Patent claims

1. A method for controlling and/or monitoring a plurality of racing vehicles (V1, V2, Vn) controlled by racing participants (T1, T2, Tn) on a racetrack, wherein each racing vehicle (V1, V2, Vn) is respectively provided with a vehicle memory (S1, S2, Sn), in which vehicle data are stored, which vehicle data are read out by a receiver/reader (R1, R2, Rn) and stored in a database (2), characterized in that each racing participant is provided with a participant memory (TS1, TS2, TSn), which is separate from the vehicle memory (S1, S2, Sn) and in which participant data are stored, and the participant data are read out by said or a further receiver/reader (P1, P2, Pn) and are stored in the and/or a further database (2), and wherein the vehicle data and participant data stored in the database or databases are assigned to one another with the aid of assignment means (3), and wherein a check of the assignment of the vehicle data and of the participant data to one another is performed by means of monitoring means, during which check vehicle data and participant data are read out anew and the assignment of the vehicle data read out anew and participant data read out anew to one another is compared with the assignment previously allocated by the assignment means (3).

2. The method as claimed in any of the preceding claims, wherein the assignment of the vehicle data and participant data to one another is performed automatically by means of a random number generator (RNG).

3. The method as claimed in either of the preceding claims, wherein the vehicle data and participant data assigned to one another are displayed on a display (4) before the beginning of a race.

4. The method as claimed in either of the preceding claims 2 and 3, wherein each racing vehicle (V1, V2, Vn) is assigned a controller (C1, C2, Cn) for controlling the vehicle and each controller (C1, C2, Cn) is provided with or connectable to a receiver/reader (P1, P2, Pn) for reading out the participant data from the participant memories (TS1, TS2, TSn), wherein the respective receiver/reader (P1, P2, Pn) reads out the participant data only of the participant memory (TS1, TS2, TSn) of the participant situated at the controller (C1, C2, Cn) and an activation device (5) activates the controller (C1, C2, Cn) and/or the respective racing vehicle (V1, V2, Vn) only when the participant data read in at the respective controller (C1, C2, Cn) corresponds to the assignment of the vehicle data and the participant data determined by the assignment means (3).

5. The method as claimed in any of the preceding claims, wherein, when a plurality of lanes (L1, L2, Ln) are present, each lane is provided with a receiver/reader (R1, R2, Rn) for reading in the vehicle data from a vehicle memory (S1, S2, Sn), wherein the respective receiver/reader (R1, R2, Rn) reads out the vehicle data only of the racing vehicle (V1, V2, Vn) situated on the respective lane (L1, L2, Ln).

6. The method as claimed in the preceding claim, wherein one assignment of the vehicle data stored in the database (2) to the lanes (L1, L2, Ln) is performed automatically by means of a random number generator and the assignment of the lanes (L1, L2, Ln) to the vehicle data and/or to the participant data is displayed on the displays means (4) before the beginning of a race.

7. The method as claimed in the preceding claim, wherein the or a further activation device (5)

activates the respective racing vehicle (V1, V2, Vn) and/or the respective lane (L1, L2, Ln) only when the vehicle data read in by the reader (R1, R2, Rn) situated at a lane (L1, L2, Ln) corresponds to the assignment of the lanes (L1, L2, Ln) to the racing vehicles (V1, V2, Vn) predetermined by assignment means (3).

8. The method as claimed in any of the preceding claims, wherein a track control device (6) sets at least one operating parameter of the racetrack (1) on the basis of the vehicle data read out from the vehicle memory (S1, S2, Sn) of a racing vehicle (V1, V2, Vn), wherein an energy regulator that controls the energy supply of the racing vehicles (V1, V2, Vn) on the racetrack (1) is preferably set on the basis of the detected vehicle data.

9. The method as claimed in any of the preceding claims, wherein at least one vehicle parameter of a racing vehicle (V1, V2, Vn) and/or a track parameter of the racetrack (1) are/is set on the basis of the participant data read out from a participant memory (TS1, TS2, TSn) and the assignment of said participant data to the vehicle data read out from the vehicle memories (S1, S2, Sn), said assignment being performed by the assignment means (3), wherein in particular an energy regulator that controls the energy supply of the racing vehicles (V1, V2, Vn) on the racetrack (1) is set on the basis of said participant data and the assignment thereof and/or a power regulator that controls the power output of the racing vehicle (V1, V2, Vn) is set on the basis of the participant data read out and the assignment thereof.

