AGCO Taps Mobility Software Experts, Apex.AI for Its Robotic Planting Concept

June 9, 2022

Apex.AI

Technical partnership represents the next step in a relationship that began with AGCO's strategic investment in Apex.AI in December 2021

PALO ALTO, CA — June 9, 2022, Apex.AI, a company developing safety-certified software for mobility and autonomous applications, announced today that AGCO, a worldwide manufacturer and distributor of agricultural machinery and precision ag technology, is adding new capabilities to its Fendt Xaver concept vehicle, an autonomous farming robot, by incorporating Apex.OS, an easy-to-use software development kit (SDK). Apex.AI has enabled AGCO's engineering team to integrate several autonomous driving components into the Fendt Xaver in a tight timeframe, including lidar object detection, collision checking and planning, using the state-of-the-art framework and developer tools that come with Apex.OS. This technical partnership expands an existing relationship between the two companies. In December 2021, AGCO announced a strategic investment in Apex.AI.

"Apex.OS is a foundational software framework and development kit for rapidly developing advanced autonomous capabilities," said Christian Kelber, Director, Engineering, AGCO. "The technology has helped AGCO shorten R&D timelines of our smart agricultural solutions and for the future of highly automated robots. Coming from the automotive industry, Apex.AI enables us to implement safety-critical applications from autonomous driving that can be deployed across our range of solutions globally."

The award-winning autonomous robot concept Fendt Xaver, developed by Fendt as part of a research project, plants seeds on farms 24 hours a day with centimeter precision thanks to the Apex.OS software. Fendt Xaver uses 90% less energy than conventional machines because of its lightweight electric design, which produces zero emissions.

AGCO has leveraged Apex.OS to develop a software stack for Xaver based on automotive industry standards, extending its real-time autonomous functions. A cloud-connected fleet of Fendt Xaver robots is controlled through an app and provides real-time data from each unit, including its location, status, and diagnostics.

"We are leveraging our success in the automotive and autonomous driving industry and applying it to areas that have similar functional safety needs such as agricultural, industrial, mining and construction," said Jan Becker, Co-founder, and CEO, Apex.AI. "Apex.OS allows the software architecture to be modular, scalable and safe, enabling customers to transition their R&D projects to commercial-ready products in record time."

There is an increasing trend of autonomy in agriculture, and designing and deploying a safe autonomous system is a complex and time-consuming task. Apex.AI is helping its agriculture, automotive and industrial customers extract the complexity of software-defined vehicles and machines with Apex.OS, which achieved the highest level of automotive software safety ISO 26262 ASIL-D last year. By bridging the gap between R&D and production quality solutions, customers using Apex.OS can overcome real-time and reliability software challenges at a record pace.

About Apex.AI

Apex.AI is a global company headquartered in Palo Alto, CA developing breakthrough safe, certified, developer-friendly, and scalable software for mobility systems. The company's flagship product is Apex.OS, a robust and reliable meta-operating system that enables faster and easier software development for vehicles and safer autonomous driving solutions. Their software development kit targets two main customer groups, the OEM developers who need to implement complex AI software integrated with the entire vehicle, and the autonomous driving developers who can now implement safety-critical applications with ease and reliability. ROS2 and Apex.OS can multiplex multiple independent tasks (called nodes) onto a smaller set of executor threads, thereby reducing context switching overhead. In addition, Apex.OS allows developers to run entire chains and graphs in a predefined order, which reduces interaction with the middleware and ensures that the nodes run in a predictable order. To access the Apex.AI media kit please visit https://www.apex.ai/media-kit.

About AGCO

AGCO (NYSE:AGCO) is a global leader in the design, manufacture and distribution of agricultural machinery and precision ag technology. AGCO delivers customer value through its differentiated brand portfolio including core brands like Challenger®, Fendt®, GSI®, Massey Ferguson®, Precision Planting® and Valtra®. Powered by Fuse® smart farming solutions, AGCO's full line of equipment and services help farmers sustainably feed our world. Founded in 1990 and headquartered in Duluth, Georgia, USA, AGCO had net sales of approximately $11.1 billion in 2021. For more information, visit www.AGCOcorp.com. For company news, information and events, please follow us on Twitter: @AGCOCorp. For financial news on Twitter, please follow the hashtag #AGCOIR.

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