January, 2015

The Streaming Audio Marketplace

A Strategic Overview of Online Audio Advertising

A RAIN News Whitepaper

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FOREWORD

ts targetspot

As you read this foreword, you might also be listening to music on your phone, tablet, or computer. The way we consume media, specifically music, news, sports, and spoken word, has fundamentally shifted to streaming audio. No longer the domain of early adopters, this is now mainstream behavior.

As consumers have increasingly moved to this space, an infrastructure has developed and matured around helping brands reach listeners. TargetSpot is excited to sponsor this comprehensive and important guide, which will help advertisers navigate the streaming audio landscape and better connect with their consumers.

TargetSpot has been a participant and advocate of streaming audio since the medium's infancy. We have commissioned a number of studies over many years to help understand, support, and encourage its growth and advertiser adoption. During this time of change, TargetSpot has provided advertisers and publishers around the world with tools across multiple facets of the streaming audio infrastructure to reach consumers and grow their businesses. We believe this whitepaper will serve as another important tool that will further advance the development of this medium and support the efforts of publishers and advertisers to participate in its growth.

David Kert
CRO, TargetSpot

AUTHOR'S NOTE

We are able to offer this whitepaper, and The Streaming Audio Marketplace Webinar, free of charge to RAIN readers thanks to the generous support of our exclusive sponsor TargetSpot.

Streaming audio is one of the most dynamic industries in the digital business landscape. TargetSpot owns a crucial role in connecting buyers and sellers, advertisers and publishers. That connection is the engine of Internet radio that powers audio streams into the future, bringing convenience and selection to the media choices of millions of people.

We are grateful to TargetSpot for supporting RAIN's ongoing mission of knowledge and advocacy.

Brad Hill
Managing Editor, RAIN News

INTRODUCTION

Audio has been streamed online for 20 years. Consumer awareness and adoption of streaming audio has grown during that period, as have opportunities for advertisers. The last three years (2011 – 2014) have seen an accelerated pace of awareness and adoption of streaming audio, raising the media category from niche to mainstream among consumers.

Streaming audio platforms generally have two business models – a subscription based model that charges listeners a fee for access, or ad supported models which offer programming to listeners for free, monetizing the audience with advertising sales. Hundreds of music services and thousands of Internet radio stations are in the market today. Most listeners choose ad-supported free listening, making advertising the primary revenue model for Internet audio publishers. Streaming audio's growing audience has attracted increased interest from advertisers – some viewing it as an extension of radio advertising, others seeing streaming audio as a complement to digital ad campaigns.

Although streaming audio borrows key concepts and terminology from broadcast radio (e.g. "Internet radio"), it is not a direct translation on the programming and advertising sides. The program experience is often more personalized to the user, and interactive, than terrestrial broadcasts. And on the business side there are key differentiators for advertisers:

- **Lower spot load**: Audio streams generally run fewer spots per hour than traditional radio, so marketing messages face less competition for the listener's attention. Streaming ads stand out more.
- **Digital ad technology**: Big Data, audience segmentation, smart inventory, precise tracking, new ad products – streaming audio benefits from its native digital infrastructure. Streaming ad campaigns can be smart and exact.

This paper is a strategic overview of the online audio advertising market. It provides coverage of these key areas:

- **Audience Definition**: Size of the market with growth trends and projections; types of streaming audio content; methods of listening.
- **The Advertising Marketplace**: Internet radio ratings; campaign planning and evolution; ad technology vendors; buying platforms; ad networks; programmatic advertising; types of ad units
- **Mobile Audio**: Measuring the growth of mobile listening; mobile ad-spending projection; streaming in cars; apps; voice-activated ad engagement
- **Features and Benefits of Streaming Advertising**: Targetability; measurability; audience affluence; audience tolerance for advertising; low ad loads
- **Future Trends**: Mobile; connected cars; Big Data; programmatic buying; spoken-word streaming programs.

Streaming audio, for all its growth, is still in early days as an advertising opportunity. It enjoys the same consumer attraction as traditional broadcast radio: deep love of the medium and the programming. At the same time, streaming offers compelling advantages that drive consumer adoption upward while providing value and return to advertisers.

"In traditional over-the-air radio, marketers can only roll out blanket campaigns that cannot target specific demographics. With online streaming, however, marketers can now measure and target ads in the audio domain." – Mobile Marketer

"Audio uniquely drives engagement with advertisements. Audio compels people to take action." –Michael Lawless, CEO, Clip Interactive

"Many people are content to engage with a few ads in exchange for hearing songs they love, whenever they want. The best way to reach audio listeners is through audio." –Dave Jimison, f#

CHAPTER 1: DEFINING THE AUDIENCE

The steep growth curve of online radio and music services is emblemized by Pandora Media, whose Internet radio service saw a 112% increase in audience size, and a 283% rise in the number streaming sessions from July, 2011 to July, 2014.

That degree of dramatic growth concentrated in one well-recognized service makes a compact data point, but the audience growth for streaming audio is spread out among many brands and platforms, furthered by consumer technology that powers new methods of listening.

As described in the next section, nearly half of American adults and teens listened to online radio every month in 2014, and more than half in certain demographics. It's not just audience size which is growing; the amount of time spent listening to streaming audio is ticking upward year over year.[1]
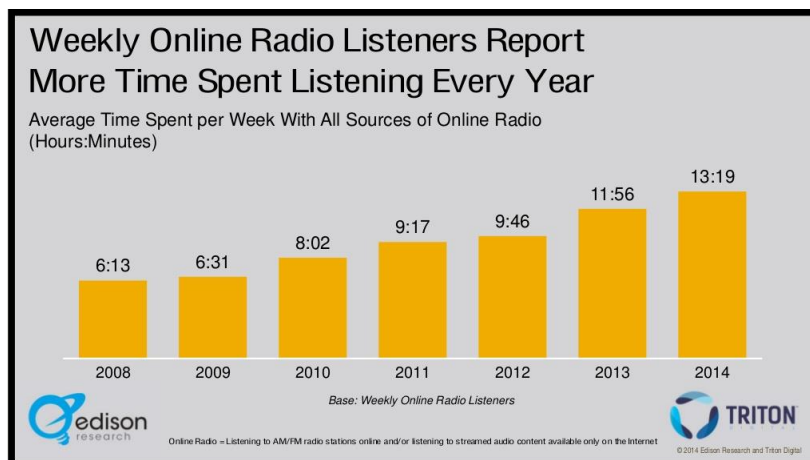
Because of mobile computing and related consumer services, people listen to audio during times of day, and in places, that were mostly silent 10 years ago. The audio pie is growing, even as it undergoes a re-distribution of listenership among music products (CDs, downloads), terrestrial radio, and streaming. It is mostly streaming audio which opens new times and locations of listening, expanding the opportunity for advertisers to reach consumers in new dayparts and environments with their audio message.

This chapter examines the size of the streaming audio market, its characteristics, types of content, and delivery platforms.

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[1] Edison Research: *The Infinite Dial 2014*, http://www.edisonresearch.com/the-infinite-dial-2014/

HOW BIG IS THE AUDIENCE?

In the past 18 months, the U.S. streaming audio market has reached for, and by some measures surpassed, the benchmark of 50% adoption among adults and teens. The first documented 50-percent milestone was in an Edison Research study called *The New MainStream*. That survey of American adults and teens found that 53% of the online population had listened to streaming audio.

In a deeper dive into the listening market, Edison Research and Triton Digital released early-2014 metrics indicating that streaming audio was attracting an American adult/teen audience of 124-million people each month, representing 47% of the population[2].
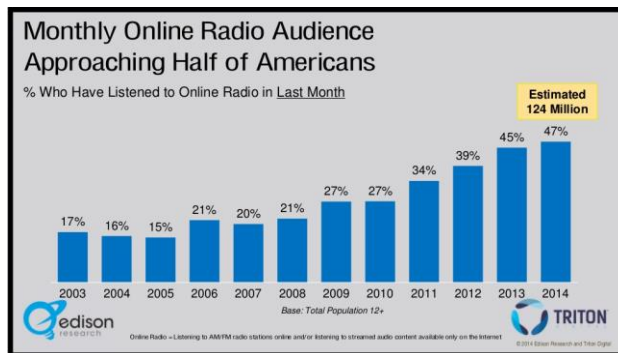
Half or more of Americans between the ages of 12 and 54 listen to streaming audio, with the strongest adoption skewing to younger listeners – a dominant 75% of the 12-24 age group listen each month.

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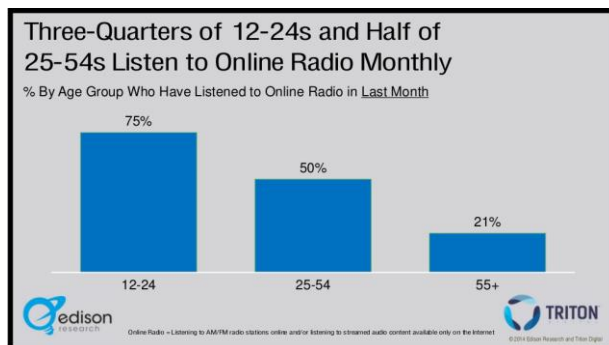
[2] Edison Research: *The Infinite Dial 2014*, http://www.edisonresearch.com/the-infinite-dial-2014/

94-million people listen to streaming audio every week, representing over a third of the American population[4]. Again, younger groups drive that percentage higher; nearly two-thirds (64%) of the 12-24 demographic listen to streaming audio at least weekly.

Online Radio Reaches Estimated 94 Million Weekly

% Who Have Listened to Online Radio in Last Week

Estimated 94 Million

Year	%
2003	8%
2004	8%
2005	8%
2006	12%
2007	12%
2008	13%
2009	17%
2010	17%
2011	22%
2012	29%
2013	33%
2014	36%

Base: Total Population 12+

Online Radio = Listening to AM/FM radio stations online and/or listening to streamed audio content available only on the Internet

© 2014 Edison Research and Triton Digital

Edison research   TRITON

PROJECTED AUDIENCE GROWTH

In February, 2014, eMarketer released a forecast of audience growth for streaming audio[5]. The eMarketer forecast started with a projection of 160-million monthly listeners (o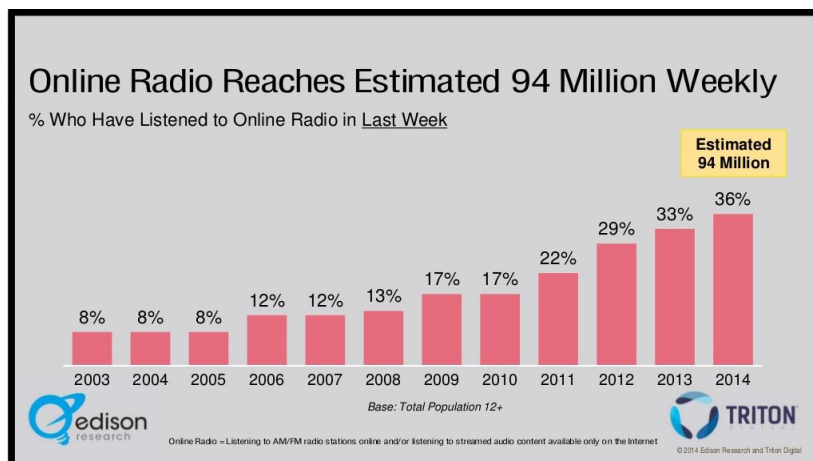f any age) by the end of 2014. Predicting several years down the road, eMarketer charted continued growth to 183-million monthly listeners in 2018.

