IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Utility Patent Application (Provisional)

TITLE: Lidar as a Service.

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FIELD OF THE INVENTION

[0001] This invention relates to the field of using Lidar technology for autonomous driving.

BACKGROUND OF THE INVENTION

[0002] Autonomous driving technology has multiple advantages like safety (less room for human error), reduced traffic congestion, less parking problems. On the other hand, the cost of ownership of fully autonomous vehicle remains the biggest barrier to autonomous driving technology adoption. This mainly due to the high cost of Lidar sensors. A key element of building fully autonomous driving technology.

Thus, there remains a need for a solution that makes using Lidar for autonomous driving more affordable.

SUMMARY OF THE DISCLOSURE

[0003] The present disclosure describes a system and/or methods to offer Lidar as a Service. A fully managed on-demand service, where drivers will be able to add/remove Lidar feature to their vehicle on demand basis like e.g., a car owner who drives his car by himself to get to work then instead of parking his vehicle at work, he will send the car back to home because his wife needs it. In this example, autonomous driving feature is only needed for the duration of the back trip from work to home. This can be achieved by using Lidar-drones that can quickly land on the top of the vehicle connect to the car system autonomously or and switch to Lidar-only mode to provide the necessary input for the autonomous drive back to home. Once arrived at the destination, it switches back to drone-mode and fly back to the next destination.

Thus, the current invention resolves the pricing barrier thanks to the shared Lidar feature provided by the Lidar as a Service provider who owns and manages a fleet of Lidar-drones.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] FIG. 1 illustrates an exemplary block diagram of Lidar-drone plugged to the car before the driverless drive.

DETAILED DESCRIPTION OF THE INVENTION

[0005] In preferred embodiments, FIG. 1 illustrates an example of block diagram of a Lidar-drone that landed on top of the Autonomous vehicle. Connected to the power source of the car first to get the necessary voltage and power to operate the Lidar and second to recharge the drone for the next flight.

[0006] The service provider owns a fleet of Lidar-drones and is responsible for the fleet monitoring, management, charging , supply chain , maintenance and upgrade via his cloud based autonomous driving service.

CLAIMS

What is claimed is:

1. A lidar-drone to provide on demand lidar services.
2. A fully self-managed cloud based lidar service that owns and manage a fleet of lidar-drone of claim 1. to offer an on demand pay as you go lidar feature.

ABSTRACT

[0007] The present disclosure describes a system and/or methods to offer Lidar as a Service. A fully managed on-demand service, where drivers will be able to add/remove Lidar feature to their vehicle on demand basis like e.g., a car owner who drives his car by himself to get to work then instead of parking his vehicle at work, he will send the car back to home because his wife needs it. In this example, autonomous driving feature is only needed for the duration of the back trip from work to home. This can be achieved by using Lidar-drones that can quickly land on the top of the vehicle connect to the car system autonomously or and switch to Lidar-only mode to provide the necessary input for the autonomous drive back to home. Once arrived at the destination, it switches back to drone-mode and fly back to the next destination.

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DRAWINGS

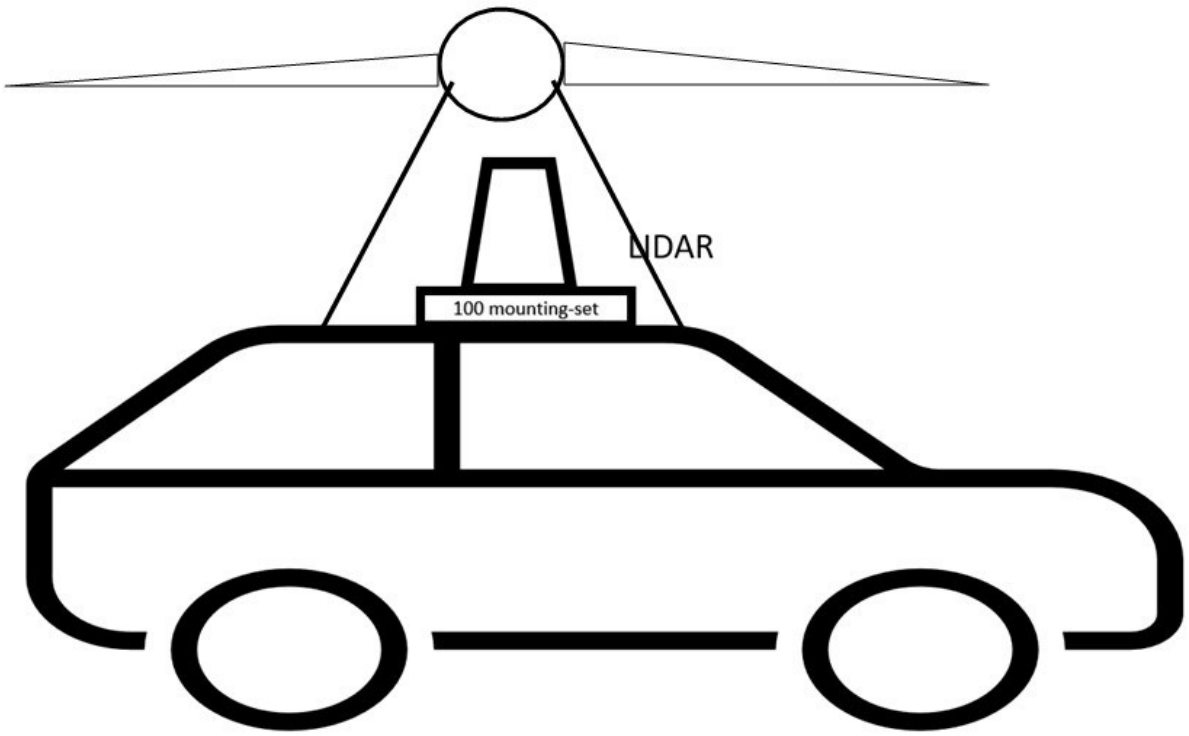

FIG. 1