



Conversational Interaction with the Car

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Agenda

- ❖ 2017 J.D. Power usability data
- ❖ Car speech moves to the cloud
- ❖ What's new?
- ❖ Car makers adopt Alexa
- ❖ What's expected in the years to come?

On-board Speech Recognition

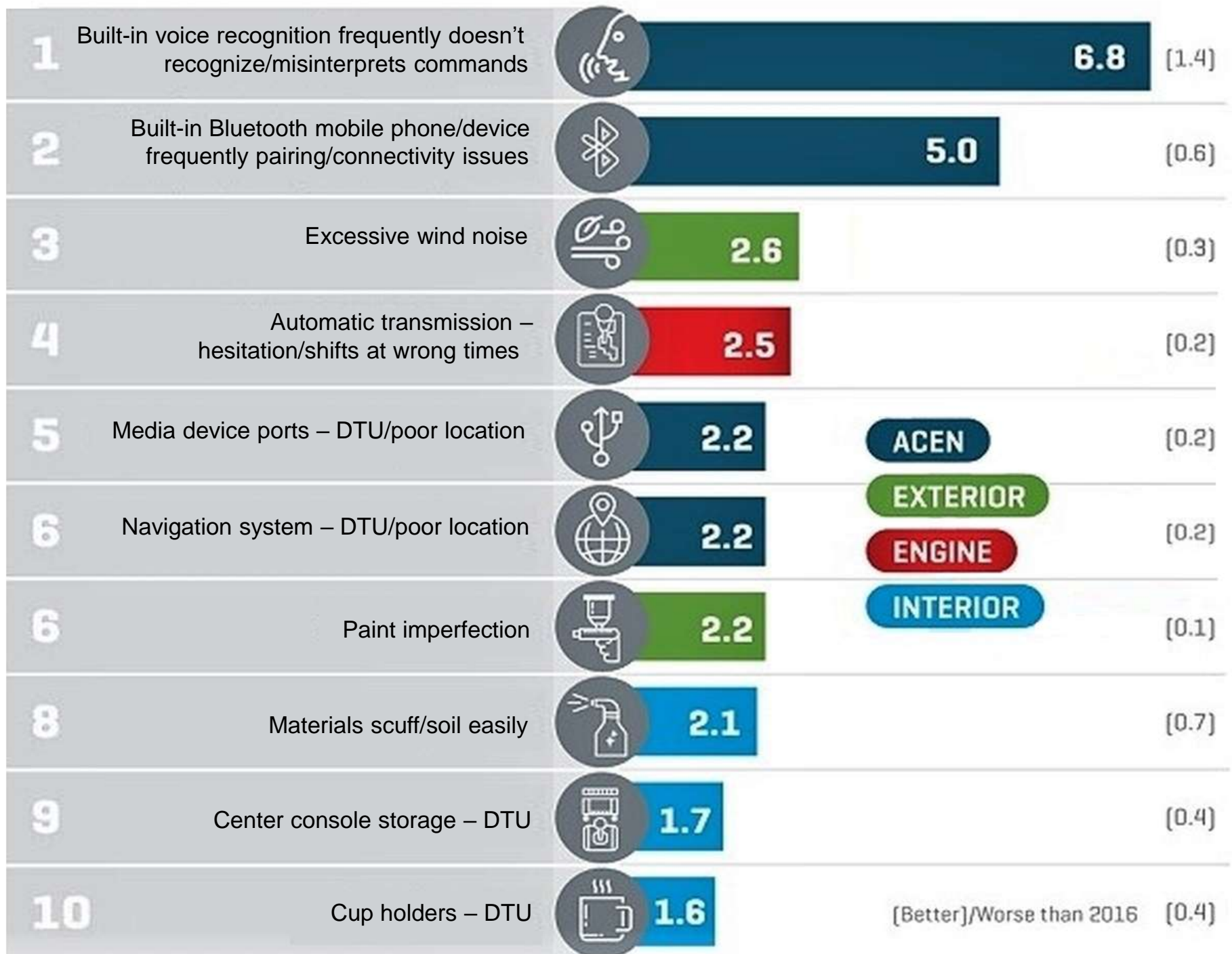
How well does it work in the car?

*The J.D. Power **Initial Quality Study** examines problems experienced by original vehicle owners during the first 90 days of ownership.*

Initial quality is determined by the number of problems experienced per 100 vehicles (PP100), with a lower score reflecting higher quality.

Car makers pay close attention to J.D. Power scores.

