

## Touchless vehicle apps know what you want, when you want it

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Today's cars and trucks are smart, but they're not smartphones. Potentially, we can choose from millions of apps on our phones, just by touching an icon. If we tried to do all the things we want to do in our cars using apps, we'd be frustrated, because we can't safely select them while driving. Automakers have been limited to the native applications built into cars—like Bluetooth and USB ports – relying on a passenger to use a phone to find the nearest gas station or restaurant if the vehicle didn't have built-in navigation.

A new developer-friendly application platform from Visteon – called Phoenix– solves this problem and propels smart vehicle infotainment systems to the head of the class. This web-based infotainment platform “stitches” together apps native to the car with apps from third parties. Application integration is performed via recipes that enable the appropriate apps at the ideal time contextually – without the driver needing to touch anything.

Case in point: As a driver enters the vehicle, a customized startup feature automatically indicates available content from three different apps: an audible message lists the day's meetings, the weather forecast and traffic conditions for the anticipated route

The driver does not need to use a phone, speak voice commands or input commands to a touch screen; all required information is automatically displayed on one screen.

Similarly, today two separate apps and two steps are required to open a garage door remotely and to show the vehicle's position in relation to the garage entrance via GPS. Phoenix stitches these apps together so that the

garage door automatically opens as the vehicle approaches.

Phoenix is easy to use since it complies with open standards such as W3C and GENIVI and is designed with app developers in mind. This platform lets developers build applications using HTML5 along with rich JavaScript based application programming interfaces (APIs). This eliminates the need to rewrite applications when porting to other infotainment systems.

Furthermore, Visteon offers a software development kit (SDK) with libraries of code, documents and a simulator. The Phoenix SDK makes development easier than conventional, often disjointed methods that require custom software or hardware and lack third-party tools – thus increasing cost and time. With Phoenix, the developer creates and tests the app with the SDK and simulator; the app is then validated by the automaker or Visteon and published to an app store. Phoenix is the first platform for vehicle apps to incorporate HTML5 and an SDK.

The Phoenix platform also advances the capability to update in-vehicle apps over the air, whether at a dealership lot or in the driveways of individual owners. For the first time, automakers can securely update just one portion of an app, using Visteon's proprietary block-and-file technology, rather than needing to upgrade the entire system.

By 2020, when vehicle-to-vehicle (V2V) communication will be more common, vehicles will have the capability to display infotainment on screens from 12 to 17 inches in size, compared with today's 7- to 8-inch screens. Phoenix will enable developers to create content that optimizes these larger screens, making them more useful for drivers and improving the driving experience.

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He has more than 15 years of automotive experience and served as software developer, technical professional for audio and infotainment software, and now as platform leader, located at Visteon's headquarters in the U.S.