



How Cerence is Making Real-Time Car Information Available to Drivers

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A car is a complex machine with hundreds of parts, a multitude of features to improve the driver experience, and subsequent maintenance issues that arise over time. The car's owner may not be aware of all the car's features, and historically there has been no credible way to assist them in diagnosing a problem in the car. In these cases, drivers typically take to the internet, performing a search or using forums to describe the problem with the hope that fellow drivers can help. Not only is this process time consuming, but it also leaves drivers wondering if they have the most credible answer tailored to their specific car, model year, and configuration.

For example, suppose the driver is looking for the Motorcraft part number of the battery installed in her car. In that case, such information is not readily available at their fingertips with an online search. In contrast, the automaker has tons of credible information available in the form of documents (e.g., user manual), frequently asked questions, call-center data, etc., that can be used to provide authentic information to the driver – tailored specifically to the car.

At Cerence, with our unique understanding of the in-car user experience, we are redefining how drivers access the information they need. Cerence Car Knowledge leverages home-grown generative AI to enable drivers to ask questions, describe situations, or even just type in a few words to find much-needed information. A key piece of the success of generative AI-based solutions is the credibility of information, which can directly impact the driver's safety. It's critical that our solution not only understand the context in which the driver is asking the question, but also the context encoded in various knowledge sources provided by the OEM (e.g., user manual, documents, sensor information, etc.). Cerence Car Knowledge provides a concise, accurate, and credible answer to the user. For example, when a driver is asking, "How do I connect my phone to the car via Bluetooth?" while driving, Cerence Car Knowledge enables the in-car assistant to respond, "Sorry, I cannot provide you this information. Please ask me again when your car is parked or via your companion app while at home." Once in the right state, Cerence Car Knowledge will provide step-by-step instructions to pair the driver's phone with Bluetooth, specific to the car's configuration. Here, we ensure driver safety as a top priority. We make sure that while the assistant is providing answers, it does not lose the context of the question and available authentic information from the OEM.

Further, Cerence Car Knowledge empowers drivers to seek information naturally and intuitively. For instance, drivers can ask, "How can I fold side mirrors automatically?" or "Is there a button to fold in the outside mirrors, or do I have to do it by myself?" or "Can my car fold these side mirrors automatically?" – all of which return the same answer and information.

In summary, Cerence Car Knowledge offers wonderful benefits to drivers, including:

- Helping drivers to better understand their car and all of its features
- Enabling multi-channel access (in-car voice assistant and smartphone app) to ask questions and learn more about the car
- Simplifying search by making it easy to ask a question by voice instead of finding the answer in the user manual or online
- Saving time by providing car-specific answers instantly
- Providing reliable information exclusively from OEM – and ensuring it's always up to date via OTA updates

Automakers also benefit by deploying Cerence Car Knowledge:

- OEMs can address drivers' concerns by combining reliable information from official sources (FAQs, user manuals, sensors, etc.). Automakers are also empowered by the data gained during these interactions as they can better understand the most asked questions per car model and per country.
- They can create a scalable solution for many different car models in multiple languages without scaling the cost, and they can save ~8-10 €/car by removing paper user manuals.
- Content is easily updated via OTA updates, rather than printing and transporting user manuals.
- Environmental impact is reduced as several tons of paper are saved and there are decreased CO2 emissions when not shipping user manuals.

Cerence Car Knowledge recently went live for drivers in a North American OEM via over-the-air update in January 2023. The feature is currently available in English with additional languages to follow.

To learn more, visit <https://www.cerence.com/cerence-products/cloud-services>.