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Revving up radio
mastering metadata and phonemes

Broadcaster requirement
Transmit audio

Radio [R]evolution

Broadcaster requirement
Transmit **stereo** audio

Radio [R]evolution

Broadcaster requirement
Transmit **stereo** audio
Transmit **RDS PI Code** and **PS Name** 🤦

Radio [R]evolution

Broadcaster requirement
Transmit stereo **digital** audio
Transmit **EID, SID, SCIds, Label, ShortLabel, DLS, DL+, Slideshow, Announcements, Linking Information, Logos** (4 sizes)**, Genre, Stream URLs, Service Description...**

😳

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Metadata is **not optional**

Broadcasters must provide accurate metadata, using the standards, to make radio work properly for drivers

Manufacturers must source and use the metadata properly to make radio work properly for the radio stations

Mutual cooperation and development

Automotive **Guidelines**

The **Automotive Guidelines** explain
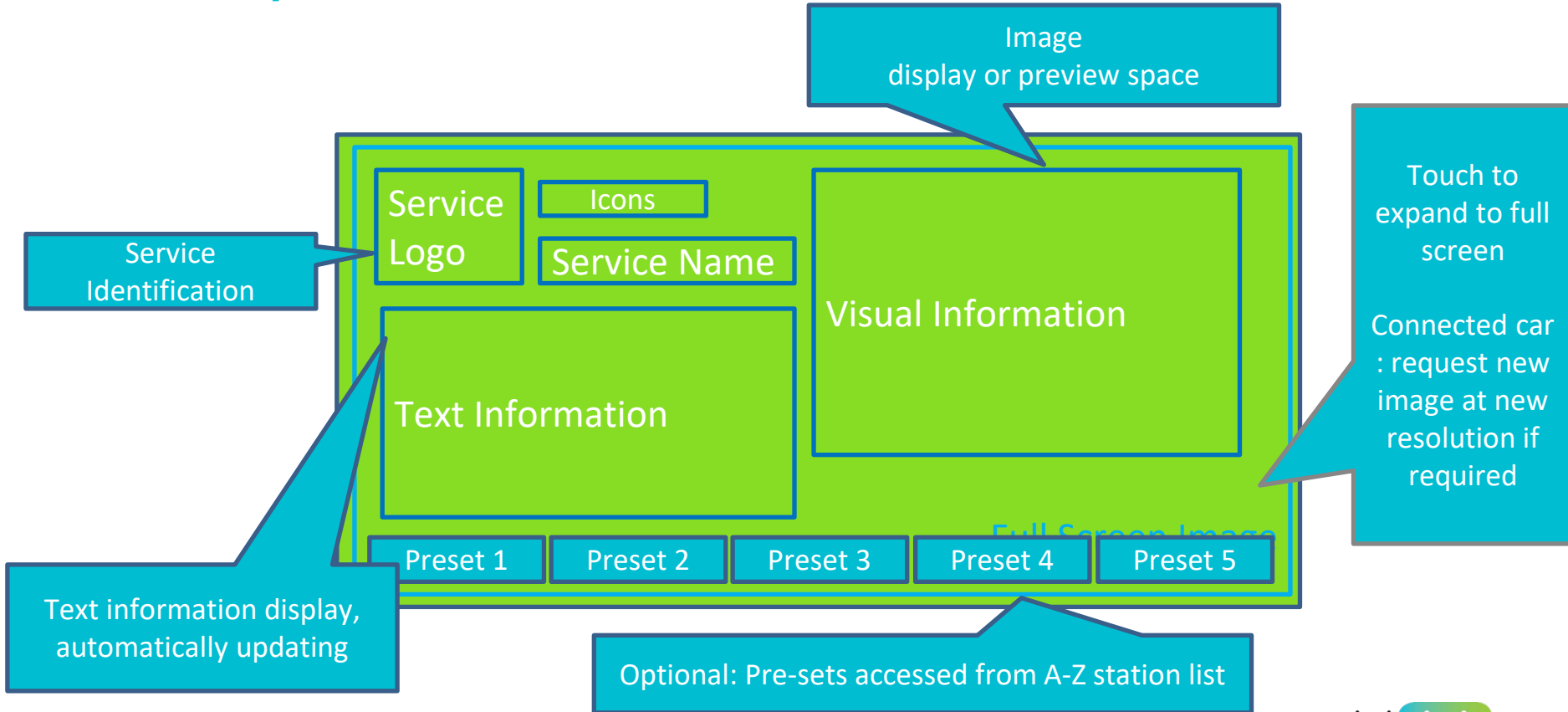
How radio stations should provide metadata and content
How manufacturers should source official metadata and content
How radio stations should author content so it looks right
How manufacturers should incorporate metadata and content
correctly into their user interfaces

Get the document from the WorldDAB website

5.6 Example – Station Information

Image
display or preview space

Service
Identification

Service
Logo

Icons

Service Name

Visual Information

Text Information

Touch to
expand to full
screen

Connected car
: request new
image at new
resolution if
required

Full Screen Image

| Preset 1 | Preset 2 | Preset 3 | Preset 4 | Preset 5 |

Text information display,
automatically updating

Optional: Pre-sets accessed from A-Z station list

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Voice Assistants **need metadata**