Top 10 Automotive Problems in 2017



2018 Honda Accord

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**How to Use Navigation System
Voice Recognition**

Off-board Speech Recognition

*Car speech is moving to the cloud,
and this movement enables
Conversational Interaction.*

Google



amazon

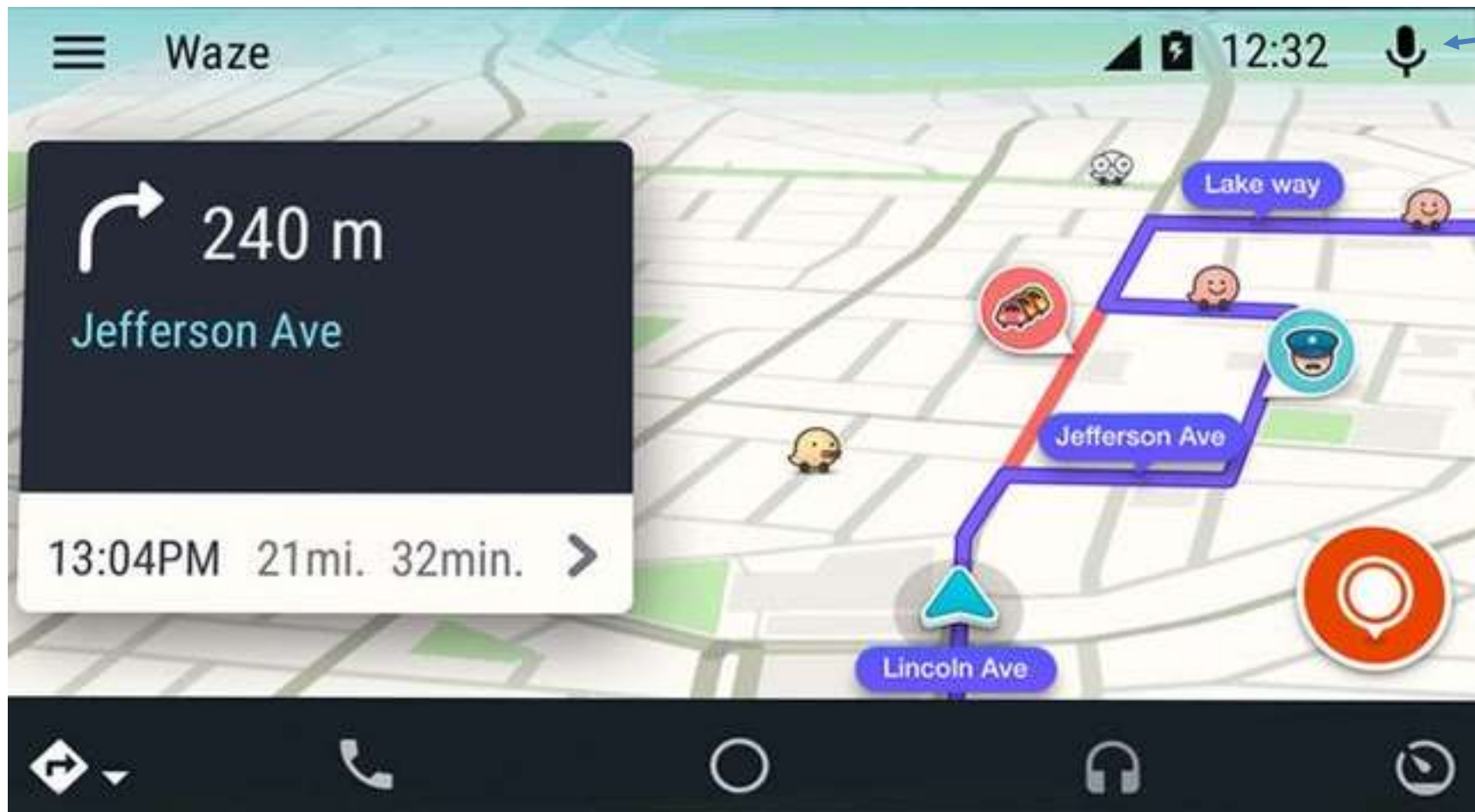


What's New in the Car?

- ❖ Apple and Google – enhanced offerings
- ❖ Panasonic integrates Onboard Alexa in head unit
- ❖ Toyota, BMW announce plans to offer Onboard Alexa
- ❖ Hyundai offers SoundHound Assistant
- ❖ Alexa-enabled car charger now available
- ❖ Mercedes claims best Conversational Interaction

