

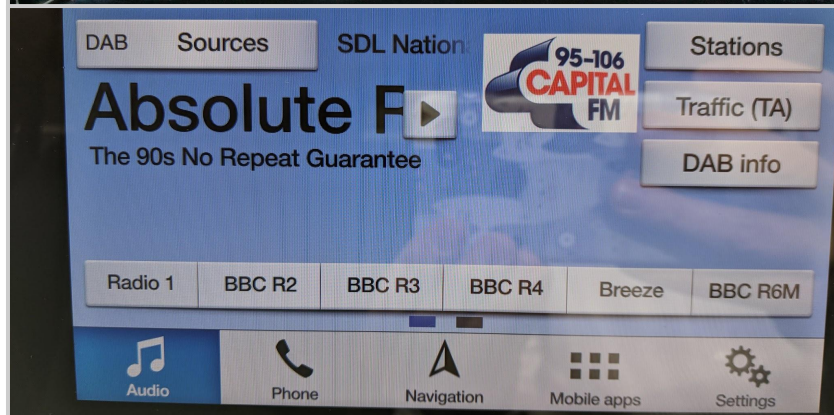


DAB SPI & Station Logos

Implementation by Broadcasters and Manufacturers

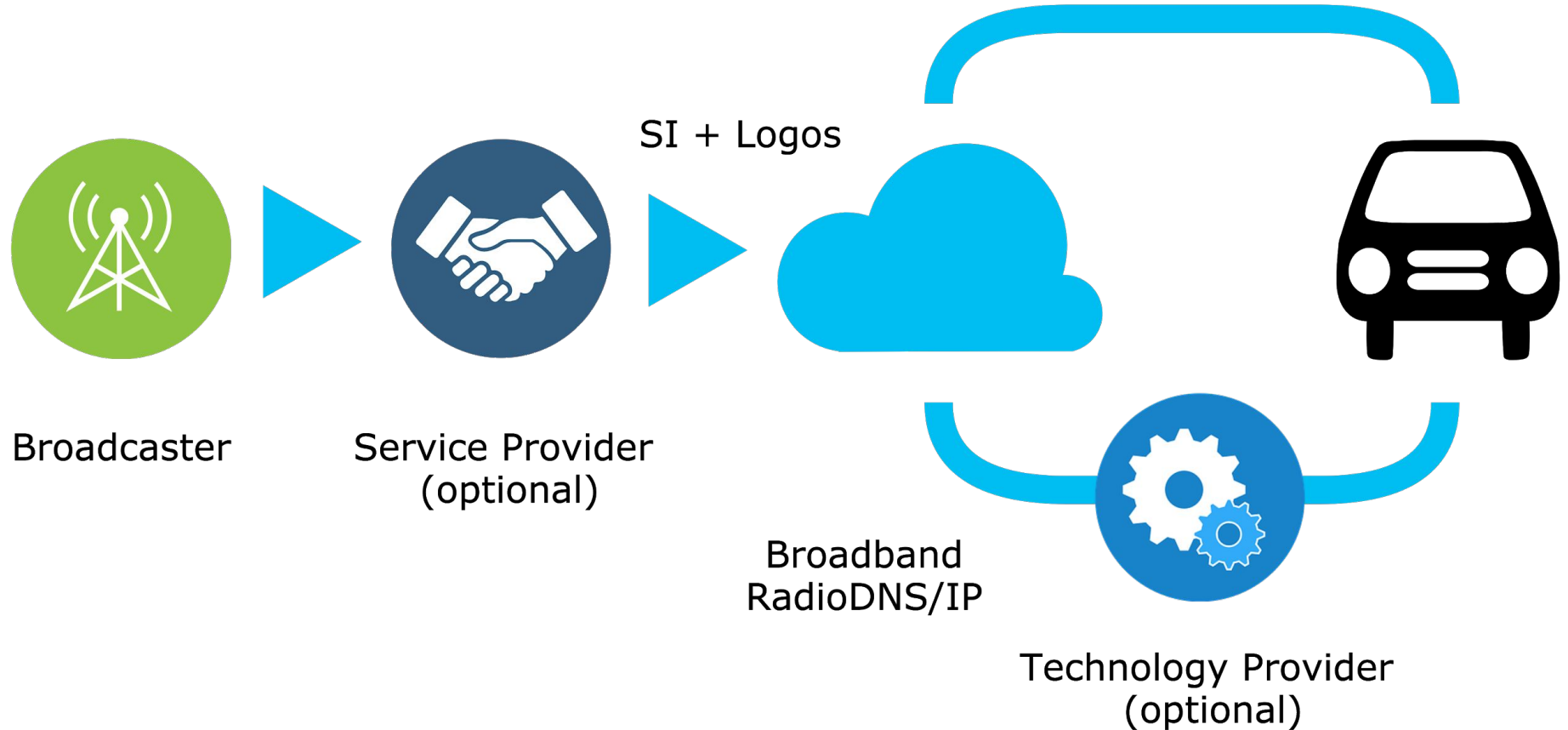
Station Logo Databases are Bad

Errors increase over time and are uncorrectable



Two Distribution Paths for Logos

via IP/RadioDNS and/or via DAB SPI



Standards and Guidance Documents

ETSI TS 102 818 V3.1.1 (2015-01)



**Hybrid Digital Radio (DAB, DRM, RadioDNS);
XML Specification for Service and
Programme Information (SPI)**



world **dab**

Radio ^{DNS}
HYBRID RADIO

Provision of Station Logos to Automotive Receivers

How broadcasters with services on FM or DAB can supply and update brand logo, and how automotive manufacturers can use them



Cost

Manufacturers

Too much engineering and support cost
for too little benefit

"Not enough logos available via DAB"

Broadcasters

Difficult to justify using / paying for data
capacity to transmit logos over DAB

"Not enough cars using logos via DAB"

**But no data to quantify
either assumption**

Where Are We Now?

Manufacturers / Tier 1

Which of your vehicles/radios acquire station logos using **DAB SPI**?

Broadcasters / Mux Operators

Which of your stations are transmitting station logos using **DAB SPI**?

There is much confusion between DAB Slideshow and DAB SPI

SPI should **always** be used for logos
Slideshow is used for any dynamic content, which **could** include logos

What Did We Learn?

So much confusion on both sides between DAB Slideshow and DAB SPI

"We transmit our station logo".... but only on DAB Slideshow

"We show logos from all stations"... but from DAB Slideshow

Tier 1's know what they support, but can't say exactly which vehicles they go into

