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HERE unveils HD Live Map, creates commercial path to highly automated driving

Las Vegas, Nevada – At CES in Las Vegas, HERE, a leader in mapping and location technology, today unveiled HERE HD Live Map, the world's most advanced cloud-based map asset commercially available for vehicles today.

Ready to be deployed in connected vehicles in North America and Western Europe, HD Live Map creates a highly detailed and dynamic representation of the road environment, enabling a vehicle to effectively "see around corners" beyond the reach of its on-board sensors.

HD Live Map is an integrated offering, consisting of multiple layers of data delivered in a maptile format. It is designed to enhance both <u>Advanced Driver Assistance Systems (ADAS)</u> and <u>automated driving</u> functionality, and therefore make driving more comfortable and enjoyable.

HD Live Map includes data which tends to have high permanency, such as lane level information; data which is temporal in nature, such as road construction, traffic and accidents; and analytics data, including speed profile information that informs the vehicle about how to drive based on actual human behavior data.

The auto industry's most intelligent vehicle sensor

With highly automated driving set to become prevalent in the next few years, the immediate next step for the automotive industry is to capitalize on the new generation of ADAS that leverages wireless network connectivity and the cloud. With HERE HD Live Map, automakers have the ability to enhance a vehicle's ADAS functionality – such as adaptive cruise control, adaptive headlights and curve speed warnings – by giving it access to more accurate and more reliable near real-time content and contextual information about its environment. In doing so, the industry can help drivers build the prerequisite trust and familiarity they need to feel comfortable with increasing levels of vehicle automation.

Floris van de Klashorst, VP Automotive at HERE, said: "As we move towards higher levels of vehicle automation, drivers need to feel that their car is making the right decisions on their behalf. When it comes to trusting your car, having consistent real-time awareness of road conditions near and far is absolutely critical. With HD Live Map serving this need, we believe it will become the car industry's most intelligent vehicle sensor."

First ever self-maintaining map

HERE HD Live Map is the first ever map from HERE which is <u>self-maintaining</u>: through multiple modes of sensor aggregation and ingestion the vehicle's map is updated and delivered in near real-time.

For example, if vehicle sensors detected a speed limit sign which is inconsistent with what is currently in the map, the map would update accordingly so that other vehicles driving



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approaching the same spot have the new, correct information. This is important for ADAS functionality such as adaptive cruise control.

Similarly, if a new lane closure was reported, the map would update accordingly so that other vehicles approaching the area can already prepare to switch lanes or alternatively re-route if traffic is heavy.

Effective, data-efficient delivery of road information

HERE HD Live Map delivers connected ADAS content via layered live tiles, with dynamic traffic flow data, real-time incident reporting and speed profile data derived from rich behavior information.

HD Live Map is also data-efficient, requiring a small data footprint, with new events able to be layered on the map without the need to update the whole map itself. The small file sizes within each live tile make the delivery of highly precise data much leaner, thus reducing bandwidth requirements.

A commercial path to highly automated driving

In the near-term, HD Live Map utilizes a variety of data gathered and delivered by the HERE location platform to enhance the vehicle and the driver's awareness of what's happening on the road.

As vehicle automation increases in the future, HD Live Map is ready to serve as an agnostic location cloud, ingesting, aggregating and delivering in near real-time ever vaster quantities of data produced by a variety of sources, especially vehicle sensors. For example, HERE is exploring further enriching its platform with <u>new sensor data</u> from Audi, BMW and Mercedes-Benz vehicles, which would benefit all automakers deploying HD Live Map.

HERE has already been providing either parts or full specifications of HD Live Map for <u>automated driving testing purposes</u> to more than ten automotive companies. Many of those have taken advantage of HD Live Map data HERE is offering of specific stretches of open road in Silicon Valley and Michigan in the United States, as well as in France, Germany and Japan.

Now, with HD Live Map offered across key regions, HERE is able to support automakers seeking to widen and deepen their automated driving development efforts. In supporting larger testbeds, HERE intends to continue to refine HD Live Map together with automakers to ensure it is optimized for their needs today and tomorrow.

Commenting on the launch of HD Live Map, analysts at IHS Automotive said: "Highly-detailed map data is not only very useful but a requirement for full-featured automated and autonomous driving. In the near term, highly-detailed map data will enhance the performance and benefits of current-generation driver assist technologies; over the longer term, they will enable more effective and efficient operation of vehicles altogether by drivers or self-driving cars. Adding a feedback loop to continually gather, update and share the latest road data will further elevate the technology's potential."



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HERE is demoing HD Live Map at CES: Central Plaza, Booth #CP-2.

To know more about why autonomous cars can only understand the real world through a map, please read our <u>HERE 360 blog</u>.

Media Enquiries: HERE Communications https://company.here.com/newsroom/contacts/ press@here.com

About HERE

HERE is a leader in mapping and location technology. We enable rich, real-time location applications and experiences for consumers, vehicles, enterprises and cities. HERE is backed by a consortium of leading automotive companies. To learn more about us, including our work in the areas of connected and automated driving, visit <u>http://360.here.com</u>.