US Monthly Digital Radio Listeners, 2012-2018

	2012	2013	2014	2015	2016	2017	2018
Monthly digital radio listeners (millions)	132.5	147.8	159.8	169.3	175.8	180.0	183.4
—% change	17.3%	11.5%	8.1%	5.9%	3.9%	2.4%	1.9%
—% of internet users	55.8%	60.1%	63.5%	66.0%	67.4%	68.0%	68.4%
—% of population	42.2%	46.7%	50.1%	52.7%	54.3%	55.2%	55.8%

Note: internet users of any age who have listened to digital broadcasts of terrestrial radio stations, digital-only radio stations or audio podcasts via any device at least once per month
Source: eMarketer, Feb 2014

168354   www.eMarketer.com

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[4] Edison Research: *The Infinite Dial 2014*, http://www.edisonresearch.com/the-infinite-dial-2014/

[5] eMarketer: Music Listeners Pump Up Volume on Digital Radio, http://www.emarketer.com/Article/Music-Listeners-Pump-Up-Volume-on-Digital-Radio/1010600/1

SHARE OF EAR: STREAMING'S PLACE IN ALL LISTENING

We have looked at the reach of streaming audio and the time spent with online radio. From a higher altitude, we can see the place of streaming audio in the entire landscape of listening to audio from all sources.
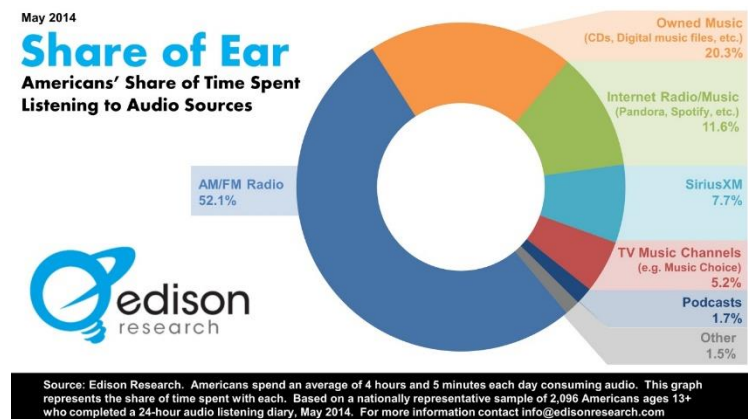
In 2014 Edison Research compiled its first *Share of Ear* report[6], seeking to understand what types of all audio Americans listen to. Over 2,000 Americans were surveyed about their listening choices during all waking hours, including AM/FM radio, owned music (e.g. CDs), streaming audio, satellite radio (Sirius XM), TV music channels, podcasts, and an "Other" category.

In this total-audio landscape, streaming audio owned 11.6% of all listening.

THE ADVERTISING REVENUE MARKET

In May of 2014, SNL Kagan released its *Economics of Internet Music & Radio*, a projection of streaming advertising revenue from 2013 to 2023. Marking the 2013 ad-income level at $889-million, SNL Kagan predicted double-digit growth for each of 2014 and 2015, lifting total streaming ad revenue to $1.5-billion in 2015.

Looking further out, SNL Kagan projected total advertising revenue in pureplay streaming (not counting terrestrial webcasts) to be $3.2-billion in 2023. At that projected 2023 level, advertising revenue from streaming audio would represent 3.6% of total U.S online ad revenue.

Report author Justin Nielson told RAIN News that mobile listening and connected cars played significantly into the projection[7].

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[6] Edison Research: *Share of* Ear, http://www.edisonresearch.com/edison-research-conducts-first-ever-share-of-ear-measurement-for-all-forms-of-online-and-offline-audio/

[7] RAIN News, "New SNL Kagan Internet music study: 10-year revenue growth; music licensing fees a 'burden'," http://bit.ly/1gfSmrb

TYPES OF STREAMING AUDIO

As on radio, streaming audio is comprised of both music and talk programming, with music streams carrying most of the listening. Many music services also present comedy recordings as a listening category.

Music services fall into two buckets: on-demand services and Internet radio services. They differ in features, cost to use, and music licensing regulations. Podcasts represent a third streaming content category.

ON-DEMAND MUSIC SERVICES.

On-demand music services are also called *interactive* music services.[8] They offer more flexible access to music than *non-interactive* services. (See the next section.)

On-demand services are cloud-based jukeboxes that offer direct access to single tracks, albums, and playlists. These platforms are often regarded as alternatives to owning music, because they contain ownership-like features. User features may include options to assemble personalized libraries of tracks and albums, create playlists, and download music which is synched across computers and mobile devices for offline listening. These features are available by monthly subscription, and subscribers are not exposed to advertisements.

At the same time, some (but not all) on-demand services also offer non-interactive listening, with radio-like features that are more customized than broadcast radio, and which resemble non-interactive online radio. The business modeling in these hybrid on-demand services contains two parts. First, free listening that is monetized through streaming audio advertising. Second, subscription service which provides the highly interactive features for a flat monthly fee. Often, the free-listening part functions as an introduction and funnel to paid subscription.

Other on-demand music services are built on subscriptions only – like cable TV, they require a monthly payment to get started. Rhapsody (one of the oldest) and Beats Music (one of the newest) are two examples of pure subscription music. There is no advertising in those services at this time.

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[8] *Interactive* and *non-interactive* are legal terms as applied to music services. *Non-interactive* online radio, like Pandora, usually does offer some degree of interactivity, limited compared to *interactive* services. Legally, the difference relate to music licensing under U.S. copyright law. For the advertiser, *non-interactive* audio streaming is the main field of action, as most of that listening is monetized by commercials. Note that some *interactive* services (e.g. Spotify) also provide *non-interactive* radio-style listening, with ads.

INTERNET RADIO SERVICES

Internet radio services emulate broadcast radio by offering a more *lean-back* listening experience with limited interactivity. In the government-regulated realm of music licensing, they are called *non-interactive* music services. By definition, the compulsory license they operate under to access the music they stream limits the interactive elements of their service. Most Internet radio stations and platforms have ad-supported revenue models. In some cases, a subscription plan is offered to users, the main feature of which is eliminating the ads (without adding interactive features as described in the previous section).

Some Internet radio is partially personalized. The most common personalization feature is artist-seeded or song-seeded stations, where the user plugs in a favorite band or song, and the service plays related music. In addition, users can vote songs up or down, and skip songs they don't like. The most sophisticated online radio outlets have music intelligence layers that learn about the user over time, improving each listener's experience. Pandora Radio is the market-leading example.

Some ad-supported Internet radio contains none of this limited interactivity. Thousands of small online stations are more closely aligned with the traditional broadcast experience; they play a stream of audio which offers no adjustment or customization. The user leans back and listens without ever needing to look at, or touch, a screen. Many broadcasters also offer streams of their over-the-air programming which falls into this category.

PODCASTS

Podcasts have existed for at least ten years, and are named for the Apple iPod, which was introduced in 2001. The definition of podcasting, and the way it works, have changed over the years. Podcasts started out as download products, at a time when streaming was not as prevalent as it is today.

Podcasts are best described as Internet-based audio and video programs. Podcasts are streamed on-demand, and many can be downloaded as well for offline listening. They are mostly talk shows. Some of the most popular programs are archived AM/FM shows, but successful *pureplay* (Internet-only) podcasts also exist.

These programs are not traditionally offered in streaming music services – but that is changing. In October, 2014, global subscription music service Deezer acquired podcast listening app Stitcher[9], integrating Stitcher's 35,000 on-demand talk programs with Deezer's music library of 30-million tracks. Before that, streaming audio aggregators (see below) TuneIn and iHeartRadio offered podcasts and on-demand talk shows.

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[9] RAIN News: "Deezer acquires Stitcher," http://bit.ly/ZLMUtN

Most users access favorite podcasts, and discover new ones, on specialty platforms that assemble catalogs of shows. The largest and most important podcast directory is in iTunes. In some cases (not iTunes), the aggregating platforms act as ad representatives, selling audio inventory across the podcast portfolio.

Buying and selling ads in the podcast realm is less evolved than in other streaming audio scenarios described in this section. Automated systems of planning, buying, and tracking (described later in this paper) do not apply to podcasts. Buying and selling is generally more personal, and the brand message is often more personal too. Native advertising, in which the podcast host reads and personalizes supplied copy, is prevalent. This type of advertising is often looking for a direct response to an offer specific to the program, and the return on investment is measured on that basis.

HOW PEOPLE LISTEN TO STREAMING AUDIO

People listen to streaming audio on computers, phones, tablets, wireless home speaker systems, car dashboards, and through emerging categories of computing devices such as digital eyepieces (e.g. Google Glass) and other wearables such as smartwatches.

In this sprawling device landscape, audio is streamed either directly by branded music services and Internet radio apps, or indirectly on aggregating platforms that service multiple streaming stations.

MUSIC SERVICES AND SITES

People connect directly with music services on the service websites, and through mobile apps. (In an increasingly app-centric world, music service websites are also called *web apps* or *desktop apps*.) Frequently and ideally, all of a service's apps – desktop, tablet, phone – present the same features and user experience, so the user always feels at home regardless of the platform.

Advertising opportunities and creative possibilities can vary from desktop to mobile, because of the dramatically different screen sizes. That said, audio ads work equally well in all screen formats. And since listening to audio is generally an eyes-off experience, whether at a computer, in a car, or on the street with a smartphone, audio advertising is device agnostic.

As with Internet-only music services, the web streams of terrestrial radio are (often, but not always) available to listeners on computers, tablets, and phones. It is common for radio station websites to offer a "Listen Now" button for listeners to tune in online. In the simplest implementation, the radio stream is an exact simulcast of the broadcast signal, including ads.

> NOTE: Some radio stations choose not to webcast, because of the expense. In the U.S., broadcast radio stations pay higher music licensing fees in their online streams than in their terrestrial signals. In October of 2014 the National Association of Broadcasters (NAB) claimed that "some [broadcasters] have reached a business decision to limit their

> streaming or not stream at all, despite the potential to expand their listening audience"
> because of music royalties applied to streams.

Terrestrial radio stations sometimes have individual mobile apps that provide their audience with mobile on-ramps to their streamed content. Online platforms that aggregate radio stations serve as a directory of available stations and enable stations to easily participate in the mobile streaming space.

The upshot is that most terrestrial stations also stream their audio, and thousands of those streams are delivered to mobile devices and cars.

STREAMING AUDIO AGGREGATORS

The scope, variety, and accessibility of Internet radio are greatly assisted by platforms that act as tuners, offering multiple stations and providing one-click listening. These tuners may be specialized, listing only stations within a certain network or group, or broadly cover many stations.

As mentioned in the previous section, broadcast stations gain mobility for their webcast streams, and also potentially gain bigger audiences, unrestricted by geography, by joining an aggregator. Two major platforms for browsing and listening to broadcast radio stations online are TuneIn (independently owned) and iHeartRadio (owned by iHeartMedia, formerly Clear Channel, the largest radio holding company in the U.S.).

TuneIn hosts over 100,000 station streams from around the world – both terrestrial webcasts and online-only (*pureplay*) stations. TuneIn also offers podcasts, archived radio programs, live sports events, and news. Listeners can search for stations based on music, location and more. TuneIn's mobile app and extensive list of deals with auto manufacturers have earned it 50 million listeners, making it one of the largest aggregators in the industry.

iHeartRadio streams radio stations in the iHeartMedia network and in other radio groups. In addition, the platform acts as an online radio music service, allowing users to create music streams based on an artist or song. iHeartRadio also supplies pre-built playlists in many music genres. As such, the service is a unique blend of live broadcast radio and customizable Internet radio.

Other aggregators serve and cater to independent programmers who wish to start an online radio station and hope to build an audience and some advertising revenue. These platforms provide the technical tools to get started, making a turnkey solution for programmers and would-be broadcasters without a great deal of technical knowledge. The services also cover the music licensing, sell the advertising, and place ads into the streams. They are sometimes used by broadcast stations to facilitate and host their streams.

