



# NAB Digital Dashboard – best practices for broadcasters

*Presented to:*



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*Vice President, Advanced Engineering*  
**National Association of Broadcasters**  
**Washington, DC**  
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**RADIO SHOW**  
Produced by NAB and RAB



# NAB Digital Dashboard Best Practices Report

- Authors:
  - Fred and Paul Jacobs (Jacobs Media)
  - Glynn Walden (Audacy)
  - NAB staff
- Describes metadata “audits” undertaken in 3 cities (and results)
- Explains what broadcasters need to do, good metadata practices



## Example of results from metadata audit

**Philadelphia Audit: HD Radio Vehicle, Afternoon Drive**

Score	Number of stations	Percent of total
Green	7	14%
Yellow	25	49%
Orange	8	16%
Red	11	22%

**Charlotte Audit: RDS Radio Vehicle, Midday**

Score	Number of stations	Percent of total
Green	9	33%
Yellow	5	18%
Orange	8	30%
Red	5	18%

**Green** The station utilized the full display functionality of the system (RDS or HD Radio) and information was displayed properly

**Yellow** The station did not properly utilize all of the display functionality

**Orange** The station's display functionality was poor or there were errors

**Red** There was no display functionality



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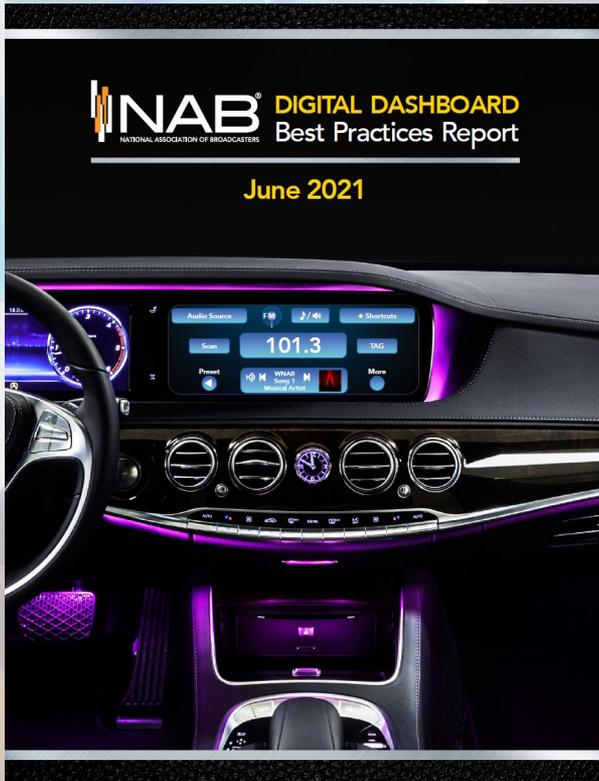
- Report has been updated and was re-released yesterday
- New information on hybrid radio receivers, metadata service providers
- Part of NAB's ongoing effort to help broadcasters improve their metadata usage





[https://www.nab.org/innovation/NAB\\_DigitalDash\\_RecommendedBestPractices\\_0621.pdf](https://www.nab.org/innovation/NAB_DigitalDash_RecommendedBestPractices_0621.pdf)

3 pages



29 pages



Below is a summary of recommended best practices for radio stations which, when followed, should result in a dashboard appearance that is useful and pleasing to listeners and will support a more consistent user experience across the radio dial. This list is divided into separate sections for the programming and engineering departments, with the understanding that some recommendations apply to both.

