

The Automotive Future?

By Bruce Hotchkiss

I recently attended a one day conference titled, "Silicon Valley Reinvents the Wheel, How Technology is Transforming Automotive Powertrains, Retail, Connectivity and Autonomous Driving" cosponsored by C3 (Connected Car Conferences) and WAJ (Western Automotive Journalists). I am a member of WAJ.

The day was split into six panel discussions with a welcoming address by Doug Newcomb, opening remarks by Brian Cooley (CNET) and Brian Douglas (WAJ), and a keynote address by Sven Beiker, Executive Director, Center for Automotive Research at Stanford.

Most people are probably unaware that Silicon Valley has technology offices for most major auto makers. The list of panelists displayed this with experts from Nissan, Bosch, BMW, VW, Hyundai, Jaguar Land Rover and Ford. Tech companies that contribute to the automotive world were also well represented.

I'm not going to go through every panel discussion. Technology is a subject I have a love/hate relationship with. On the one hand technology is the reason cars are so good today, able to perform at exceptionally high levels while still able to run cleanly and frugally. On the other hand technology has turned many cars into rolling "infotainment" centers.

Almost every panel touched on the safety aspect of too much information being available to drivers. The answer always seems to be voice recognition (when you talk to your car and it knows what you're saying and responds accordingly). I have what I believe is a fairly neutral accent (I am amazed when I hear my friends from Connecticut speak because they sound so different) yet I have never met a voice recognition system that understood me more than 50% of the time. Until a voice recognition system that adapts to different accents immediately is on the market I don't see them being a panacea to pushing buttons. And with today's cars there are more buttons to push just to set a radio to a given station.

With many of today's cars you have to go through a touch screen to change the radio, climate control system, Bluetooth, navigation system, etc, etc. I've been there and it can be frustrating. Voice recognition is supposed to make this easier but I remember a couple of examples, different makes of cars, where I tried and tried to get the system to change the radio station or find a specific address to no avail. Like some bad commercial it would enter the wrong address or change the temperature but hardly ever what I wanted it to do.

One panel did address security but only personal security. Many new cars are connected to either some home base through a satellite or to the Internet through cellular towers. There is a large segment of our population who fear big brother (no judgment here from me one way or the other). If you worry about someone knowing exactly where you go and how you drive I understand. I remember speaking with someone from OnStar years ago about the capabilities of the system to upload info from your car back to OnStar. He admitted that the system was

capable of uploading every bit of information it collected including where you went, how fast you went, how quickly you accelerated and on and on. But, he said, they hadn't enabled those parts because of fear no one would buy OnStar if they believed someone was tracking their every move.

Computer systems have surpassed the original OnStar in their abilities. When I sat on the Inspection and Maintenance Review Committee (a California legislative advisory committee for the smog inspection program) the topic of instantaneous smog inspections came up. It is a real possibility; instead of once every two years going to a smog station whenever it feels like it the government could, with the proper system, upload your vehicle's operating data, data that shows how clean your vehicle runs. I think it is a great idea but there is that fear of big brother. A few years ago Oregon tried a pilot program for taxis that worked but for some reason they did not continue the program.

I have a different security fear though; my fear is that with all the wireless technology in our vehicles (and our lives) we are vulnerable to hacking. There have been some stories of people being able to wirelessly hack into a car's computer and taking over steering, accelerating and braking (all which are wireless on some cars). Although it is rare (mainly because you have to target one vehicle and a vehicle is rarely static when in use) it is possible.

I for one don't see the need for the Internet in a car yet that is here and will become more prevalent. I know we spend way too much time in our cars but I just can't buy into the idea that cars have to entertain us.

Something that is coming is the autonomous car, or self-driving car. From the speakers the biggest hindrance is liability. If the car drives itself and there is no human driver, and the car runs over a pedestrian who is responsible? Car companies have more than enough liability right now.

The benefits as described by the panel are huge though. Optimized traffic flow, no more parking problems (your car drops you off at your destination and drives to a remote lot to park), no dozing drivers, no texting while driving, just sit back and relax - better than taking the train because the train doesn't stop right at your office.

But again there is the problem of computer control. All those autonomous cars working in sync need one heck of a computer system. What happens when a computer acts up? How much redundancy can be built in and who will pay for it?

The wrap up panel was titled, "What We'll Drive in the Future. Or Will Drive Us". That says it all. Do you want to be in the driver's seat or just a passenger? I want technology to assist me not take over for me. I don't want to be connected 24/7. What do you think?