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Tech-Tech BOOM

Cutting-edge technology is highlighted

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By Bob Young

Stop to consider how far automotive technology has come in the past decade — then take the next step into the future at the Los Angeles Auto Show. Much of it might seem like something out of science fiction, revealing a dramatic evolutionary curve in just the last 10 years or so.

The 2011 Auto Show shines a bright spotlight on cutting-edge car-tech like never before — systems and features found on new models such as the Cadillac XTS, Infiniti JX and Prius v, as well as breathtaking developments right around the corner.

Get ready for the next generation. Lexus is working on its Driver Monitoring System, aimed at preventing accidents caused by distracted or drowsy drivers by tracking eye movements with infrared sensors. And Ford is testing its popular SYNC voice-command platform with WellDoc, a cloud-based patient monitoring service that can evaluate a driver's current health condition.

Consider that Volkswagen, which spends \$20 million a year on research and development, has devised a system that allows a car to drop off its passengers, navigate itself through a parking structure, find an empty spot and then return to pick everyone up when they're ready to leave.

The 2011 L.A. Auto Show is the epicenter of new-era technology — a one-stop high-tech showcase for this booming market that's projected to generate \$9.3 billion in 2011, up 12% from 2009, according to the Consumer Electronics Assn. Ford, for instance, is planning to offer SYNC systems on all its models by 2014.

Science of safety

You gotta love a car that keeps an eye on your driving habits. A most inventive safety feature, Mercedes-Benz's Attention Assist employs an algorithm that creates an individual driver profile that recognizes typical patterns of behavior, then uses real-time data to detect if the driver is getting tired or otherwise screwing up — signs such as unintentional weaving or delayed reactions. Alarms blare and visual warnings flash on the instrument cluster to get the driver quickly back on track.

Audi is showcasing its "pre-sense-plus" technology in several vehicles making their debuts, including the S8. It actually anticipates and reacts to incidents using a radar-based Adaptive Cruise Control sensor that monitors adjacent traffic, then adjusts accordingly with, among other things, controlled, automatic braking. Hyundai rolled out its versatile Blue Link platform, which offers Automatic Collision Notification and Assistance on several new models, notably the 2012 Veloster, featured at the show. ACN is triggered when an airbag deploys, and the system alerts roadside assistance and transmits vehicle information and location.

That's infotainment

No worries about texting while driving — not when it's hands-free. Voice-command systems like Ford SYNC enable drivers to text by voice, while Mercedes-Benz COMAND provides voice access to popular apps like [Pandora](#), [Facebook](#) and Twitter.

Kia hits the show with its UVO system, giving drivers myriad voice-command and touchscreen options — it even rips music from CDs and downloads it into the car. Cadillac is rolling out its new CUE (Cadillac User Experience) system, offering [iPod](#) integration, app capability and Bluetooth for phoning and wireless music streaming.

Caddy even drops a [Blu-ray](#) system in the backseat and delivers cool user-interface touchscreen tools like swipe, tap, scroll and even pinch-to-zoom — all familiar to smartphone and tablet owners. CUE is offered in the 2012 XTS and ATS sedans, as well as the SRX crossover.

Cloud concierge

Five-star hotels have nothing on today's driver-assist technology. Systems such as BMW Assist, Hyundai's Blue Link and Infiniti's Personal Assistant tap into cloud computing, Bluetooth and GPS to provide not only voice texting but also access to advanced 24/7 concierge services for hotel and restaurant recommendations and reservations — often from a live concierge.

Infiniti's Personal Assistant, offered in the JX luxury crossover making its world debut, serves up all of the above — it can even offer gift ideas to last-minute shoppers. Hyundai's Service Link manages maintenance schedules, offers an eco-coach to improve fuel-efficient driving and even delivers restaurant ratings.

The 2012 Toyota Prius v debuts with Entune technology that can access mobile apps along with a universe of music options — the most ever, according to the manufacturer. It also accesses integrated apps like Bing search, makes restaurant reservations and searches for movie times.

And parents will love Entune's GeoFencing — their kids, not so much. Punch in predefined borders, and it sends text alerts when teenage drivers stray beyond them.

Navigation

Advanced GPS systems do far more than simply navigate — they can create custom itineraries, give live traffic updates and even sniff out the best deals from local businesses. BMW's ConnectedDrive automatically recognizes a vehicle's position and sends the driver results for various points of interest. The Mercedes-Benz mbrace navigation and trip-planning system has an app that lets friends send a location from a smartphone directly into the navigation system. And Hyundai's Blue Link can automatically locate the best gas prices nearby, while allowing drivers to keep their hands on the wheel. Hyundai plans to put Blue Link in the majority of Hyundai vehicles by 2013.

We've come a long way from car radios, kids. Welcome to the future, brought to you by the 2011 L.A. Auto Show.