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Safe teleoperation to enable autonomous vehicles – today!

Ottopia and T-Systems take teleoperations to the next level:
AI-based network optimization technology delivers a reliable connection over any LTE network. Built-in autonomous technology provides safety and security under challenging conditions – even thousands of kilometers away.

Improving operational productivity

Teleoperation saves money and lives relocating or replacing the driver in environments such as factories, mines, shipping ports, airports and logistics centers.

There are many inefficient logistics use-cases where a lot of the driver's time is wasted through waiting and walking, e.g. in end-of-line logistics where every minute a finished car is driven from the end of the production line to the parking lot. This process is costly as human drivers are allocated to drive and park these cars and get back to the production line, resulting   in a driver productivity of less than 50%.

With teleoperation, this process can be significantly improved. The cars can be driven remotely without the need to get the driver to the vehicle and back. The parking density can be improved because no driver needs to leave the car, which safes space.

Accelerating the introduction of Level-4 AD

Teleoperation is also considered a pre-requisite for the introduction of Level-4 autonomous driving functions on public roads (e.g. automated valet parking, hub-to-hub transportation starting 2021/22), as remote human intervention can overcome critical situations that the autonomous vehicle can not handle by itself.

With the stepwise introduction of autonomous driving functions, a single operator will be able to manage many vehicles simultaneously and engage only when needed, improving operational productivity.

Lastly, teleoperation can be applied and delivers tangible improvements for existing services, e.g. last-mile for Car Sharing, remote Valet Parking, driverless end-of-line logistics.

T··Systems·

Let's power higher performance

Reliability in all network conditions

Leading-edge technology components

AI-based network optimization technology ensures a reliable connection over any LTE network.
A key challenge for teleoperations is safety and reliability under changing and challenging network conditions. The roll-out of 5G will not be completed before 2025, and current network capabilities can not always guarantee the bandwidth and latency requirements of a demanding use case like teleoperations.

Dynamic video compression technology delivers a continuous video feed to the teleoperator.
Ottopia's patent pending teleoperations technology uses Artificial Intelligence to predict the cellular network behaviour at any moment. This unique prediction capability enables resilient and ultra-low latency data transmission, for example when streaming a 360 degrees video from a moving vehicle to a control center.

Advanced safety, provided by a proprietary autonomous functionality suite.
Ottopia builds and provides advanced safety algorithms to deal with situations such as sudden connectivity loss, or unexpected hazards on the road. Proprietary vehicle-side software provides safety and security, under any condition. The solution includes cyber protection against any known attack vector.

Industry-grade integration into OEM systems

Simple and fast implementation for any vehicle, even retro-fitted.
T-Systems integrates Ottopia's core solution into the IT environment of the OEM or fleet customer. High service availability, functional safety, ultra-security as well as cost efficient operation are key for teleoperations in a larger scale and T-Systems' proven sweet spots.
Together with Deutsche Telekom's connectivity competency to predict and secure bandwidth as well as low latency, OEMs and fleet operators are able to take advantage of the solution already under current public LTE network conditions.

Economically viable solution for the commercial deployment of autonomous fleets – ready to start.
T-Systems and Ottopia partnered to commercialize Ottopia's technology, making it available as a solution for demanding customers such as automotive OEMs, Tier1 suppliers and commercial fleet managers. The solution can be utilized immediately to address a multitude of customer use cases.
The joint offering by T-Systems and Ottopia provides unparalleled performance, thanks to the combination of Ottopia's AI-based prediction capabilities and T-Systems' unique connected vehicle and automotive expertise.

About Ottopia

Ottopia builds and provides a platform that enables remote humans to guide vehicles in a way that is safe, scalable and cybersecure. Ottopia is founded by leading autonomous vehicle, network and cybersecurity experts and backed by top-tier investors. The company has offices in Tel Aviv and San Francisco.
To learn more about Ottopia, visit the company website at **www.ottopia.tech**, contact a team member via email at **info@ottopia.tech** or follow its posts on **Medium**.

"We are humbled to work with T-Systems, who bring unparalleled expertise in delivering connectivity, connected vehicle and automotive solutions. We are excited to bring a new and enhanced offering to the market, which will not only save money but also save lives, in many market segments".

Amit Rosenzweig, CEO Ottopia

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