

CES Preview - self-aware cars predicted for 2022

Global launch of Intelligent Driving from Delphi Technologies

- Up to 10% fuel economy improvement
- Harnesses available information to optimise efficiency of existing propulsion technologies
- Reduces congestion, journey times and environmental impact of vehicles by enabling smoother traffic flow
- Time and cost savings predicted for truck and bus applications

At CES 2019 (January 8-11, Las Vegas), Delphi Technologies will reveal its new Intelligent Driving technology, which could put 'self-aware' cars on the roads by 2022-23. The system is expected to slash fuel consumption and CO₂ emissions by up to 10 percent, significantly increase the zero emissions range of electric and hybrid vehicles, reduce congestion and make journeys quicker and safer.

Modern powertrains receive little information on the conditions in which they operate. Intelligent Driving harnesses available data that is already collected for convenience and safety functions, allowing the powertrain controller to plan ahead. For example, using electrical energy to save fuel going up a hill, knowing that there is an opportunity to recover that electrical energy through regenerative braking on the way back down. Similar opportunities exist where there are traffic lights, speed limit changes, stop signs, construction and curves.

"We can take all of that data and apply it to our propulsion system to make for a better system that provides more range," explains Mary Gustanski, senior vice-president and chief technology officer, Delphi Technologies. "More range for an internal combustion engine, more range for a hybrid, or more range to an electric vehicle. The same technology that made phones smart, can make cars intelligent."

"Down the road, we can add more computing capability," says Gustanski. "So a vehicle knows when I'm going to get up in the morning, it knows I'm going to work, it knows the route I'm going to take, and because it knows that, it can help with my route planning because now construction has popped up overnight, and it can help to adjust that route so I can get the best range out of my vehicle."

With expanded connection to the cloud, additional information is now available such as traffic flows, weather and signal light patterns, just to name a few. "So, consider a city where every vehicle has Intelligent Driving," continues Gustanski. "Just having traffic move more effectively, having some people going slower, some people going faster as they're approaching traffic lights, knowing when the traffic lights are going to change, adjusting the way that they are driving and driving habits. I think it just makes for smoother traffic flow all around in these congested areas." With less stop-start and fewer changes in speed, fuel economy is improved, emissions are reduced, and journey times are less affected by congestion.

Smoother traffic flow, enhanced fuel efficiency, reduced emissions leading to cleaner air, and less waiting for the red light to change. Welcome to Intelligent Driving.

To watch a video on the technology, click here: Delphi Technologies Intelligent Driving Video

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