10. The method as claimed in any of the preceding claims, wherein detection means at the racetrack (1) for detecting and/or monitoring the racing vehicles

(V1, V2, Vn) depending on the vehicle data read out from the vehicle memories (S1, S2, Sn) are configured automatically, in particular set in terms of their response behavior and coordinated with the respective racing vehicles (V1, V2, Vn).

11. The method as claimed in any of the preceding claims, wherein RFID elements are respectively used as vehicle memories (S1, S2, Sn) and/or as participant memories (TS1, TS2, TSn) and an RFID reader is used as receiver/reader (R1, R2, Rn; P1, P2, Pn).

12. The method as claimed in any of the preceding claims, wherein barcode elements are respectively used as vehicle memories (S1, S2, Sn) and/or as participant memories (TS1, TS2, TSn) and a barcode reader is used as receiver/reader (R1, R2, Rn; P1, P2, Pn).

13. The method as claimed in any of the preceding claims, wherein monitoring of the racetrack (1) is controlled by at least one camera (K1, K2, Kn) depending on the vehicle data read out from the vehicle memories (S1, S2, Sn) and/or depending on the effected assignment of said vehicle data to the participant data read out from the participant memories (TS1, TS2, TSn).

14. The method as claimed in the preceding claim, wherein the racetrack (1) is monitored by a plurality of cameras (K1, K2, Kn), wherein a changeover, in particular the changeover times, between the different cameras (K1, K2, Kn) is controlled depending on the vehicle data read out from the vehicle memories (S1, S2, Sn).

15. The method as claimed in any of the preceding claims, wherein a racing start signal for indicating the beginning of racing is generated automatically by a start device wherein, on the basis of a comparison of

the vehicle data read out from the vehicle memories (S1, S2, Sn) and the participant data read out from the participant memories (TS1, TS2, TSn) with the assignment - generated by the computer (3) - of the vehicle data to the participant data and/or the assignment of the vehicle data to the lanes (L1, L2, Ln) of the racetrack (1), it has been ascertained that the actual positioning of the participant memories (TS1, TS2, TSn) at the controllers (C1, C2, Cn) of the racing vehicles (V1, V2, Vn) and/or the actual disposition of the racing vehicles (V1, V2, Vn) on the lanes (L1, L2, Ln) corresponds to the respective computer-generated assignment.

16. A device for controlling and/or monitoring a plurality of racing vehicles (V1, V2, Vn) controlled by racing participants (T1, T2, Tn) on a racetrack (1), comprising vehicle memories (S1, S2, Sn) which are respectively assigned to the racing vehicles (V1, V2, Vn) and in which vehicle data are stored, and comprising at least one reader (R1, R2, Rn) assigned to the racetrack and serving for reading out the vehicle data stored in the vehicle memories (S1, S2, Sn) at the racetrack (1), and comprising a database (2) for storing the vehicle data read out by the reader (R1, R2, Rn), characterized in that participant memories (TS1, TS2, TSn) separate from the vehicle memories (S1, S2, Sn) are assigned to the racing participants (T1, T2, Tn), in which participant memories (TS1, TS2, TSn) participant data are stored, which can be read out by said or a further reader (P1, P2, Pn) and can be stored in the and/or a further database (2), wherein assignment means for assigning the vehicle data and participant data stored in the database or databases are provided, and wherein monitoring means for monitoring the assigned vehicle data and participant data are provided and designed in such a way that, during monitoring, provision is made for reading out

vehicle data and participant data anew and the assignment of the vehicle data read out anew and of the participant data read out anew to one another can be compared with the assignment previously allocated by the assignment means.

17. The device as claimed in the preceding claim, wherein at least one sensor unit (20) arranged in a manner recessed beneath the raceway surface of the racetrack (1) is provided, said at least one sensor unit being mounted on a guide element (21), which can be slid transversely with respect to the raceway (22) from the lateral raceway edge (23) into a receptacle space (24) beneath the raceway (22), wherein the guide element (21) and/or the receptacle space (24) preferably have/has sliding guide means (25) for lateral guidance and/or positioning transversely with respect to the slide-in direction of the guide element (21) into the receptacle space (24).

