

Smartphones fueling smarter cars, safer drivers

January 14 2013, by Susan Carpenter

One of the most innovative automotive technologies at this week's Consumer Electronics Show in Las Vegas is something most drivers already own: a smartphone.

Android or iPhone, it doesn't matter; the car of the near future will enable mobile devices to double as car keys and to alert drivers if their vehicles have been hit while parked. And that's just the start. Among other tasks, phones soon will be used to verify that the driver is, in fact, the car's owner. They'll even be able to prove a driver's safe driving record to insurance companies and coach sports-car owners on setting up a turn.

It's called the [connected car](#). And if you thought it was neat just to be able to talk hands-free via Bluetooth, that's only the beginning. At this week's CES, some of the world's largest automakers demonstrated different strategies for leveraging [cellphone services](#) and making them accessible through vehicle dashboards, steering wheels and navigation screens.

"It's a little bit like 50 years ago when hot-rodding first came on the scene," said Scott Fosgard, communications "infotainment" manager for General Motors. "People were customizing their cars through the engine. Today, people are customizing their cars through what we once thought was a radio. With apps, I can make my Chevrolet Malibu different from your Chevrolet Malibu just like your iPhone is different from my iPhone."

General Motors and [Ford Motor](#) Co. both unveiled new music, news and points-of-interest applications that will be available in upcoming GM vehicles equipped with MyLink and immediately in Ford cars with Sync AppLink. In select 2014 model-year vehicles, General Motors will allow drivers to update their cars with manufacturer-approved apps as they become available. Those U.S. automakers announced programs this week that will allow [software developers](#) to access the manufacturers' vehicle frameworks and accelerate the integration of new apps with their cars' controls, using voice recognition, display screens, buttons and microphones.

Many of the apps available in Ford and General Motors cars are lifestyle-oriented, originally designed to be useful outside of a car. But what's coming down the pike is entirely different.

"These are apps created specifically for the car," said Fosgard, who at a "hackathon," or programming conference, in Las Vegas this week fielded 200 developer pitches for apps that keep tabs on a car's systems and advise drivers when they need service, or that track a driver's acceleration habits and following distances, among other things.

More than 1 billion smartphones are in use globally, according to Ford Vice President of Engineering Hau Thai-Tang, and to date more than 55 billion apps have been downloaded worldwide. With another billion smartphones expected to be in use by 2015, Thai-Tang said, "Smartphone owners want to use the fully expanded capabilities of their phones in the car."

For now, many of them are doing so in a manner that isn't safe.

Smartphone users are twice as likely as other phone users to interact with their phones' touch screens and keypads while driving if the technology embedded in their vehicles doesn't meet their needs, Thai-Tang said,

adding that recent studies have shown smartphone users increasingly are using their devices to access the Internet while in a car.

"The issue today is that consumers want to access their cellphone content while driving on the road, and the only way to do that is to use their phones while driving, which is not safe and in most states is illegal," said Jake Sigal, founder of Michigan-based Livio Connect, a system that makes apps accessible through a vehicle's controls. Livio Connect is available in the 2013 Chevrolet Spark, an entry-level minicar that uses the system to access the global radio-station and podcast app TuneIn via voice commands.

On Monday, Livio announced it would expand the apps available to its partner automakers, some of which provide weather updates (Accuweather), information on nearby parking (Parkopedia) and the ability for in-car FM radio listeners to contact radio stations and their sponsors through Bluetooth-connected smartphones (FM Connect).

Livio Connect, and other systems that sync vehicle controls with phones' connectivity to the cloud, are capable of importing almost any app consumers are using on their mobile devices into a car's infrastructure. But automakers are gatekeeping. Activities that could distract drivers, such as watching a TV show on Hulu or playing "Angry Birds" on the center console screen while the vehicle is moving, aren't enabled.

Car companies are allowing only apps that safely enhance the driving experience, such as audio, navigation, real-time traffic rerouting and searches for points of interest, along with even more-cutting-edge technologies that send information the other way - from the car, through the cloud, to the car's owner, even when he isn't in the driver's seat.

Computer microprocessor maker Intel is working with automakers such as BMW, Hyundai, Nissan and Toyota to enable their vehicles' cameras

and sensors to notify a driver's smartphone if something has happened to the car while the driver was away. Intel has also developed a system that securely pairs cars with smartphones so they can be used as virtual keys for remote entry, similar to traditional fobs. On a more personal level, Intel's intelligent car system also can access cellphones' contact lists and alert drivers when someone they know is nearby.

Cellphone and [automotive technologies](#) are moving so speedily, and are fragmented among so many different devices and manufacturers, that there's a real risk of technologies becoming incompatible from one vehicle or manufacturer to the next. To ensure that smartphones from competing manufacturers can integrate with cars' built-in systems, a coalition of automakers, smartphone vendors and makers of display technologies called the Car Connectivity Consortium have created MirrorLink, a technology standard for operating smartphones with steering wheel controls and dashboard buttons and screens that works across competing platforms. General Motors, Toyota and Volkswagen are among the 80 percent of global automakers who are part of the consortium, along with 70 percent of the world's smartphone vendors, including LG and Nokia, but not Apple.

In the future, phones are likely to enable even more safety features. It won't be long before cellphones alert drivers to, and direct them from, dangers they can't yet see and communicate among moving cars to prevent them from colliding.

SMARTPHONE APPLICATIONS IN CARS:

Aha Radio:

-What it does: Organizes drivers' favorite Internet content, including radio channels, news, music, audio books, social media feeds and podcasts.

-Available in: Ford vehicles equipped with Sync AppLink, including Mustang, Fiesta, F-150 and Expedition.

BeCouply:

-What it does: Suggests date ideas and directs couples to their destinations with turn-by-turn navigation.

-Available in: Ford vehicles equipped with Sync AppLink, including Mustang, Fiesta, F-150 and Expedition.

BringGo:

-What it does: Provides full-function navigation, including turn-by-turn directions.

-Available in: Future versions of the Chevrolet Spark and Sonic.

Glympse:

-What it does: Allows drivers to share their location information with family and friends via email, SMS, Facebook or Twitter using voice commands.

-Available in: Ford vehicles equipped with Sync AppLink, including Mustang, Fiesta, F-150 and Expedition.

Kaliki:

-What it does: Reads select magazines and local newspapers in a real human voice.

-Available in: Ford vehicles equipped with Sync AppLink, including

Mustang, Fiesta, F-150 and Expedition.

Parkopedia:

-What it does: Provides information on nearby parking garages, including pricing and real-time space availability, as well as navigation to get there.

-Available in: Livio Connect-enabled vehicles.

Rhapsody:

-What it does: Lets drivers access any of the service's 16 million songs through their phones, or listen without a connection by downloading a playlist to a mobile device accessible through the car.

-Available in: Ford vehicles equipped with Sync AppLink, including Mustang, Fiesta, F-150 and Expedition.

Siri:

-What it does: Allows [drivers](#) to get things done while driving by asking the Apple [iPhone](#) intelligent assistant.

-Available in: Future versions of the Chevrolet Spark and Sonic and future Hyundai models.

TuneIn:

-What it does: Streams audio from a global network of 70,000 radio stations; a listener in California could listen to an Afrobeat station in Nigeria.

-Available in: 2013 Chevrolet Spark and future versions of the Sonic.

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