

CLAIMS

1. A method for a wireless transmit/receive unit (WTRU), the method comprising:

receiving a transmission including at least a synchronization signal, the received transmission having a subset of potential subcarrier spacings based on a frequency region of the received transmission; and

based on the received transmission, determining frequency resources and subcarrier spacing for use in acquiring a system information block (SIB); and

monitoring the determined frequency resources associated with acquiring the SIB at times based on the received transmission.
2. The method of claim 1 wherein based on the received transmission, determining frequency resources and subcarrier spacing for use in receiving a control channel transmission.
3. The method of claim 1 wherein a master information block has a same subcarrier spacing as the synchronization signal.
4. The method of claim 1 wherein the synchronization signal includes a primary synchronization signal and a secondary synchronization signal.
5. The method of claim 1 wherein blind detection is used to detect the synchronization signal using specific sets of resources.
6. The method of claim 1 further comprising receiving using radio resource control signaling information related to boundaries between different subcarrier spacings.

7. A wireless transmit/receive unit (WTRU) comprising:
a receiver and a processor configured to receive a transmission including at least a synchronization signal, the received transmission having a subset of potential subcarrier spacings based on a frequency region of the received block; and
the processor configured, based on the received transmission, to determine frequency resources and subcarrier spacing for use in acquiring a system information block (SIB); and
the receiver and the processor are configured to monitor the determined frequency resources associated with acquiring the SIB at times based on the received transmission.
8. The WTRU of claim 7 wherein the receiver and the processor are configured, based on the received transmission, to determine frequency resources and subcarrier spacing for use in receiving a control channel transmission.
9. The WTRU of claim 7 wherein a master information block has a same subcarrier spacing as the synchronization signal.
10. The WTRU of claim 7 wherein the synchronization signal includes a primary synchronization signal and a secondary synchronization signal.
11. The WTRU of claim 7 wherein the receiver and the processor use blind detection to detect the synchronization signal using specific sets of resources.
12. The WTRU of claim 7 wherein the receiver and the processor are configured to receive using radio resource control signaling information related to boundaries between different subcarrier spacings.

13. A base station comprising:

a transmitter and a processor configured to transmit a transmission including at least a synchronization signal, the transmission having subcarrier spacing selected from a subset of potential subcarrier spacings based on a frequency region of the transmission, wherein a master information block has a same subcarrier spacing as the synchronization signal; and

the transmitter and the processor configured to transmit a control channel, wherein the frequency resources and subcarrier spacing for the control channel are determinable from the transmission.

14. The base station of claim 13 wherein the synchronization signal includes a primary synchronization signal and a secondary synchronization signal.

15. The base station of claim 13 wherein the transmitter and the processor are configured to transmit using radio resource control signaling information related to boundaries between different subcarrier spacings used by the base station.