18. The device as claimed in the preceding claim, wherein a plurality of sensor units (20) are mounted at a predetermined distance from one another on the guide element (21), wherein said distance between the sensor units (20) corresponds to the division of the raceway (22) into lanes (L1, L2, Ln) and/or the distance between sensor windows (29) provided in the raceway (22), wherein the plurality of sensor units (20) is preferably mounted on a common printed circuit board, which forms at least one part of the guide element and/or is rigidly fixed to the guide element (21).

Patent Claims

1. A method for controlling and/or monitoring a plurality of racing vehicles controlled by racing participants on a racetrack, wherein each racing vehicle is respectively provided with a vehicle memory, in which vehicle data are stored, which vehicle data are read out by at least one receiver/reader and stored in at least one database, characterized in that each racing participant is provided with a participant memory, which is separate from the vehicle memory and in which participant data are stored, and the participant data are read out by the at least one receiver/reader and are stored in the at least one database, and wherein the vehicle data and participant data stored in the database or databases are assigned to one another with the aid of assignment means, and wherein a check of the assignment of the vehicle data and of the participant data to one another is performed by a monitoring means, during which check vehicle data and participant data are read out anew and the assignment of the vehicle data read out anew and participant data read out anew to one another is compared with the assignment previously allocated by the assignment means, wherein a track control device sets at least one operating parameter of the racetrack on the basis of the vehicle data read out from the vehicle memory of a racing vehicle, wherein an energy regulator that controls the energy supply of the racing vehicles on the racetrack is preferably set on the basis of the detected vehicle data.

2. A method for controlling and/or monitoring a plurality of racing vehicles controlled by racing participants on a racetrack, wherein each racing vehicle is respectively provided with a vehicle memory, in which vehicle data are stored, which vehicle data are read out by at least one receiver/reader and stored in at least one database, characterized in that each racing participant is provided with a participant memory, which is separate from the vehicle memory and in which participant data are stored, and the participant data are read out by the at least one receiver/reader and are stored in the at least one

database, and wherein the vehicle data and participant data stored in the database are assigned to one another with the aid of assignment means, and wherein a check of the assignment of the vehicle data and of the participant data to one another is performed by a monitoring means, during which check vehicle data and participant data are read out anew and the assignment of the vehicle data read out anew and participant data read out anew to one another is compared with the assignment previously allocated by the assignment means, wherein atleast one vehicle parameter of a racing vehicle and/or a track parameter of a racetrack is set on the basis of the participant data read out from a participant memory and the assignment of said participant data to the vehicle data read out from the vehicle memory, said assignment being performed by the assignment means, wherein an energy regulator that controls the energy supply of the racing vehicles on the racetrack is set on the basis of said participant data and the assignment thereof and/or a power regulator that controls the power output of the racing vehicle is set on the basis of the participant data read out and the assignment thereof.

3. A method for controlling and/or monitoring a plurality of racing vehicles controlled by racing participants on a racetrack, wherein each racing vehicle is respectively provided with a vehicle memory, in which vehicle data are stored, which vehicle data are read out by at least one receiver/reader and stored in at least one database, characterized in that each racing participant is provided with a participant memory, which is separate from the vehicle memory and in which participant data are stored, and the participant data are read out by the at least one receiver/reader and are stored in the at least one database, and wherein the vehicle data and participant data stored in the at least one database are assigned to one another with the aid of assignment means, and wherein a check of the assignment of the vehicle data and of the participant data to one another is performed by a monitoring means, during which check vehicle data and participant data are read out anew and the assignment of the vehicle data read out anew and participant

data read out anew to one another is compared with the assignment previously allocated by the assignment means, wherein monitoring of the racetrack is controlled by at least one camera depending on the vehicle data read out from the vehicle memories and/or depending on the effected assignment of said vehicle data to the participant data read out from the participant memories.

4. The method as claimed in claim 3, wherein the racetrack is monitored by a plurality of cameras, wherein a changeover, in particular the changeover times, between the different cameras is controlled depending on the vehicle data read out from the vehicle memories.