WHAT IS CLAIMED IS:

1. A transport vehicle system wherein a plurality of transport vehicles and at least one inspection vehicle travel along a travelling route according to instructions from a ground controller,

wherein the inspection vehicle and the plurality of transport vehicles have common rules for avoiding collision and speed regulation and a common pattern for acceleration and deceleration; and

wherein the inspection vehicle is configured to measure inspection data of the travelling route while travelling along the travelling route.

2. The transport vehicle system according to claim 1,

wherein the inspection vehicle is configured to store inspection data in a memory without outputting the inspection data to outside while the inspection vehicle is travelling.

3. The transport vehicle system according to claim 1 or 2,

wherein one storage period comprising a plurality of sampling periods, and

wherein the inspection vehicle is configured to:

sample inspection data at each sampling period; and

store inspection data within one storage period that is most deviated from a permissible range as inspection data for the storage period.

4. The transport vehicle system according to claim 3,

wherein the inspection vehicle is configured to store inspection data that is most deviated from a target value within the permissible range when no inspection data is out of the permissible range in a storage period.

5. The transport vehicle system according to any one of claims 1 to 4,

wherein the plurality of transport vehicles and the inspection vehicle are configured to communicate with the ground controller via a LAN, and

wherein the inspection vehicle is further provided with a wireless communication unit that is assigned a unique communication address and is configured to output the inspection data to a diagnostic computer for the transport vehicle system via a wireless access point connected to the diagnostic computer.

6. The transport vehicle system according to any one of claims 1 to 5,

wherein the inspection vehicle and the plurality of transport vehicles are configured to transport a same type of carriers, and wherein the inspection vehicle is configured to measure oscillation that a carrier undergoes during transportation as inspection data.

7. The transport vehicle system according to any one of claims 1 to 6,

wherein the inspection vehicle and the plurality of transport vehicles are configured to receive electricity from a feeder line that is laid on the travelling route, without being in contact with the feeder line, and

wherein the inspection vehicle is configured to measure electrical power received from the feeder line, as inspection data.

8. The transport vehicle system according to any one of claims 1 to 7,

wherein the inspection vehicle and the plurality of transport vehicles are configured to perform wireless communication with the ground controller, and

wherein the inspection vehicle is configured to measure strength of electric field received via wireless communication and a success rate of the wireless communication,

as inspection data.

9. The transport vehicle system according to any one of claims 1 to 8,

wherein the inspection vehicle and the plurality of transport vehicles are configured to read bar codes provided on the travelling route, and

wherein the inspection vehicle is configured to measure data that indicates a good or bad attachment of the bar codes as inspection data.

10. The transport vehicle system according to any one of claims 1 to 9,

wherein the travelling route is provided with a guide that guides the inspection vehicle and the plurality of transport vehicles, and

wherein the inspection vehicle is configured to measure data that indicates a good or bad positional condition of the guide as inspection data.

11. The transport vehicle system according to claim 7,

wherein the inspection vehicle is configured to measure inspection data regarding slack in the feeder line.

12. The transport vehicle system according to any one of claims 1 to 11,

wherein the diagnostic computer is configured to display information regarding problems in the transport vehicle system on a monitor with superimposing the information regarding the problems on a layout of the travelling route.

13. The transport vehicle system according to claim 12,

wherein the diagnostic computer is configured to display icons while changing types of the icons according to types of the problems in the transport vehicle system and changing colors of the icons according to an extent of the problems.

14. A method for inspecting a transport vehicle system wherein a plurality of transport vehicles travel along a travelling route according to instructions from a ground controller,

wherein the transport vehicle system includes an inspection vehicle that has common rules for avoiding collision and speed regulation and a common pattern for acceleration and deceleration with the plurality of transport vehicles; and

wherein the inspection vehicle measures inspection data of the travelling route while travelling along the travelling route.

15. An inspection vehicle that inspects a travelling route in a transport vehicle system wherein a plurality of transport vehicles travel along the travelling route according to instructions from a ground controller,

wherein the inspection vehicle has common rules for avoiding a collision and speed regulation and a common pattern for acceleration and deceleration with the plurality of transport vehicles; and

wherein the inspection vehicle is configured to measure inspection data of the travelling route while travelling along the travelling route.

