

CLAIMS

1. A method for wireless communications by a user equipment, UE (115; 705; 805; 1005), comprising:

identifying (610; 1505; 1615; 1705; 2005) a minimum scheduling offset between a cross-slot grant and a shared channel scheduled by the cross-slot grant;

monitoring (615; 1510; 1620; 1710; 2010) an occasion (515) of a control channel (215) in a first slot (210) for the cross-slot grant, the control channel having a first numerology (225) that is different than a second numerology (225) of the shared channel;

mapping (520) the occasion (515) of the control channel (215) to a second slot defined in the second numerology and overlapping with an ending symbol period of the occasion (515);

determining (625; 1515; 1625; 1720; 2015) a beginning slot (525) defined in the second numerology based at least in part on the minimum scheduling offset and the second slot; and

operating (630; 1520; 1630; 1725; 2020) in a low power state, or communicating (635; 1520; 1630; 1725; 2020) a data transmission on the shared channel, during the beginning slot (525) based at least in part on whether the cross-slot grant is detected,

wherein the minimum scheduling offset is defined based on a relative timing difference between the occasion (515) of the control channel (215) and the shared channel.

2. The method of claim 1, wherein identifying the minimum scheduling offset comprises:

retrieving (1605) a plurality of different candidate minimum scheduling offsets from local storage of the UE, the plurality of different candidate minimum scheduling offsets being preconfigured; and

receiving (1610) layer one control signaling indicating the minimum scheduling offset from the plurality of different candidate minimum scheduling offsets.

3. The method of claim 1, further comprising:

receiving (1715) the cross-slot grant in a downlink bandwidth part having the first numerology, the cross-slot grant scheduling the data transmission as an uplink transmission on the shared channel in an active uplink bandwidth part having the second numerology; or

receiving the cross-slot grant in the downlink bandwidth part having the first numerology, the cross-slot grant scheduling the data transmission as a downlink transmission on the shared channel in a target downlink bandwidth part having the second numerology.

4. The method of claim 1, wherein determining (625; 1515; 1625; 1720; 2015) the beginning slot (525) comprises:

converting the minimum scheduling offset to a second minimum scheduling offset in the second numerology, the minimum scheduling offset being defined in the first numerology; and
determining the beginning slot (525) based at least in part on the second minimum scheduling offset.

5. The method of claim 1, further comprising:

receiving the cross-slot grant via a first component carrier (205; 505) that is defined in the first numerology (225), the cross-slot grant scheduling the data transmission on the shared channel via a second component carrier (205; 510) that is defined in the second numerology (225).

6. The method of claim 1, wherein the minimum scheduling offset indicates a number of slots defined in the second numerology; or

wherein the minimum scheduling offset indicates a number of symbol periods defined in the second numerology.

7. A method for wireless communications by a base station (105; 1105; 1205; 1405), comprising:

transmitting (605; 1805; 1910) control signaling that indicates a minimum scheduling offset between a cross-slot grant and a shared channel scheduled by the cross-slot grant;

transmitting (620; 1810; 1915), in a first slot (210), the cross-slot grant in an occasion (515) of a control channel (215) that has a first numerology (225) that is different than a second numerology (225) of the shared channel;

mapping (520) the occasion (515) of the control channel (215) to a second slot defined in the second numerology and overlapping with an ending symbol period of the occasion (515);

determining (625; 1815; 1920) a beginning slot (525) in the second numerology based at least in part on the minimum scheduling offset and the second slot; and

transmitting or receiving (635; 1820; 1925) a data transmission on the shared channel during the beginning slot (525) based at least in part on the cross-slot grant,

wherein the minimum scheduling offset is defined based on a relative timing difference between the occasion (515) of the control channel (215) and the shared channel.

8. The method of claim 7, wherein transmitting the control signaling comprises:
transmitting (1905) layer one control signaling indicating the minimum scheduling offset from a plurality of different candidate minimum scheduling offsets.

9. The method of claim 7, wherein transmitting (620; 1810; 1915) the cross-slot grant comprises:

transmitting the cross-slot grant in a downlink bandwidth part having the first numerology, the cross-slot grant scheduling the data transmission as an uplink transmission on the shared channel in an active uplink bandwidth part having the second numerology; or

transmitting the cross-slot grant in the downlink bandwidth part having the first numerology, the cross-slot grant scheduling the data transmission as a downlink transmission on the shared channel in a target downlink bandwidth part having the second numerology.

10. The method of claim 7, wherein determining (625; 1815; 1920) the beginning slot (525) comprises:

converting the minimum scheduling offset to a second minimum scheduling offset in the second numerology, the minimum scheduling offset being defined in the first numerology; and

determining the beginning slot (525) based at least in part on the second minimum scheduling offset.

11. The method of claim 7, wherein transmitting the cross-slot grant comprises:

transmitting the cross-slot grant via a first component carrier (205; 505) that is defined in the first numerology (225), the cross-slot grant scheduling the data transmission on the shared

channel via a second component carrier (205; 510) that is defined in the second numerology (225); or

wherein the minimum scheduling offset indicates a number of slots defined in the first numerology; or

wherein the minimum scheduling offset indicates a number of symbol periods defined in the second numerology.

12. An apparatus for wireless communications by a user equipment, UE (115; 705; 805; 1005), comprising:

a processor (1040),

memory (1030) coupled with the processor; and

instructions (1035) stored in the memory and executable by the processor to cause the apparatus to:

identify a minimum scheduling offset between a cross-slot grant and a shared channel scheduled by the cross-slot grant;

monitor an occasion (515) of a control channel (215) in a first slot (210) for the cross-slot grant, the control channel having a first numerology (225) that is different than a second numerology (225) of the shared channel;

map (520) the occasion (515) of the control channel (215) to a second slot defined in the second numerology and overlapping with an ending symbol period of the occasion (515);

determine a beginning slot (525) defined in the second numerology based at least in part on the minimum scheduling offset and the second slot; and

operate in a low power state, or communicate a data transmission on the shared channel, during the beginning slot (525) based at least in part on whether the cross-slot grant is detected,

wherein the minimum scheduling offset is defined based on a relative timing difference between the occasion (515) of the control channel (215) and the shared channel.

13. The apparatus of claim 12, wherein the instructions are further executable by the processor to cause the apparatus to perform the method of any one of claims 2 to 6.

14. An apparatus for wireless communications by a base station (105; 1105; 1205; 1405), comprising:
 - a processor (1440),
 - memory (1430) coupled with the processor; and
 - instructions (1435) stored in the memory and executable by the processor to cause the apparatus to:
 - transmit control signaling that indicates a minimum scheduling offset between a cross-slot grant and a shared channel scheduled by the cross-slot grant;
 - transmit, in a first slot (210), the cross-slot grant in an occasion (515) of a control channel (215) that has a first numerology (225) that is different than a second numerology (225) of the shared channel;
 - map (520) the occasion (515) of the control channel (215) to a second slot defined in the second numerology and overlapping with an ending symbol period of the occasion (515);
 - determine a beginning slot (525) in the second numerology based at least in part on the minimum scheduling offset and the second slot; and
 - transmit or receiving a data transmission on the shared channel during the beginning slot (525) based at least in part on the cross-slot grant,
 - wherein the minimum scheduling offset is defined based on a relative timing difference between the occasion (515) of the control channel (215) and the shared channel.

15. The apparatus of claim 14, wherein the instructions are further executable by the processor to cause the apparatus to perform the method of any one of claims 8 to 11.