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HERE takes step to accelerate development of live map for cars

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HERE, a leader in mapping, navigation and location experiences, has published an interface specification that defines how sensor data gathered by vehicles on the road can be ingested by a cloud. The aim of this step is to support the automotive industry in accelerating the deployment of technologies that improve road safety and ease traffic congestion, such as connected [Electronic Horizon](#) and automated driving.

According to a recent forecast from automotive technology research firm SBD, by 2020 there will be some 33 million vehicles sold annually with built-in connectivity, generating more than 163 million terabytes of data each year via their dozens of on-board cameras and sensor technologies. When shared across the road network, this data can be utilized by vehicles to give them an [awareness of road conditions](#) beyond the reach of their sensors, and thus enable the driver or the vehicle itself to better plan driving maneuvers. In order to be efficiently useable, the data shared should be intelligible to other vehicles, and thus it ideally should pass through the cloud in a standard format.

In view of that need, HERE, which is developing location cloud technology for automated vehicles, has published a sensor data ingestion interface specification for the automotive industry to utilize. HERE intends for this interface specification, made available through a creative commons license, to become a standardized way for vehicles to send to the cloud the rich variety of data gathered by their on-board sensors. With a standard interface specification, the data generated would be analogous regardless of vehicle manufacturer and could be pooled, processed and analyzed quickly to create a detailed live view of road and traffic conditions.

HERE is already discussing the interface specification with certain leading automakers, and intends to invite other industry peers to discuss the specification this summer. More information about the interface specification can be accessed on the [Automotive](#) section of the HERE website.

“Your car generates a wealth of data about road and traffic conditions which will be very helpful to other cars driving behind you,” said Dietmar Rabel, who heads product



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management for the automated driving program at HERE. “By uniting around a single data specification, we can improve our collective abilities to gain a better overall understanding from the data collected. It will mean fewer accidents and less time spent in traffic. It also moves the industry closer to the goal of cars that can drive themselves.”

The data generated from sensors on board modern vehicles can be used to warn others of possible dangers, including icy roads or a spill, sudden braking or traffic build up, an accident, or an animal or object on the road. Data can also be used to verify and enhance map data and attributes, provide warnings of poor road infrastructure like potholes as well as construction. With cloud technology this data can also be utilized for new dynamic and personalized services.

The HERE location platform applies data fusion and crowdsourcing for the extremely challenging task of deriving useful information from a huge volume of vehicle sensor data. The platform ensures the robustness of data it sources to enable a car to effectively ‘see around the corner’ and avoid an accident. Achieving the highest possible confidence level requires continuous near real-time processing of large streams of very diverse data which are then fused with map, traffic, incident, weather and other data. For information to become actionable and made known to other vehicles on the road, it would typically have to evolve through multiple layers of information extraction hierarchy. HERE has already implemented a next generation engine for real-time traffic and in doing so has gained significant expertise to apply similar technology for road events relevant to highly automated driving.

As is the case with its other products and services, HERE has built data anonymization into its sensor data ingestion interface specification, meaning that the location data generated by vehicles are anonymous unless drivers opt-in to sharing personal identifier information in order to benefit from additional personalized services.

To know more about the vision of HERE for autonomous cars and read the full interview with Dietmar Rabel, visit [HERE 360](#).

Media enquiries:
press@here.com

About HERE
HERE, a Nokia company, is a leader in navigation, mapping and location experiences. We build high-definition (HD) maps and combine them with cloud technology to enable rich, real-time location experiences in a broad range of connected devices – from smartphones and tablets to wearables and vehicles. To learn more about HERE, including our work in the areas of connected and autonomous driving, visit <http://360.here.com>.