WHAT IS CLAIMED IS:

1. (Amended) A transport vehicle system wherein a plurality of transport vehicles and at least one inspection vehicle travel along a travelling route according to instructions from a ground controller:

wherein the inspection vehicle and the plurality of transport vehicles have common rules for avoiding collision and speed regulation and a common pattern for acceleration and deceleration; and

wherein the inspection vehicle is configured to: measure inspection data of the travelling route while travelling along the travelling route; sample inspection data at each sampling period; and store inspection data within one storage period that is most deviated from a permissible range as inspection data for the storage period, one storage period comprising a plurality of sampling periods.

2. The transport vehicle system according to claim 1,

wherein the inspection vehicle is configured to store inspection data in a memory without outputting the inspection data to outside while the inspection vehicle is travelling.

3. (Amended) The transport vehicle system according to claim 1 or 2,

wherein the inspection vehicle is configured to store inspection data that is most deviated from a target value within the permissible range, when no inspection data is out of the permissible range in a storage period.

4. (Amended) The transport vehicle system according to any one of claims 1 to 3,

wherein the plurality of transport vehicles and the inspection vehicle are configured to communicate with the ground controller via a LAN; and

wherein the inspection vehicle is further provided with a wireless communication unit that is assigned a unique communication address and is configured to output the inspection data to a diagnostic computer for the transport vehicle system via a wireless access point connected to the diagnostic computer.

5. (Amended) The transport vehicle system according to any one of claims 1 to 4,

wherein the inspection vehicle and the plurality of transport vehicles are configured to transport a same type of carriers, and wherein the inspection vehicle is configured to measure oscillation that a carrier undergoes during transportation as inspection data.

6. (Amended) The transport vehicle system according to any one of claims 1 to 5,

wherein the inspection vehicle and the plurality of transport vehicles are configured to receive electricity from a feeder line that is laid on the travelling route, without being in contact with the feeder line, and

wherein the inspection vehicle is configured to measure electrical power received from the feeder line as inspection data.

7. (Amended) The transport vehicle system according to any one of claims 1 to 6,

wherein the inspection vehicle and the plurality of transport vehicles are configured to perform wireless communication with the ground controller, and

wherein the inspection vehicle is configured to measure strength of electric field received via wireless communication and a success rate of the wireless communication as inspection data.

8. (Amended) The transport vehicle system according to any one of claims 1 to 7,

wherein the inspection vehicle and the plurality of transport vehicles are configured to read bar codes provided on the travelling route, and

wherein the inspection vehicle is configured to measure data that indicates a good or bad attachment of the bar codes as inspection data.

9. (Amended) The transport vehicle system according to any one of claims 1 to 8,

wherein the travelling route is provided with a guide that guides the inspection vehicle and the plurality of transport vehicles, and

wherein the inspection vehicle is configured to measure data that indicates a good or bad positional condition of the guide as inspection data.

10. (Amended) The transport vehicle system according to claim 6,

wherein the inspection vehicle is configured to measure inspection data regarding slack in the feeder line.

11. (Amended) The transport vehicle system according to any one of claims 1 to 10,

wherein the diagnostic computer is configured to display information regarding problems in the transport vehicle system on a monitor with superimposing the information regarding the problems on a layout of the travelling route.

12. (Amended) The transport vehicle system according to claim 11,

wherein the diagnostic computer is configured to display icons while changing types of the icons according to types of the problems in the transport vehicle system and colors of the icons according to extent of the problems.

13. (Amended) A transport vehicle system wherein a plurality of transport vehicles and at least one inspection vehicle travel along a travelling route according to instructions from a ground controller:

wherein the inspection vehicle and the plurality of transport vehicles have common rules for avoiding collision and speed regulation and a common pattern for acceleration and deceleration;

wherein the inspection vehicle is configured to measure inspection data of the travelling route while travelling along the travelling route;

wherein the plurality of transport vehicles and the inspection vehicle are configured to communicate with the ground controller via a LAN; and

wherein the inspection vehicle is further provided with a wireless communication unit that is assigned a unique communication address and is configured to output the inspection data to a diagnostic computer for the transport vehicle system via a wireless access point connected to the diagnostic computer.

14. (Amended) The transport vehicle system according to claim 13,

wherein the inspection vehicle and the plurality of transport vehicles are configured to transport a same type of carriers, and wherein the inspection vehicle is configured to measure oscillation that a carrier undergoes during transportation as inspection data.

