

CLAIMS

1. A communication apparatus, comprising:
circuitry, which, in operation, receives control information including a first resource assignment information; and
a transmitter, which in operation, transmits to a base station a signal on resources determined based on the first resource assignment information,
wherein the first resource assignment information indicates a set of one or more interlace indices, each of which consisting of a plurality of resource blocks with a determined interval in a frequency domain;
wherein, for a first subcarrier spacing, the first resource assignment information indicates a starting interlace index and a number of contiguous interlace indices, and
wherein, for a second subcarrier spacing larger than the first subcarrier spacing, the first resource assignment information includes a bitmap indicating the set of one or more interlaces.
- ~~2. The communication apparatus according to claim 1, wherein the first resource assignment information indicates a starting interlace index and a number of contiguous interlace indices.~~
- ~~32.~~ 32. The communication apparatus according to claim 1, wherein the first resource assignment information indicates ~~at the~~ starting interlace index and ~~at the~~ number of contiguous interlace indices in a case where the first a subcarrier spacing is smaller than or equal to a threshold.
- ~~43.~~ 43. The communication apparatus according to claim 1, wherein the first resource assignment information ~~comprises~~includes ~~at the~~ bitmap indicating the set of one or more interlaces in a case where the second subcarrier spacing is larger than a threshold.
- ~~5. The communication apparatus according to claim 1, wherein the first resource assignment information indicates a starting interlace index and a number of contiguous interlace indices in a first case, and the first resource assignment information comprise a bitmap indicating the set of one or more interlaces in a second case, and~~
~~wherein a subcarrier spacing of the first case is smaller than a subcarrier spacing of the second case.~~

64. The communication apparatus according to claim 1, wherein the control information includes a second resource assignment information indicating a starting resource block set index and a number of contiguous resource block sets, and

the resources ~~is~~are determined based on an intersection of first resource blocks of the set of one or more interlace indices and second resource blocks determined based on the second resource assignment information.

75. The communication apparatus according to claim 64, wherein each of the contiguous resource block sets is sized 20MHz.

86. A communication method performed by a communication apparatus comprising:

receiving control information including a first resource assignment information; and

transmitting to a base station a signal on resources determined based on the first resource assignment information,

wherein the first resource assignment information indicates a set of one or more interlace indices, each of which consisting of a plurality of resource blocks with a determined interval in a frequency domain;

wherein, for a first subcarrier spacing, the first resource assignment information indicates a starting interlace index and a number of contiguous interlace indices, and

wherein, for a second subcarrier spacing larger than the first subcarrier spacing, the first resource assignment includes a bitmap indicating the set of one or more interlaces.

97. A base station comprising:

a transmitter which, in operation, transmits control information including a first resource assignment information; and

a receiver which, in operation, receives from a communication apparatus a signal on resources determined based on the first resource assignment information,

wherein the first resource assignment information indicates a set of one or more interlace indices, each of which consisting of a plurality of resource blocks with a determined interval in a frequency domain;

wherein, for a first subcarrier spacing, the first resource assignment information indicates a starting interlace index and a number of contiguous interlace indices, and

wherein, for a second subcarrier spacing larger than the first subcarrier spacing, the first resource assignment includes a bitmap indicating the set of one or more interlaces.

~~10. The base station according to claim 9, wherein the first resource assignment information indicates a starting interlace index and a number of contiguous interlace indices.~~

~~118.~~ The base station according to claim 97, wherein the first resource assignment information indicates athe starting interlace index and athe number of contiguous interlace indices in a case wherea the first subcarrier spacing is smaller than or equal to a threshold.

~~129.~~ The base station according to claim 97, wherein the first resource assignment information comprises athe bitmap indicating the set of one or more interlaces in a case where athe second subcarrier spacing is larger than a threshold.

~~13. The base station according to claim 9, wherein the first resource assignment information indicates a starting interlace index and a number of contiguous interlace indices in a first case, and the first resource assignment information comprise a bitmap indicating the set of one or more interlaces in a second case, and wherein a subcarrier spacing of the first case is smaller than a subcarrier spacing of the second case.~~

~~1410.~~ The base station according to claim 97, wherein the control information includes a second resource assignment information indicating a starting resource block set index and a number of contiguous resource block sets, and

the resources isare determined based on an intersection of first resource blocks of the set of one or more interlace indices and second resource blocks determined based on the second resource assignment information.

~~15~~11. The base station according to claim ~~14~~10, wherein each of the contiguous resource block sets is sized 20MHz.

~~16~~12. A communication method performed by a base station comprising:
transmitting control information including a first resource assignment information; and

receiving from a communication apparatus a signal on resources determined based on the first resource assignment information,

wherein the first resource assignment information indicates a set of one or more interlace indices, each of which consisting of a plurality of resource blocks with a determined interval in a frequency domain;

wherein, for a first subcarrier spacing, the first resource assignment information indicates a starting interlace index and a number of contiguous interlace indices, and

wherein, for a second subcarrier spacing larger than the first subcarrier spacing, the first resource assignment includes a bitmap indicating the set of one or more interlaces.

~~17~~13. An integrated circuit comprising:

circuitry, which, in operation, controls:

receiving control information including a first resource assignment information; and

transmitting to a base station a signal on resources determined based on the first resource assignment information,

wherein

the first resource assignment information indicates a set of one or more interlace indices, each of which consisting of a plurality of resource blocks with a determined interval in a frequency domain,

for a first subcarrier spacing, the first resource assignment information indicates a starting interlace index and a number of contiguous interlace indices,

for a second subcarrier spacing larger than the first subcarrier spacing, the first resource assignment includes a bitmap indicating the set of one or more interlaces, and

at least one output coupled to the circuitry which, in operation, outputs the signal.

~~18~~14. An integrated circuit comprising:

circuitry, which, in operation, controls:

transmitting control information including a first resource assignment information; and

receiving from a communication apparatus a signal on resources determined based on the first resource assignment information,

wherein

_____ the first resource assignment information indicates a set of one or more interlace indices, each of which consisting of a plurality of resource blocks with a determined interval in a frequency domain,

_____ for a first subcarrier spacing, the first resource assignment information indicates a starting interlace index and a number of contiguous interlace indices,

_____ for a second subcarrier spacing larger than the first subcarrier spacing, the first resource assignment includes a bitmap indicating the set of one or more interlaces, and

at least one input coupled to the circuitry which, in operation, inputs the signal.