

METHODS FOR FLEXIBLE RESOURCE USAGE

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of provisional application 62/373,089 filed on August 10th, 2016 and provisional application 62/400,950 filed on September 28, 2016, the contents of which are hereby incorporated by reference herein.

BACKGROUND

[0002] In mobile communication, there are generational advancements in wireless technologies. For instance, in 1980 the first generation of wireless technology was established. By the late 1980s, a second generation followed. This pattern, albeit at varying paces of development, continues. Some generations of technology have been retired, while others are still being developed concurrently with other generations. All generations of wireless technology require standards, protocols, hardware, and other related developments. With each new generation, these same concerns must be addressed.

SUMMARY

[0003] A method and system for ~~flexible resource control~~initial access for a wireless transmit/receive unit (WTRU) is disclosed. The WTRU may ~~monitor a first control channel region and~~ receive a ~~first control channel~~ transmission ~~in the first control region indicating boundaries of a plurality of numerology blocks of a carrier~~including at least a synchronization signal and having a first subcarrier spacing. The WTRU may then ~~receive a second control channel transmission in a second control channel of a second control region, wherein the second control channel transmission indicates one or more numerology parameters for at least one of the plurality of numerology blocks~~determine a second subcarrier spacing based on the received transmission. The WTRU may then ~~send or receive data based on the one or more numerology parameters of the one or more numerology blocks~~initial access parameters using the determined second subcarrier spacing and perform initial access using the initial access parameters.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] A more detailed understanding may be had from the following description, given by way of example in conjunction with the accompanying drawings, wherein like reference numerals in the figures indicate like elements, and wherein:

[0005] FIG. 1A is a system diagram illustrating an example communications system in which one or more disclosed embodiments may be implemented;

[0006] FIG. 1B is a system diagram illustrating an example wireless transmit/receive unit (WTRU) that may be used within the communications system illustrated in FIG. 1A according to an embodiment;

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 first subcarrier spacing; ~~and~~
 determining a second subcarrier spacing based on the received transmission;
 receiving initial access parameters using the determined second subcarrier spacing; and
 performing initial access using the initial access parameters.
2. The method of claim 1, wherein the initial access parameters include a third subcarrier spacing for use in performing initial access.
3. The method of claim 1, wherein performing the initial access includes sending a signal on a physical random access channel.
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 a set of resources.
6. The method of claim 1, wherein the first and second subcarrier spacings are out of a set of subcarrier spacings.
7. A wireless transmit/receive unit (WTRU) comprising:
 a transceiver coupled to a processor, the ~~transceiver~~transceiver configured to receive a transmission including at least a synchronization signal, the received transmission having a first subcarrier spacing;
 the processor configured to determine a second subcarrier spacing based on the received transmission;

the transceiver configured to receive initial access parameters using the determined second subcarrier spacing; and

the transceiver and the processor further configured to perform initial access using the initial access parameters.

8. The WTRU of claim 7 the initial access parameters include a third subcarrier spacing for use in performing initial access.

9. The WTRU of claim 7, wherein performing the initial access includes sending a signal on a physical random access channel.

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 a set of resources.

12. The WTRU of claim 7, wherein ~~wherein~~ the first and second subcarrier spacings are out of a set of subcarrier spacings.