Automotive OEMs can't be too specific about volumes and capabilities

Broadcasters don't always know if their Multiplex Operator is sending their logo



**The following figures are for guidance
and are not definitive**

Broadcaster Support

Germany



DR Deutschland

National Ensemble -

4 stations

ARD

Regional Ensembles -
(National coverage)

5-10 stations

In **most** places 10 - 20 station logos are available via DAB SPI. (20-40% of all DAB stations)

United Kingdom



BBC National Multiplex

National Ensemble -

11 stations

NOW Digital - Trial

Regional Ensembles -
(Covering 5m (~10%) popn)

7-8 stations

90% of the UK receives only 11 BBC Logos

10% of the UK gets 20 station logos (around 30% of all DAB stations).

Norway



National Ensemble

National Ensemble -

17 stations

Regional Ensembles

Regional Ensembles -
(national coverage)

15-20 stations

Norway has station logos for between 65 - 100% of DAB radio stations

Belgium



RTBF

Regional Ensembles -
(National coverage of French speaking area)

16-17 stations

Belgium has logos for almost all DAB stations in the French speaking area

Italy



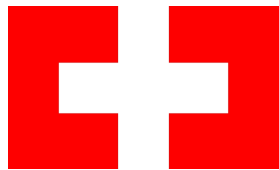
DAB ITALIA

National Ensemble -

18 stations

Represents around 20-40% of all DAB stations, depending on location

Switzerland



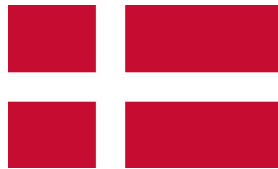
SRG SSR

Regional Ensembles -
(National coverage)

14-16 stations

Represents around 25-35% of all DAB stations, depending on location

Denmark



Danmarks Radio

Regional Ensembles -
(National coverage)

8-9 stations

Represents around 25-35% of all DAB stations, depending on location

How many DAB stations have logos?