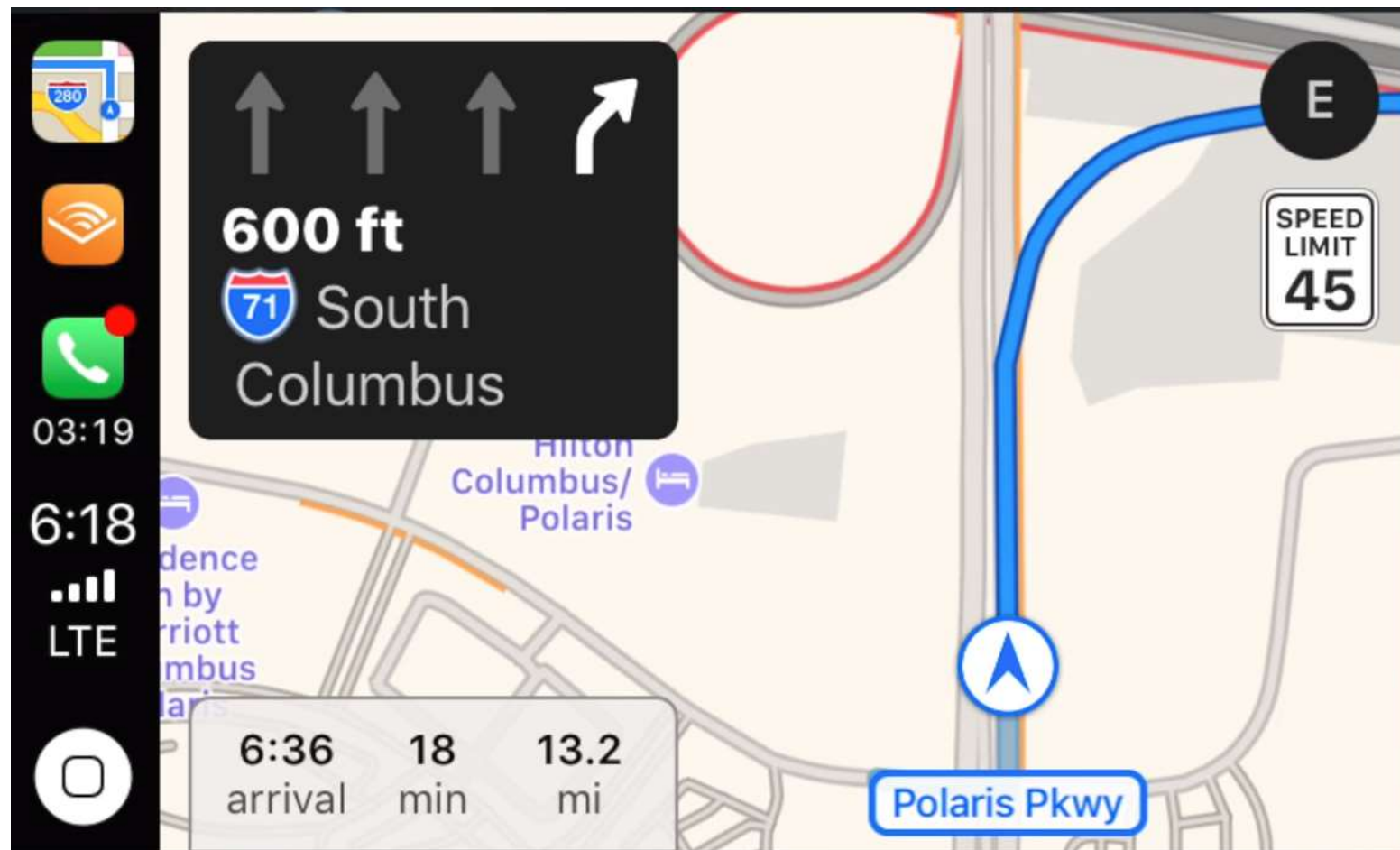
Android Auto – What's New?

- Full Google Assistant
- Wireless connectivity to car
- Waze – regarded by many as the best navigation UX



CarPlay – What's New?

- Enhanced navigation
- Enhanced U/I
- SiriusXM



Alexa – Expected Trends in the Car

- ❖ The wakeup command
- ❖ Remote car control
- ❖ Shopping
- ❖ Home control
- ❖ Enhanced music/audio management
- ❖ And more....

A woman with dark hair pulled back, wearing a green cardigan over a red top, is sitting in a modern kitchen. She has a thoughtful expression. The kitchen features dark cabinets, a white countertop, a sink with a faucet, and two blenders on the counter. A white text box is overlaid at the bottom of the image.

**FORD AND AMAZON ARE CONNECTING
YOUR CAR WITH ALEXA**

Amazon Alexa Onboard

- ❖ Integration of Alexa into Panasonic head unit
 - Panasonic is major tier 1 supplier for automotive
- ❖ Major trend toward true automotive assistant
 - Full Alexa on-line user experience
 - Off-line control of car features (e.g., setting car temperature)
- ❖ Expect many car manufacturers to adopt
 - On-line/Off-line vehicle support
- ❖ First notable new on-board speech recognition
 - Nuance has completely dominated embedded

After Market Alexa Addon

Alexa in a car charger!



Conclusion

- ❖ The cloud is changing the Car speech experience
- ❖ CarPlay, Android Auto, and Alexa will sustain
- ❖ Nuance's Dragon Drive has competition
- ❖ Shopping and home control from the car is new
- ❖ The J.D. Power satisfaction scores will improve

Thank You