, as well as on-demand content. The player console offers participating stations a high degree of personalisation, contrasting the user experience somewhat with the original UK Radioplayer from which it is derived. The stations themselves (or their sales house) sell advertising for their channels, including display, pre-roll audio and video spots.

radio.at is the Austrian address for the international aggregator radio.net, and the country's stations may also be accessed via the German version at radio.de. Please see page 30 for a case study of the commercial station Kronehit's legal case against radio.de.

// Belgium

Estimates for the proportion of online radio listening taking place through aggregators vary from 30% to as high as 70%. Belgian radio stations appear on most international aggregator websites, and there are country-specific versions of some, such as Radiosonline.be (Radiowebsites.org) and Belgie.FM (Nederland.fm). A number of mobile apps specifically designed to aggregate Belgian radio stations are also available.

There is a significant difference in the Walloon (French-speaking) and Flemish (Dutch-speaking) regions. The main public and private stations (with the exception of NRJ Belgique), along with numerous digital-only sub-brands, are all present on Radioplayer.be, which is based on the UK Radioplayer and was formerly known as maRadio.be. The Flemish stations, on the other hand, are not represented on a common

online destination, although the region's public broadcaster, VRT, brings its FM and digital-only stations together on Radioplus.

The availability of Belgian radio stations on aggregator sites is somewhat inconsistent. The Francophone public broadcaster RTBF, for example, does not appear on TuneIn at the broadcaster's request, but its stations can be freely accessed via radio.net and a host of other third-party aggregators. Some of the commercial radio stations also appear on some aggregators and not on others, in some cases with outdated logos, highlighting the difficulty broadcasters face in managing the way their brands are presented on platforms they do not control.

// France

Overall, aggregators are estimated to account for 20-30% of online radio listening, although the figure is much higher for some broadcasters (up to 80% for local and regional stations combined). International aggregators with a significant presence in France include Tuneln, RadioLine and radio.fr (the French version of radio.net/radio.de). Orange Radio is an English-language aggregator developed by the leading French mobile network operator; while it offers access to thousands of live radio stations and on-demand podcasts from around the world, the site is focussed on the country's broadcasters.

ComFM is another local aggregator that includes some international radio stations within its directory, although the majority of its on-demand shows, broadcast and online-only radios are French.

// Germany

The German Radioplayer (Radioplayer.de) was launched in 2014, initially with the country's private radio stations followed by the public broadcaster, ARD, in 2015. The functionality is similar to that of the original UK version, with the browser-based

player employing the larger, customisable format of its Austrian counterpart.

radio.de (radio.net) is based in Hamburg and is the country's biggest radio aggregator. For many commercial stations, up to 80% of radio online listening happens at radio.de The company sells its own digital display and pre-roll advertising, and synchronised audio and display advertising is also offered by the national sales house RMS.

Estimates of the percentage of listening taking place through aggregators, rather than radio stations' own players, vary widely. For radio brands with a stronger digital presence and promotion of their own apps and websites, the share of radio.de can be significantly lower (30%-40%).

// Italy

There are Italian versions of a number of international radio aggregators, including Ascoltareradio.com (Radiowebsites.org), Italia.fm (Nederland.fm) and radio.it (radio.net/radio.de).

LeRadio.com and RadioInDiretta.Fm both serve as aggregators specifically for Italian radio stations. The two platforms share several features and appear to be linked. RadioStreaming.it is another Italian aggregator, with connections to WRA, the country's web radio association. The platform currently has limited functionality, providing hyperlinks to broadcasters' own websites.

// Netherlands

Aggregators are estimated to account for 40-60% of online radio listening in the Netherlands. The country's dominant aggregator is Nederland.fm, which was launched in 2011 as a hobby project aimed to help Dutch people listen to their home radio stations when abroad and now claims (undated) more than 17 million stream starts/listeners per month. The platform has established some relationships with broadcasters in the country, including allowing them to collect data,

and it also sells audience research based on online surveys to radio stations⁶.

The owners of Nederland.fm have been embroiled in legal cases with the country's organisations representing music rights holders, Buma/Stemra and Sena, over whether the portal should be obliged to pay a licence for making radio station streams available. Nederland.fm was successful in the most recent judgement, of January 2017, in a case brought by Sena, the organisation representing musicians and producers in the Netherlands. The court in The Hague based its findings on an earlier judgement from the European Court of Justice, finding that the portal was not required to pay any royalties over those already paid by the radio stations, as there is no new audience addressed when merely linking to stream URLs⁷.

Aggregators specifically catering to the Dutch market include AllRadio.nl, Radio.NL and RadioFM. nl, while Nederlandseradio.nl is the Dutch version of the international Radiowebsites.org platform.

// Russia

In the period between 2007 and 2015, the most popular radio-related website in the country was the independent portal Moskva.FM (and its sister project Piter.FM). Unlike most third-party radio aggregators, Moskva.FM offered several unique features that made this service popular among both B2C and B2B audiences:

- Access to the full archives of radio stations in a timeline from 2007-2015;
- Monitoring of advertising and programmes;
- Statistics of songs rotations;
- Customised playlists created by users;
- On-demand listening (including stations' archives) for registered users;
- Opportunity to export songs statistics and playlists to services like Last.fm.

