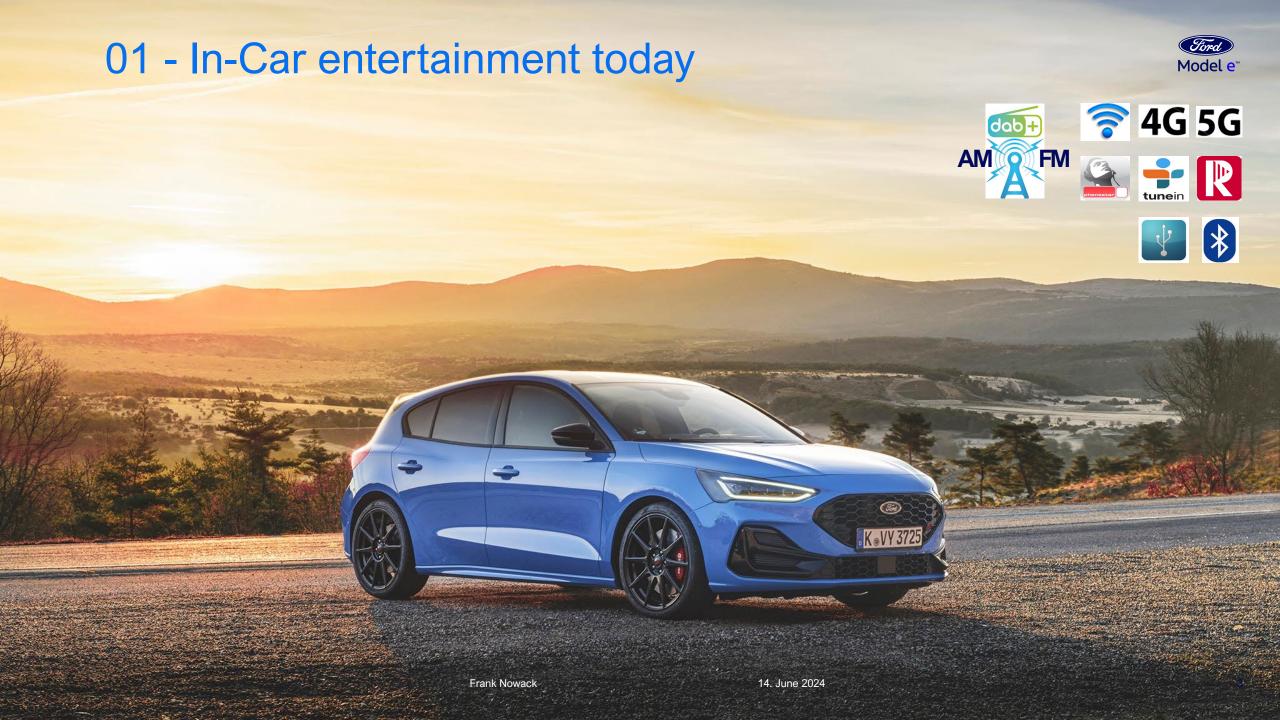


Agenda



- In-Car entertainment today
- General Broadcast situation
- O3 Mobile Experience
- O4 Potential consequences
- **O5** Future of DAB In-car-radio



02 - General Broadcast situation



The overall broadcast situation improved a lot in regard to the broadcast coverage and the station offering.

The details are well known and already shown by the responsible colleagues from WorldDAB, the broadcasters and the regulation authorities.

With this improved broadcast situation and the higher listeners usage, the risk for complaints is getting higher – for car manufactures and service providers!

The following issues are shown to prevent such listener complaints.

03 - Mobile Experience 1/5:



- Bad audio quality on DAB:
 - Station provides bad audio quality; sounds like FM recorded audio including interference noise
 - Listeners annoyed by bad audio
- SlideShow contains just the station logo:
 - The SlideShow provides only the station logo
 - Listeners annoyed by just getting the station logo and no further information
- Useless RadioText content:
 - RadioText provides useless content like e.g., "coder location"
 - Listeners annoyed by just getting useless content and not real information

03 - Mobile Experience 2/5:



- Inconsistent Service linking information:
 - Service Linking information is provided from one station correctly, but from the other not.
 - ➤ Listeners will get seamless DAB2DAB Service Linking, but on the way back just mute
- Stations with no content:
 - Station are provided with no audio or data content
 - Station are provided with no audio but data content
 - Listeners will complain audio system for "no audio"
- Station name not regionalised even the station is regionalised:
 - The station list show several times the same station and no differentiation for the different region
 - Listeners are confused by several times same station
 - Listeners do not know what would be the best station for his region
 - Listeners might get the "wrong" advertisement

03 - Mobile Experience 3/5:



- Station name writing varies:
 - Station name writing varies due to band or frequency change with no content change
 - Listeners get confused on continuously changing writing differences during listening
- Same station but different content:
 - Station changes the content due to band or frequency change without station name change
 - Listeners get confused on continuously changing content
- Signalisation of TA support, but no TA support:
 - TA support is signaled, but the station never provide a TA
 - Only signalise the TA support if TA is supported
 - Listeners don't understand why the TA is provided by the FM alternative, respectively by a different station

03 - Mobile Experience 4/5:



- Other announcements types than Traffic not used:
 - Nearly 100% of services are only supporting TA and no other announcement types
 - Use the capabilities, at minimum the same as for FM e.g. News
 - Listeners don't understand the different station behaviour on FM and DAB
 - > Background announcement support might switch to different station than selected station
- 3s audio delay on service selection:
 - DAB chip supplier issue due to the high FIG repetition rate on some services
 - Listener is confused, why the service selection takes more time
- Inconsistent regionalisation:
 - The station do not regionalise on DAB, but do regionalise on FM with keeping the PI-code / SID match
 - Listeners get confused by continuous changing content

03 - Mobile Experience 5/5:



- FM only Not related stations using regional relation:
 - Two stations are using a PI-code, which indicates that they are regional alternatives
 - Listeners get confused by continuous changing content
- FM only Overlapping frequency area:
 - A station is provided by at least 2 towers using the same frequency with overlapping area
 - Listeners will be annoyed by heavy distortion

04 - Potential consequences



Costs, time and money to handle the complaints

Broadcaster will lose listeners

Broadcaster will lose advertising contracts

05 - Future of DAB In-car-radio



Broadcast radio will stay as a part of vehicle entertainment systems.

DAB is in most DAB countries already a standard feature due to market legislations.

Online services, data and audio streaming, will be implemented.

These are used to improve the broadcast radio UX and the overall audio offering.

Data services (SlideShow, EPG, etc.) are implemented by the car manufactures.

Broadcaster need to implement them more to be competitive with streaming alternatives.



Thank you!

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