How AI-Powered Voice Interaction Enhances In-Vehicle Navigation

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Consider that more than 90% of vehicles sold in the United States feature connected technologies that offer entertainment and information to drivers and passengers alike. One of the most common components of these connected vehicles is navigation — OEMs recognize the value of helping drivers get from point A to point B as efficiently as possible, and access to real-time data – enabled by vehicle connectivity – makes this easier.

Presently, there's also an uptick in smartphone navigation apps; however, these cost-effective options for drivers, despite their widespread use, have potential drawbacks when it comes to safety. Unlike embedded navigation systems, these options may not have undergone the same rigorous safety testing and may not be designed specifically to limit driver distraction.

Too Much Screen Time? Common Smartphone Challenges

While smartphones offer convenience, they also come with challenges.

Screen Size

Smartphone screens are often between 5 and 6 inches, while in-vehicle touchscreens may be twice that size. When actively driving a vehicle and looking for small details such as road or business names, smartphone screens aren't easy to see, let alone read. Smartphones may also overheat when placed on dashboards in direct sunlight, introducing the risk of possible navigation failure at a crucial moment.

Sound Levels

While many mobile apps have voice navigation options, the sound output of a handheld device can't match the audio offered by in-vehicle speakers. This can create challenges for drivers trying to navigate a new city or country while listening to audio directions. If their smartphone fails or runs out of power, voice directions may suddenly vanish.

Safety

Both smartphones and in-vehicle touchscreens also come with safety drawbacks. According to the National Safety Council (NSC), phone use while driving leads to 1.6 million crashes per year. Although it might seem like a small thing to quickly pick up a smartphone and check directions, even a small lapse in attention can be fatal.

Consider that in the EU, many highways have a speed limit of 130 km/hr. This translates to more than 36 meters per second and means that if drivers glance away from the road to tap touchscreens or review smartphone directions for just three seconds, they're effectively flying blind for more than 100 meters, putting themselves and everyone around them at risk.

Let's Talk: How NNG and Cerence are Driving In-Vehicle Navigation

With AI-powered, embedded voice interactive navigation solutions from NNG and Cerence, drivers can benefit from enhanced safety features and reduced risk on the road.

Together, NNG and Cerence deliver a fully integrated, voice-powered navigation solution for vehicles. For drivers, this eliminates the need to tap on touchscreens and fiddle with apps at critical moments of journey — instead, they simply speak their destination, and the system provides step-by-step instructions delivered in plain language.

Connected vehicles make it possible to streamline the driving experience and enhance occupant safety —when using the right software that makes the most of available hardware. With NNG and Cerence, you get this peace of mind, as tailored navigation combined with natural language understanding enables drivers to speak and the system to respond, getting them safely where they want to go.

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