

Claims

1. A user equipment (UE) comprising:

a receiving unit configured to receive a master information block (MIB) indicating an offset which is used to indicate~~represents~~ a number of subcarriers between (a) a first subcarrier corresponding to a specific frequency position and (b) a second subcarrier corresponding to a frequency position of a synchronization signal; and

a processing unit configured to determine the number of subcarriers on a basis of the MIB, wherein

the receiving unit is further configured to receive information indicating (a) a starting physical resource block (PRB) index and (b) a length of a sub-band in number of PRBs, the sub-band being one of a plurality of sub-bands within a given carrier which have respective subcarrier spacings, and

the processing unit is further configured to determine a~~the~~ sub-band within a the given carrier on a basis of (a) thea starting physical resource block (PRB) index and (b) thea length of the sub-band in number of PRBs, the length being a number of PRBs continuously distributed on the give carrier, and

the starting PRB index is derived from a reference point in a frequency domain.

2. A base station comprising:

a generating unit configured to generate a master information block (MIB) indicating an offset which is used to indicate a number of subcarriers between (a) a first subcarrier corresponding to a specific frequency position and (b) a second subcarrier corresponding to a frequency position of a synchronization signal; and

a transmitting unit configured to transmit the MIB, wherein

the transmitting unit is further configured to transmit information indicating (a) a starting physical resource block (PRB) index and (b) a length of a sub-band in number of PRBs, the sub-band being one of a plurality of sub-bands within a given carrier which have respective subcarrier spacings, and

the sub-band within the given carrier is indicated by (a) the starting PRB index and (b) the length of the sub-band in number of PRBs. The UE of claim 1, wherein

~~the processing unit is further configured to receive RRC signaling for determining the reference point.~~

3. A method performed by a user equipment (UE), the method comprising:

receiving a master information block (MIB) indicating an offset which is used to indicate~~represents~~ a number of subcarriers between (a) a first subcarrier corresponding to a specific frequency position and (b) a second subcarrier corresponding to a frequency position of a synchronization signal;

determining the number of subcarriers on a basis of the MIB;

receiving information indicating (a) a starting physical resource block (PRB) index and (b) a length of a sub-band in number of PRBs, the sub-band being one of a plurality of sub-bands within a given carrier which have respective subcarrier spacings; and

~~determining the sub-band within the given carrier on a basis of (a) the starting physical resource block (PRB) index and (b) the length of the sub-band in number of PRBs, the length being a number of PRBs continuously distributed on the given carrier; and~~

~~deriving the starting PRB index from a reference point in a frequency domain.~~