European technology award for sustainable method of training autonomous cars

ALP.Lab, Austria's test region for automated driving, received the renowned Tech.AD Europe Award 2021. The innovative and sustainable method of generating training data for autonomous driving systems won 1st price in the category "Most Advanced Real-Life Testing & Simulation Techniques in Autonomous Driving".

Graz/Berlin, 16.7.2021 – The Tech.AD Europe Award honors extraordinary projects in the automotive industry and celebrates exceptional solutions & innovations. This year, ALP.Labs submission "Traffic Monitoring as Source of Training Data for Autonomous Vehicles" was rewarded with the 1st price in the category "Most Advanced Real-Life Testing & Simulation Techniques in Autonomous Driving". The project convinced the international expert jury as well as Europe's largest community of autonomous driving decision-makers in a live-voting.

The international jury of experts:
- Mathias Reimann, Vice President Engineering at Robert Bosch GmbH
- Hagen Böhmert, Head of Safety and Security Engineering at Continental
- Pierre Olivier, CTO at LeddarTech
- Matthieu Worm, Director autonomous vehicles at Siemens Digital Industries Software

The winning project turns commuters and Sunday drivers into test drivers

Large amounts of training data are required for developing autonomous driving functions that work safely in real road traffic. The common way of collecting this data involves large fleets of specially equipped cars and thousands of measurement drives. ALP.Lab instead equipped selected crossings with radar, LiDAR and optical sensors. That way, normal traffic can be monitored to collect training data faster, more cost-effectively and more environmental-friendly.

"We collect 7 million kilometers of training data a year - without driving a single meter."
(Gerhard Greiner, Managing Director ALP.Lab)

From bird view to ego view – a clever change in perspective

The sensors are mounted on street poles or traffic lights, enabling a perfect (GDPR conform) overview over all road users ("bird view"). Using special algorithms, every situation can then be represented from the perspective of cars, cyclists etc. ("Ego-View") – just like it needs to be to work as training data for autonomous vehicles.

"The results are available for simulations and as test data for machine learning in different formats, even as a live stream," Mohamed Berrazouane, Technical Project Manager at ALP.Lab explains. "Also, the traffic data can be enriched with additional information, such as weather, sunlight-angles, road surface condition, visibility, or temperature."

The collected data can be accessed via international sales partnerships and the in-house data platform from ALP.Lab (www.alp-lab.at/platform).

The beginning of a new era – efficient green testing

Every day, ALP.Lab records and evaluates tens of thousands of traffic movements - with no additional emissions (CO2, fine particles, noise etc.). The new method is also economically convincing, as it works without expensive measuring vehicles and test rides. And the clear vote of the international experts in the online voting proves that the method also makes technological sense.

“The winners have set a new standard for innovation and creative technology within the autonomous driving industry,” said Swetlana Torosyan, Producer of the Tech.AD Europe 2021. “This award is a testament to the skill, ingenuity, and vision of the creators.”

Strong partners for the mobility of the future

It took teamwork to make this successful project possible. Therefore, we would like to thank our technology partners Cepton, Bernard Gruppe, LeddarTech, Ouster and Smartmicro, as well as the municipalities Graz, Feldbach, Straden, Tamsweg and St. Michael/Lungau and the project partners Citycom Austria and A1 for their great support.

“This international award is a great confirmation for the whole team and shows the enormous potential of our approach that is both ecologically and economically convincing.”
(Jost Bernasch, Managing Director ALP.Lab)

About ALP.Lab

ALP.Lab is the Austrian Light Vehicle Proving Region for Automated Driving and provides comprehensive services for safe and secure testing of automated driving technologies. Founded in 2017, ALP.Lab provides an integrated test chain for automated driving functions and vehicles, enabling testing activities in both the virtual and real world.

ALP.Lab GmbH was founded in 2017 by the automotive companies AVL List and Magna Steyr as well as the research institutions TU Graz, Joanneum Research and Virtual Vehicle Research. The innovation laboratory is supported as part of the program "Mobility of the Future" from the Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology (BMK) through the FFG Research Promotion Agency.

About Tech.AD Europe
- Leading technical **autonomous vehicle L4+ R&D conference** for the automotive industry.
- The **8th edition** took place on July 01 – 02, 2021 in Berlin, Germany & Online.

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Images/Video

Winner of the Tech.AD Europe Award 2021
ALP.Labs submission "Traffic Monitoring as Source of Training Data for Autonomous Vehicles" was rewarded with the 1st price in the category "Most Advanced Real-Life Testing & Simulation Techniques in Autonomous Driving" at this years Tech.AD Europe Award.

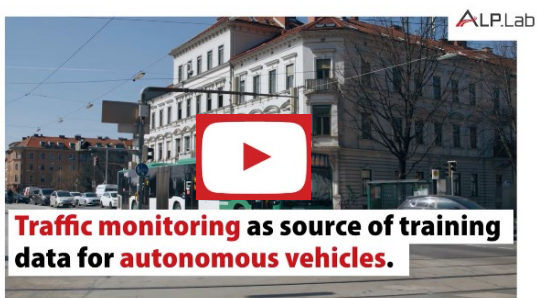>> DOWNLOAD Picture ©TECH.AD

Expert Jury and Live Voting
Selected as a finalist by a jury of experts, the ALP.Lab project convinced Europe's largest community of autonomous driving decision-makers in a live voting.

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Commuting Sunday drivers into test drivers
ALP.Lab equipped selected crossings with radar, LiDAR and optical sensors. That way, normal traffic can be monitored to collect training data for autonomous vehicles faster, more cost-effectively and more environmental-friendly than by using large fleets of special vehicles.

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Video about the project:
https://youtu.be/3RAE8qOq3yQ

Tech.AD Europe Award
ALP.Lab received the renowned Tech.AD Europe Award 2021.

>> Award-Website

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