Evolutionary communication infrastructure connecting diverse mobile devices and humans

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Grand Challenge and Goal：

Provide a communication platform that is not bound by standard technologies for future transportation systems, enabling safe and efficient interaction between humans and Embodied AI mobility. Focus on human-centric transportation, we aim to enhance the flexibility and scalability of communication.

Summary：

- Define a communication platform that integrates the interoperability of vendor-defined messages for vehicle-to-vehicle and vehicle-to-infrastructure communication, as well as a bidirectional interaction platform that enables efficient communication between humans and Embodied AI
- Integrate an interoperability platform for heterogeneous communication messages with Embodied AI systems using bidirectional interaction technology, and enhance communication function in the open-source autonomous driving software: Autoware
- Field demonstrations of this platform will be conducted, and a VR simulation environment will be developed where multiple Embodied AIs and various road users can continuously interact with

Social Impact：

- Remove barriers to innovation caused by delays in standardization, significantly accelerating the R&D of IT and communication technology
- Accelerate the advancement of the research community in human-AI interaction and cooperative autonomous driving by openly sharing research outcomes through open-source platforms