**Programming**

1. For FM stations that don't currently have Radio Data System (RDS) equipment, obtain an RDS encoder and set it up to support transmission of station information using Program Service (PS) and Radio Text (RT) fields.
2. Make sure that someone on staff uses daily a car equipped with an RDS-capable radio and an HD Radio for digital stations. For HD Radio stations, both RDS and HD Radio displays need to be monitored. Be aware that hybrid radios are entering the marketplace and if possible, monitor how the station looks on hybrid radios, too.
3. Install an RDS monitoring system and an HD Radio system in the on-air studio to allow air staff to view the textual information that is broadcast.
4. For music stations, song titles and artist fields should maintain the following standards:
  - Contain only the actual artist name, song title, etc. without metadata notes (ex: "edited version").
  - Artists should be expressed as first name, last name.
  - Capitalization of proper nouns (artist, song), but no all caps for entire words.
  - For HD Radio systems, review all artwork. Album artwork is optimal; artist photos are acceptable. Generic format artwork/graphics are discouraged. The station logo should be the default.
5. For spoken word stations and/or personality/programs/shows on music stations, the following standards are recommended:
  - During programs, display text with name of show, and with HD Radio, a graphic logo.
  - Use capitalization standards as specified above for music stations.
  - Other content display options include a program topic, guest, call-in number, etc. Stations might also want to consider additional enhancements (weather, traffic alerts, sports scores, etc.).
6. Radio programs on both music and spoken word stations should be identified with text and logos during their real-time broadcasts. Show/DJ/host logos should be created and displayed.
7. Logos should be created and displayed for each HD Radio multicast channel. Program formats should be properly identified in the PS data text field.
8. During commercial breaks, consider displaying advertiser information (phone number, URL), and for HD Radio using Artist Experience to display advertiser logos.
9. Programming and engineering staff should conduct a quarterly audit of dashboard displays using vehicles with both RDS and HD Radio with Artist Experience receivers, observing and rating your station's metadata appearance for both RDS and HD Radio.
10. Conduct a quarterly review of how well your station's music library successfully matched to clean metadata, also noting the unmatched songs which need to be corrected.

[https://www.nab.org/innovation/NAB\\_DigitalDash\\_BestPractices\\_0621.pdf](https://www.nab.org/innovation/NAB_DigitalDash_BestPractices_0621.pdf)



### Metadata source/provider by auto manufacturer (May 2021)

Manufacturer	Metadata Source/Provider	
	Static	Dynamic
Audi	RadioDNS	Radioplayer
BMW	RadioDNS	n/a
Mercedes	Various (including RadioDNS, direct integration with Xperi is recommended)	Various (direct integration with Xperi is recommended)

## Metadata Service Providers

This information is provided for informational purposes only. Please contact David Layer at NAB, [dlayer@nab.org](mailto:dlayer@nab.org), if you want your company's services to be included.