Three of the major aggregators for independent programmers are:

- Radionomy: a global company that offers a platform for creating, managing, hosting and monetizing online radio stations.
- SHOUTcast: a pioneering platform formerly owned by AOL and recently purchased by Radionomy, which hosts over 50,000 stations.
- Live365: a stream-hosting company for audio producers of all sizes.

CHAPTER 2: THE ADVERTISING MARKET

The advertising marketplace for streaming audio consists of sellers and buyers and the technology partners that facilitate transactions. What are the mechanics that drive monetization of streaming audio advertising?

FUNCTION	DESCRIPTION
Audio Publishers	Audio publishers fall into two main groups: Webcasts of terrestrial radio stations, and Internet-only (pureplay) stations and platforms. Pureplays can further be divided into branded direct programmers (e.g. Pandora) and aggregators of streaming audio choices (e.g. Radionomy, SHOUTcast, Live365.)
Audience Measurement Firms	Standardized ratings provide audience measurement including audience size, reach, and time spent listening. As with traditional radio, audience measurement creates a basis for buying and selling streaming audio advertising.
Advertisers and Agencies	Advertisers and their agencies make up the demand side in the streaming audio ad economy. They purchase ads based on developed criteria, seeking to measure their return on investment.
Ad Technology Vendors	These firms offer tools that enable audio publishers to schedule, deliver and measure ad campaigns.
Campaign Management Platforms	Companies in this space provide software that advertisers use to plan advertising campaigns. These tools have the capacity to integrate audience data, enabling platforms on both the buy and sell side of the industry accuracy in planning, billing and analyzing campaigns.
Sellers	Streaming audio ads can be sold in a number of ways. Direct sellers work for the content platform (publisher), selling ad campaigns to run exclusively on their service. Sales reps represent several or many content providers, and can sell ads on any one or group of those. Networks sell ads across an established grouping of stations, often offering less specific selectivity to buyers in terms of certain platforms, in exchange for a lower rate. There are also some dedicated networks in the marketplace that offer access to one branded group.
Programmatic Buying Platforms	Programmatic ad-buying is machine buying, targeted to availability and audience attributes in real-time, sometimes priced via a bidding method. Programmatic can be a feature of large media-buying systems. There are also dedicated programmatic systems for brand groups. The programmatic category is treated distinctly in the market as a growing trend increasingly demanded by advertisers.

Audio publishers are described in the previous chapter ("Defining the Audience"). This chapter is about the functions and technologies that underpin the streaming advertising market, and also specific ad products.

STREAMING AUDIENCE MEASUREMENT

A ratings system is necessary in a value-driven audio market. Traditional radio ratings organize the buying and selling of audio commercials around size of the listening audience based on ratings. Those ratings describe a station's audience size during defined dayparts, as well as audience reach within a station's geographic market. Streaming audio measurement includes similar metrics, along with more digitally oriented data that enables real time impression based measurement as well.

In broadcast radio, ratings are produced by a *survey* method, similar to political opinion polling. A sample of a market's population is surveyed (using different methods) about individual radio listening choices, and results are extrapolated to represent the entire population. Some standard audience metrics are key radio ratings:

- AQH (Average Quarter Hour): Used to define audience density within a time period, AQH is the average number of listeners per 15 minutes, tuned in to at least five minutes within that quarter hour. People can be counted more than once during a period – for example, if a listener tunes in for 10 minutes at noon, then again at 2:00pm for 10 minutes, that person will factor into the AQH rating twice. AQH can be expressed as a number of listeners, or a percentage of the listening market.

- Cume (Cumulative audience): Similar to "unique visitors" on the web, Cume measures the total number of unique listeners during a reporting period. All individuals are counted one time regardless of multiple tunings. In the example above, the person tuning in twice would be counted once for the Cume. Since not all listeners are listening at the same time, Cume is also considered to be the potential reach of a station.

- TSL (Time Spent Listening): The length of time tuned into a station during a listening session. TSL balances AQH by indicating how the audience sticks to a station once tuned in.

Streaming audio ratings are not derived from the survey method. Because digital listenership can be exactly counted according to computer logs, there is no need for estimates or extrapolations. This methodology is called *census* measurement. It differs from *survey* ratings as elections (counted votes) differ from pre-election polling (phone surveys).

Accuracy is the good news. The marketplace challenge is to align different methods so that advertisers can evaluate and integrate broadcast and streaming in their campaigns.

TRITON DIGITAL/WEBCAST METRICS

Triton Digital is the market leading audience measurement firm for streaming audio, and it has developed the industry standard for measuring digital listening. Its ratings products turn computer log census data into ratings that traditional radio buyers and sellers can understand, enabling streaming audio publishers to be evaluated using criteria that resembles radio station ratings. In March, 2014, Triton's local ratings product (called Webcast Metrics Local) was accredited by the Media Rating Council (MRC). The MRC's sanction was an important stamp of approval giving advertisers and agencies confidence that Webcast Metrics were trustworthy audience measurement tools.

Triton Digital issues a monthly report which serves as a general ratings guide to streaming audio. Called the Webcast Metrics Top 20 Ranker, it provides a ranked list of the most-listened streaming audio publishers measured by the ratings service.[10] The Ranker's key metric is Average Active Sessions (AAS), which is nearly identical to AQH.[11]

NIELSEN

Nielsen Audio was created when media measurement company Nielsen acquired radio ratings firm Arbitron in 2013. Nielsen Audio took over Arbitron's technology and methodology and continued survey-based ratings of terrestrial radio, including also estimates of streams simulcast online by those stations, provided the simulcasts were unaltered.

Nielsen produces ratings only for broadcast radio at this time, but has stated an intent to bring online audio into its reporting. Jeff Wender, Nielsen SVP of Digital, told a conference audience at RAIN Summit Indy in September, 2014, "Measuring digital audio is one of our biggest priorities."[12] At the Nielsen Audio Advisory Council meeting in November, 2014, it was reported that 30 radio stations were testing Nielsen's webcast measurement solution, which would be launched more widely in mid-2015.[13]

At stake for radio stations, advertisers and agencies is unification of radio ratings, where listenership is measured across the broadcast and Internet platforms. At present, measurement of terrestrial and online audio are done in separate platforms using similar metrics but different methodologies.

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[10] Only audio publishers which subscribe to Tritons metrics products are included in the Top 20 Ranker. That group includes the U.S.'s largest radio station groups (for measuring their streaming webcasts) and many Internet-only platforms. The monthly reports are considered proxies for the state of streaming and its listenership trends.

[11] In addition to a standard AQH rating for streaming audio, Triton Digital promotes a metric called Average Active Sessions (AAS). AAS is like AQH, except that the listener needs to be receiving the stream for only one minute, not the five minutes of listening required for AQH.

[12] RAIN News, "Nielsen digital radio measurement in the wings" - http://bit.ly/1BGAnWP

[13] RAIN News, "Nielsen Audio reportedly targeting mid-2015 for streaming ratings" - http://bit.ly/1wXyvbo

AD INSERTION TECHNOLOGY

Broadcast AM/FM stations make up a large portion of online audio offerings. Many station webcasts offer programming similar to their terrestrial stations. Some play the same commercials online as on-air, but many choose to use *ad insertion technology* that enables them to monetize the commercial inventory of their streams separately. Technology companies which facilitate this include, but are not limited to:

- **Triton Digital:** The Triton Ad Platform (Tap) is a technology platform which delivers ads, manages campaigns including competitive separation of ads, and tracks companion banners that sometimes go with audio ads (see the Ad Units section of this chapter). Tap OnDemand is customized for Internet radio services, while Tap Live is designed for AM/FM broadcasters.

- **AdsWizz:** Ad-tech company AdsWizz has an ad-insertion product called Audio Injection for Streamers (AIS). It is a platform-agnostic tool (FM webcast stream or Internet-only radio) that works with many audio formats in music streams, and can work with several injection prompts including metadata, beeps, and jingles that precede ad breaks. AdsWizz provides ad insertion for iHeartRadio.[14]

- **Abacast:** Recently acquired by Wide Orbit, Abacast is a provider of streaming services for radio. Its cloud-based ad insertion solution offers individualized targeting flexibility – for example, injecting one ad to smartphone listeners and another to 25-34 male listeners in certain zip codes.

CAMPAIGN PLANNING AND EVALUATION

Internet delivery of audio has spurred the development of entirely new, digital methods of buying and selling commercials. Traditional person-to-person selling relationships are still prevalent, at radio stations and online services. Market-leading Internet radio service Pandora, for example, has invested in dozens of local-market sales teams for feet-on-the-ground selling of Pandora's advertising opportunities. But in streaming audio, even legacy sales relationships are informed by precision audience metrics that only digital platforms can provide.

Digital technology in audio advertising has created a buy-side expectation of key values:

- Automation: any advertising campaign has many parts handled by specialists in buying firms, from planning to ordering, tracking to billing. Automation ideally ties together campaign planning functions into a seamless unified interface. For example, an advertiser can check

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[14] RAIN News: "iHeartRadio partners with AdsWizz to monetize streams," http://bit.ly/1tvA9xg

results of a certain ad in a direct response campaign in almost real time, and adjust accordingly.

- Data: "Big Data" is a technology trend that influences industries as diverse as retail, medicine, politics ... and streaming audio. Ad campaigns are increasingly informed by a fine-tuned understanding of the audience, far more precise than station/city/genre identifiers of traditional radio buying.
- Targeting: As audiences are better defined, the ability to configure a detailed addressable market is of high value to advertisers, and increasingly expected. The realm of digital efficiency is not just about pricing, but about exact and effective targeting of audience segments receptive to marketing messages.
- Precision fulfillment: Because all streaming audio is a one-to-one medium (unlike broadcast's one-to-many technology), every aspect of outgoing programming can be logged – including the individual commercial impressions.

> "Digital Audio continues to achieve huge growth and momentum and presents a great opportunity for advertisers to speak to their target audiences and deliver results" –Mitch Kline, CEO, TargetSpot

CAMPAIGN PLANNING PLATFORMS

The digital expectations of advertisers and agencies are addressed by companies that serve the buy-side. Streaming audio publishers and advertisers meet on platforms where ad inventory and audience data intersect. The results are web-based campaign planning environments. Examples of these services include:

- **Strata**: A media management buying platform founded in 1984, Strata integrates many different media types into one platform, so cross-media campaigns (broadcast, streaming, TV, display) can be planned in one location. The company serves over 1,000 buying agencies.

- **Mediaocean**: Like Strata, Mediaocean is a broad, multi-channel platform for buyers. Integration of the entire planning and campaign workflow is achieved with a suite of connected products. The company serves 80,000 users.

Other technology vendors serve streaming audio publishers as well as their terrestrial counterparts. These services create business management software for the sell-side -- media companies. Features can include managing inventory, creating reporting statistics for advertisers, and invoicing. The most complete solutions seek to assist the entire workflow of conducting an ad-revenue business. Two such companies are:

- **Marketron**: A suite of Marketron products branded as Mediascape allows publishers to schedule campaigns, set up ad injection, generate reports on fulfillment and performance statistics ("proof of play"), and invoice clients.

- **WideOrbit**: A provider of management software for media companies, WideOrbit offers a soup-to-nuts product line can perform radio automation and manage ad campaigns. WideOrbit has acquired specialty technology vendors to build up the digital/streaming side of its business: Paris-based Fivia provides digital order management for ads; Vancouver-based Abacast specializes in streaming technology and ad monetization; Gothenburg-based Admeta is a sell-side programmatic ad platform; U.S.-based Castfire provides ad insertion for on-demand audio and video.

> "I encourage many of my clients to give in-stream audio a try. Brand recall and engagement with in-stream ads typically perform better than traditional audio campaigns." –Denise Bulgin, True Media

AD NETWORKS

Ad networks are companies that group audio publishers together, combine their ad inventory in targetable ways, and sell across publishing brands using technology platforms that manage inventory and inject ads. Publishers join ad networks to take advantage of group scale, and exposure to advertisers they wouldn't be able to attract alone. Advertisers and agencies buy into the effectiveness and efficiency of reaching large audience segments across multiple stations.

