CLAIMS

1. A method comprising:

identifying a target region of an environment of an autonomous vehicle to be monitored for presence of moving objects;

operating a first sensor on the autonomous vehicle to obtain a scan of a portion of the environment that includes at least a portion of the target region and an intermediate region between the autonomous vehicle and the target region;

determining, based on at least the scan obtained by the first sensor, whether a second sensor on the autonomous vehicle has a sufficiently clear view of the target region to monitor the target region for presence of moving objects; and

based on at least a determination that the second sensor has a sufficiently clear view of the target region, operating the second sensor to monitor the target region for presence of moving objects.

2. The method of claim 1, further comprising:

adjusting a viewing direction of the first sensor such that a field-of-view of the first sensor includes the at least portion of the target region.

3. The method of claim 1, wherein determining whether the second sensor has a sufficiently clear view of the target region comprises:

determining, based on the scan obtained by the first sensor, whether a view of the target region by the second sensor is occluded by one or more objects in the intermediate region of the environment.

4. The method of claim 1, wherein determining whether the second sensor has a sufficiently clear view of the target region comprises:

determining, based on the scan obtained by the first sensor, whether a view of the target region by the second sensor is occluded by one or more objects in the target region of the environment.

5. The method of claim 1, wherein determining whether the second sensor has a sufficiently clear view of the target region is also based on a scan of the environment obtained by the second sensor.

6. The method of claim 1, wherein the scan obtained by the first sensor is a first scan, the method further comprising:

operating the first sensor to obtain a second scan of the portion of the environment that includes the at least portion of the target region, wherein determining whether the second sensor has a sufficiently clear view of the target region is also based on the second scan.

7. The method of claim 6, wherein operating the first sensor to obtain the second scan is in response to passage of a predetermined amount of time after the first scan.

8. The method of claim 6, further comprising:

determining that a change in a position of the autonomous vehicle after the first sensor obtained the first scan is greater than a threshold, wherein operating the first sensor to obtain the second scan is in response to the determining.

9. The method of claim 1, wherein determining whether the second sensor has a sufficiently clear view of the target region to monitor the target region for presence of moving objects is also based on a determination that a speed of the autonomous vehicle is less than a threshold speed.

10. The method of claim 1, further comprising:

determining, based on data from the second sensor, electromagnetic interference in the environment, wherein operating the second sensor to monitor the target region is also based on a determination that the electromagnetic interference is less than a threshold.

11. The method of claim 1, further comprising:

based on at least a determination that the second sensor does not have a sufficiently clear view of the target region, operating another sensor on the autonomous vehicle to monitor the target region for presence of moving objects.

12. The method of claim 11, wherein operating the another sensor on the autonomous vehicle to monitor the target region for presence of moving objects comprises operating the first sensor to monitor the target region for presence of moving objects.

13. The method of claim 11, wherein operating the another sensor on the autonomous vehicle to monitor the target region for presence of moving objects comprises:

determining whether a third sensor on the autonomous vehicle has a sufficiently clear view of the target region to monitor the target region for presence of moving objects; and

based on at least a determination that the third sensor has a sufficiently clear view of the target region, operating the third sensor to monitor the target region for presence of moving objects.

14. The method of claim 1, further comprising:

identifying a second target region of the environment of the autonomous vehicle to be monitored for presence of moving objects;

operating the first sensor to obtain a scan of a second portion of the environment that includes at least a portion of the second target region; and

selecting, based on at least the scan of the second portion of the environment obtained by the first sensor, a particular sensor on the autonomous vehicle to monitor the second target region of the environment for presence of moving objects.

15. A vehicle comprising:

a first sensor configured to scan an environment of the vehicle;

a second sensor configured to scan the environment of the vehicle;

one or more processors;

data storage configured to store instructions executable by the one or more processors to cause the vehicle to:

identify a target region of the environment of the vehicle to be monitored for presence of moving objects;

operate the first sensor to obtain a scan of a portion of the environment that includes at least a portion of the target region and an intermediate region between the vehicle and the target region;

determine, based on at least the scan obtained by the first sensor, whether the second sensor has a sufficiently clear view of the target region to monitor the target region for presence of moving objects; and

based on at least a determination that the second sensor has a sufficiently clear view of the target region, operate the second sensor to monitor the target region for presence of moving objects.

16. The vehicle of claim 15, wherein the first sensor is a light detection and ranging (LIDAR) sensor, and wherein the second sensor is a radio detection and ranging (RADAR) sensor.

17. The vehicle of claim 15, wherein the first sensor has a first spatial resolution, and wherein the second sensor has a second spatial resolution.

18. A non-transitory computer readable medium having stored therein instructions, that when executed by a computing device, cause the computing device to perform functions, the functions comprising:

identifying a target region of an environment of an autonomous vehicle to be monitored for presence of moving objects;

operating a first sensor on the autonomous vehicle to obtain a scan of a portion of the environment that includes at least a portion of the target region and an intermediate region between the autonomous vehicle and the target region;

determining, based on at least the scan obtained by the first sensor, whether a second sensor on the autonomous vehicle has a sufficiently clear view of the target region to monitor the target region for presence of moving objects; and

based on at least a determination that the second sensor has a sufficiently clear view of the target region, operating the second sensor to monitor the target region for presence of moving objects.

19. The non-transitory computer readable medium of claim 18, wherein the computing device is disposed in the autonomous vehicle, and wherein the functions further comprise:

providing first operation instructions to the first sensor and second operation instructions to the second sensor.

20. The non-transitory computer readable medium of claim 18, wherein the computing device is disposed outside the autonomous vehicle, and wherein the functions further comprise:

providing, via a wireless communication interface, first operation instructions to the first sensor and second operation instructions to the second sensor.