



NVIDIA and ZENRIN Collaborate on AI-Powered HD Mapping for Japan

LAS VEGAS, NV - **CES** -- NVIDIA (NASDAQ: NVDA) today announced that it is collaborating with ZENRIN, Japan's leading mapping company, to develop a cloud-to-car HD map solution for self-driving cars.

The collaboration encompasses processing both in the car, where the data is collected, and in the cloud:

- In the mapping-survey vehicle, the [NVIDIA DRIVE™ PX 2 AI car computer](#) and [NVIDIA DriveWorks software](#) can process massive amounts of data generated by camera and lidar sensors. Deep learning will enable the real-time image recognition, feature detection and classification necessary to build detailed environment models.
- In the data center, NVIDIA GPUs and NVIDIA MapWorks software can be used to process complex datasets, compile and register data from multiple vehicles, and create a 3D map.

"ZENRIN's big data includes road images and point-cloud data captured by mapping-survey vehicles," said Koji Haraguchi, head of the Research and Development Office at ZENRIN. "Combining NVIDIA's AI technologies and ZENRIN's big data will enable us to provide wider coverage of HD maps to automotive manufacturers with a dramatically shorter lead time."

"Using NVIDIA's GPU technology, DriveWorks and MapWorks, ZENRIN will be able to accelerate the map creation process, and then easily detect changes when they occur," said Rob Csongor, vice president and general manager of Automotive at NVIDIA.

NVIDIA is additionally developing localization technology based on ZENRIN HD maps, which will become part of DriveWorks. This enables automakers using DRIVE PX 2 in the car to integrate localization capabilities.

ZENRIN has been focused for more than 60 years on creating maps of Japan. To reflect rapid change in the physical world, the company is increasingly turning to artificial intelligence as a tool for keeping its maps current.

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About NVIDIA

[NVIDIA's](#) (NASDAQ: NVDA) invention of the GPU in 1999 sparked the growth of the PC gaming market, redefined modern computer graphics and revolutionized parallel computing. More recently, GPU deep learning ignited modern AI -- the next era of computing -- with the GPU acting as the brain of computers, robots and self-driving cars that can perceive and understand the world. Today, NVIDIA is increasingly known as "the AI computing company." More information at <http://nvidianews.nvidia.com/>.

Certain statements in this press release including, but not limited to, statements as to: the benefits and impact of DRIVE PX 2, DriveWorks software, GPUs, MapWorks software, deep learning, the NVIDIA and ZENRIN collaboration, and NVIDIA's localization technology development; and ZENRIN increasingly turning to artificial intelligence are forward-looking statements that are subject to risks and uncertainties that could cause results to be materially different than expectations. Important factors that could cause actual results to differ materially include: global economic conditions; our reliance on third parties to manufacture, assemble, package and test our products; the impact of technological development and competition; development of new products and technologies or enhancements to our existing product and technologies; market acceptance of our products or our partners' products; design, manufacturing or software defects; changes in consumer preferences or demands; changes in industry standards and interfaces; unexpected loss of performance of our products or technologies when integrated into systems; as well as other factors detailed from time to time in the reports NVIDIA files with the Securities and Exchange Commission, or SEC, including its Form 10-Q for the fiscal period ended October 30, 2016. Copies of reports filed with the SEC are posted on the company's website and are available from NVIDIA without charge. These forward-looking statements are not guarantees of future performance and speak only as of the date hereof, and, except as required by law, NVIDIA disclaims any obligation to update these forward-looking statements to reflect future events or circumstances.

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