Leading examples of streaming audio ad networks include:

- **TargetSpot**: TargetSpot represents streaming inventory that reaches 50-million listeners. Audience segmenting includes platform, listening device, demographics, behavioral aspects, psychographics, dayparts, music genres, and geography to the zip code level. An analytics platform measures campaign performance. TargetSpot merged with Brussels-based station aggregator Radionomy in December 2013, expanding the ad network into Europe.[15] A month later Radionomy acquired SHOUTcast, another aggregation platform with 50,000 stations, and those stations were added to TargetSpot's ad network in July, 2014.[16]

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[15] RAIN News, "Radionomy and TargetSpot combine," http://bit.ly/1bU7B9P

[16] RAIN News, "SHOUTcast re-launches with Radionomy integration and improvements for station owners," http://bit.ly/Wy3Cfg

- **Triton Digital**: Triton Digital's Audio Ad Network can sell across 3,000 audio publishers (terrestrial-based and pureplay streams) streaming to 37-million monthly listeners. Audience targeting includes demographics, gender, geography, listening device, and programming format. Impression tracking is part of the reporting component. Audio brands included in Triton's network include terrestrial webcasts (e.g. radio groups Cumulus Media, Entercom, CBS) and pureplay Internet streamers (e.g. Slacker Radio).

AD REPRESENTATION

While ad networks (see above) collect cross-brand inventory into a technology system for planning and executing campaigns, ad rep companies are human-powered sales organizations that likewise work with multiple publishers. Stations are combined into groups for selling based on specific ad campaign criteria, and buyers generally have greater options for selectivity. Three examples illustrate ways in which ad representation can be shaped and brought to market:

- **AdLarge**: New York-based AdLarge works with multiple streaming audio sources, podcast platforms, and radio stations to create campaign programs for buyers. The company sells packages segmented by daypart, local market, programming type, and others.

- **AudioHQ**: A recently-launched boutique ad-repping firm, AudioHQ is addressing what it calls a "middle market" between the giant buying platforms run by software, and super-premium content represented by salespeople. AudioHQ forms partnerships with brand inventory at small scales, representing it both by individual brand and in combination.

- **KRG Digital**: Part of Katz Radio Group, KRG digital is a leading radio representation company for 3,000 stations and many digital platforms. Most of the streaming stations it represents are also represented on the broadcast side by Katz Radio. KRG Digital's streaming audience is presented as an aggregate in the monthly Webcast Metrics report from Triton Digital.

DIRECT BRAND SELLING

In the midst of cross-brand buying platforms, multiple-brand ad networks and ad-repping companies, some streaming publishers, large and not-so-large, sell ad inventory directly to advertisers and agencies.

Among pureplay internet companies, market-leader Pandora owns the most evolved and ambitious direct local-sales operation. The company has built its own sales force in local markets. By the end of 2013 those local offices existed in 29 markets; nearly 40 toward the end of 2014.

As Pandora competes with broadcast radio with feet on the ground in local markets, it also competes with buying platforms in its data operation, which creates sophisticated audience targeting according to user registration information and behavior within the service. Correlating its own extensive data with other information (such as U.S. census results) Pandora can offer a range of audience segments such as political affiliation. Pandora monthly audience is about 76-million people (September, 2014), making this one publisher an important streaming market.

Other big-brand pureplays also invite direct advertiser contact, including Radionomy (which merged with ad network TargetSpot), Spotify, Live365, while some employ a staff of direct sellers and also work with sales networks or reps. Slacker and AccuRadio are in this group.

Rdio, one of the most recognized online-only music services, entered into an equity partnership with radio group Cumulus Media in September, 2013. In that arrangement, Cumulus (which owns a portion of Rdio) exclusively represents Rdio inventory through its national sales force.

iHeartRadio, which offers terrestrial webcasts and pureplay streaming stations, is folded into a lineup of advertising assets that includes 850 iHeartMedia radio stations and a content syndication network. Advertisers can contact iHeartMedia directly about streaming campaigns; iHeart uses an extensive staff of radio personnel to sell inventory.

PROGRAMMATIC PLATFORMS

Programmatic buying, arguably the most important media advertising trend of the last five years, is likely to increasingly influence how streaming audio is bought and sold. (See the "Future Trends" section.)

A survey by Strata in November, 2014, revealed that agencies are becoming more open to programmatic campaign planning, as trust in the platforms and inventory quality rises.[19] In that research, respondents named audience targeting, buying efficiency, and campaign insights as the most important values of programmatic.

Programmatic advertising was spearheaded by the web display industry, which was on track to generate $4.5-billion dollars in programmatic buying by the end of 2014.[20] An eMarketer study projected programmatic display to reach $8.7-billion in 2017 – and that is for real-time bidding (RTB), one aspect of programmatic platforms.[21]
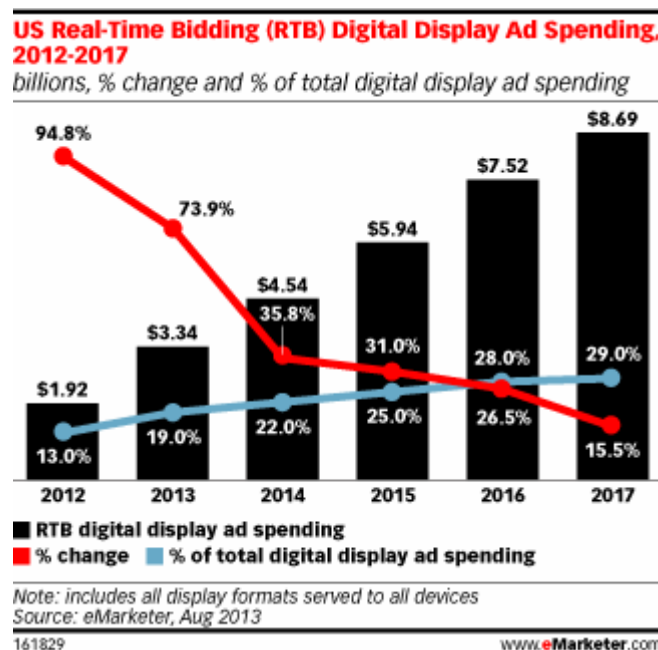
The audio field generally is a few years behind web display, but three factors will increase programmatic buying:

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[19] Strata: 3rd Quarter 2014 Agency Forecast Survey, http://www.gotostrata.com/surveys/3q14survey.html

[20] eMarketer: US Real-Time Bidding (RTB) Digital Display Ad spending, 2012-2017.

[21] Real-time bidding puts advertisers in competition with each other for pricing available ads targeted to audience segments of high value. The instantaneous process lifts publisher prices to the highest bid level automatically, and fulfills impressions to targeted consumers as the ad spot becomes available.

- The advantages of programmatic will become better known on the buy and sell sides.
- Campaign platforms will increase their programmatic tools and market them effectively to publishers and agencies
- Buyer demand will encourage streaming audio publishers to place inventory in programmatic systems.

> "Marketers today aren't looking to programmatic for cheap inventory –
> they're pivoting to on-point targeting and strong ROI." –Benjamin Masse,
> Triton Digital

Two types of pricing hold sway in programmatic advertising: auction-based and fixed. Auction-based pricing involves real-time bidding in which advertisers vie to reach listeners with specific attributes as those impressions become available in audio streams. With fixed buying, the price is set by the publisher and purchased by the buyer – again according to audience segments and characteristics.

In the U.S., two companies represent the market-leading programmatic platforms for audio, at the end of 2014.

- **Jelli**: Founded in 2008 as a social service that interacted with radio stations, Jelli reinvented itself and built the first programmatic ad platform for terrestrial radio sales.

- **Triton Digital a2x**: On the streaming side, Triton's a2x is the first programmatic buying platform for online audio and mobile audio. The a2x system is a private exchange which, in Triton's words "consists of Tier 1 publishers and agencies."

Brand-specific programmatic environments are possible, combining the efficiency of software-driven buying with the brand reputation of respected publishers, providing an appealing on-ramp to programmatic for some agencies. One such private system is CBS Audio AdCenter, which incorporates inventory from terrestrial stations and over 125 webcast streams.

Technology provider Admeta (acquired in July, 2014 by WideOrbit)[22] provides a white-label programmatic solution to premium publishers that want to package their own inventory in a private environment for buyers.

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[22] RAIN News: "WideOrbit acquires Admeta," http://bit.ly/Ut1uDW

AD UNITS

Streaming audio is similar to radio in its ad-supported business model, and in some of the advertising products that have long defined traditional radio. At the same time, as an Internet medium, it borrows from display advertising in some cases. There are also emerging mobile components and ad technologies.

AUDIO SPOTS

The traditional 15-second, 30-second, and 60-second audio spots are mainstays of the streaming audio creative repertoire, just as in broadcast.

> "We think the most powerful form of advertising is audio." –Heidi Browning,
> SVP of Strategic Solutions, Pandora

Along with ad spots come the question of ad loads – the number of commercials, and commercial breaks, in an hour of programming. Terrestrial radio, and its webcast streams, generally run a heavier load (more ads) than pureplay Internet radio. While eight minutes of ads per hour is not unusual in broadcast programming, Pandora, for example, was running about two and a half minutes per hour in May, 2014.[23] A few radio stations have experimented with pureplay-level ad loads, both to compete with online listening choices and to raise the value of their ad spots.[24]

Streaming audio-only ads are inserted in the audio stream as self-contained spots, taking the listener's entire attention. The Interactive Advertising Bureau (IAB) calls these *linear* ads.[25]

Pre-roll ads (a term borrowed from online video advertising) come before the start of a content block. For example, a newly launched Internet radio music station might start with a 15-second or 30-second audio spot. Or when switching from one stream to another in Pandora (or another ad-supported online radio platform) the new stream might be preceded by an ad.

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[23] RAIN News: "Pandora ad load: audio down, video up, display the same," http://bit.ly/1pPvpkv

[24] RAIN News: "Seattle radio station lowers ad load to Internet-radio level," http://bit.ly/UGhhjo

[25] Interactive Advertising Bureau, "Digital Audio Ad Serving Template (DAAST)," http://www.iab.net/media/file/DAAST_10.pdf
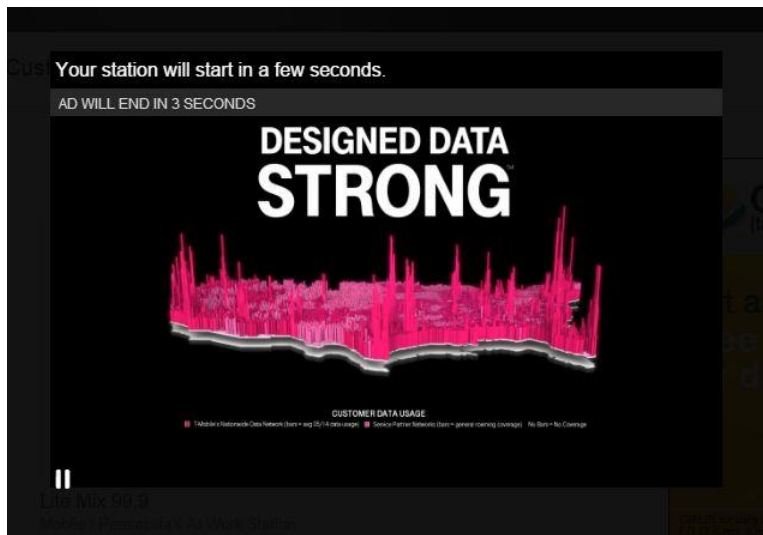
PRE-ROLL AUDIO ADS PRECEDE STATION STREAMS, AND ARE OFTEN ACCOMPANIED BY A GRAPHIC

COMPANION ADS

Streaming audio ad units may include a visual element in addition to the audio. Companion ads are banners, or visual units, which accompany audio spots in audio players that support such visuals.
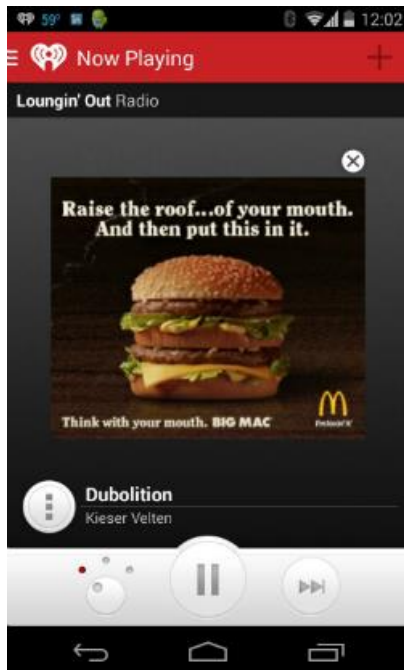
When listening to streaming audio in a web browser, some audio ads on some listening platforms might be accompanied by a companion visual ad.

