Radio TechCheck
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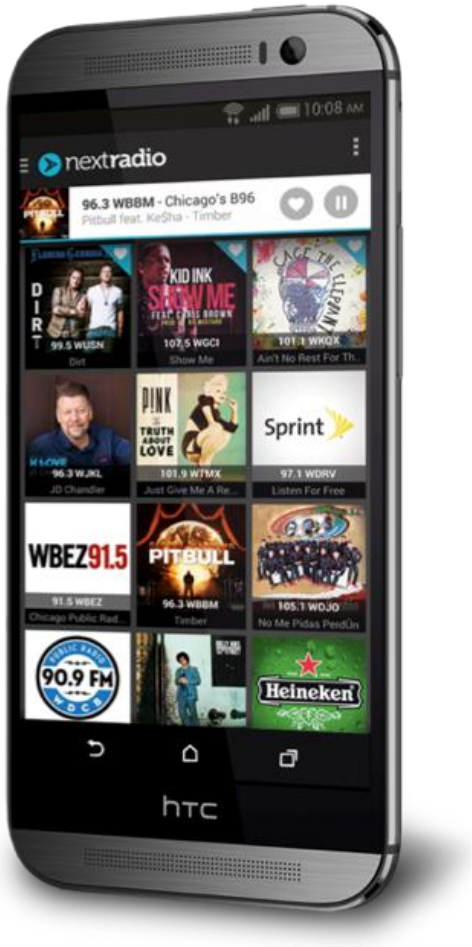
RadioDNS Introduces Project Logo

With the introduction of NextRadio in the U.S., FM radio listeners have an enhanced experience when listening on an FM-capable smartphone compatible with the NextRadio "app." NextRadio is a "hybrid radio" technology that uses both the over-the-air signal for the program audio and the Internet (usually a wireless broadband or a WiFi connection) to provide enhanced content and interactive capabilities.



One of the most basic features offered by NextRadio is the ability for a broadcaster to display a logo on the smartphone screen, providing a visual representation of the station and a more modern "look and feel" to radio, similar to what a consumer might experience when listening to an audio streaming service or a digital music player. The image at right shows the NextRadio app displaying "Live Guide," showing a mix of album art and station logos for the radio stations the device is currently receiving.

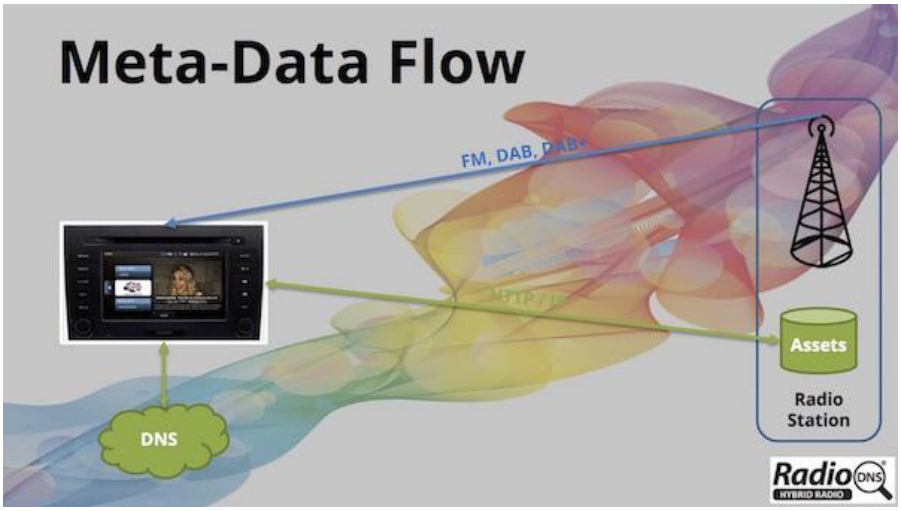
Some of the underlying technology in NextRadio comes from an international standards development organization called *RadioDNS*, which has been developing techniques and standards supporting hybrid radio for a number of years. Recently, Radio DNS announced a new initiative, "Project Logo," with the goal of improving the user interface (UI) on hybrid radio devices in smartphones and connected cars.

"Broadcast radio is the technology that works best, but looks worst," said Nick Piggott, Radio DNS chair, in a recent webinar about Project Logo. Piggott believes that the question is not whether radio will have a presence in the car, but whether it will be the first thing drivers reach for when they are looking for entertainment.

Piggott said that the Radio Data System (RDS), an FM data subcarrier technology widely deployed in radio receivers, is at its current limits of what can be achieved in terms of enhancing the user interface, but falls far short of what is possible in a hybrid radio environment. RDS currently supports an eight-character station name, one genre, and 64-character Radiotext. Compared to Apple CarPlay or Google Auto, an RDS-based UI is substantially outclassed in looks and usability.

Apple CarPlay.

In order to combat this, Project Logo plans to deliver metadata to hybrid radios using standard http data. Stations will continue to broadcast over FM (including RDS), DAB or DAB+, but hybrid radio receivers will use the RadioDNS look-up process to find the IP address of the server containing the visuals and other online data associated with the station's broadcast content. The hybrid radio would then connect to that server (via wireless broadband) and pull in these assets.



Project Logo's planned metadata flow.

Apart from simply looking better, the Project Logo system would add the ability for stations to quickly update the metadata using http caching algorithms, which would avoid issues with incorrect or outdated images.

The system would also have no single point of failure. If the RadioDNS system went down, the radio would still receive signals over-the-air, unlike Internet streaming audio services that require a continuous connection to function.

The system requires no generic user interface, giving receiver manufacturers freedom to design the look and feel of the display, while accessing standardized, common metadata.

The Power of metadata: The radio on the left is using standard FM with RDS, while the one on the right shows the enhanced interface through Project Logo enabled metadata.

Like NextRadio, the Project Logo system is based on the RadioDNS Service & Program Information standard (ETSI TS 102 818 v3.1.1) that provides metadata to hybrid radio devices.

Project Logo also specifies a mandatory minimum metadata set that broadcasters must provide via their online data service to hybrid radio receivers, which requires the following:

- Station name
- Description
- Genre
- Logos with varied aspect ratios from 32 pixels squared to 600 pixels squared.
- Frequencies and Service IDs to enable radio stations to map to the assets

Unlike NextRadio, however, Project Logo does not include a centrally managed service that provides the visual enhancement content. Instead, each station provides the enhancement data directly to receivers. However, the RadioDNS organization has provided a number of tools to help broadcasters get involved with Project Logo, assisting in the creation of enhanced content to integrating it into their existing workflows and systems. As its name implies, Project Logo is a visual enhancement service only, so it would not directly provide listeners with the additional interactive features that NextRadio can

offer. Nevertheless, if it is widely deployed, it can provide a uniform framework for radio stations to make themselves "look better" on modern receivers.

More information on Project Logo can be found on the RadioDNS website, http://radiodns.org.