15. (Amended) The transport vehicle system according to claim 13 or 14,

wherein the inspection vehicle and the plurality of transport vehicles are configured to receive electricity from a feeder line that is laid on the travelling route, without contact with the feeder line, and

wherein the inspection vehicle is configured to measure electrical power received from the feeder line as inspection data.

16. (Added) The transport vehicle system according to any one of claims 13 to 15,

wherein the inspection vehicle and the plurality of transport vehicles are configured to perform wireless communication with the ground controller, and

wherein the inspection vehicle is configured to measure strength of an electric field received via wireless communication and a success rate of the wireless communication as inspection data.

17. (Added) The transport vehicle system according to any one of claims 13 to 16,

wherein the inspection vehicle and the plurality of transport vehicles are configured to read bar codes provided on the travelling route, and

wherein the inspection vehicle is configured to measure data that indicates a good or bad attachment of the bar codes as inspection data.

18. (Added) The transport vehicle system according to any one of claims 13 to 17,

wherein the travelling route is provided with a guide that guides the inspection vehicle and the plurality of transport vehicles, and

wherein the inspection vehicle is configured to measure data that indicates a good or bad positional condition of the guide as inspection data.

19. (Added) The transport vehicle system according to claim 15,

wherein the inspection vehicle is configured to measure inspection data regarding slack in the feeder line.

20. (Added) The transport vehicle system according to any one of claims 13 to 19,

wherein the diagnostic computer is configured to display information regarding problems in the transport vehicle system on a monitor with superimposing the

information regarding the problems on a layout of the travelling route.

21. (Added) The transport vehicle system according to claim 20,

wherein the diagnostic computer is configured to display icons while changing types of the icons according to types of the problems in the transport vehicle system and colors of the icons according to extent of the problems.

22. (Added) A method for inspecting a transport vehicle system wherein a plurality of transport vehicles travel along a travelling route according to instructions from a ground controller:

wherein the transport vehicle system includes an inspection vehicle that has common rules for avoiding collision and speed regulation and a common pattern for acceleration and deceleration with the plurality of transport vehicles; and

wherein in order to measure inspection data of the travelling route while travelling along the travelling route, the inspection vehicle samples inspection data at each sampling period and stores inspection data within one storage period that is most deviated from a permissible range as inspection data for the storage period, one storage period comprising a plurality of sampling periods.

23. (Added) A method for inspecting a transport vehicle system wherein a plurality of transport vehicles travel along a travelling route according to instructions from a ground controller:

wherein the transport vehicle system includes an inspection vehicle that has common rules for avoiding collision and speed regulation and a common pattern for acceleration and deceleration with the plurality of transport vehicles;

wherein the plurality of transport vehicles and the inspection vehicle are configured to communicate with the ground controller via a LAN;

wherein the inspection vehicle is further provided with a wireless communication unit that is assigned a unique communication address; and

wherein the inspection vehicle measures inspection data of the travelling route while travelling along the travelling route and outputs the inspection data to a diagnostic computer for the transport vehicle system via a wireless access point connected to the diagnostic computer.

24. (Added) An inspection vehicle that inspects a travelling route in a transport vehicle system wherein a plurality of transport vehicles and the inspection vehicle travel along the travelling route according to instructions from a ground controller:

wherein the inspection vehicle has common rules for avoiding collision and speed regulation and a common pattern for acceleration and deceleration with the plurality of transport vehicles; and

wherein the inspection vehicle is configured to: measure inspection data of the travelling route while travelling along the travelling route; sample inspection data at each sampling period; and store inspection data within one storage period that is most deviated from a permissible range as the inspection data for the storage period, one storage period comprising a plurality of sampling periods.

25. (Added) An inspection vehicle that inspects a travelling route in a transport vehicle system wherein a plurality of transport vehicles travel along the travelling route according to instructions from a ground controller:

wherein the inspection vehicle has common rules for avoiding collision and speed regulation and a common pattern for acceleration and deceleration with the plurality of transport vehicles;

wherein the inspection vehicle, as well as the plurality of transport vehicles, is configured to communicate with the ground controller via a LAN; and

wherein the inspection vehicle is configured to measure inspection data of the travelling route while travelling along the travelling route, is further provided with a wireless communication unit that is assigned a unique communication address, and is configured to output the inspection data to a diagnostic computer for the transport vehicle system via a wireless access point connected to the diagnostic computer.