Companion ads serve a double purpose. First, they are usually clickable on a computer or touchable on a mobile device, leading to a *landing page* (another display-ad term) on the advertiser's site where consumers can follow through on the marketing message. Often the companion ad (and the audio message) contain a call to action, such as "Click on the banner for more information." The second reason for companion ads is persistence – they can linger on the screen after an audio message is completed.

A good deal of creative artistry can go into companion ads, which can assume different sizes, shapes, and degree of screen take-over – in players which support those displays.

Because the listener may not be looking at their desktop or device while listening, companion ads are not always seen. A software engineer who listens to music at his desk all day might have the source buried in a closed browser tab. A person listening to streaming radio on a phone while shopping might not look at her player app for hours at a time.

Audio ads most effectively capture attention in stream listening. And because streaming's ad load is typically low, occasional commercials stand out more distinctly than in terrestrial radio, with or without a visual component.

EMERGING AD UNIT TECHNOLOGY

Two recent developments in creative ad technology possibly point to future interactivity with streaming ads.

Skippable ads: The IAB notes that skippable ads are technically possible, but few publishers are experimenting with them. Skippable audio ads are related to skippable video ads, which are widely used in YouTube. The IAB's DAAST specification, which defines streaming audio advertising standards, does support implementing and tracking skippable ads.

Voice-activated ads: An antidote to the companion-ad problem (see above; many companion banners and their calls to action are never seen) developed by XAPPmedia and branded as XAPP Ads, this technology allows listeners to respond to ad messages by speaking to them. In this case the call to action is a vocal call-out. The commercial might instruct the listener to say "Send me email" or "Download the app." Voice-activated marketing is ideal for mobile implementation generally, especially in the car, where looking at and touching a phone screen is dangerous. XAPP Ads were launched in March, 2014, with NPR as the inaugural publishing partner.[26]

NATIVE ADVERTISING

Native advertising is a broad category of marketing that is integrated with non-commercial programming. It can take many forms and is subject to a wide creative imagination.

One streaming audio type which thrives on native advertising is podcasting. Because so many podcasts are personality driven, listener engagement is high and this type of programming is an effective platform for testimonial and/or native advertising. Some programs are also conducive to weaving commercial messages into the program natively. Pre-recorded spots are much less common in podcasts than in music streams. The typical podcast native implementation has the host reading, and sometimes riffing on, the marketing message.

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[26] RAIN News: "XAPPmedia introduces voice-activated audio advertising for Internet radio," http://bit.ly/1jPPwQm

"Native advertising integrates the advertiser with the direct interests of the consumer. Advertising doesn't get any better than that." –Cathy Csukas, co-founder, AdLarge

Beyond podcasting, native advertising is a moving trend in streaming audio. In July, 2014, music service 8tracks announced a partnership with Feature.FM, which supplies sponsored music placements.[27] This form of native affiliation puts sponsor label content into the programming contextually – so that listeners will hear their preferred type of music when they encounter a sponsored song.

Other examples of native advertising can be far more elaborate. Pandora employs a division which develops brand affiliations through unique marketing plans. These "ad experiences" have included creating episodic video series, and custom concert events, all sponsored by an advertiser whose brand also appears in related stream programming.[28]

Pandora and other services offer sponsored listening, a native solution which wraps a brand's imagery around custom stations which musically represent advertiser values, as with Bacardi's "Loud & Untameable" native campaign on Pandora:

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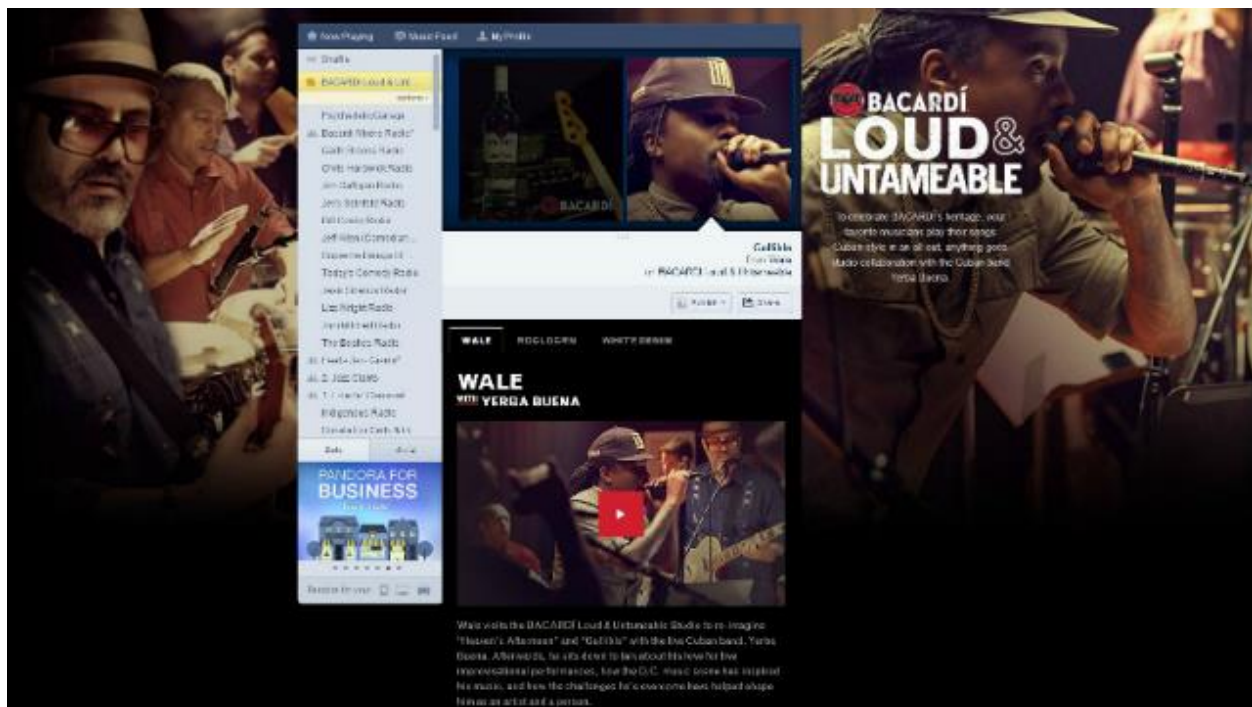
[27] RAIN News: "Native advertising in 8tracks: Conversation with founder David Porter," http://bit.ly/1rRD8zS

[28] RAIN News: "Pandora's 'ad experiences': a conversation with Heidi Browning," http://bit.ly/1nuw1OC

Native advertising can enhance a brand while enhancing consumer value. The music-recognition and streaming discovery app SoundHound partnered with Grand Marnier for a native implementation that revealed the ingredients of music hits (audio samples and cover renditions).[29] To the user it was interesting added value; for Grand Marnier it emphasized its own ingredients with a persistent visual wrap-around.

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[29] RAIN News: "adStream: Grand Marnier 'mixes' with SoundHound in original branding campaign," http://bit.ly/1zhBESR

CHAPTER 3: FEATURES AND BENEFITS OF STREAMING AUDIO ADVERTISING

Streaming audio vies with broadcast radio for market share of both audience and advertising dollars. Streaming competes on the basis of its all-digital platform and technological underpinnings. Radio transmission is a distinct technology, too, but the business of selling and buying ads is historically an analog one. That culture is migrating unevenly into the online era, while streaming audio – born on the Internet – is inherently digital.

What is streaming audio's value proposition? For advertisers, the key values are precision, efficiency, and transparency. Streaming audio advertisers can target audience segments, measure delivery and effectiveness, track user responses to ads, and shape campaigns by specified geographic locations.

All this in a consumer market that skews more educated and affluent than the broadcast radio audience, is comprised of listeners who are demonstrably willing to hear ads in exchange for free listening, and is programmed with lower ad loads that reduce competition among advertisers.

TARGETABILITY

When people listen to streaming audio in music services, they can choose the music they hear, to a greater or lesser extent depending on the service. Listening is more personalized than in the non-digital realm. Just as listeners can target their music of choice, brands can increasingly select audience segments to target with their advertisements.

Many streaming audio platforms have built-in advantages over broadcast radio for understanding audience make-up, identifying listener attributes, and delivering brand messages to target groups. As these platforms compete with radio stations for advertising revenue, some of the most tech-oriented companies are pushing the inherent advantage with innovative data work that connects listener behavior to ad targeting in very advantageous ways.

One of the most basic datasets used by streaming audio sites to deliver audience targeting to advertisers is **registration data** – the name/location details provided by users when they sign up with a music or audio service. This bundle of information is sometimes called ZAG (zip/age/gender).

Some services require registration to unlock some or all features. For example, on iHeartRadio, which streams radio station webcasts and online-only stations, new users may listen to the radio stations without registering, but must sign up to hear a pureplay stream. (In January, 2015, iHeartRadio announced reaching 60-million registered users)[30]. On Pandora, a prospective user must sign up to use some features (In March, 2014, Pandora had reached 250-million registrations)[31].

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[30] RAIN News: "iHeartRadio at 60-million registered users, claims 'top streaming radio app'," http://bit.ly/1wsOQRc

[31] RAIN News: "Pandora has 250-million registered users," http://bit.ly/1hFPLKt

ZAG registration information has three target points: age, location (zip code), and gender. In the era of Big Data, these fundamental information points enable publishers and advertisers to focus on key audience attributes. When you consider the scale and breadth of streaming audio, which has no geographic constraint within the U.S. market (and can sometimes cross national borders), the reach and precision offered to advertisers is impressive. A single campaign targeted to a specific demographic (e.g. age 24-39 women living in urban locations) can potentially reach millions of individuals. It is important to note that there are limitations to targeting – overly specific campaigns with limited geographic coverage areas can be difficult to deliver because of scarcity of impressions that meet campaign criteria.

Registration data is just the beginning of targetability in streaming audio. Greater potentials have been realized thanks to innovations in data science. Technology vendor The Echo Nest[32] released a series of "high value demographic and psychographic advertising segments" to its music service clients. By analyzing music choices, user information, and U.S. census information, The Echo Nest was able to make reliable correlations of listener behavior (e.g. song choices) to audience properties (e.g. political preferences).

Similar work was done by market-leading Internet radio platform Pandora, which released its own set of targetable consumer audience segments based on the company's mountainous collection of user data.

