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HD RADIO™ BROADCASTING: A Primer into Radio's Digital Technology

About HD Radio

HD Radio Technology enables AM and FM radio stations to broadcast digitally, enhancing the listeners audio experience. HD Radio Technology delivers a higher quality audio broadcast to listeners, allows stations the ability to transmit additional programs on the same frequency, send station logos, transmit data services, and more. The benefits of an HD Radio Broadcast can only be experienced via the use of one of the many HD Radio Receivers available to consumers via tabletop, portable, aftermarket, or in their vehicle. HD Radio Broadcasts are subscription-free.

HD Radio Technology offers numerous advertising and marketing opportunities:

- Advertiser's custom text delivered over-the-air to receivers in the market (ex. Call John's Florist @ 1.800.000.0000 for special deals)
- Advertiser logos appearing during commercial airing
- Dedicated client content channels on HD2/HD3 stations
- New customized channel around a client (ex. an Easy Listening channel with limited breaks that offered tips on Car Maintenance, Car Buying, etc. This channel could be owned by a Dealer Group and aired in all their showrooms). Station clusters with AM frequencies could always expand the reach of that AM by simulcasting on a sister FM-HD2.

There are also programming opportunities for radio stations:

- Unique over-the-air content
 - Playing music from local artists, foreign language programming, religious programming
 - Formats that complement a station's main frequency

In addition, stations have incorporated professional sports team partnerships. In markets across the country, professional sport teams are offering LIVE game simulcast, recap coverage, archived game replays, player music playlists, etc. Some teams currently broadcasting include: Dallas Cowboys, Pittsburgh Penguins, Philadelphia Phillies, Detroit Pistons, D.C. United, and more.

To date, there are over 2,100 stations broadcasting their primary signal with HD Radio Technology, including stations in the top 100 markets. As of January 2015, there are more than 1,500 multicast channels being broadcasted, giving consumers more choice of new diverse programming.

HD Radio Capabilities

Features of HD Radio Technology available on today's receivers (availability varies on the individual receiver):

- Digital Sound – HD Radio broadcasts deliver crystal clear, CD-like digital audio quality
- HD2/HD3 – adjacent to traditional main stations are HD2/HD3 Channels, providing new original formats on the FM dial (ex. 100.3-HD1, 100.3-HD2, 100.3-HD3)



- Program Info – provides song name, artist, station ID, and other relevant data
- Artist Experience® - visual images, such as album art and station logos, of over-the-air broadcasts from HD Radio station



- Traffic – HD Radio Traffic delivers more in-depth traffic data and travel conditions – as much as 10x faster than other broadcast methods
- Emergency Alerts – delivers critical and lifesaving messages to the public during emergency situations
- iTunes® Tagging – provides users the means to “tag” broadcast radio content for later review and purchase from the iTunes Store
- Bookmark – a music & product discovery feature that enables users to store information about content on the radio and delivers interactive information via QR codes
- Station Guide – displays all the HD Radio stations available in the current market, enabling the listener to discover all the digital programs available in the local area
- Instant Info – News, Sports, Weather and more useful information at the touch of a button

HD Radio Programming

Multicasting, the ability to broadcast multiple stations on one radio frequency, has been a primary driver in consumer adoption and a tremendous growth factor for the medium. Highly specialized programming on alternate stations deliver tightly targeted audiences, creating more opportunities for advertisers to integrate their brand with program content, and connect on an even deeper level with their customers.

With the ability to offer unprecedented new content, HD Radio channels bring fresh sounds to the airwaves. Formats currently on HD Radio channels include (but are not limited to):

- Alternative rock
- Christian & gospel
- Classic / progressive rock
- Classical
- Comedy
- Country

- Dance
- Easy listening
- Electronic
- Folk
- Gay Pride
- Hip Hop
- Holiday
- Jazz
- Latin
- Oldies
- Pop
- Public Radio format R&B
- Rap
- Reggae
- Rock
- Soul
- Soundtrack
- South Asian programming
- Sports
- Top 40
- Urban
- Vocal
- World

There are also opportunities for broadcasters to expand an AM station's reach by multicasting it on an FM's HD2 channel – providing an additional avenue for advertisers to extend their product messaging further.

Listeners can discover new programming through the station guide on HDRadio.com, the FREE HD Radio Guide App (available on both iOS and Android) as well as through the local radio broadcasters.

HD Radio In-Car

HD Radio Technology is currently available on vehicles from ALL major automakers in the U.S., with over 90 vehicle models having HD Radio Technology as a standard feature. In 2014, a new HD Radio Receiver was SOLD every 3.5 seconds in the U.S.

iBiquity Digital, the creator of HD Radio Technology, continues to work with automakers every day to develop new ways for consumers to enjoy Radio. For more details on progress and efforts that are being taken, please visit iBiquityDigital.com.

Where to Find HD Radio Receivers

HD Radio Receivers can be found in new-vehicles, tabletop, and portable receivers. These products are available at local dealerships, local Audio Installers, Crutchfield, Best Buy, Kmart, WalMart, Costco, Amazon.com, and many other online retailers. (Go to <http://hdradio.com/get-a-radio> for a list of various styles and types.)



To find a list of available retailers with HD Radio Receivers, go to <http://hdradio.com/get-a-radio/retailers> .

HD Radio Technology By The #'s Recap

- 75% of all adults 12+ listen to HD Radio Broadcasts weekly
- Over 62 million hours of digital radio listening occurs weekly in the U.S.
- A new HD Radio receiver is SOLD every 3.5 seconds
- 15 Automakers are shipping vehicles that allows user to see logos delivered by HD Radio Technology
- Nearly 25 million HD Radio Receivers available in the U.S.
- Nearly 2,100 digital stations on-air
- Over 1,500 HD2/HD3 digital only stations available

About iBiquity Digital Corporation

iBiquity Digital Corporation is the developer of HD Radio Technology, which is fueling the digital radio revolution in the United States and around the world. The digital technology enables broadcasters to offer new HD2/HD3 FM channels through multicasting, crystal-clear sound and data service on both the AM and FM bands – all free, with no subscription fee. Leading broadcasters, consumer electronics manufacturers, automakers and retailers are committed to HD Radio Technology. iBiquity Digital is a privately held company with operations in Columbia, MD, Auburn Hills, MI and Piscataway, NJ. For more information, please visit <http://hdradio.com/> and <http://www.ibiquity.com/>.

“HD Radio” is the brand name for the digital radio broadcast technology developed by iBiquity Digital Corporation. The “HD” in “HD Radio” does not stand for “high definition” or “hybrid digital.”

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