Ladies and gentlemen, welcome to the dawn of a new era in automotive design. We’re entering the age of the connected car, where our vehicles will communicate with each other, thanks to the work of international auto supplier Continental and IBM. Together, the companies built the eHorizon platform, which uses data analytics, mobile and cloud technologies to enable cars and trucks to receive continuous updates on weather, traffic, and road conditions.

The eHorizon platform is designed to reduce fuel usage while creating a less stressful and safer driving experience. Continental executives see eHorizon playing an important role in automated driving and think the combination of automation and connectivity could completely eliminate road accidents.

Here’s a look at how the eHorizon platform works.

—Bernhard Warner

### Connect Cars with Data

Outcomes

- **Increased Safety**: Continental believes connected cars hold the promise to eliminate roadway accidents and fatalities.
- **Voice-controlled Driving**: Armed with natural language command control based on IBM Watson, the plan is for cars to respond to spoken instructions with human-like quickness by 2020.
- **Reduced Emissions**: Early deployments of eHorizon in the trucking industry have reduced fuel usage and CO2 emissions by about 3% per vehicle.
- **Cars Join the Internet of Everything Revolution**: Continental believes connected cars will generate 200-300MB of data per second, according to Continental. Analytics will determine what’s important to drivers.

**0 Meters: Location, speed established**
Each vehicle is equipped with various sensors and cameras to transmit and receive road data from as far as 200 meters ahead—along with the analytics capability to make sense of it.

**200 Meters: Real-time mapping**
Using similar to various data collection, car creates a map of the road ahead in near real-time.

**Downstream Intelligence**
The cloud feeds the driver a crowd sourced, detailed picture that goes far beyond what on-board sensors can detect. Eventually, eHorizon intends to suggest route changes to conserve fuel, avoid traffic, and increase safety.

**Upstream Data Feed**
Vehicles beam roadway data to the cloud via a low-power, high-speed mobile protocol called MQTT, which is 11 times faster than HTTP.

**Analytics in the Cloud**
The brains of eHorizon, IBM’s M2M messaging, fit into a single box. The platform can concurrently process data from more than a million vehicles and analyze 12 million messages per second. Continental is also using SoftLayer, Bluemix and other IBM solutions to continually update drivers with real-time road conditions.

**Vehicle Notifications**
Drivers will be alerted to road hazards, traffic snarls, and even accidents in real-time, well before the incidents are visible to the naked eye.

**Geo Spatial Mapping**
Connected cars will depict accurate conditions of surroundings, and the road ahead on prominent displays that are updated in real-time.

**Big Data Processing**
Connected cars will generate 200-300MB of data per second, according to Continental. Analytics will determine what’s important to drivers.

**Remote Control**
IBM and Continental have developed a digital key that allows drivers to open and start their cars with their smart phones.

**An Automated Future**
Informed by continuous updates on hazards, road conditions and weather events from other cars, drivers will be able to know what’s over the horizon. Before long, the car will do more than turn data into intelligence. It’ll do driving, too.

**Voice-controlled Driving**
- Armed with natural language command control based on IBM Watson, the plan is for cars to respond to spoken instructions with human-like quickness by 2020.

**Reduced Emissions**
- Early deployments of eHorizon in the trucking industry have reduced fuel usage and CO2 emissions by about 3% per vehicle.

**Cars Join the Internet of Everything Revolution**
- Continental believes connected cars will generate 200-300MB of data per second, according to Continental. Analytics will determine what’s important to drivers.

**Outcomes**
- **Increased Safety**: Continental believes connected cars hold the promise to eliminate roadway accidents and fatalities.
- **Voice-controlled Driving**: Armed with natural language command control based on IBM Watson, the plan is for cars to respond to spoken instructions with human-like quickness by 2020.
- **Reduced Emissions**: Early deployments of eHorizon in the trucking industry have reduced fuel usage and CO2 emissions by about 3% per vehicle.
- **Cars Join the Internet of Everything Revolution**: Continental believes connected cars will generate 200-300MB of data per second, according to Continental. Analytics will determine what’s important to drivers.