However, despite the fact that many radio and advertising professionals used the services of Moskva.FM (for competitive analysis, songs statistics and even as a resource in court cases regarding disputes on advertising), in 2012 leading radio broadcasters demanded the closure of access to the archives and on-demand features such as those that violate copyright and related rights of radio stations, artists and record labels. Also, according to comments from Russian radio broadcasters, Moskva.FM was cutting out original commercials from archives and replacing them with its own instream ads in addition to other forms of advertising.

In 2015 along with the arrival of new stricter antipiracy regulation, Moskva.FM closed access to the archive and significantly reduced the functionality of the website, keeping only simulcast streaming of the stations. In addition, several top radio groups won cases in Moscow's courts against Moskva. FM and removed their streams from the service, and, as a result, the popularity of Moskva.FM has decreased significantly since 2015.

In early 2017, European Media Group ceased operation of its aggregator Chameleon (launched in 2015 in partnership with Karnaval Media), and the most popular radio aggregator in the market is now 101.ru, which belongs to Gazprom-Media.

101.ru includes 200 professional and 10,000 user-created radio stations, attracting a monthly audience of 2.4 million people. It is monetised by display, audio and video advertising, competitions, sponsored stations, special projects and communication to its social media followers (+600.000 on vk.com).

There are discussions on the market about the practicability and benefits of launching joint radio aggregators for all main broadcasters (like Radioplayer), but so far broadcasters do not see a real business benefit of doing so.

// Slovakia

Slovakia's radio stations are represented on a platform called Radia.sk, which serves both as an aggregator for the country's broadcasters and as a portal for information about the industry. Content includes market share data from Slovakia's radio audience measurement service, information on station frequencies, most played music charts, news about the country's radio stations and so on. It also includes a fairly active discussion board.

Radio.sk is available as an app for iOS, Android and Windows. The app detects whether the user is listening over WiFi or a cellular network and automatically selects a lower quality stream for the latter in order to preserve data. The iOS app also includes a feature called *radio-flow* that allows users to select stations based on the CD artwork of currently playing songs, as well as the possibility to record stations and listen later.

// Sweden

The share of online radio listening through aggregators is estimated to be 20-30%, with the majority taking place on Tuneln. However, ondemand content in the form of podcasts is popular in Sweden, and a much higher percentage of this (about 85% in the case of one broadcaster) takes place on external platforms, mainly through iTunes. Broadcasters can monetise content delivered via iTunes by server-side inserted audio advertising.

// Turkey

60-70% of online radio listening is estimated to take place through aggregators. Canli Radyo Dinle provides links exclusively to Turkish radio stations, and it has a partner website that aggregates the country's TV stations. RADYO is one of a number of Turkish-specific radio aggregator apps; however, it also allows users to access radio stations from around the world as part of a package of additional features for a one-off fee.



The stations of one of Turkey's leading private radio broadcasters are presented on Karnaval. com, a platform that serves as an entertainment portal featuring live radio streams, podcasts, video and editorial content. Karnaval.com was launched by Spectrum Medya in 2012 to represent its five broadcast stations alongside a number of digital channels, and - in a move that echoed Clear Channel's decision to rename its entire company after its digital iHeart platform - Spectrum Medya redefined itself as Karnaval Media Group in 2014. Karnaval.com in notable for its high-quality interface and user experience, advanced use of data within its advertising offer and its success in reaching expatriate Turkish listeners. Triton Digital's Webcast Metrics, which measures digital audio publishers both in the US and globally, ranks Karnaval.com as the 10th in the world by session starts for January 20178.

FIGURE 04:NATIONAL URLS OF THREE LEADING AGGREGATOR SERVICES

Country	Nederland.fm National versions	Radiowebsites.org National versions	radio.net National versions
Austria	-	Radios.co.at	radio.at
Belgium	Belgie.fm	Radiosonline.be	-
Bulgaria	-	Bg-radio.org	-
Croatia	-	Radios.hr	-
Czech Republic	-	Ceskaradiaonline.cz	-
Denmark	Danmark.fm	Radio.co.dk	radio.dk
Finland	-	Nettiradiot.org	-
France	LaFrance.fm	Ecouterradioenligne.com	radio.fr
Germany	Deutschland.fm	Radiolisten.de	radio.de
Hungary	-	Radiohallgatas.hu	-
Ireland	-	leradio.org	-
Italy	Italia.fm	Ascoltareradio.com	radio.it
Netherlands	Nederland.fm	Nederlandseradio.nl	-
Norway	Norge.fm	Nettradionorge.com	-
Poland	-	Radiointernetowe.com.pl	radio.pl
Portugal	-	Radioonline.com.pt	-
Romania	-	Radio.org.ro	-
Russia	-	Radio.pp.ru	-
Slovenia	-	Radio.co.si	-
Spain	Espana.fm	Emisora.org.es	radio.es
Sweden	Sverige.fm	Radio.org.se	radio.se
Switzerland	-	Radiosonline.ch	-
Turkey	-	Radyodinle.fm	-
Ukraine	-	Radioua.net	-
United Kingdom	England.fm	Internetradiouk.com	-
Non-European	America.fm India.fm	Multiple national URLs	radio.net

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LEGAL NOTICE

This publication has been researched and produced by egta's radio department, and it draws inspiration from the team's conversations with industry experts and literature from multiple sources.

Whilst every effort has been made to ensure the accuracy of the information in publication, egta does not accept responsibility for errors or omissions.

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