

Amendments to Claims 1 and 13 have been offered on a conditional basis and
Amendments to Claims 2 and 14 have been offered on an unconditional basis

Annex 1

1. A method implemented by a wireless transmit/receive unit, WTRU, the method comprising:

transmitting (410) an indication of a bandwidth aggregation capability of the WTRU;

receiving (415) a radio resource control, RRC, connection reconfiguration message, wherein the RRC connection reconfiguration message configures the WTRU to support at least one additional component carrier and the RRC connection reconfiguration message does not activate the at least one additional component carrier;

receiving (425) a medium access control, MAC, control element, CE, wherein the MAC CE indicates that the at least one additional component carrier is to be activated; and

activating (425) monitoring and processing of the at least one additional component carrier based on receiving the MAC CE.

[Contingent amendment to claim 1:

1. A method for use in long term evolution advanced (LTE-A) implemented by a wireless transmit/receive unit, WTRU, the method comprising:

transmitting (410) an indication of a bandwidth aggregation capability of the WTRU;

receiving (415) a radio resource control, RRC, connection reconfiguration message, wherein the RRC connection reconfiguration message configures the WTRU to support at least one additional component carrier and the RRC connection reconfiguration message does not activate the at least one additional component carrier;

receiving (425) a medium access control, MAC, control element, CE, wherein the MAC CE indicates that the at least one additional component carrier is to be activated; and

activating (425) monitoring and processing of the at least one additional component carrier based on receiving the MAC CE.]

2. The method as in claim 1, wherein:

when in DRX Connected mode and when at least one additional component carrier has been activated, the on-duration and the DRX cycle apply to the anchor carrier as well as to activated additional component carriers.

3. The method as in claims 1 or 2, wherein:

activating the monitoring and processing of the at least one additional component carrier comprises activating the monitoring and processing of a physical downlink control channel, PDCCH, associated with the at least one additional component carrier.

- ~~43.~~ The method as in each of claims 1 to 3 or 2, wherein the MAC CE comprises a bit combination field that is indicative of which component carrier is to be activated.
- ~~54.~~ The method as in claim ~~43~~, wherein the bit combination field indicates that multiple component carriers are to be activated.
- ~~65.~~ The method as in claims 1 or 2, wherein a subsequent MAC CE that is received by the WTRU comprises a bit combination field that indicates which component carrier is to be deactivated.
- ~~76.~~ The method as in claim ~~32~~, wherein the WTRU stops monitoring the PDCCH associated with the at least one additional component carrier upon expiration of an inactivity timer for the at least one additional component carrier.
- ~~87.~~ The method as in claim ~~76~~, wherein a respective inactivity timer is maintained for each of a plurality of additional component carriers configured for use by the WTRU.
- ~~98.~~ The method as in claims 1 or 2, wherein the RRC connection reconfiguration message comprises a cell identity and a carrier frequency for the at least one additional component carrier.
- ~~109.~~ The method as in claims 1 or 2, wherein the indication of the bandwidth aggregation capability comprises an indication of a number of contiguous component carriers that the WTRU can be configured to simultaneously monitor in the downlink.
- ~~114.~~ The method as in claims 1 or 2, wherein the indication of the bandwidth aggregation capability comprises an indication of a maximum aggregated bandwidth supportable by the WTRU.
- ~~121.~~ The method as in claims 1 or 2, wherein the at least one additional component carrier comprises at least one of a downlink component carrier or an uplink component carrier.

~~1312~~. A wireless transmit/receive unit (110), WTRU, comprising:
means for transmitting an indication of a bandwidth aggregation capability of the WTRU;

means for receiving a radio resource control, RRC, connection reconfiguration message, wherein the RRC connection reconfiguration message configures the WTRU to support at least one additional component carrier and the RRC connection reconfiguration message does not activate the at least one additional component carrier;

means for receiving a medium access control, MAC, control element, CE, wherein the MAC CE indicates that the at least one additional component carrier is to be activated;
and
means for activating monitoring and processing of the at least one additional component carrier based on receiving the MAC CE.

[Contingent amendment to claim 13:

~~1312~~. A wireless transmit/receive unit (110), WTRU, suitable for use in LTE-A, comprising:
means for transmitting an indication of a bandwidth aggregation capability of the WTRU;

means for receiving a radio resource control, RRC, connection reconfiguration message, wherein the RRC connection reconfiguration message configures the WTRU to support at least one additional component carrier and the RRC connection reconfiguration message does not activate the at least one additional component carrier;

means for receiving a medium access control, MAC, control element, CE, wherein the MAC CE indicates that the at least one additional component carrier is to be activated;
and
means for activating monitoring and processing of the at least one additional component carrier based on receiving the MAC CE.]

14. The WTRU as in claim 13, comprising:

means which when the WTRU is in DRX Connected mode and when at least one additional component carrier has been activated, configure the on-duration and the DRX cycle to apply to the anchor carrier as well as to activated additional component carriers.

153. The WTRU as in claims 132 or 14, wherein the means for activating the monitoring and processing of the at least one additional component carrier is configured to activate the monitoring and processing of a physical downlink control channel, PDCCH, associated with the at least one additional component carrier.
164. The WTRU as in each of claims 132 to 150~~13~~, wherein the MAC CE comprises a bit combination field that is indicative of which component carrier is to be activated.
175. The WTRU as in claim 164, wherein the bit combination field indicates that multiple component carriers are to be activated.
186. The WTRU as in claims 132 or 14, wherein a subsequent MAC CE that is received by the WTRU comprises a bit combination field that indicates which component carrier is to be deactivated.
197. The WTRU as in claim 153, wherein the WTRU is configured to stop monitoring the PDCCH associated with the at least one additional component carrier upon expiration of an inactivity timer for the at least one additional component carrier.
2018. The WTRU as in claim 197, wherein a respective inactivity timer is maintained for each of a plurality of additional component carriers configured for use by the WTRU.
2119. The WTRU as in claims 132 or 14, wherein the RRC connection reconfiguration message comprises a cell identity and a carrier frequency for the at least one additional component carrier.
2220. The WTRU as in claims 132 or 14, wherein the indication of the bandwidth aggregation capability comprises an indication of a number of contiguous component carriers that the WTRU can be configured to simultaneously monitor in the downlink.

- ~~23~~²¹. The WTRU as in claims ~~13~~² ~~or 14~~, wherein the indication of the bandwidth aggregation capability comprises an indication of a maximum aggregated bandwidth supportable by the WTRU.
- ~~24~~²². The WTRU as in claims ~~13~~² ~~or 14~~, wherein the at least one additional component carrier comprises at least one of a downlink component carrier or an uplink component carrier.