

CLAIMS:

1. A method of transmitting a signal, comprising:
 - determining, by a first device, a first numerology used to transmit a signal;
 - 5 determining, by the first device, a first precoding granularity which is used to transmit the signal based on the first numerology;
 - performing, by the first device, transmission of the signal with a second device using the first precoding granularity,
 - wherein determining, by the first device, a first precoding granularity which is used
 - 10 to transmit the signal based on the first numerology, comprises:
 - determining the first precoding granularity based on a first bandwidth and the first numerology, wherein the first bandwidth is a system bandwidth or a bandwidth for transmitting the signal, and
 - wherein determining the first precoding granularity based on a first bandwidth and
 - 15 the first numerology, comprises:
 - determining the first precoding granularity based on the first numerology, the first bandwidth and a second correspondence, wherein the second correspondence indicates an association of at least one bandwidth, at least one numerology and at least one precoding granularity.
- 20 2. The method of claim 1, wherein the first precoding granularity comprises a time-domain precoding granularity and/or a frequency-domain precoding granularity.
3. The method of claim 1 or 2, wherein determining, by the first device, a first
 - 25 precoding granularity which is used to transmit the signal based on the first numerology, comprises:
 - determining the first precoding granularity based on the first numerology and a first correspondence, wherein the first correspondence indicates an association between at least one numerology and at least one precoding granularity.
- 30 4. The method of claim 1 or 2, wherein determining, by the first device, a first precoding granularity which is used to transmit the signal based on the first numerology, comprises:
 - determining the first precoding granularity based on a first frequency point and the
 - 35 first numerology, wherein the first frequency point is a frequency point for transmitting the signal.
5. The method of any one of claims 1 to 4, wherein the signal is transmitted from the first device to the second device;
 - 40 performing, by the first device, transmission of the signal with a second device using the first precoding granularity comprises:
 - performing, by the first device, precoding processing on a signal carried by a resource corresponding to the first precoding granularities by a same precoding matrix;
 - transmitting the signal after the precoding processing to the second device.

6. The method of any one of claims 1 to 4, wherein the signal is transmitted from the second device to the first device;

5 wherein performing, by the first device, transmission of the signal with a second device using the first precoding granularity comprises:

receiving, by the first device, the signal transmitted by the second device assuming that a signal carried by a resource corresponding to the first precoding granularities is pre-coded by a same precoding matrix.

10 7. The method of any one of claims 1 to 4, wherein the first numerology comprises at least one of:

subcarrier spacing;

number of subcarriers under a specific bandwidth;

number of subcarriers included in a Physical Resource Block (PRB);

15 length of an Orthogonal Frequency Division Multiplexing (OFDM) symbol;

number of points of Fast Fourier transform (FFT) or Inverse Fast Fourier transform (IFFT) used for generating an OFDM signal;

number of OFDM symbols included in a time unit;

number of time slots included in a time unit;

20 length of a signal prefix.

8. A device for transmitting a signal, comprising a memory and a processor, wherein the memory stores instructions, and the processor is configured to invoke the instructions stored in the memory to perform processings of a first device in a method of transmitting
25 a signal which comprises:

determining a first numerology used to transmit a signal;

determining a first precoding granularity which is used to transmit the signal based on the first numerology;

30 performing transmission of the signal with a second device using the first precoding granularity,

wherein determining a first precoding granularity which is used to transmit the signal based on the first numerology comprises:

35 determining the first precoding granularity based on a first bandwidth and the first numerology, wherein the first bandwidth is a system bandwidth or a bandwidth for transmitting the signal, and

wherein determining the first precoding granularity based on a first bandwidth and the first numerology, comprises:

40 determining the first precoding granularity based on the first numerology, the first bandwidth and a second correspondence, wherein the second correspondence indicates an association of at least one bandwidth, at least one numerology and at least one precoding granularity.

9. The device of claim 8, wherein determining a first precoding granularity which is used to transmit the signal based on the first numerology comprises:

determining the first precoding granularity based on the first numerology and a first correspondence, wherein the first correspondence indicates an association between at least one numerology and at least one precoding granularity.

5 10. The device of claim 8, wherein determining a first precoding granularity which is used to transmit the signal based on the first numerology comprises:

determining the first precoding granularity based on a first frequency point and the first numerology, wherein the first frequency point is a frequency point for transmitting the signal.

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11. The device of claim 8, wherein the signal is transmitted from the first device to the second device;

performing transmission of the signal with a second device using the first precoding granularity comprises:

15 performing precoding processing on a signal carried by a resource corresponding to the first precoding granularities by a same precoding matrix;

transmitting the signal after the precoding processing to the second device.

20 12. The device of claim 8, wherein the signal is transmitted from the second device to the first device;

wherein performing transmission of the signal with a second device using the first precoding granularity comprises:

receiving the signal transmitted by the second device assuming that a signal carried by a resource corresponding to the first precoding granularities is pre-coded by a same precoding matrix.

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13. The device of claim 8, wherein the first precoding granularity comprises a time-domain precoding granularity and/or a frequency-domain precoding granularity.

30 14. The device of claim 8, wherein the first numerology comprises at least one of: subcarrier spacing;

number of subcarriers under a specific bandwidth;

number of subcarriers included in a Physical Resource Block (PRB);

length of an Orthogonal Frequency Division Multiplexing (OFDM) symbol;

35 number of points of Fast Fourier transform (FFT) or Inverse Fast Fourier transform (IFFT) used for generating an OFDM signal;

number of OFDM symbols included in a time unit;

number of time slots included in a time unit;

length of a signal prefix.