

MULTI-AGENT NAVIGATION AND COMMUNICATION SYSTEMS

Tech ID: 32126 / UC Case 2021-021-0

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	12,515,657	01/06/2026	2021-021

BRIEF DESCRIPTION

The field of autonomous transportation is rapidly evolving to operate in diverse settings and conditions. However, as the number of autonomous vehicles on the road increases the complexity of the computations needed to safely operate all of the autonomous vehicles grows rapidly. across multiple vehicles, this creates a very large volume of computations that must be performed very quickly (e.g., in real or near-real time). Thus, treating each autonomous vehicle as an independent entity may result in inefficient use of computing resources, as many redundant data collections and computations may be performed (e.g., two vehicles in close proximity may be performing computations related to the same detected object).

To address this issue, researches at UC Berkeley proposed algorithms for the management and exchange of shared information across nearby and distant vehicles.

According to the proposed arrangement, autonomous vehicles may share data collected by their respective sensor systems with other autonomous vehicles and adjust their operations accordingly in a manner that is more computationally efficient. This can not only increase safety but at the same time reduce computational load required by each individual vehicle.

SUGGESTED USES

autonomous vehicle guidance in two and three-dimensional spaces

Data sharing among vehicles

commercial sensors

ADVANTAGES

Faster information processing without excess computation

Optimization of locally shared information amongst multiple vehicles

Increases safety

RELATED MATERIALS

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- ▶ [Temporal And Spectral Dynamic Sonar System For Autonomous Vehicles](#)

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INVENTORS

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OTHER INFORMATION

CATEGORIZED AS

- » **Communications**
- » Networking
- » Wireless
- » **Transportation**
- » Automotive
- » Other
- » Personal

RELATED CASES

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