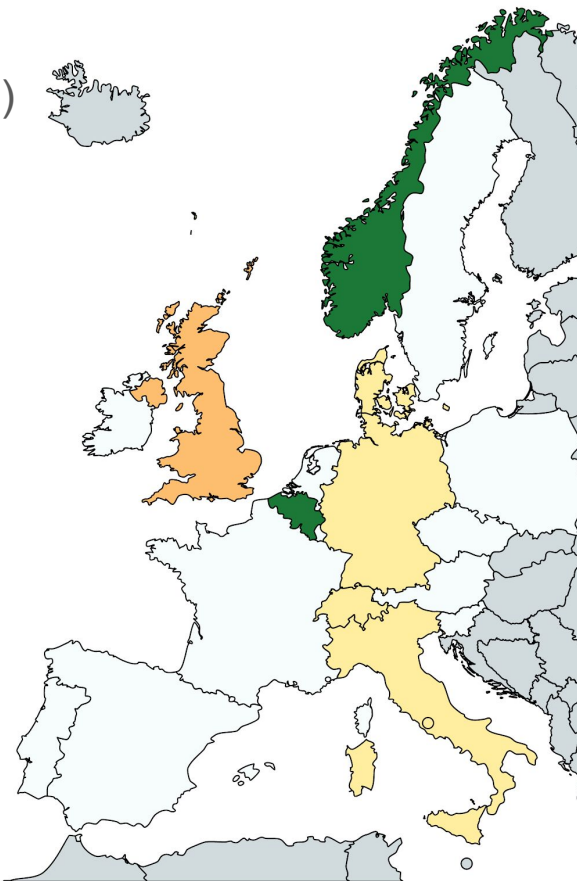
Nearly 100% Norway and Belgium (French speaking areas)

Between 20 - 50% Germany, Italy, Switzerland, Denmark
United Kingdom (10% of population)

Between 10 - 30% United Kingdom (90% of population)

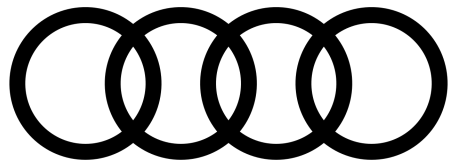
No response / data France, Spain, Austria, Poland,
Czech Republic, Sweden, Netherlands

Heavy skew towards public service broadcasters operating their own multiplexes



Manufacturer Support

Manufacturers who implement DAB Logos



These manufacturers responded

- Audi
- BMW
- Fiat
- Volvo
- Mercedes
- Hyundai (no volume figures available)

Volumes

Proceed with **caution**

Sales volumes are from **various sources**

Manufacturers have told us what **percentage** of their models support DAB

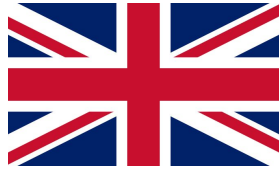
Covers sales in **2018-2019**, so misses any vehicles on the road but sold before then

These figures have been given back to OEMs to **verify**

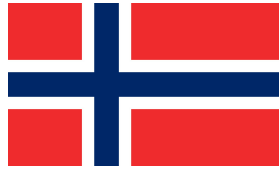
Vehicles By Country - 2018/2019 Sales



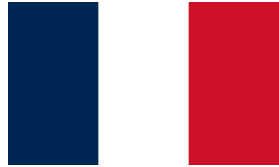
1,699,310



1,196,021



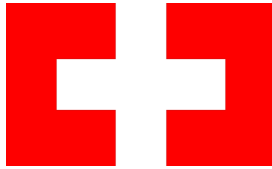
43,372



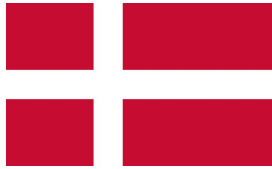
351,352



418,419



87,161



23,381



72,590

TOTAL
3,891,606

Summary

Getting responses to this survey was **difficult**

Broadcaster support **varies considerably** by country

In most places, fewer than 50% of DAB stations have logos

Determining **manufacturer support** is hard

Working out **number of vehicles with DAB Logo support** is harder

The figures here are probably **conservative** for both stations and vehicles

However, we do know things are changing more VMs are coming into the market in 2021 with DAB logos over SPI

There will be an **update of this research next year (2021)**

Next Steps

Broadcasters now **have data** to decide if getting their branding right in vehicles is worth the required bandwidth to transmit DAB SPI

Manufacturers now **have data** to decide if coverage is too little, sufficient or improving to support DAB SPI for Station Logos

[Open Source software](#) exists to automatically repurpose SI/PI via RadioDNS Lookup to DAB SPI format

RadioDNS / WorldDAB will repeat this survey in 2021 to assess growth

Please let us know if we have missed data / information



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