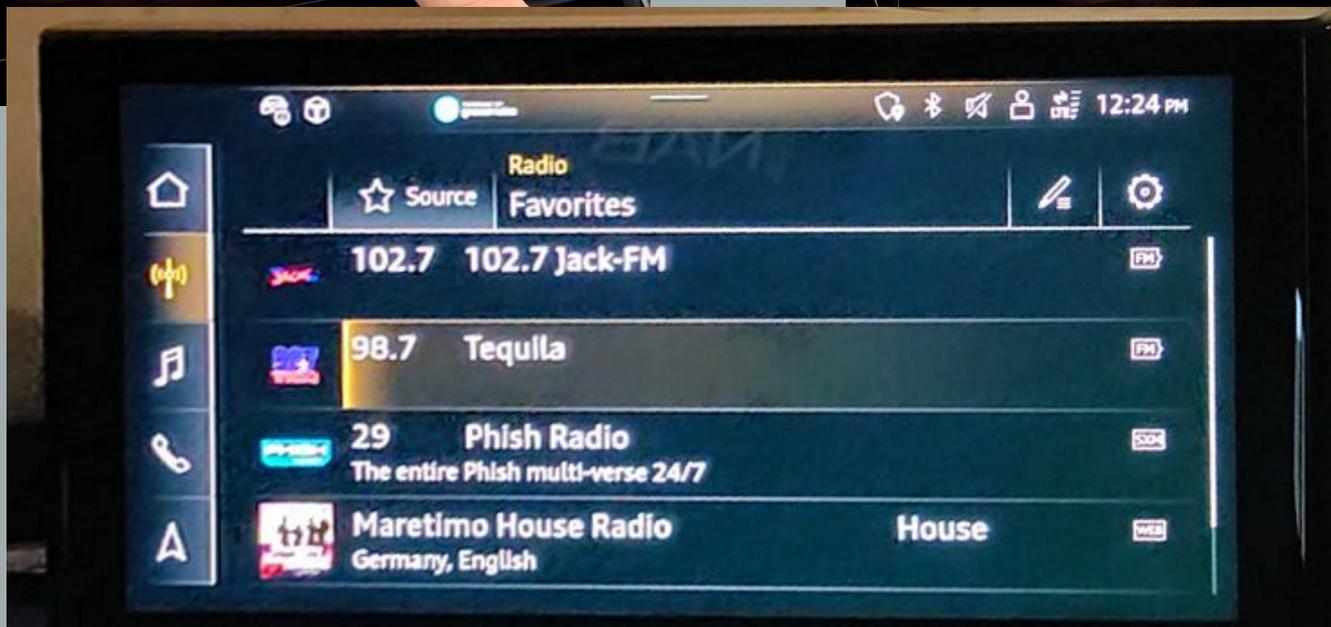
Service Provider	List of services	Comments
<b>Aiir</b> <a href="https://aiir.com/">https://aiir.com/</a>	<ul style="list-style-type: none"> <li>RadioDNS registration, service information (SI) file creation</li> </ul>	Currently offered for free to U.S. broadcasters
<b>Arctic Palm</b> <a href="https://arcticpalmapps.com/">https://arcticpalmapps.com/</a>	<ul style="list-style-type: none"> <li>Radio station production software for metadata management</li> </ul>	Evolving into the Rapid Xperi platform (see below)
<b>Pluxbox</b> <a href="https://pluxbox.com/">https://pluxbox.com/</a>	<ul style="list-style-type: none"> <li>RadioDNS registration, service information (SI) file creation (<a href="https://metadata.radio/">https://metadata.radio/</a>)</li> <li>Full-service dynamic metadata including song title and artist, artist images and synchronized ad display messages</li> </ul>	Currently offered for free to U.S. broadcasters
<b>Quu Interactive</b> <a href="https://myquu.net/">https://myquu.net/</a>	<ul style="list-style-type: none"> <li>RadioDNS registration, service information (SI) file creation</li> <li>Full-service dynamic metadata including song title and artist, artist images and synchronized ad display messages</li> </ul>	Acquired Jump2Go in 2019
<b>Radioline</b> <a href="http://business.radioline.co/">http://business.radioline.co/</a>	<ul style="list-style-type: none"> <li>Full-service dynamic metadata including song title and artist, album art</li> </ul>	Have developed a hybrid radio platform for Android Automotive OS
<b>Radioplayer</b> <a href="https://radioplayer.org/">https://radioplayer.org/</a>	<ul style="list-style-type: none"> <li>RadioDNS registration, service information (SI) file creation</li> <li>Full-service dynamic metadata including song title and artist, album art</li> <li>Exclusive dynamic metadata service provider for Audi and BMW hybrid radio solutions</li> </ul>	Not currently available in the U.S.
<b>Rapid</b> <a href="https://www.aimrapid.com/">https://www.aimrapid.com/</a>	<ul style="list-style-type: none"> <li>Radio station production software for metadata management</li> </ul>	Predecessor system is Arctic Palm
<b>TRE</b> <a href="https://www.bdcast.com/products/studio-products/tre-the-radio-experience/">https://www.bdcast.com/products/studio-products/tre-the-radio-experience/</a>	<ul style="list-style-type: none"> <li>Radio station production software for metadata management</li> <li>Full-service dynamic metadata including song title and artist, artist images</li> </ul>	
<b>Xperi</b> <b>AutoStage</b> , <a href="https://dts.com/autostage/">https://dts.com/autostage/</a>	<ul style="list-style-type: none"> <li>Acquire service information (SI) using RadioDNS standards</li> <li>Full-service dynamic metadata including song title and artist, artist images and synchronized ad display messages</li> <li>Analytical information on listener behavior shared with the broadcaster</li> <li>Exclusive service provider of broadcast metadata for Mercedes hybrid radio solution</li> </ul>	AutoStage is an amalgam of TiVo metadata services and the DTS Connected Radio platform



# NAB Digital Dashboard Best Practices Report

- Key points (2021):
  - Metadata support is more important than ever

**DIGITAL DASHBOARD  
BEST PRACTICES REPORT**  
August 2017  
**NAB**





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  - Many automakers are using in-vehicle databases

