**Requirements:**

1. The application shall allow the leader vehicle to move forward by remote control.
2. The application shall allow the leader vehicle to move backwards by remote control.
3. The application shall allow the leader vehicle to turn left by remote control.
4. The application shall allow the leader vehicle to turn right by remote control.
5. The application shall be able to transmit position changes to the follower vehicle.
6. The application shall allow the follower vehicle to interpret position changes into left position motion.
7. The application shall allow the follower vehicle to interpret position changes into right position motion.
8. The application shall allow the follower vehicle to interpret position changes into forward position motion.
9. The application shall allow the follower vehicle to interpret position changes into backwards position motion.
10. The application shall allow the follower vehicle to only follow directly behind the leader vehicle.
11. The application shall prevent the follower from colliding with the leader vehicle.
12. The application shall prevent the follower vehicle from being within a short distance around the vehicle.
13. The application shall allow the individual vehicles to be named.
14. All users actions shall not have a response time greater than 250ms
15. The application shall stop motion on all out of range remote controlled vehicles.
16. The system shall have zero severity level 1 defects.
17. The system shall only support one wireless controller at a time.
18. The system shall only support one concurrent pilot at a time.
19. Meantime between failures shall be at least 30 days.
20. The application shall be able to log diagnostic information about each drive.
21. The application shall be able to export diagnostic information about each drive.
22. The application shall be able to playback previous diagnostic information from earlier drives.
23. The application shall allow the remote control to control the forward speed of the leader vehicle.
24. The application shall allow the remote control to control the forward acceleration of the leader vehicle.
25. The application shall allow the remote control to control the backwards speed of the leader vehicle.
26. The application shall allow the remote control to control the backwards acceleration of the leader vehicle.
27. The application shall display a warning if the leader vehicle is unable to change its current position.
28. The application shall display a warning if the follower vehicle is unable to change its current position.
29. The system shall support a remote control range of 20 meters.
30. The application shall encrypt the positional changes of the leader vehicle.
31. The application shall be able to decrypt the information transmitted from the vehicles.
32. The leader vehicle shall encrypt the signal sent to the follower vehicle(s).
33. The follower vehicles shall be able to decrypt the signal sent from the leader vehicle.
34. The application shall allow the leader vehicle to receive input from a remote control.
35. The application shall be able to determine location of lead vehicle upon loss of sight.
36. The application shall be able to designate any vehicle in the system as the lead vehicle.
37. The application shall be able to designate any vehicle in the system as the follower vehicle.
38. The application shall be able to use image pattern recognition to determine the location of the lead vehicle.
39. The application shall be able to navigate around obstructions in the following vehicles path.
40. The application shall be able to determine the distance between the follower and leader vehicle.
41. The application shall be able to determine the angular position between the follower and leader vehicle.
42. The application shall only have one leader vehicle at a time.
43. The application shall allow one or more following vehicles.
44. The application shall be able to determine orientation of following vehicle relative to lead vehicle.
45. The application should be able to register vehicles in the system.
46. The application shall notify the lead vehicle that the following vehicle(s) have lost sight.