CLAIMS:

1. A train platform screen door (PSD) system being controlled locally at each station, said PSD system comprising:

a PSD control cubicle (PCC);

a plurality of door control units (DCUs) linked to and controlled by the PCC, with each DCU for operating each associated screen door at a platform so that the screen doors keep passengers safe at the platform and away from a trackside;

a train positioning system (TPS) in communication with the PCC, and a set of output indicators being linked to the PCC; wherein the output indicators indicate the position of a train in relation to the screen doors; and

a station control unit (SCU) linked to the TPS and in wireless communication with a train control unit (TCU) located on the train;

wherein as the train is stopping at the station, the indicators allow a train driver to determine a distance of alignment of train doors with the associated screen doors and to open the train doors and screen doors for safe passenger embarkation and disembarkation; and

when the screen doors are closed, the PSD system is momentarily dis-connected from a train signaling system.

2. The PSD system according to claim 1, wherein the TPS comprises a position sensor (PS) unit, which emits three curtain beams (L1-L3), with each curtain beam laying in a plane.

3. The PSD system according to claim 2, wherein the plane containing the curtain beams is orientated transverse to the direction of travel of the train.

4. The PSD system according to claim 3, wherein the three curtain beams sequentially detect a head of an approaching train, with the first curtain beam being adjusted to detect the train prior to reaching a target stop position, and the third curtain beam being adjusted to detect an over-run position.

5. The screen door system according to claim 4, wherein the position sensor PS unit outputs a sequence of signals to illuminate a set of indicators (N1-N3) as each curtain beam detection is activated.

6. The PSD system according to claim 5, wherein the set of indicators is visually continuous, segmented or serial.

7. The PSD system according to claim 2, wherein the PS unit emits beams of laser, of a predetermined range of wavelengths or ultrasound.

8. The PSD system according to any one of claims 2-7, wherein the PS unit is further connected to a set of wheel sensors SS.

9. The PSD system according to any one of the preceding claims, wherein the SCU further comprises a wireless transceiver and the TCU further comprises a wireless transceiver matching the SCU wireless transceiver.

10. The PSD system according to claim 9, wherein the TCU wireless transponders are separately disposed near the two ends of the train.

11. The PSD system according to claim 9 or 10, wherein the SCU further comprises a near-field (NFC) transponder linked to a number of NFC tags corresponding to the number of train doors.

12. The PSD system according to claim 11, wherein two sets of NFC tags are separately disposed on the left and right hand side of the train.

13. The PSD system according to any one of the preceding claims, further comprising a local control panel (LCP) and a set of output indicators PSI to show the status of locking of both the screen doors and train doors for a train to pull in or pull out safely at a station.

14. The PSD system according to claim 13, wherein the output indicators PSI includes a by-pass mode indicator.

15. A kit for configuring a train platform screen door (PSD) system comprising:

a position sensor (PS) which emits three curtain beams, with each curtain beam laying in a plane and outputs a signal corresponding to detection by each curtain beam;

a set of indicators (N1-N2 or N1-N3) operable by the output signals of the PS; and

a station control unit (SCU) for connecting to the PS and for wireless communication with a train control unit (TCU).

16. The kit according to claim 15, further comprising:

a plurality of door control units (DCUs), with each DCU for operating a platform screen door;

a set of wheel sensors (SS); and

a local control panel (LCP) and associated status indicators (PSI).

17. The kit according to claim 16, wherein the TCU further comprising:

a wireless transceiver matching the SCU; and

a plurality of near-field communication (NFC) tags linked to associated NFC antennae and NFC transponder located at the SCU.

18. A train positioning method comprising:

detecting an end of a train pulling into a station with a laser position sensor unit (PS) that emits 3 curtain beams;

outputting an indicator signal (N1-N3) corresponding to detection by each curtain beam; and

narrowing a range of detection of each curtain beam by outputting a wheel sensor (SS) before the associated indicator signal is sent to illuminate an associated lamp, so that train positioning at a platform is made more accurate.