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Crowd sourcing for automated driving: BMW Group and Mobileye agree to generate new kind of sensor data

- Next step of inclusive approach towards systematically making autonomous driving reality
- Leading mapping and location service HERE to benefit from transfer of anonymized data

Jerusalem, Munich, Feb. 21, 2017 – BMW Group and Mobileye (NYSE: MBLY) today announced that they have signed an agreement introducing Mobileye’s Road Experience Management (REM™) data generation technology in newly developed BMW Group models entering the market in 2018. This agreement to crowd-source real-time data using vehicles equipped with camera-based Advanced Driver Assist System (ADAS) technology is a critical enabler for autonomous driving through next-generation high definition (HD) maps aimed at making driving safer and more efficient for consumers.

The agreement is entered into with a sense of inclusiveness and industry collaboration with the goal to further promote automated driving in a safe and robust way. BMW Group sensor data can be merged with data from different automakers, resulting in a larger scale of data used to create Mobileye’s Global RoadBook (GLRB™), to support and rapidly update HD maps with highly accurate localization capabilities. Autonomous vehicles will require HD maps that can identify and update changes in the environment with near real-time speed enabling very short “time to reflect reality”.

The cameras that enable to collect anonymized, fleet-wide data act as intelligent agents that, through Mobileye EyeQ® processors and software, can identify valuable information that is sent to the cloud in a highly compressed form (10 kilobytes per kilometer). This data can be used to add a dynamic layer to current and future navigation maps, enabling BMW Group customers to access true real-time information on traffic density, potential road hazards, weather conditions, on-street parking, and other helpful information.

To support the rapid creation and updating of HD mapping, the BMW Group and Mobileye will transfer anonymized data to HERE, the leading mapping and location service. HERE will use this data and information to conduct real-time updates of HERE HD Live Map, HERE’s real-time cloud service for partially, highly and fully automated vehicles, and enhance its Open Location Platform, ensuring an accurate depiction of the real world as it changes. Mobileye and HERE earlier communicated their intention to integrate data gathered through REM™ technology as a layer in HERE HD Live Map. The BMW Group has always stressed that it is open for collaboration with additional partners, be it OEMs or other third parties.

Today’s announcement underlines the systematic and inclusive approach of the BMW Group concerning cooperations for automated driving. This approach comprises, amongst others, the cooperation with HERE as well as the cooperation with Intel and Mobileye on bringing highly automated driving to the streets by 2021 with the BMW iNEXT. Besides its automotive competence in safety and software standards as well as motion control, the BMW Group especially contributes

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its leading capabilities in end-to-end system integration which are essential to implement groundbreaking technologies like autonomous driving and transfer them into series production.

“This announcement demonstrates that our partnership is rapidly bringing innovation to market to allow customers to benefit from the latest technology,” said **Klaus Fröhlich, Member of the Board of Management of BMW AG, Development**. “At a strategic level, this announcement makes it clear how our cooperation with Mobileye leverages our investment stake in HERE. The data of future BMW vehicles will enrich the quality of maps and services for everyone. Furthermore, this represents a significant step towards introducing the BMW iNEXT with its features of highly automated driving in 2021 as well as creating a leading ecosystem around HERE’s Open Location Platform leveraged by swarm data from millions of vehicles across the world.”

“We welcome the opportunity to take this next step in our relationship with BMW Group,” stated **Professor Amnon Shashua, Chairman and Chief Technology Officer of Mobileye**. “Camera-based ADAS systems are already making the roads safer. Global RoadBook is an initiative to utilize data from these cameras to create the high-definition maps required to make the next generation of autonomous driving a reality, in an inclusive way which will create an industry standard.”