The Electric Experience: How Voice & AI are Supercharging Next-Gen EVs

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By Stefan Ortmanns, EVP & GM, Core Products

In recent months, there's been a flurry of exciting announcements from automakers launching their next-generation electric vehicles. Perhaps inspired by Tesla, NIO, and other EV innovators, and with mounting governmental regulations pushing them to increasingly electric lineups, legacy OEMs are not only prioritizing the mechanics of EV driving – battery life, charging infrastructure, etc. – but are also supercharging and completely transforming the EV in-car experience. In many cases, they're working with Cerence to create intelligent assistants that serve as co-pilots in the dashboard, guiding drivers through all aspects of EV ownership and delighting them with high-tech, intuitive user experiences that are, simply put, electrifying.

As the leading provider of conversational AI assistant experiences working with all the world's leading OEMs – and supporting many of them in their strategic push to electrification – we know firsthand the unique requirements of EV drivers when it comes to their in-car assistants. New use cases, important contextual information, and new opportunities for personalization are all elements of the EV driving experience where voice and AI play a major role. Here are three key aspects of creating incredible, conversational-AI in-car experiences for EVs:

- **Deep integration with the car itself** – in an EV setting, the in-car assistant must be directly integrated with the car's sensors and data to deliver critical information and knowledge to the driver, including battery status, vehicle direction, temperature (multi-seat inside, outside, engine), camera images, microphone (multi-seat inside, outside), steering movement, proximity, stability, and more. Uniting this important context with the user interface provides a streamlined experience for drivers and makes voice a key piece of their day-to-day driving experience. In the future, we'll take this one step further with proactive AI, using voice for critical warnings and information that would previously be delivered by an easily missed warning light or beep.
- **Natural language understanding** – there's nothing more frustrating than asking for important information like where the closest charging station is located and having the system not understand you because you haven't used a specific, prescribed set of words. Natural language understanding takes the guesswork out of interacting with the automotive assistant, simplifying each interaction and ensuring drivers get what they need when they need it. Plus we're constantly increasing the number of intents our systems can understand, across Cerence's unmatched language portfolio
- **Personalization** – prefer free charging stations close to the office? Using AI, Cerence-powered assistants can learn these preferences over time and integrate them into EV drivers' day-to-day experience, even offering them proactively when the time is right. Drivers can even let the assistant know that it should remember certain preferences or favorites moving forward. It's this type of intelligence that transforms the system from a voice recognition platform to a true personal assistant.

As we look to drive continued adoption of EVs worldwide, incredible, high-tech experiences in the cabin will be critical, with voice and AI playing an important role. To learn more about Cerence technology driving these experiences, visit www.cerence.com/cerence-products/core-technologies.