CLAIMS

1. A position detecting system comprising:

~~a target object shape extracting part configured to extract a target object as a target object shape from a three-dimensional shape in an indoor space and acquire a position of the target object shape;~~

~~an identification information acquisition part configured to acquire, on the basis of data reported from the target object, target object identification information for identifying the target object; and~~

~~an identification information associating part configured to associate the target object shape with the target object identification information~~

an object shape extracting part configured to extract an object shape of an object from a three-dimensional shape obtained by a three-dimensional measuring device and acquire the object shape and a position of the object;

an identification information acquisition part configured to store target object identification information related to a target object, which is one of a plurality of the objects;

a position estimation unit configured to output position estimation information that estimates the position of the target object; and

an identification information associating part configured to associate the target object identification information with the object shape by using the position of the object acquired by the object shape extraction unit and the position estimation information.

~~2. (Canceled) The position detecting system according to claim 1, further comprising:~~

~~a target object position estimation part configured to receive position estimation information for estimating the position of the target object in the indoor space, from a wireless device provided in the target object, and estimate the position of the target object in a measurement range as an estimated position, on the basis of the position estimation information,~~

~~wherein the target object position estimation part acquires the target object identification information transmitted together with the position estimation information.~~

2~~3~~. The position detecting system according to ~~claim 2~~ claim 1, wherein the position estimation information is estimated from a reception strength of electromagnetic waves transmitted from ~~each transmitter placed in the indoor space~~ each of a plurality of transmitter.

34. The position detecting system according to ~~claim 2~~ claim 1, wherein the position estimation information is estimated from a measured value of a geomagnetism measured by a magnetic sensor provided in the wireless device.

54. The position detecting system according to ~~claim 2~~ claim 1, wherein

a motion sensor mounted on the target object is provided, and

the position estimation information is estimated from each of a moving distance and a moving direction of the target object detected by the motion sensor ~~and a map of the indoor space~~.

56. The position detecting system according to any one of ~~claims 2 to 5~~ claims 1 to 4, wherein the identification information associating part associates the target object shape with the target object identification information, based on a correlation between a velocity vector of the target object obtained from the position estimation information ~~when the estimated position of the target object moves~~ and a velocity vector of the object obtained from output of the object shape extracting part ~~when the position of the target object moves~~.

76. The position detecting system according to any one of ~~claims 1 to 6~~ claims 1 to 5, wherein ~~, when the target object identification information is associated with another target object different from the target object,~~ the identification information associating part associates the target object shape with the target object identification information, based on a history of the target object identification information associated with the object ~~stores a history of the target object identification information associated with the target object~~.

78. A position detecting method comprising:

~~a target~~ an object shape extracting process of extracting ~~a target object as a target~~ an object shape from a three-dimensional shape obtained by a three-dimensional measuring device ~~in an indoor space~~, and acquiring the object shape and a position of the ~~target~~ object ~~shape~~;

an identification information acquisition process of ~~acquiring~~ stored target object identification information ~~for identifying the~~ related to a target object, which is one of a plurality of the objects ~~based on data notified from the target object~~;

a position estimation process of outputting position estimation information that

estimates the position of the target object; and

an identification information associating process of associating ~~the target object shape with~~ the target object identification information with the object shape by using the position of the object acquired by the object shape extraction unit and the position estimation information.

~~9. (Canceled) The position detecting method according to claim 8, further comprising:~~

~~a target object position estimation process of receiving position estimation information for estimating the position of the target object in the indoor space, from a wireless device provided in the target object, and estimating the position of the target object in a measurement range as an estimated position, on the basis of the position estimation information,~~

~~wherein the target object position estimation process includes a step of acquiring the target object identification information transmitted together with the position estimation information.~~

~~10~~8. The position detecting method according to ~~claim 9~~ claim 7, wherein the position estimation information is estimated from a reception strength of electromagnetic waves transmitted from each of a plurality of transmitter ~~placed in the indoor space~~.

~~11~~9. The position detecting method according to ~~claim 9~~ claim 7, wherein the position estimation information is estimated from a measured value of a geomagnetism measured by a magnetic sensor provided in the wireless device.

~~12~~10. The position detecting method according to ~~claim 9~~ claim 7, wherein the position estimation information is estimated from each of a moving distance and a moving direction of the target object detected by a motion sensor mounted on the target object ~~and a map of the indoor space~~.

~~13~~11. The position detecting method according to any one of ~~claims 9 to 12~~ claims 7 to 10, wherein the identification information associating process includes a step of associating the target object shape with the target object identification information, based on a correlation between a velocity vector of the target object obtained from the position estimation information ~~when the estimated position of the target object moves~~ and a velocity vector of

the object obtained from output of the object shape extracting process ~~when the position of the target object moves~~.

~~14~~12. The position detecting method according to any one of ~~claims 8 to 13~~ claims 7 to 11, wherein the identification information associating process includes a step of ~~storing~~ associating the target object shape with the target object identification information, based on a history of the target object identification information associated with the ~~target object when the target object identification information is associated with another target object different from the target~~ object.