

WHAT IS CLAIMED IS:

1. A system for acquiring map data, comprising:
 - a mounting structure configured to adjustably mount a sensor to a vehicle,
 - wherein the sensor is configured to capture data indicative of at least one surrounding object as the vehicle travels along a path; and
 - a controller, configured to:
 - dynamically determine a mounting angle based on the captured data; and
 - cause the mounting structure to adjust the sensor according to the dynamically determined mounting angle.
2. The system of claim 1, wherein the sensor includes a camera or a LiDAR.
3. The system of claim 2, wherein the captured data includes image data or point cloud data.
4. The system of claim 1, wherein the mounting structure includes a pivot configured to turn the sensor to the dynamically determined mounting angle.
5. The system of claim 1, wherein to determine the mounting angle based on the captured data, the controller is further configured to:
 - detect a group of static objects based on the captured data; and
 - increase the mounting angle.

6. The system of claim 1, wherein to determine the mounting angle based on the captured data, the controller is further configured to:
 - detect a threshold number of moving objects based on the captured data; and
 - cause the vehicle to slow down.
7. The system of claim 5, wherein the static objects are high-rise buildings along the path in which the vehicle travels.
8. The system of claim 6, wherein the moving objects include pedestrians or other vehicles.
9. A method for acquiring map data, comprising:
 - capturing data indicative of at least one surrounding object using a sensor adjustably mounted on a vehicle, as the vehicle travels along a path;
 - dynamically determining, by a controller, a mounting angle based on the captured data; and
 - adjusting the sensor according to the dynamically determined mounting angle.
10. The method of claim 9, wherein the sensor includes a camera or a LiDAR.
11. The method of claim 10, wherein the captured data includes image data or point cloud data.
12. The method of claim 9, wherein the sensor is mounted on the vehicle via a mounting structure that includes a pivot configured to turn the sensor to the dynamically determined mounting angle.

13. The method of claim 9, wherein determining the mounting angle based on the captured data further includes:

detecting a group of static objects based on the captured data; and
increasing the mounting angle.

14. The method of claim 9, wherein determining the mounting angle based on the captured data further includes:

detecting a threshold number of moving objects based on the captured data; and
causing the vehicle to slow down.

15. The method of claim 13, wherein the static objects are high-rise buildings along the path the vehicle travels.

16. The method of claim 14, wherein the moving objects include pedestrians or other vehicles.

17. A vehicle, comprising:
at least one wheel;
a body carried by the at least one wheel;
a sensor configured to capture data indicative of at least one surrounding object as the vehicle travels along a path;
a mounting structure configured to adjustably mount the sensor to the body; and
a controller, configured to:
dynamically determine a mounting angle based on the captured data; and
cause the mounting structure to adjust the sensor according to the dynamically determined mounting angle.

18. The vehicle of claim 17, wherein the sensor includes a camera or a LiDAR.
19. The vehicle of claim 17, wherein the mounting structure includes a pivot configured to turn the sensor to the dynamically determined mounting angle.
20. The vehicle of claim 17, wherein to determine the mounting angle based on the captured data, the controller is further configured to:
 - detect a group of static objects based on the captured data; and
 - increase the mounting angle.