

CLAIMS

1. A communication apparatus comprising:
circuitry, which, in operation, generates a physical layer protocol data unit
5 (PPDU) comprising a signal field and a data field, the signal field comprising a resource
unit (RU) allocation field and one or more user specific field and the data field
comprising one or more physical layer service data unit (PSDU); and
a transmitter, which, in operation, transmits the generated PPDU, wherein a
single PSDU of the one or more PSDU is transmitted over a RU combination, and
10 whether two or more RUs of the RU combination share a single low density parity
check (LDPC) tone mapper depends on the size of the two or more RUs of the RU
combination.
2. The communication apparatus of claim 1, wherein the two or more RUs of the
15 RU combination share a single LDPC tone mapper if the size of the two or more RUs
of the RU combination is not larger than a defined value.
3. The communication apparatus of claim 2, wherein the defined value is 996
tones.
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4. The communication apparatus of claim 1, wherein same transmission
parameters are applied to the two or more RUs of the RU combination that share a
single LDPC tone mapper.
- 25 5. The communication apparatus of claim 4, wherein the same transmission
parameters comprise modulation and coding scheme.
6. The communication apparatus of claim 1, wherein the two or more RUs of the
RU combination that share a single LDPC tone mapper are indicated in the RU
30 allocation field.
7. The communication apparatus of claim 1, wherein the one or more user specific
field in the signal field includes user specific field corresponding to one of the two or
more RUs of the RU combination that share a single LDPC tone mapper; wherein the
35 one or more user specific field in the signal field does not include user specific field
corresponding to the remaining of the two or more RUs of the RU combination that
share the single LDPC tone mapper.

8. A communication method comprising:
generating a physical layer protocol data unit (PPDU) comprising a signal field
5 and a data field, the signal field comprising a resource unit (RU) allocation field and
one or more user specific field and the data field comprising one or more physical layer
service data unit (PSDU); and
transmitting the generated PPDU, wherein a single PSDU of the one or more
PSDU is transmitted over a RU combination, and whether the two or more RUs of the
10 RU combination share a single low density parity check (LDPC) tone mapper depends
on the size of the two or more RUs of the RU combination.
9. The communication method of claim 8, wherein the two or more RUs of the RU
combination share a single LDPC tone mapper if the size of the two or more RUs of
15 the RU combination is not larger than a defined value.
10. The communication apparatus of claim 9, wherein the defined value is 996
tones.
- 20 11. The communication method of claim 8, further comprising applying same
transmission parameters to the two or more RUs of the RU combination that share a
single LDPC tone mapper.
12. The communication method of claim 11, wherein the same transmission
25 parameters comprise modulation and coding scheme.
13. The communication method of claim 8, wherein the two or more RUs of the RU
combination that share a single LDPC tone mapper are indicated in the RU allocation
field.
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14. The communication method of claim 8, wherein the one or more user specific
field includes user specific field corresponding to one of the two or more RUs of the
RU combination that share a single LDPC tone mapper; wherein the one or more user
specific field does not include user specific field corresponding to the remaining of the
35 two or more RUs of the RU combination that share the single LDPC tone mapper.