Voice is a new control surface in vehicles
>Voice recognition - to understand what is said to them
>Voice reproduction - to confirm actions in natural language

Many typical words and phrases can be represented by plain text

But two situations are not well handled
>When drivers ask for radio stations using an "unofficial" name
>When a radio station name isn't said as it's written down in text

Metadata for Voice Assistants

Aliases are alternative ways of describing a radio station
The official name is "XYZ Radio One", but drivers call it "One FM"
Adding "One FM" as an alias means the station will also be
recognised as "One FM", but that will never be shown or said

Phonemes are the detailed building blocks of speech
The official displayed name is "ZZZ100" - but it's said "Triple Zee
One Hundred"
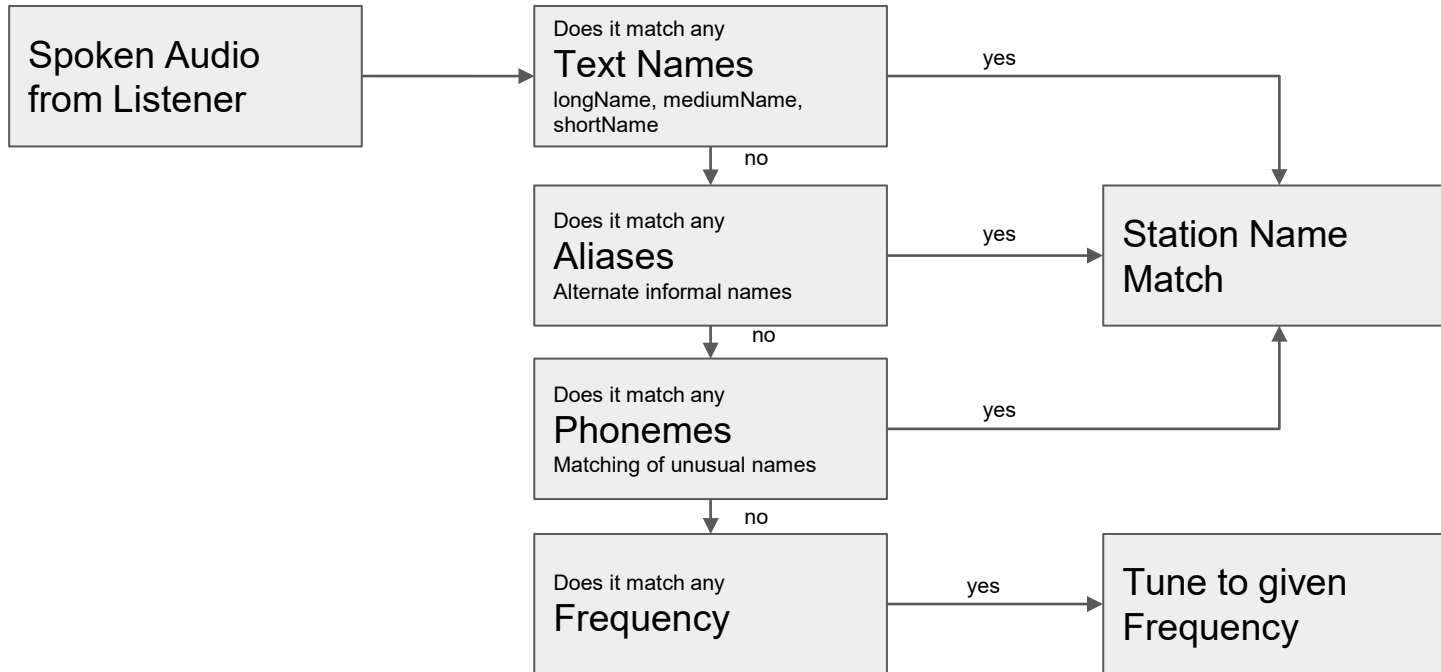This is accurately written as "ˈtrɪpl ziː wʌn ˈhʌndrəd"

Next Steps

Broadcasters should start to provide **phonemes** and **aliases** <u>where it helps voice assistants</u>

Manufacturers should use **phonemes** and **aliases** to improve the accuracy of matching and reproduction, in addition to **plain text matching**

How **voice matching** works

Spoken Audio from Listener

Does it match any
Text Names
longName, mediumName, shortName

→ yes → Station Name Match

↓ no

Does it match any
Aliases
Alternate informal names

→ yes → Station Name Match

↓ no

Does it match any
Phonemes
Matching of unusual names

→ yes → Station Name Match

↓ no

Does it match any
Frequency

→ yes → Tune to given Frequency

Summary

Accurate Metadata is crucial to delivering a good radio experience

Voice Metadata helps drivers get to the radio station they want to listen to

The Automotive Guidelines explain how to implement the standards to create a great user experience

Contact WorldDAB if you want to know more