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**NAB**

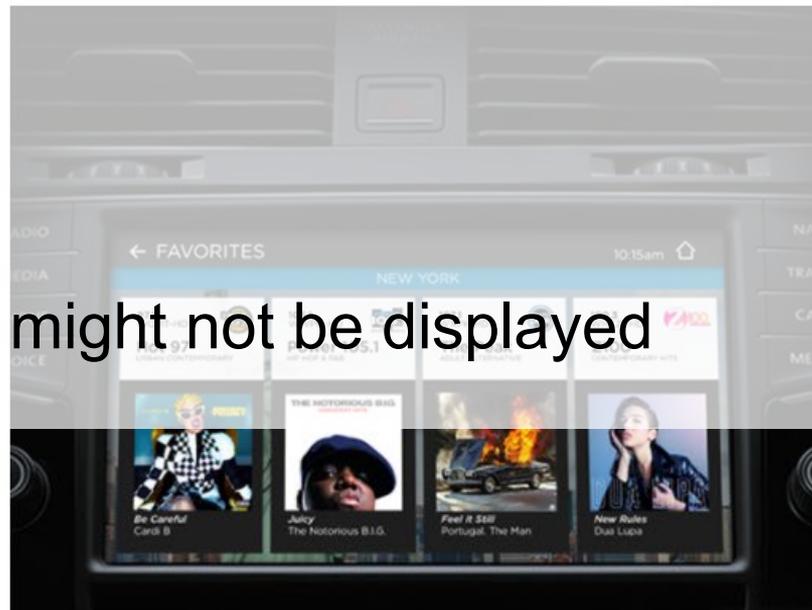
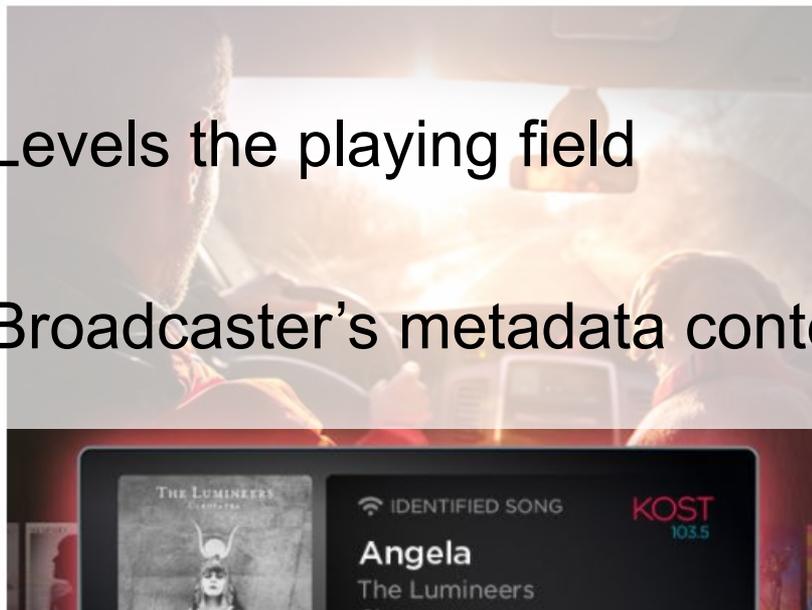
## Music Recognition for Radio in the Car

Drivers have a dizzying array of music options to choose from. Gracenote MusicID Radio brings order to the chaos by identifying music playing from every possible radio source and delivering consistent metadata, Album Cover Art and relational links to the driver's dashboard.

- **Raises consumer expectations**

- **Levels the playing field**

- **Broadcaster's metadata content might not be displayed**





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  - Many automakers are using in-vehicle databases
  - Using RadioDNS is a good start to enhance a station's image



Introducing Hybrid Radio

News & Campaigns

Technical Information

Policy & Organisation

# Documentation & How To Guides

GO

CONTACT

HOME Technical Information **Documentation & How To Guides**



These documents are here to help developers of RadioDNS Hybrid Radio systems and receiver implementations



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  - Broadcasters should sign up for DTS AutoStage



- ▶ Get in touch:  
[juan.galdamez@xperi.com](mailto:juan.galdamez@xperi.com)
- ▶ Join us in revolutionizing the future of broadcast radio in the connected car
- ▶ Enabling partners:
  - Quu Interactive
  - RCS
  - Plubox
  - Radio.com
  - Broadcast Electronics
  - Arctic Palm/All In Media



▶ Learn More @ [www.dts.com/autostage](http://www.dts.com/autostage)



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- Many automakers are using in-vehicle databases
- Using RadioDNS is a good start to enhance a station's image
- Broadcasters should sign up for DTS AutoStage
- Broadcasters must develop strategies for supporting non-linear content and interactivity



radio.net



8:55 AM



Source

Radio

Online



## How Bruce Lee Worked



Bruce Lee may have introduced more Westerners to Asian culture than any person in history. And, because he died...

22:18 | -33:52

STUFF YOU SHOULD KNOW

PODCAST



List





## NAB Digital Dashboard Best Practices Report

- NAB continues to work with automakers and others to enhance broadcast radio in the vehicle
- Getting broadcasters on-board with improved metadata is a marathon not a sprint
- Look forward to continued interaction with WorldDAB both directly and through our work with NABA

