

CLAIMS

1. A communication apparatus comprising:
circuitry, which, in operation, generates a transmission signal comprising a
5 plurality of user fields and a data field, the data field comprising a plurality of resource
units (RUs); and
a transmitter, which, in operation, transmits the generated transmission
signal,
wherein a single transmission scheme is applied to one or more RUs of the
10 plurality of RUs, which are assigned to another communication apparatus, and
wherein one or more user fields of the plurality of user fields are addressed to
the another communication apparatus and a number of the one or more user fields
addressed to the another communication apparatus is equal to a number of the one or
more RUs assigned to the another communication apparatus, and the one or more
15 user fields addressed to the another communication apparatus correspond to the one
or more RUs assigned to the another communication apparatus respectively.
2. The communication apparatus of claim 1, wherein the one or more user
fields addressed to the another communication apparatus contain same user-specific
20 allocation information.
3. The communication apparatus of claim 1, wherein each of the plurality of
user fields is either a type 1 user field or a type 2 user field and contains a signaling
for indicating its type; and the one or more user fields addressed to the another
25 communication apparatus comprises at least one type 1 user field.
4. The communication apparatus of claim 3, wherein the type 1 user field
contains user-specific allocation information while the type 2 user field does not
contain user-specific allocation information.
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5. The communication apparatus of claim 3, wherein each of the at least one
type 1 user field contains a signaling for indicating whether a single RU is assigned to
the another communication apparatus.
- 35 6. The communication apparatus of claim 3, wherein if the number of the one
or more RUs assigned to the another communication apparatus is more than one,
the one or more user fields addressed to the another communication apparatus

comprises at least one type 2 user field, and each of the at least one type 2 user field contains a signaling for indicating the number of the one or more RUs assigned to the another communication apparatus.

5 7. The communication apparatus of claim 3, wherein if the number of the one or more RUs assigned to the another communication apparatus is more than one, the one or more user fields addressed to the another communication apparatus comprises at least one type 2 user field, and each of the at least one type 2 user field contains a signaling for indicating whether the one or more RUs assigned to the
10 another communication apparatus are contiguous.

8. The communication apparatus of claim 3, wherein if the number of the one or more RUs assigned to the another communication apparatus is more than one, the one or more user fields addressed to the another communication apparatus
15 comprises at least one type 2 user field, and each of the at least one type 2 user field contains a signaling for indicating a different RU among the one or more RUs assigned to the another communication apparatus.

9. The communication apparatus of claim 3, wherein if the number of the one or more RUs assigned to the another communication apparatus is more than one, the one or more user fields addressed to the another communication apparatus comprises at least one type 2 user field, and each of the at least one type 2 user field contains a signaling for indicating a position of the RU corresponding to the each of the at least one type 2 user field among the one or more RUs assigned to the
20 another communication apparatus.
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10. The communication apparatus of claim 3, wherein only the last user field of the one or more user fields addressed to the another communication apparatus is a type 1 user field.
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11. A communication apparatus comprising:
a receiver, which, in operation, receives a signal comprising a plurality of user fields and a data field, the data field comprising a plurality of resource units (RUs); and
circuitry, which, in operation, processes the received signal,
35 wherein a single transmission scheme is applied to one or more RUs of the plurality of RUs, which are assigned to the communication apparatus, and

wherein one or more user fields of the plurality of user fields are addressed to the communication apparatus and a number of the one or more user fields addressed to the communication apparatus is equal to a number of the one or more RUs assigned to the communication apparatus, and the one or more user fields addressed to the communication apparatus corresponds to the one or more RUs assigned to the communication apparatus respectively.

12. The communication apparatus of claim 11, wherein the one or more user fields addressed to the communication apparatus contain same user-specific allocation information.

13. The communication apparatus of claim 11, wherein each of the plurality of user fields is either a type 1 user field or a type 2 user field and contains a signaling for indicating its type; and the one or more user fields addressed to the communication apparatus comprises at least one type 1 user field.

14. The communication apparatus of claim 13, wherein the type 1 user field contains user-specific allocation information while the type 2 user field does not contain user-specific allocation information.

15. A communication method comprising:
generating a transmission signal comprising a plurality of user fields and a data field, the data field comprising a plurality of resource units (RUs); and
transmitting the generated transmission signal,
wherein a single transmission scheme is applied to one or more RUs of the plurality of RUs, which are assigned to another communication apparatus, and
wherein one or more user fields of the plurality of user fields are addressed to the another communication apparatus and a number of the one or more user fields addressed to the another communication apparatus is equal to a number of the one or more RUs assigned to the another communication apparatus, and the one or more user fields addressed to the another communication apparatus corresponds to the one or more RUs assigned to the another communication apparatus respectively.