

CLAIMS

- 5 1. A communication apparatus comprising:
 circuitry which, in operation, generates a Physical Layer Protocol Data Unit (PPDU) that contains a first signal field, a second signal field and a third signal field, and wherein the second signal field is used to determine whether a physical layer (PHY) version of the generated PPDU is not older than a defined PHY version, and the third
10 signal field is used to indicate the PHY version of the generated PPDU; and
 a transmitter which, in operation, transmits the generated PPDU.
2. The communication apparatus according to Claim 1, wherein the third signal field includes version independent bits having a defined number of bits and static location in
15 the third signal field.
3. The communication apparatus according to Claim 2, wherein the generated PPDU contains version dependent bits following the version independent bits.
- 20 4. The communication apparatus according to Claim 3, wherein the version dependent bits have a variable number of bits.
5. The communication apparatus according to Claim 2, wherein the second signal field is a repeat of the first signal field.
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6. The communication apparatus according to Claim 5, wherein the second signal field is mapped to tones, and respective values of the second signal field at a part of the tones are generated according to corresponding values of the first signal field at the part of the tones.
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7. The communication apparatus according to Claim 6, wherein respective values of the second signal field at a part of the tones are inverted from corresponding values of the first signal field at the part of the tones.

8. The communication apparatus according to Claim 6, wherein the tones are data subcarriers.
9. The communication apparatus according to Claim 1, wherein a PPDU for the defined
5 PHY version is an Extremely High Throughput (EHT) PPDU.
10. The communication apparatus according to Claim 1, wherein the second signal field and the third signal field are encoded in a single Orthogonal Frequency Division Multiplexing (OFDM) symbol.
- 10 11. The communication apparatus according to Claim 1, wherein the first signal field and the second signal field are used to determine whether the PHY version of the generated PPDU is not older than the defined PHY version.
- 15 12. A communication method comprising:
generating a Physical Layer Protocol Data Unit (PPDU) that contains a first signal field, a second signal field and a third signal field, and wherein the second signal field is used to determine whether a physical layer (PHY) version of the generated PPDU is not older than a defined PHY version, and the third signal field is used to indicate the PHY
20 version of the generated PPDU; and
transmitting the generated PPDU.
13. The communication method to Claim 12, wherein the third signal field includes version independent bits having a defined number of bits and static location in the third
25 signal field.
14. The communication method according to Claim 13, wherein the generated PPDU contains version dependent bits following the version independent bits.
- 30 15. The communication method according to Claim 14, wherein the version dependent bits have a variable number of bits.
16. The communication method according to Claim 13, wherein the second signal field is a repeat of the first signal field.

17. The communication method according to Claim 16, wherein the second signal field is mapped to tones, and respective values of the second signal field at a part of the tones are generated according to corresponding values of the first signal field at the part of the tones.

18. The communication method according to Claim 17, wherein respective values of the second signal field at a part of the tones are inverted from corresponding values of the first signal field at the part of the tones.

19. The communication method according to Claim 17, wherein the tones are data subcarriers.

20. The communication method according to Claim 12, wherein a PPDU for the defined PHY version is an Extremely High Throughput (EHT) PPDU.

21. The communication method according to Claim 12, wherein the second signal field and the third signal field are encoded in a single Orthogonal Frequency Division Multiplexing (OFDM) symbol.

22. The communication method according to Claim 12, wherein the first signal field and the second signal field are used to determine whether the PHY version of the generated PPDU is not older than the defined PHY version.