

CLAIMS

1. A method of controlling a vehicle in an autonomous driving mode, the method comprising:
maneuvering, by one or more processors, a vehicle in the autonomous driving mode using pre-stored map information identifying traffic flow directions;
receiving, by the one or more processors, data from a perception system of the vehicle identifying objects in an external environment of the vehicle related to a traffic redirection not identified in the map information;
using, by the one or more processors, the received data to identify one or more corridors of the traffic redirection, the one or more corridors being not identified in the map information;
selecting, by the one or more processors, one of the one or more corridors based on a direction of traffic flow through the selected corridor; and
controlling, by the one or more processors, the vehicle in the autonomous driving mode to enter and follow the selected corridor.
2. The method of claim 1, further comprising determining the direction of traffic flow through the selected corridor by analyzing how opposing traffic relative to the vehicle would enter and pass through the one or more corridors.
3. The method of claim 1, further comprising determining the direction of traffic flow through the selected corridor by analyzing signs proximate to any of the one or more corridors.
4. The method of claim 1, further comprising determining the direction of traffic flow through the selected corridor by observing traffic through any of the one or more corridors.
5. The method of claim 1, further comprising:
receiving information from one or more computing devices of a second vehicle identifying the one or more corridors; and
determining the direction of traffic flow through the selected corridor based on the received information.
6. The method of claim 1, further comprising:
after using the received data to identify the one or more corridors, sending a request to a computing device remote from the vehicle for instructions as to how to proceed; and
receiving the instructions, and wherein selecting the selected one of the one or more corridors is further based on the received instructions.

7. The method of claim 1, further comprising determining a direction of traffic flow through each of the one or more corridors, and wherein selecting the selected corridor is further based on any determined directions of traffic flow.

8. The method of claim 1, wherein the one or more corridors are not defined by two or more lane lines.

9. A system for controlling a vehicle in an autonomous driving mode, the system comprising one or more processors configured to:

maneuver a vehicle in the autonomous driving mode using pre-stored map information identifying traffic flow directions;

receive data from a perception system of the vehicle identifying objects in an external environment of the vehicle related to a traffic redirection not identified in the map information;

use the received data to identify one or more corridors of a traffic redirection, the one or more corridors being not identified in the map information;

select one of the one or more corridors based on a direction of traffic flow through the selected corridor; and

control the vehicle in the autonomous driving mode to enter and follow the selected corridor.

10. The system of claim 9, wherein the one or more processors are further configured to determine the direction of traffic flow through the selected corridor by analyzing how opposing traffic relative to the vehicle would enter and pass through the one or more corridors.

11. The system of claim 9, wherein the one or more processors are further configured to determine the direction of traffic flow through the selected corridor by analyzing signs proximate to any of the one or more corridors.

12. The system of claim 9, wherein the one or more processors are further configured to determine the direction of traffic flow through the selected corridor by observing traffic through any of the one or more corridors.

13. The system of claim 9, wherein the one or more processors are further configured to:

receive information from one or more computing devices of a second vehicle identifying the one or more corridors; and

determine the direction of traffic flow through the selected corridor based on the received information.

14. The system of claim 9, wherein the one or more processors are further configured to:

after using the received data to identify the one or more corridors, send a request to a computing device remote from the vehicle for instructions as to how to proceed; and

receive the instructions, and wherein selecting the selected one of the one or more corridors is further based on the received instructions.

15. The system of claim 9, wherein the one or more processors are further configured to determine a direction of traffic flow through each of the one or more corridors, and wherein selecting the selected corridor is further based on any determined directions of traffic flow.

16. The system of claim 9, wherein the one or more corridors are not defined by two or more lane lines.

17. The system of claim 9, further comprising the vehicle.

18. A non-transitory computer readable medium on which instructions are stored, the instructions, when executed by one or more processors, cause the one or more processors to perform a method of controlling a vehicle in an autonomous driving mode, the method comprising:

maneuvering a vehicle in the autonomous driving mode using pre-stored map information identifying traffic flow directions;

receiving data from a perception system of the vehicle identifying objects in an external environment of the vehicle related to a traffic redirection not identified in the map information;

using the received data to identify one or more corridors of a traffic redirection, the one or more corridors being not identified in the map information;

selecting one of the one or more corridors based on a direction of traffic flow through the selected corridor; and

controlling the vehicle in the autonomous driving mode to enter and follow the selected corridor.

19. The medium of claim 18, wherein the method further comprises determining the direction of traffic flow through the selected corridor by analyzing how opposing traffic relative to the vehicle would enter and pass through the one or more corridors.

20. The medium of claim 18, wherein the method further comprises determining the direction of traffic flow through the selected corridor by observing traffic through any of the one or more corridors.