Registration data, while important and very useful, is a first step in audience understanding and targeting. Other dimensions beyond knowing the age and location of a listener include:

- **Behavioral targeting**: Representing the actions and movements of an online listener.
- **Psychographic targeting**: Representing the interests, attitudes, lifestyles, and values of a listener.
- **Retargeting**: Through anonymous tracking, retargeting reaches listeners who have shown interest in an advertiser's product or category in the past

Nielsen Audio revealed its own audience targeting framework with the "Audience Demand Landscape" in mid-2014. Departing from traditional demographics, Nielsen identified behavioral and attitudinal qualities such as Music Loving Personalizers, Information Seeking Loyalists, and Techie Audio Enthusiasts. Nielsen tied these audience categories to audio consumption levels – time spent listening.

More generically, Data Management Platforms (DMPs) act as information warehouses that create audience segments for advertisers. DMPs collect and sort large amounts of audience information, and tie into demand-side buying platforms (DSPs). DMPs might be invisible to the buyer while being tied into the software system used to plan campaigns, helping to target qualified audiences.

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[32] The Echo Nest released its first audience segments when it was an independent company with over 400 clients, including many of the largest streaming audio services. In March, 2014, The Echo Nest was acquired by Spotify, where it is a wholly-owned subsidiary.

As the Big Data field settles into the streaming audio industry, we predict audience targetability will become more granular and accurate. Jeff Howard, President, National Sales, iHeartMedia, told RAIN News, "We have an inordinate amount of data at our fingertips. There are opportunities to match that data with advertiser information. The goals are to find and leverage new insights."

The emerging capability to reach the right listener with the right message is one of the primary benefits of streaming audio advertising.

> "Streaming audio advertising is data-rich and, unlike visual advertising, doesn't fight for consumers' attention, with a single stream active at one time."[33] –Anthony Mullen, Forrester

MEASURABILITY

The ability to plan campaigns, and understand their effectiveness, is enhanced in the digital realm of streaming audio. Legacy radio advertising relies on blunt instruments -- panel-based ratings indicate a campaign's audience reach, and return on campaign investment is estimated as well.

While radio is a one-to-many broadcast medium, streaming audio is one-to-one content delivery. As such, campaigns can be planned by impression, similar to display campaigns on the web.

New software-based buying platforms enable precise campaign planning of impressions and audience attributes. These demand side platforms (DSPs) represent the foundation of campaign planning and impression buying. Unlike traditional radio, which sells commercial inventory against an estimated audience size, streaming audio is digital from end to end, and can connect with buying systems that inventory impressions, not time slots.

Measurability is optimized on platforms that can layer inventory information with audience data such as demographics and location. Added control benefits include frequency capping, which limits the number of single-ad impressions to individual users, and testing different creative versions of ads.

TRACKABILITY

Digital tracking of ad performance and audience engagement is precise, where in the broadcast/analog realm it is approximate or non-existent.

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[33] Anthony Mullen, "Avoid The Visual Clutter And Go For In-Stream Audio Advertising.
http://blogs.forrester.com/anthony_mullen/13-07-31-avoid_the_visual_clutter_and_go_for_in_stream_audio_advertising

The challenge for all advertising platforms is to give buyers high-quality "attribution analytics" that include engagement (which usually means clicking through a visual ad) and impressions (the ad is seen or heard). Triton Digital, a technology company with buy-side solutions for streaming audio advertisers, remarks in its website marketing: "It has become clear that click-through attribution is not sufficient nor sophisticated enough for brand advertisers today."

TargetSpot, Triton, AdsWizz and other companies have developed technology to give advertisers a remarkably precise view of audio and display impressions, and how a campaign can be credited for success. So-called audio pixels (analogous to visual pixels which are embedded in web pages and display banners for audience tracking) yield impression data for audio-only streaming spots. (This technology is also called audio watermarking, a term which comes from visual branding applied to photos and other images.)

The European based company Civolution is another company pioneering audio watermarking. In October, 2014, that division of Civolution was acquired by Kantar Media,[34] a global audience measurement company in the TV and audio industries. Kantar already used audio watermarking, so in doubling down by acquiring that part of Civolution's portfolio, Kantar indicated how important the technology is to advertisers.

MOBILITY

Streaming audio is inherently mobile, often delivered on phones, tablets, and car dashboards without geographic boundaries. Beyond that basic advantage of scope, specific mobile technologies bring additional effectiveness to streaming advertisers.

One such technology is geo-fencing, which is a virtual perimeter in a real-world location. It takes advantage of GPS, cell phone towers, and WiFi signals to locate individual listeners and control their reception of content. Geo-fencing is used to deliver ads to consumers who are within the perimeter specified as a geo-location by the advertiser. So, for example, a local car dealership might advertise a year-end sale to consumers who are listening to the stream within driving distance to the showroom.

Precision delivery of geo-located campaigns is a digital feature that dramatically separates streaming audio from broadcast. Another technology, falling behind geo-fencing in development and adoption, but more futuristic in implementation, is called audio beacons.

Audio beacons are ultrasonic sounds that trigger special content to play in mobile audio apps. They require a few parts to be in place – sending apparatus, a receiving device, and apps which have beacon recognition built into them and can deliver the special content.

Audio beacons are inaudible to people, but audible to apps which receive them. An example of beacon marketing could take place at a sports stadium, where a broadcast beacon activates enabled

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[34] Broadband TV News: http://www.broadbandtvnews.com/2014/10/16/kantar-buys-civolution-audio-watermarking-unit/s

apps among the spectators, targeting them for relevant ads. A Wall Street Journal article[35] described beacon marketing conducted by Sony Music, which used beacon technology provided by tech startup Lisnr to activate special streaming content to consumers walking in Times Square in New York City. Those consumers were offered a chance to preview an upcoming album by Sony artist J. Cole, generating album pre-orders and social buzz.

AN AFFLUENT AUDIENCE

Users of streaming audio skew toward affluent households. In mid-2013, Edison Research compared household incomes of survey respondents who listened to streaming audio compared to those who listened to broadcast radio.[36] The result showed 19% of streaming listeners lived in households with $100,000+ incomes, against 13% of such households for terrestrial radio. (The streaming audience in the Edison study also indexed higher for four-year college degrees than the radio audience, 51% to 39%.)
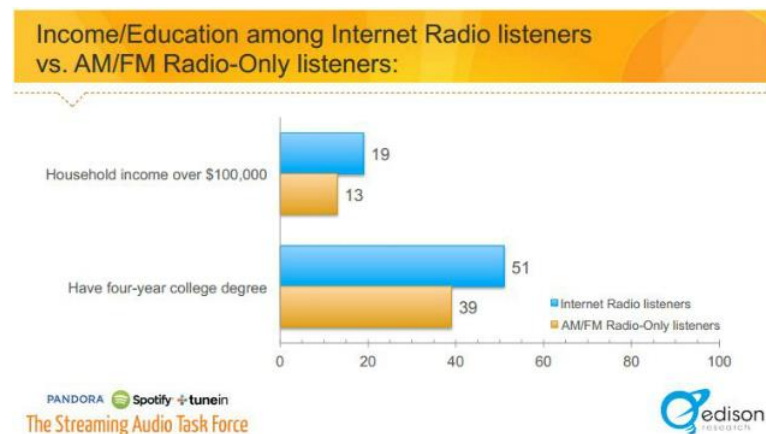

In a report titled *In-Stream Audio Advertising,* Forrester Research discovered that the streaming audio audience is affluent, with more than half owning homes, and 22% earning a household income of at least $100,000.[37]

At RAIN Summit West 2012, a presentation by The Media Audit illustrated that streaming audio listeners over-index toward affluence, and under-index on the low-income end of the scale:

[35] Broadband TV News: http://www.broadbandtvnews.com/2014/10/16/kantar-buys-civolution-audio-watermarking-unit/

[36] *The New MainStream*, Edison Research and The Streaming Audio Task Force

[37] Forrester Research: *In-Stream Audio Advertising,*
https://www.forrester.com/InStream+Audio+Advertising/fulltext/-/E-RES98061
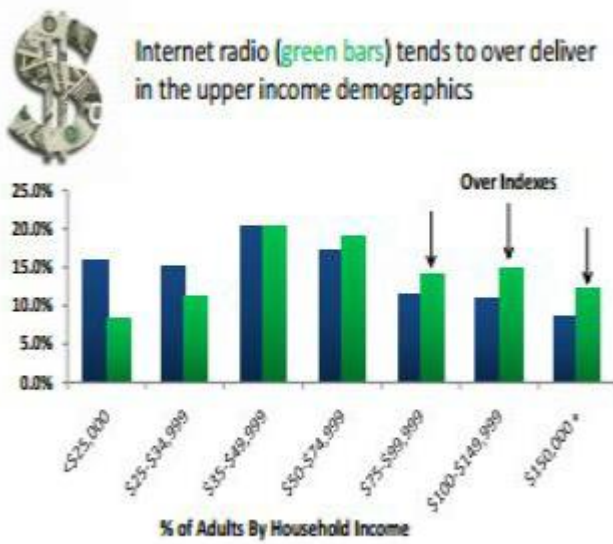
WILLING LISTENERS

Another beneficial feature of streaming audio ad platforms is that listeners are positively disposed to hearing ads in exchange for the content. Encouragingly for advertisers, the growth and breadth of the streaming audio market is matched by an acceptance of commercials. Three-quarters of active Internet audio consumers say that listening to advertisements is a "fair price" to pay for free programming.[38]

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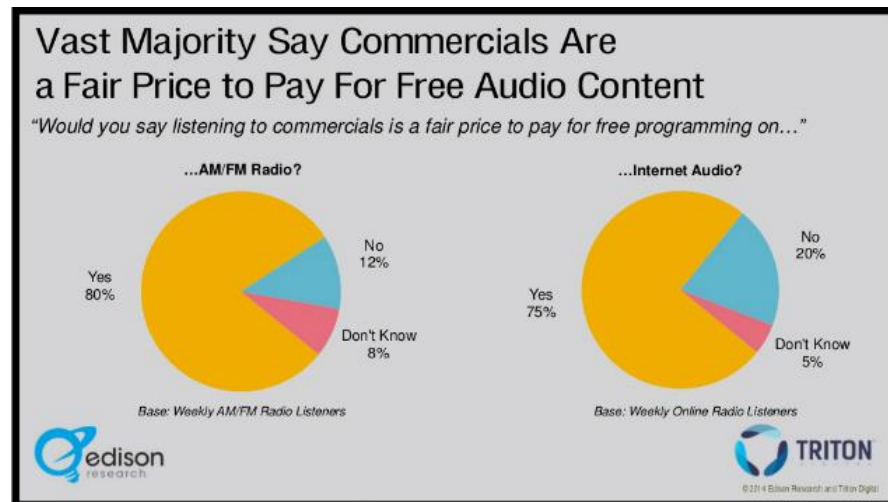
[38] Edison Research: *The Infinite Dial 2014*

That statistic is borne out by majorities of music-service users who opt for free listening (interrupted by ads) instead of paying a monthly fee to eliminate ads. For example, the market-leading online radio platform, Pandora, serves a monthly audience of 76-million people, fewer than 5-million of whom pay five dollars a month for the ad-free experience.

LOWER AD LOAD

If consumer willingness to hear ads in exchange for free listening (see above) is partly due to radio's historic success with ad-supported free programming, the streaming realm makes the value equation even more valuable by playing fewer ads.

Ad load varies across different streaming stations and platforms, just as it does among radio stations. But across the board, streaming audio inserts much less commercial content than radio does – a competitive differentiator that radio is grappling with.[39] Lower ad inventory is a win-win for consumers and advertisers: Listeners are tolerant of brief and occasional interruptions, and advertisers have less competition from competing brands in a spot break.

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[39] A few radio stations have experimented with dramatic reductions of ad inventory (RAIN News: http://bit.ly/UGhhjo). Results are inconclusive as of this writing. Correspondingly, some industry observers and investors believe that there is valuable upside for Internet radio to increase its spot load while preserving its competitive differentiation against terrestrial radio.

