

CLAIMS

1. A method for encoding channel state information (CSI), comprising:
mapping [the](#) CSI and a fourth type of information bits according to indexes in a position index set;
wherein the CSI comprises a first type of information bits, a second type of information bits, and a third type of information bits; and
wherein the mapping comprises placing the first type of information bits, the second type of information bits, the third type of information bits and the fourth type of information bits in the position index set according to [the](#) values of position indexes from small to large; and
performing Polar codes encoding on the mapped CSI and the fourth type of information bits to obtain an encoded bit sequence.
~~2. The method according to claim 1,~~ wherein
the first type of information bits comprise a CSI-RS resource indicator (CRI) and a rank indicator (RI).
~~3. The method according to claim 1,~~ wherein
the second type of information bits are padding bits;
the third type of information bits at least comprise one of the following: a precoding matrix indicator (PMI) or a channel quality indicator (CQI); and
the fourth type of information bits are parity check bits.

[24.](#) The method according to claim 1, wherein the indexes of the first type of information bits are firstly determined and the first type of position indexes are indexes having smallest index numbers and having a same quantity as that of the first type of information bits in the position index set.

[35.](#) The method according to claim [24](#), wherein the determining, from the indexes in the position index set other than the first type of position indexes determined by the first type of information bits, the indexes of the second type of information bits, the indexes of the third type of information bits, and the indexes of the fourth type of information bits in the position index set comprises:

determining indexes having the same quantity as that of the fourth type of information bits and having the largest values in the position index set as the indexes of the fourth type of information bits; and

determining, according to an arrangement of position index values and quantities of the

second type of information bits and the third type of information bits, the indexes of the second type of information bits and the indexes of the third type of information bits in sequence from undetermined indexes in the position index set.

[46](#). The method according to claim [12](#), wherein a positional relationship between the CRI and the RI of the first type of information bits is a position of the CRI is before a position of the RI.

[57](#). An apparatus for encoding channel state information (CSI), comprising:
a mapping module used to map [the](#) CSI and a fourth type of information bits according to indexes in a position index set;

wherein the CSI comprises a first type of information bits, a second type of information bits, and a third type of information bits; and

wherein the mapping comprises placing the first type of information bits, the second type of information bits, the third type of information bits and the fourth type of information bits in the position index set according to ~~the~~ values of position indexes from small to large; and

an encoding module used to perform Polar codes encoding on the mapped CSI and the fourth type of information bits to obtain an encoded bit sequence.~~8. The apparatus according to claim 7, wherein~~

the first type of information bits comprise a CSI-RS resource indicator (CRI) and a rank indicator (RI).~~9. The apparatus according to claim 7, wherein~~

the second type of information bits are padding bits;

the third type of information bits at least comprise one of the following: a precoding matrix indicator (PMI) and a channel quality indicator (CQI); and

the fourth type of information bits are parity check bits.

~~610~~. The apparatus according to claim [57](#), wherein the mapping module is configured to determine firstly indexes of the first type of information bits and the first type of position indexes are indexes having smallest index numbers and having a same quantity as that of the first type of information bits in the position index set.

~~711~~. The apparatus according to claim ~~610~~, wherein the determining, from the indexes in the position index set other than the first type of position indexes determined by the first type of information bits, the indexes of the second type of information bits, the indexes of the third type of information bits, and the indexes of the fourth type of information bits in the position

index set comprises:

determining indexes having the same quantity as that of the fourth type of information bits and having the largest values in the position index set as the indexes of the fourth type of information bits; and

determining, according to an arrangement of position index values and quantities of the second type of information bits and the third type of information bits, the indexes of the second type of information bits and the indexes of the third type of information bits in sequence from undetermined indexes in the position index set.

[812](#). The apparatus according to claim [58](#), wherein a positional relationship between the CRI and the RI of the first type of information bits is a position of the CRI is before a position of the RI.

[913](#). A device comprising a storage medium and a processor, the medium comprising a program stored therein, wherein the processor is configured to execute the program, and the program when executed, performs the method according to claim 1.

[1014](#). The device according to claim [913](#), wherein the program when executed, performs the method according to claim 2.

[1115](#). The device according to claim [913](#), wherein the program when executed, performs the method according to claim 3.

[1216](#). The device according to claim [913](#), wherein the program when executed, performs the method according to claim 4.

~~[17](#). The device according to claim [16](#), wherein the program when executed, performs the method according to claim [5](#).~~

~~[18](#). The device according to claim [14](#), wherein the program when executed, performs the method according to claim [6](#).~~