

[CLAIMS]

【Claim 1】

A method of transmitting a signal for device-to-device (D2D) communication by a user equipment (UE) in a wireless communication system, the method comprising:

generating a plurality of bits for a physical channel carrying synchronization information for the D2D communication by using a synchronization identity for the D2D communication; and

transmitting the physical channel using the plurality of bits and a demodulation reference signal (DM-RS) associated with the physical channel, to synchronize the D2D communication,

wherein an orthogonal cover code (OCC) applied to the DM-RS is determined based on the synchronization identity for the D2D communication.

【Claim 2】

The method according to claim 1, wherein the orthogonal cover code (OCC) is determined by modulo operation 2 of the synchronization identity for the D2D communication.

【Claim 3】

The method according to claim 1, wherein the orthogonal cover code (OCC) is determined using one lower bit of the synchronization identity for the D2D communication.

【Claim 4】

The method according to claim 1, wherein a cyclic shift for the DM-RS is determined by modulo operation between a value to which a floor function is applied and 8, wherein the value to which a floor function is applied is obtained by dividing the synchronization identity for the D2D communication by 2.

【Claim 5】

A user equipment (UE) for transmitting a signal for device-to-device (D2D) communication in a wireless communication system, the UE comprising:

a radio frequency (RF) unit; and

a processor,

wherein the processor is configured to :

to generate a plurality of bits for a physical channel carrying synchronization information for the D2D communication by using a synchronization identity for the D2D communication, and

to transmit the physical channel using the plurality of bits and a demodulation reference signal (DM-RS) associated with the physical channel to synchronize the D2D communication,

wherein an orthogonal cover code (OCC) applied to the DM-RS is determined by modulo operation between the synchronization identity for the D2D communication and 2.

【Claim 6】

The UE according to claim 5,

wherein the orthogonal cover code (OCC) is determined by modulo operation 2 of the synchronization identity for the D2D communication.

【Claim 7】

The UE according to claim 5, wherein the orthogonal cover code (OCC) is determined using one lower bit of the synchronization identity for the D2D communication.

【Claim 8】

The UE according to claim 5, wherein a cyclic shift for the DM-RS is determined by modulo operation between a value to which a floor function is applied and 8, wherein the value to which the floor function is applied is obtained by dividing the synchronization identity for the D2D communication by 2.