CHAPTER 4: MOBILE STREAMING

Streaming audio is primarily a mobile platform. In fact, streaming radio is one of the two most popular smartphone activities, equaled only by games.
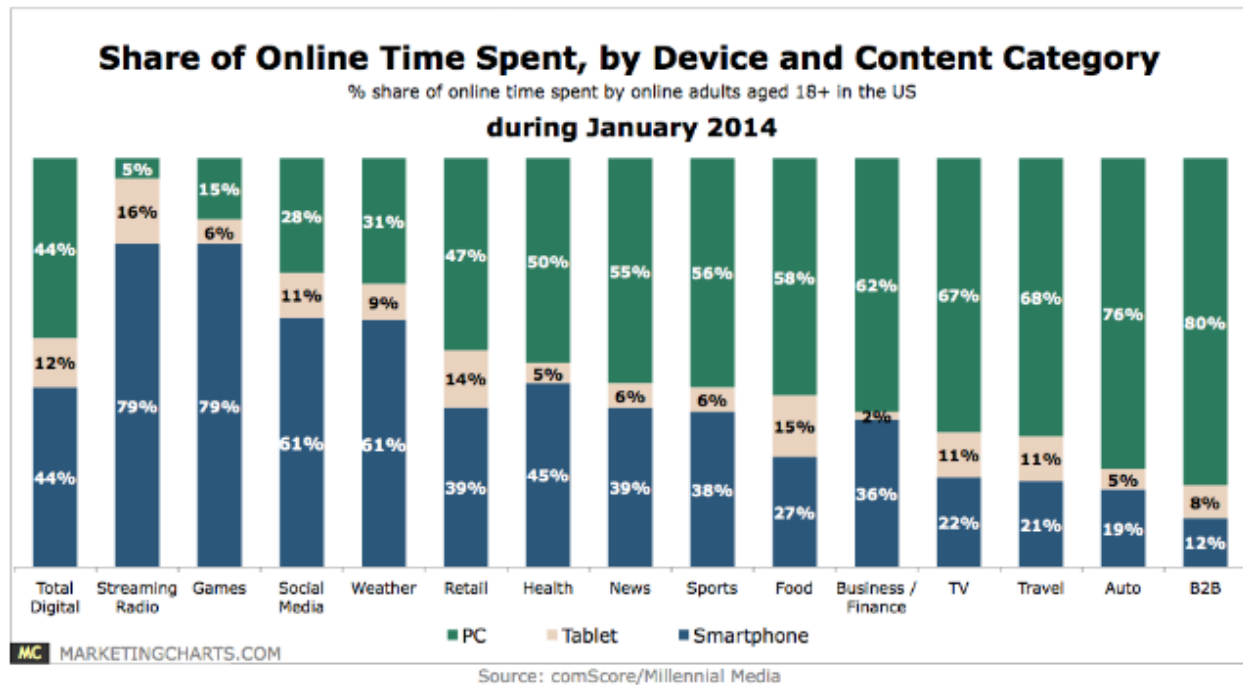
In the July edition of Triton Digital's Webcast Metrics Top 20 Ranker, the streaming technology and measurement company noted that 68% of streaming occurred on the two major mobile operating systems – iOS and Android.
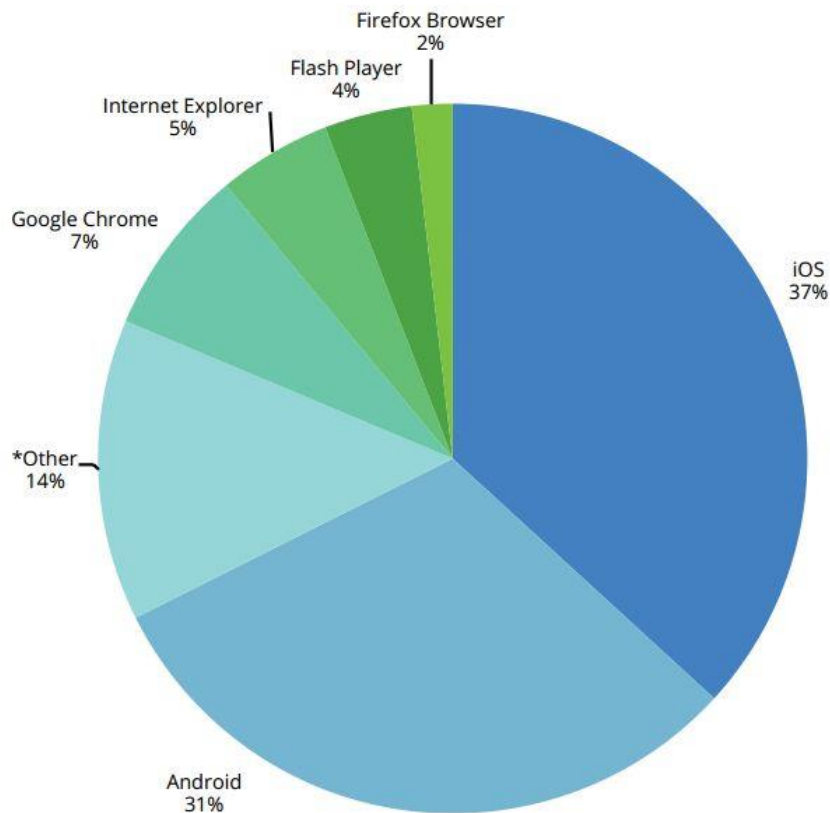
Triton's report includes terrestrial webcasts and online pureplays.

An even more startling measurement comes from comScore and Millennial Media, showing that 95% of time spent with streaming radio in January, 2014 was through tablets (16%) and smartphones (79%).[40] The combined number was higher than for any other type of online activity.

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[40] RAIN News, "Streaming radio is the most mobile content category," http://bit.ly/1iKbLVB

Share of Online Time Spent, by Device and Content Category
% share of online time spent by online adults aged 18+ in the US
during January 2014

Source: comScore/Millennial Media

Mobile's primacy is not limited to the U.S. – for example, nearly twice as many survey respondents in a study in France streamed audio through mobile than through a computer.[41]

Where consumers go, marketing follows. Across all categories of the digital lifestyle, the mobile Internet has quickly become a major consumer usage category, soon to be a dominating one according to ZenithOptimedia. In April, 2014, ZenithOptimedia projected that advertisers would shift $31.6-billion to the mobile Internet – more than to television or any other medium.

Where Advertisers Plan to Spend Their Dollars
Estimated change in global ad spending by 2016, compared with spending levels in 2013

Medium	Value
Mobile Internet	$31.6b
Television	$31.1b
Desktop Internet	$24.9b
Outdoor	$5.3b
Radio	$2.7b
Cinema	$0.8b
Magazines	$-1.6b
Newspapers	$-3.4b

THE WALL STREET JOURNAL.   Source: ZenithOptimedia   statista

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[41] Forrester, "In-Stream Audio Advertising Is Rife with Marketing Opportunity,"
https://www.forrester.com/InStream+Audio+Advertising+Is+Rife+With+Marketing+Opportunity/-/E-PRE5764

MOBILE-SPECIFIC INNOVATION

Where technology leads consumers follow, and where consumers reside money follows. As streaming audio in smartphones draws consumer listening into the mobile space, new initiatives for advertisers are offering new mobile-specific values.

CARS

The so-called connected car is a trend in motion that is influencing consumer habits, and promises to have even more sway in the future. (See the "Future Trends" chapter.)
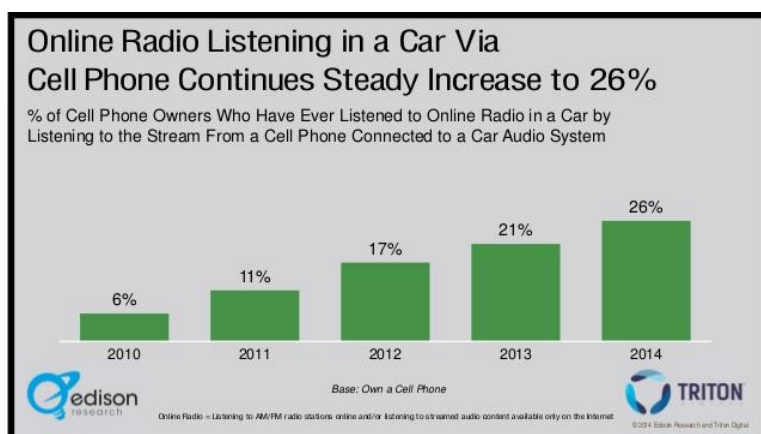
"Connected car" can mean different specific things, but generally refers to vehicles that can somehow enable streaming audio. This can be accomplished by plugging a phone or tablet into the dashboard, or by building Internet connectivity and streaming apps into the dashboard.

Each car company has its own solution, with Apple and Google also providing dashboard operating systems. The result is a fractured connected-car market but it was good enough to drive 26% adoption of in-car streaming among American smartphone owners in early 2014.[42] (The number is 46% of the 12-24 demographic.)

Market-leading Internet radio platform Pandora, whose company mission is to redefine radio, has been a first-mover into the car space both for consumers and advertisers. In January, 2014, the company announced a dedicated in-car advertising department with launch partners State Farm, Taco Bell, and others.

Pandora claimed that four-million drivers had listened to Pandora through a native application, i.e. an app built into the car dashboard. The car-specific ad program targets those drivers specifically, enabling buyers to reach drivers as a distinct audience segment.

APPS

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[42] Edison Research, *The Infinite Dial 2014.*

Terrestrial radio participates in the mobile streaming revolution by distributing their webcast streams in mobile apps. The software development industry has many solution companies that specialize in building single-brand mobile apps for websites.

Mobile platform Clip Interactive develops radio station apps that add interactivity to terrestrial webcasts, including engaging with ads. The result is a 26% engagement rate with ads, according to CEO Michael Lawless.[43] (Engagement means clicking through a companion ad banner, or taking an advertiser's survey.) Clip Interactive claims that its platform adds incremental revenue to a stations webcast monetization, and better ROI for advertisers.

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[43] RAIN News, "Clip Interactive announces new partners and revenue generation," http://bit.ly/YVqAhS

CHAPTER 5: FUTURE TRENDS

Streaming audio, being part of the broad digital technology movement, is always evolving. Change happens both in the industry's front end (programming and serving content to consumers) and the back end (marketing in audio streams and monetizing streaming platforms).

This chapter is an overview of the most important trends in motion today that affect the whole industry. They are:

- Mobile listening
- In-car digital listening
- Big Data
- Programmatic advertising
- Spoken-word streaming

MOBILE

The steep rise in listening to streaming audio platforms in recent years is directly a result of increased mobile connectivity and the dramatic rise in smartphone usage.

Mobile listening has been popular for decades, supported with bygone technologies as transistor radios and the Sony Walkman. Radio was arguably the first mass mobile medium, in cars and small portable radios. Broadcast radio's mobility, until recently, was defined by a signal area.
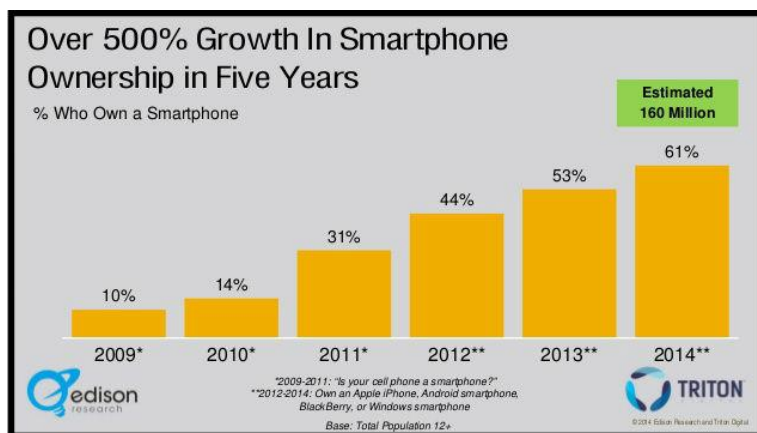
The key technologies of mobile listening today are high-speed wireless connectivity to the Internet, and handheld computers (smartphones and tablets). WiFi connection speeds have increased incrementally during roughly the same period that mass-market smartphones put a connected device in the pocket of most Americans.[45] Edison Research estimated that 160-million Americans 12 and over owned a smartphone in 2014.

