

A meet-up reveals a step-up in Apollo self-driving tech

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Baidu has announced an update to its open-source autonomous driving platform. What is interesting about this update is that it comes on the heels rather quickly of its earlier version and its newer features indicate progress made in a very short time.

Roadshow by CNET reported on the update. Version 1.5. is the new iteration for Apollo software from Baidu. The open-source driverless-car software was made available on GitHub a few months back—specifically, only three months ago in a July release, and presented as an autonomous driving platform.

The Apollo site said "Apollo provides an open, reliable and secure software platform for its partners to [develop](#) their own autonomous driving systems through on-vehicle and hardware platforms."

Wayne Cunningham, *Roadshow* by CNET, said Baidu President Ya-Qin Zhang announced 1.5 at a meetup in Sunnyvale, California.

"The meetup was one way that Baidu is promoting the open-source nature of Apollo," said Cunningham. He quoted the Baidu president: "We looked at the history of PCs and mobile, and we believe an open system is more [powerful](#), more vibrant, in the longer term. So we decided to open Apollo, both the IP, the technology and the source code."

[Apollo](#) provides a complete toolkit that works with the Apollo code for perception, planning, control and prediction. The Apollo web site said Apollo supplies a complete set of software, hardware and service systems. These include cloud services for vehicle, hardware, and software platforms.

What's special about Apollo 1.5? It carries "high-definition mapping access." "Sensor and high-definition mapping access are two of the biggest updates to the software," said Cunningham. In addition to location, the maps show fixed objects around the roads.

Writing about the Apollo 1.5 upgrade too, *The Register* said the new iteration adds HD maps and enables vehicles running the [software](#) to pre-plan optimal driving routes. It also helps to accurately identify obstacles day or night.

Cunningham, meanwhile, wrote about the sensor-map interactions.

"The self-driving car compares what its sensors detect with its stored maps to determine its exact location. The maps also show the car where it can safely drive, and include trajectories to take when making turns in intersections. The car uses its onboard sensors to make sure it can follow the trajectory given to it on the map without hitting another car, pedestrian or anything else in the environment not depicted on the map."

According to *Roadshow*, Zhang said, "We announced a partnership with Beijing Automotive,

one of the biggest automakers in China, that will make Level 3 cars by 2019 and Level 4 cars by 2021." Cunningham noted that, with Level 3 cars, these must share driving with a human. Level 4 cars can handle driving by themselves, although with controls allowing a human to take over.

RealistInvestor.com reported on Baidu, where Robin Li, Baidu CEO, revealed the firm plans a fully autonomous bus launch next [year](#) in China. Li was speaking during a technology event organized by *The Wall Street Journal*.

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