WHAT IS CLAIMED IS:

1. A transport vehicle system wherein a plurality of transport vehicles and at least one inspection vehicle travel along a travelling route according to instructions from a ground controller:

wherein the inspection vehicle and the plurality of transport vehicles have common rules for avoiding collision and speed regulation and a common pattern for acceleration and deceleration; and

wherein the inspection vehicle is configured to: measure inspection data of the travelling route while travelling along the travelling route; sample inspection data at each sampling period; and store inspection data within one storage period that is most deviated from a permissible range as inspection data for the storage period, one storage period comprising a plurality of sampling periods.

2. The transport vehicle system according to claim 1,

wherein the inspection vehicle is configured to store inspection data in a memory without outputting the inspection data to outside while the inspection vehicle is travelling.

3. The transport vehicle system according to claim 1 or 2,

wherein the inspection vehicle is configured to store inspection data that is most deviated from a target value within the permissible range, when no inspection data is out of the permissible range in a storage period.

4. The transport vehicle system according to any one of claims 1 to 3,

wherein the plurality of transport vehicles and the inspection vehicle are configured to communicate with the ground controller via a LAN; and

wherein the inspection vehicle is further provided with a wireless communication unit that is assigned a unique communication address and is configured to output the inspection data to a diagnostic computer for the transport vehicle system via a wireless access point connected to the diagnostic computer.

5. The transport vehicle system according to any one of claims 1 to 4,

wherein the inspection vehicle and the plurality of transport vehicles are configured to transport a same type of carriers, and wherein the inspection vehicle is configured to measure oscillation that a carrier undergoes during transportation as inspection data.

6. The transport vehicle system according to any one of claims 1 to 5,

wherein the inspection vehicle and the plurality of transport vehicles are configured to receive electricity from a feeder line that is laid on the travelling route, without being in contact with the feeder line, and

wherein the inspection vehicle is configured to measure electrical power received from the feeder line as inspection data.

7. The transport vehicle system according to any one of claims 1 to 6,

wherein the inspection vehicle and the plurality of transport vehicles are configured to perform wireless communication with the ground controller, and

wherein the inspection vehicle is configured to measure strength of electric field received via wireless communication and a success rate of the wireless communication as inspection data.

8. The transport vehicle system according to any one of claims 1 to 7,

wherein the inspection vehicle and the plurality of transport vehicles are configured to read bar codes provided on the travelling route, and

wherein the inspection vehicle is configured to measure data that indicates a good or bad attachment of the bar codes as inspection data.

9. The transport vehicle system according to any one of claims 1 to 8,

wherein the travelling route is provided with a guide that guides the inspection vehicle and the plurality of transport vehicles, and

wherein the inspection vehicle is configured to measure data that indicates a good or bad positional condition of the guide as inspection data.

10. The transport vehicle system according to claim 6,

wherein the inspection vehicle is configured to measure inspection data regarding slack in the feeder line.

11. The transport vehicle system according to any one of claims 1 to 10,

wherein the diagnostic computer is configured to display information regarding problems in the transport vehicle system on a monitor with superimposing the information regarding the problems on a layout of the travelling route.

12. The transport vehicle system according to claim 11,

wherein the diagnostic computer is configured to display icons while changing types of the icons according to types of the problems in the transport vehicle system and colors of the icons according to extent of the problems.

13. A method for inspecting a transport vehicle system wherein a plurality of transport vehicles travel along a travelling route according to instructions from a ground controller:

wherein the transport vehicle system includes an inspection vehicle that has common rules for avoiding collision and speed regulation and a common pattern for acceleration and deceleration with the plurality of transport vehicles; and

wherein in order to measure inspection data of the travelling route while travelling along the travelling route, the inspection vehicle samples inspection data at each sampling period and stores inspection data within one storage period that is most deviated from a permissible range as inspection data for the storage period, one storage period comprising a plurality of sampling periods.

14. An inspection vehicle that inspects a travelling route in a transport vehicle system wherein a plurality of transport vehicles and the inspection vehicle travel along the travelling route according to instructions from a ground controller:

wherein the inspection vehicle has common rules for avoiding collision and speed regulation and a common pattern for acceleration and deceleration with the plurality of transport vehicles; and

wherein the inspection vehicle is configured to: measure inspection data of the travelling route while travelling along the travelling route; sample inspection data at each sampling period; and store inspection data within one storage period that is most deviated from a permissible range as the inspection data for the storage period, one storage period comprising a plurality of sampling periods.