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[45] *The Infinite Dial 2014*, Edison Research and Triton Digital: 61% of American teens and adults own a smartphone.

In remarks accompanying the release of *The Infinite Dial 2014*, Tom Webster of Edison Research said: "Mobile devices are rewiring behavior, and the conversation about them should be a behavioral conversation, not a device conversation."[46] Consumers are moving their online behavior out of the house and office, not because of specific devices, but because mobile technology as a broad trend matches consumer demand for untethered connectivity.

Listening to music is one of the most popular smartphone activities. Companies that serve mobile freedom to consumers recognize that demand, and in some cases they hook their deals directly into supporting on-the-go music. Validating the high value proposition of streaming audio platforms to potential customers, wireless phone company T-Mobile introduced its Music Freedom monthly plan in June, 2014, in which customers could stream selected audio platforms without limit, regardless of their normal data plans, effectively making Internet radio an unlimited mobile experience.

Triton Digital, which measures and produces rankings of streaming audio, noted that 2013 streaming growth was driven overwhelmingly by mobile listening, which grew 41% over the previous year, while desktop listening remained flat. The prediction at that time was the mobile would "continue to skyrocket."[47] In Triton's monthly report for August, 2014, mobile stream consumption over the two dominant phone/tablet platforms (iOS and Android) represented 60% of listening.[48]

That statistic matches mobile use according to measurement company comScore, which noted in August, 2014, that mobile devices account for 60% of digital media time. In that report, Pandora Radio's mobile app was cited as the fifth-most popular app in the U.S., across all categories. YouTube, the largest music delivery platform in the world, was the second-ranked app.

<center>"The days of desktop dominance are over," --comScore [49]</center>
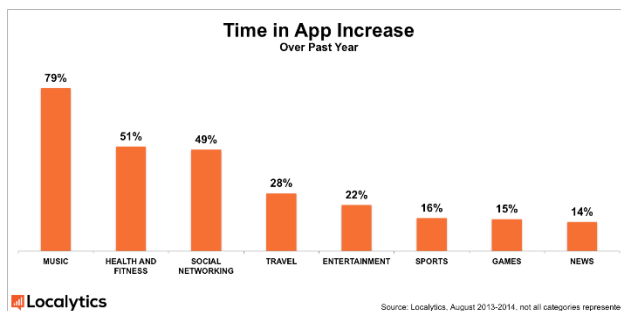
Mobile use is growing in all categories, but music is the app category which is achieving the most increase in time spent by the user. Localytics measured "Time in App" in eight use categories, including games and social media, and music had the greatest year-over-year increase – 79% more time in music apps during 2014.

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[46] RAIN News: "The Infinite Dial Review Part 4 Mobile," http://bit.ly/1jSuQDZ

[47] RAIN News: "Triton 2013 Year in Review: double-digit streaming growth driven by mobile," http://bit.ly/1b0Vw51

[48] RAIN News: "Webcast listening flat in August; year-over-year growth (Triton)," http://bit.ly/1FrFUDs

[49] "The U.S. Mobile App Report," comScore, August 21, 2014. http://www.comscore.com/Insights/Presentations-and-Whitepapers/2014/The-US-Mobile-App-Report

As an advertising trend, mobile is a growth catalyst across the board. In BIA Kelsey's Local Media Forecast for 2015, a five-year projection called for rampaging growth in mobile ad-spending, from $3-billion in 2015 to $6.6-billion in 2019, a rise of 54%.

Along the same line, in July, 2014 research eMarketer projected that mobile advertising would surpass non-streaming radio ad revenues in 2014, with a growth curve continuing at least through 2019.[50]

STREAMING AUDIO IN CARS

Cars are mobile devices, in a sense, and are contributing to out-of-home consumption of streaming audio. Car dashboards are increasingly resembling consumer electronic devices, with Internet connections either built in or plugged in.

For several years, early adopters of in-car digital audio have plugged in mobile devices to car dashboards, starting with MP3 players and graduating to smartphones. Internet streaming brought the possibility of an unlimited spectrum of personalized programming into the car. Increasing consumer demand for easy in-car connection to music services people use outside the car has resulted in a scramble for dashboard control that defines an important future trend.

Two constituencies want to exert dashboard control: first, audio services, and second, technology companies that compete to provide the operating systems for a new generation of computer-like dashboards. Those technology companies are preeminently Apple, Google, and Microsoft.

The result of this gold rush for consumer ears is an entrenchment of leading music and audio services on dashboard screens, potentially pushing-aside traditional radio. The rise of streaming audio in cars is an opportunity for advertisers to reach connected consumers in an environment where listening to music and talk programming is the primary (and usually, only) entertainment. Audio's value proposition in the car has always been that it is eyes and hands free. Streaming audio has the added advantage of delivering a connected consumer.

BIG DATA

Data collection and processing is one of the most comprehensive trends defining the present and future of the streaming audio marketplace. The so-called Big Data movement affects programming, audience targeting, and ad inventory buying.

Data is big if it requires special processing to make it smart and useful. The streaming audio industry deals with huge numbers on all sides: number of listeners, selection of music, and the scale of

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[50] eMarketer: "Total US Ad Spending to See Largest Increase Since 2004."
http://www.emarketer.com/Article/Total-US-Ad-Spending-See-Largest-Increase-Since-2004/1010982

inventory. Many of the companies which supply consumers and advertisers are pure technology ventures, where measurement and analytics are in the DNA. Accordingly, advertisers can demand, and increasingly receive, more exact understanding of who is receiving their brand messages, and what the results are.

Jeff Wender, Senior Vice President of Digital at Nielsen, explained Big Data to RAIN news this way: "The value of Big Data is in driving new outcomes, and giving the advertiser confidence."

Consumers benefit from data-crunching, too, by receiving hyper-personalized audio programming. Analytical companies like Pandora and The Echo Nest work to deliver "the perfect song at the perfect moment" – an oft-repeated marketing mantra among music services.

Delivering the perfect advertising message to listeners is just as important, to both buyers and sellers. Lizzie Widhelm, Vice President of Digital at Pandora, told RAIN News: "One of the things that we believe strongly is that what's good for the listener is good for the advertiser." Big Data, with its monumental scope and laser-sharp correlations, ties together advertiser need with consumer need, enabling a much higher level of precision than broadcast radio can offer.

PROGRAMMATIC BUYING

The simple definition of programmatic is machine buying – that is, using a software platform to buy inventory rather than traditional human buying and selling.

Programmatic ad buying is well known and well used in website media to sell banner ads. A business Insider report in September, 2014, stated: "Programmatic platforms are on pace to fundamentally reshape the entire digital advertising landscape." The accompanying study forecasted a nearly six-fold increase in programmatic ad spending from 2013 ($3.1-billion) to 2018 ($18.2-billion).[51]

For buyers and sellers, the advantage of ad-buying software is efficiency. That efficiency applies to both targeting and price. Buyers use programmatic to reach specific audience segments and attributes. In some cases real-time bidding systems are used to instantaneously price ad inventory, bringing efficiency to the cost side. Although real-time bidding (RTB) is the most recognized aspect of programmatic buying, it does not define programmatic. Balancing RTB is fixed-rate buying and selling in which costs for different types of inventory are stable for all buyers in the system.

Companies which provide these automated transaction platforms (see Section 2) are building their technology into a marketplace that lags behind other, programmatic-savvy digital media, especially display banners on websites, and online video. Alexis van der Wyer, CEO of AdsWizz, told RAIN News: "Programmatic in streaming audio trails display advertising by about five years, and video by two years. But it could grow faster than either of those, and catch up quickly."

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[51] Business Insider: *The Programmatic Advertising Report*. http://www.businessinsider.com/the-programmatic-ad-report-2014-7#ixzz3DaljTHrv

On the buy side, the trend is powered by large-scale advertisers that wish to integrate different media in their campaigns, and want to bundle audio advertising into their programmatic planning. The momentum, demand, and assumption of availability is driving streaming audio to supply its inventory where the demand increasingly exists – ad-buying software platforms. As demand by buyers increases, sellers will likely supply inventory to ad buying software platforms to meet that demand.

SPOKEN-WORD STREAMING AUDIO

Historically, the streaming audio industry is mostly music programming. But the popularity of the spoken-word category is well demonstrated in broadcast radio, and there is no technological reason for it to be less popular than streamed content.

In fact, spoken-word streams represent a rising trend.

Time-shifting is a consumer behavior that drives one aspect of that trend. Streaming platforms that enable listening to archived spoken-word programs are increasingly used for listening that is detached from a broadcast schedule (in the case of arched radio shows) or a podcast production schedule (in the case of online-only shows). TuneIn and iHeartRadio are the market-leading examples of platforms which aggregate talk programs for time-shifted access. Each has about 50-million users.

Podcasting (see chapter 1), which was invented as a downloadable product, is increasingly streamed, either instead of downloading or while downloading. Podcast apps and online platforms have multiplied while increasing audience sizes. Swell Radio, a mobile app that offered talk programming from many publishers, was acquired by Apple in July, 2014 – a leading indicator that custom applications for listening to spoken-word streams were attaining mainstream importance.
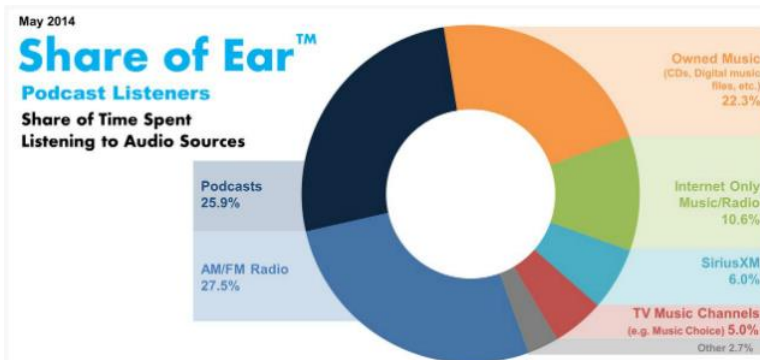
In fact, in September, 2014 Edison Research released a study called "Why Podcasting Is Bigger Than You Think."[52] Part of that research indicated that podcast consumers are "super listeners" who soak in more audio during the day than average. An inherent advantage of talk programs to advertisers is their length and stickiness.

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[52] Edison Research, "Why Podcasting Is Bigger Than You Think," http://www.edisonresearch.com/podcasting-bigger-think/

Perhaps the most important verification that spoken-word programming could be placed alongside music content in streaming services, as it is in the AM/FM realm, is the acquisition of leading talk-program app Stitcher by global music service Deezer. "Talk lags behind music," Deezer CEO of North America Tyler Goldman told RAIN News, "but among our users there is an enormous demand for talk content."[53]

All these indicators seemed to culminate in the breakthrough success of *Serial*, an online-only true-crime program launched in September, 2014 by the creators of NPR's *This American Life*. Record-breaking streams and audience size created a milestone moment for podcasting and streaming talk generally, made news headlines, and generated conversation around advertising opportunities. One agency director of digital buying was quoted in Ad Age: "I'd say it's a game-changer. I hate using that word, but it really is."[54]

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[53] RAIN News, "Deezer acquires Stitcher," http://bit.ly/ZLMUtN

[54] Advertising Age, "Are Podcasts Poised to Break Into Advertising Mainstream?" http://adage.com/article/digital/serial-put-podcast-advertising-map/295948/