DriveU.auto

Press Release

The Andromeda Consortium, led by DriveU.auto, publishes key deliverables to advance Autonomous Vehicle teleoperation, and remote management of autonomous robotic fleets

The consortium, formed by the Israel Innovation Authority and composed of academic institutions and leading Israeli companies, promotes the legal and technological foundations for the widespread deployment of AV fleets through teleoperations.

Kfar Saba, Israel, January 6, 2021 - DriveU.auto, developer of a software-based connectivity platform for autonomous vehicle teleoperation, today announces the objectives and main deliverables of the Andromeda consortium, a multi-disciplinary consortium developing the technological infrastructure needed for teleoperation of large scale autonomous vehicle fleets in urban areas. The group is working together with leading OEMs to implement their stringent demands for the teleoperation market.

The key objective of the consortium is to extend the ratio between a remote human operator and the number of controlled vehicles/robots from where the industry is at today, by a thousand-fold and more. This will be made possible by taking a holistic approach towards addressing the main challenges of teleoperation: low latency, high quality video and data transmission, human-machine interface, cybersecurity, interoperability and scalability.

Over the next three years and with a planned budget of $17M, the consortium, which was established by the Israel Innovation Authority and is spearheaded by DriveU.auto, will lay the foundations for industry and regulators for the widespread deployment of teleoperation of autonomous vehicle fleets, including robotaxis, delivery robots, trucking, and more.

Deliverables will be made within the following domains:

- **Scalable Medium Management** to overcome situations where many autonomous vehicles require remote assistance at the same time and from the same location. Example: multiple robotaxis exiting a stadium at the end of a sports event.
- **Adaptive Distributed Architecture** utilizing mobile edge devices to improve network load management of and latency between teleoperation centers. Example: actively switch between long-distance autonomous trucks' teleoperation centers, taking into account latency and load.
- **Heterogeneous fleet control and management** optimizing the utilization of remote drivers and teleoperation centers with regard to multiple types of vehicles and multiple remote assistance events. Example: enable specialization of remote operators to specific vehicles or scenarios while optimally managing the virtual queue of events.
- **AI-based Smart Assistant** reducing the need for remote assistance using real time feedback to the vehicle AI. Example: use 'Learning from Observation' to provide vehicles with the correct course of action, with no need for a full remote operations session.
- **Smart event management** predicting remote assistance events in advance, allowing for proactive interventions with a shorter duration. Example: identify that the vehicle is entering a complex scenario where the confidence level of the AI is decreasing, and since there are available remote operators, proactively request remote vehicle control.
- **Advanced Remote Operation** assisting teleoperators in the remote driving activity, including safety management, intervention escalation and adaptive restrictions. Example: provide more restrictive speed limits based on the intervention scenario in order to maintain the required level of safety.

"Teleoperation and remote assistance are accelerating the mobility revolution of autonomous driving," says Alon Podhurst, DriveU.auto's CEO. *"As we move towards wide-scale commercial AV deployments, the importance of remote fleet operation and management is becoming paramount. We were successful in recruiting some of the industry's titans, including the world's leading OEMs as consortium observers. Their role is to provide guidance and insights to ensure that the outputs of the consortium are aligned with the industry's and regulators' stringent demands.*

"I am especially proud of the role DriveU.auto has in the Andromeda consortium," Podhurst adds. "Our origins as a part of LiveU - a market leader in video transmission over cellular networks - combined with our strong traction with customers are what enabled the Israeli Innovation Authority (IAA) to bestow upon us a responsibility often placed on much older and bigger companies - to lead a consortium of Israeli technology companies and leading researchers, entrusted with tackling the key challenges of teleoperation of autonomous vehicles - Andromeda."

Consortium participants are working together towards establishing industry standards and best practices. Learn more about the consortium here: https://nocamels.com/2020/06/israel-innovation-authority-research-development-consortiums/

About DriveU.auto

DriveU.auto provides a software-based connectivity platform for teleoperation of autonomous vehicles using cellular bonding and dynamic encoding. The platform is already deployed and used live on public roads. It provides high speed, low latency, and ultra-reliable transmission of 4k video, audio streams, high-speed data and control channels, and is available with hardware or as a software-only implementation.

The platform's SDK and APIs enable quick and straightforward integration.

DriveU.auto is based on technology developed by LiveU, the world leader in cellular-based field video transmission, deployed by more than 3,000 customers worldwide.

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