

【CLAIMS】**【Claim 1】**

A pallet rental system comprising:

a pallet;

5 a radio frequency identification (RFID) tag attached to one side of each pallet and recorded with a pallet identifier (ID) to identify the pallet;

first and second mobile terminals installed with a pallet rental application and comprising an RFID tag reading function to read the RFID tag attached to the pallet;

10 first and second gates comprising an RFID tag reading function to read the RFID tag attached to the pallet; and

a pallet rental server configured to manage rental and collection of the pallet based on a pallet rental order of an exporter connected through the pallet rental application,

the pallet rental server comprising a warehouse manager configured to
15 control the RFID tag attached to the pallet taken out of a first warehouse based on the pallet rental order of the exporter to be read by the first gate installed in the first warehouse and be stored in a shipping database; control the RFID tag attached to the pallet to be read by the first mobile terminal, be mapped to goods loaded on the pallet, and be stored in the shipping database when the pallet is shipped to the
20 exporter; control the RFID tag attached to the pallet to be read by the second mobile terminal, be mapped to the goods loaded on the pallet, and be stored in a warehousing database when the taken-out pallet together with the goods is shipped to an importer; and control the RFID tag attached to the pallet collected after the warehousing of the goods to be read by the second gate installed in a second
25 warehouse and be stored in the warehousing database.

【Claim 2】

The pallet rental system of claim 1, wherein
the pallet comprises an aluminum pallet.

【Claim 3】

5 The pallet rental system of claim 2, wherein
the pallet rental server comprises an order manager configured to check a
stored order policy to determine whether to confirm an order with regard to the pallet
rental order of the exporter, and control a shipping instruction to be generated with
regard to the pallet taken out of the first warehouse after confirming the order.

10 **【Claim 4】**

The pallet rental system of claim 3, wherein
the order manager further controls to generate a collection instruction for the
pallet shipped to the importer as a rental period included in the pallet rental order of
the exporter expires.

15 **【Claim 5】**

The pallet rental system of claim 3 or 4, wherein the shipping instruction for
the pallet or the collection instruction for the pallet is automatically generated as a
rental contract drawn up by the pallet rental order of the exporter is established or
terminated.

20 **【Claim 6】**

The pallet rental system of claim 5, wherein
(a) the first warehouse is directly or indirectly related to a manufacturer of the
pallet, and the second warehouse is related to a first transporter being in charge of
the collection of the pallet, or (b) the first warehouse is related to a second
25 transporter being in charge of the collection of the pallet and the second warehouse

is related to a third transporter being in charge of the collection of the pallet.

【Claim 7】

The pallet rental system of claim 6, wherein

the pallet rental server further comprises a contract manager configured to
5 control a rental contract related to the pallet rental order of the exporter, and a
transportation contract related to the first transporter and/or the second transporter
and the third transporter to be stored in a rental contract database and a
transportation contract database, respectively.

【Claim 8】

10 A pallet rental server configured to manage rental and collection of a pallet
based on a pallet rental order of an exporter connected through a pallet rental
application,

the pallet rental server comprising a warehouse manager configured to
control a radio frequency identification (RFID) tag attached to one side of each pallet
15 and recorded with a pallet identifier (ID) to identify the pallet taken out of a first
warehouse based on the pallet rental order of the exporter to be read by a first gate
installed in the first warehouse, the first gate comprising an RFID tag reading function
to read the RFID tag attached to the pallet and be stored in a shipping database;
control the RFID tag attached to the pallet to be read by a first mobile terminal
20 installed with the pallet rental application and comprising an RFID tag reading
function to read the RFID tag attached to the pallet, be mapped to goods loaded on
the pallet, and be stored in the shipping database when the pallet is shipped to the
exporter; control the RFID tag attached to the pallet to be read by a second mobile
terminal installed with the pallet rental application and comprising an RFID tag
25 reading function to read the RFID tag attached to the pallet, be mapped to the goods

loaded on the pallet, and be stored in a warehousing database when the taken-out pallet together with the goods is shipped to an importer; and control the RFID tag attached to the pallet collected after the warehousing of the goods to be read by a second gate installed in a second warehouse, the second gate comprising an RFID tag reading function to read the RFID tag attached to the pallet and be stored in the warehousing database.

【Claim 9】

A method of operating a pallet rental system for managing rental and collection of a pallet based on a pallet rental order of an exporter, the method comprising:

controlling a radio frequency identification (RFID) tag attached to the pallet taken out of a first warehouse based on the pallet rental order of the exporter to be read by a first gate installed in the first warehouse and be stored in a shipping database;

controlling the RFID tag attached to the pallet to be read by a first mobile terminal, be mapped to goods loaded on the pallet, and be stored in the shipping database when the pallet is shipped to the exporter;

controlling the RFID tag attached to the pallet to be read by a second mobile terminal, be mapped to the goods loaded on the pallet, and be stored in a warehousing database when the taken-out pallet together with the goods is shipped to an importer; and

controlling the RFID tag attached to the pallet collected after the warehousing of the goods to be read by a second gate installed in a second warehouse and be stored in the warehousing database,

wherein the pallet rental system comprises a pallet rental server configured to

manage the rental and collection of the pallet based on the pallet rental order of the exporter connected through a pallet rental application, the RFID tag is attached to one side of each pallet and recorded with a pallet identifier (ID) to identify the pallet, the first and second mobile terminals are installed with the pallet rental application
5 and comprise an RFID tag reading function to read the RFID tag attached to the pallet, and the first and second gates comprise an RFID tag reading function to read the RFID tag attached to the pallet.

【Claim 10】

The method of claim 9, wherein
10 the pallet comprises an aluminum pallet,

【Claim 11】

The method of claim 10, further comprising
checking a stored order policy to determine whether to confirm an order with regard to the pallet rental order of the exporter, and generating a shipping instruction
15 with regard to the pallet taken out of the first warehouse after confirming the order.

【Claim 12】

The method of claim 11, further comprising
generating a collection instruction for the pallet shipped to the importer as a rental period included in the pallet rental order of the exporter expires.

20 **【Claim 13】**

The method of claim 11 or 12, wherein the shipping instruction for the pallet or the collection instruction for the pallet is automatically generated as a rental contract drawn up by the pallet rental order of the exporter is established or terminated.

【Claim 14】

25 The method of claim 13, wherein

(a) the first warehouse is directly or indirectly related to a manufacturer of the pallet, and the second warehouse is related to a first transporter being in charge of the collection of the pallet, or (b) the first warehouse is related to a second transporter being in charge of the collection of the pallet and the second warehouse
5 is related to a third transporter being in charge of the collection of the pallet.

【Claim 15】

The method of claim 14, further comprising
controlling a rental contract related to the pallet rental order of the exporter,
and a transportation contract related to the first transporter and/or the second
10 transporter and the third transporter to be stored in a rental contract database and a
transportation contract database, respectively.

【Claim 16】

A computer readable recording medium recorded with a program to perform
the method of any one of claims 9 to 15.

15 **【Claim 17】**

A computer program stored in a medium to perform the method of any one of
claims 9 to 15, based on combination with hardware.

【Claim 18】

A computer program comprising instructions for implementing the method of
20 any one of claims 9 to 15.