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CT Engineering drives the future of transportation with the Remote Driver project

Remote Driver is an R&D project aimed at developing a **pioneering technological solution that enables the remote driving of vehicles in real-world environments**, opening new possibilities for specialized transportation in urban settings. To achieve this, the project focuses on research and development in computer vision, ultra-fast video encoding, and 5G communications.

Launched in 2023 and expected to conclude in early 2026, the project is geared toward bringing this technology into practical use by validating it in real operational scenarios. Its direct application is envisioned in sectors such as logistics, passenger transport, and last-mile urban delivery.

The technology being developed will allow all vehicle controls to be managed in real time from a remote driving station that replicates the actual vehicle cockpit. Meanwhile, an omniscient operations center will manage a fleet of vehicles by assigning routes and drivers. A human operator always remotely drives the vehicle. This model allows for rapid switching between vehicles—connecting or disconnecting in a matter of seconds—significantly boosting productivity and providing great flexibility in fleet management.

Remote Driver is part of a consortium made up of Nokia, CTAG, Brainstorm, the Carlos III University of Madrid, the Polytechnic University of Madrid, and CT Ingenieros.

Within this framework, CT Ingenieros plays a key role by developing strategic components of the system, including:

- **Integration of the decoding system within the control center**, along with the remote driving application used by the operator. Active participation in remote control tasks and communications between the vehicle and the command center.
- **Detailed analysis of requirements and complete system design**, defining what the system must do, how it should behave, and under what conditions it should operate.
- **Systems engineering and data processing** to ensure robust and efficient operation.
- **Development of both basic and advanced virtual simulators** for controlled environment testing, allowing functionality validation without operational risks.
- **Onboard data processing and connectivity** to ensure continuous communication between the vehicle and the control center.
- **Definition of remote scenarios and operational workflows between the client and the remote system,** along with forward-looking analysis of the technology's potential applications.

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This project reflects CT Ingenieros' ongoing commitment to cutting-edge technological solutions that optimize processes, respond to new mobility demands, and contribute to building more efficient, connected transportation networks aimed at improving the daily operations of the people and businesses that rely on them.

About CT

CT is a leading engineering company throughout the complete product lifecycle. For more than 35 years, our mission has been to provide innovative services and technological solutions that help our clients be more effective and competitive. Today, CT´s success is driven by 2.000+ engineers in seven countries providing end-to-end expert support to leading customers in the aeronautical, space, naval, automotive, railway, energy and industrial plant sectors. www.ctengineeringgroup.com

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