

CLAIMS

1. A method of wireless communication by a base station, comprising:
identifying a first region of a first frequency spectrum assigned to a first operator, wherein uplink and downlink subframe configurations for Time Division Duplex (TDD) communications using the first region and a first region of a second frequency spectrum assigned to a second operator are synchronized between the first and second operator;
identifying a second region of the first frequency spectrum, wherein uplink and downlink subframe configurations for TDD communications using the second region and a second region of the second frequency spectrum are not synchronized between the first and second operators; and
communicating with one or more user equipments (UEs) using the first and second regions of the first frequency spectrum.
2. The method of claim 1, further comprising dynamically changing uplink and downlink subframe configurations for TDD communications using the second region.
3. The method of claim 2, wherein the dynamic changing of uplink and downlink subframe configurations for TDD communications using the second region is based, at least in part, on traffic needs using the first frequency spectrum.
4. The method of claim 2, wherein the dynamic changing of uplink and downlink subframe configurations for TDD communications using the second region is based, at least in part, on information regarding interference between the first and second regions of the first frequency spectrum exchanged with one or more other base stations of the first operator.
5. The method of claim 4, wherein the interference information comprises jamming graph information indicating interference between various network elements.
6. The method of claim 1, wherein synchronization of uplink and downlink subframe configurations for TDD communications using the first region of the first

frequency spectrum and the first region of the second frequency spectrum involves using one or more fixed uplink and downlink subframe configurations.

7. The method of claim 6, wherein:
the first region of the first frequency spectrum is mapped to a set of resource blocks (RBs); and
whether or not RBs in the set of RBs are used for a particular type of communication is dependent on agreement of that type of communication with the uplink and downlink subframe configurations.
8. The method of claim 1, further comprising dynamically allocating one or more resource blocks (RBs) from a guard band separating the first frequency spectrum and the second frequency spectrum for synchronous TDD operation between the first and the second operator.
9. The method of claim 8, wherein the RBs are allocated to a UE based on a position of the UE within a wireless communication network.
10. The method of claim 1, wherein the first region of the first frequency spectrum is adjacent the first region of the second frequency spectrum.
11. The method of claim 10, wherein the first region of the first frequency spectrum and the first region of the second frequency spectrum are separated by a guard band.
12. The method of claim 11, wherein at least one of a size of the guard band or location is determined based on coordination between operators.
13. The method of claim 11, wherein one or more of the operators utilizes the guard band based on a static TDD uplink and downlink subframe configuration.

14. The method of claim 1, wherein uplink and downlink subframe configurations for TDD communications using at least one of the first or second regions of the first frequency spectrum is determined based on coordination between the first and second operators.

15. The method of claim 1, wherein the first and second regions of the first frequency spectrum are mapped to separate component carriers.

16. The method of claim 15, further comprising:

identifying a first portion of a first carrier assigned to the first region of the first operator, wherein uplink and downlink subframe configurations for TDD communications using the first portion and a first portion of a second carrier assigned to the first region of the first operator are synchronized between the first and second carriers;

identifying a second portion of the first carrier, wherein uplink and downlink subframe configurations for TDD communications using the second portion and a second portion of the second carrier are not synchronized between the first and second carriers; and

communicating with one or more user equipments (UEs) using the first and second portions of the first carrier.

17. An apparatus for wireless communication by a base station, comprising:

means for identifying a first region of a first frequency spectrum assigned to a first operator, wherein uplink and downlink subframe configurations for Time Division Duplex (TDD) communications using the first region and a first region of a second frequency spectrum assigned to a second operator are synchronized between the first and second operator;

means for identifying a second region of the first frequency spectrum, wherein uplink and downlink subframe configurations for TDD communications using the second region and a second region of the second frequency spectrum are not synchronized between the first and second operators; and

means for communicating with one or more user equipments (UEs) using the first and second regions of the first frequency spectrum.

18. The apparatus of claim 17, further comprising means for dynamically changing uplink and downlink subframe configurations for TDD communications using the second region.

19. The apparatus of claim 18, wherein the dynamic changing of uplink and downlink subframe configurations for TDD communications using the second region is based, at least in part, on traffic needs using the first frequency spectrum.

20. The apparatus of claim 18, wherein the dynamic changing of uplink and downlink subframe configurations for TDD communications using the second region is based, at least in part, on information regarding interference between the first and second regions of the first frequency spectrum exchanged with one or more other base stations of the first operator.

21. The apparatus of claim 20, wherein the interference information comprises jamming graph information indicating interference between various network elements.

22. The apparatus of claim 17, wherein synchronization of uplink and downlink subframe configurations for TDD communications using the first region of the first frequency spectrum and the first region of the second frequency spectrum involves using one or more fixed uplink and downlink subframe configurations.

23. The apparatus of claim 22, wherein:
the first region of the first frequency spectrum is mapped to a set of resource blocks (RBs); and
whether or not RBs in the set of RBs are used for a particular type of communication is dependent on agreement of that type of communication with the uplink and downlink subframe configurations.

24. The apparatus of claim 17, further comprising means for dynamically allocating one or more resource blocks (RBs) from a guard band separating the first frequency

spectrum and the second frequency spectrum for synchronous TDD operation between the first and the second operator.

25. The apparatus of claim 24, wherein the RBs are allocated to a UE based on a position of the UE within a wireless communication network.

26. The apparatus of claim 17, wherein the first region of the first frequency spectrum is adjacent the first region of the second frequency spectrum.

27. The apparatus of claim 26, wherein the first region of the first frequency spectrum and the first region of the second frequency spectrum are separated by a guard band.

28. The apparatus of claim 27, wherein at least one of a size of the guard band or location is determined based on coordination between operators.

29. The apparatus of claim 28, wherein one or more of the operators utilizes the guard band based on a static TDD uplink and downlink subframe configuration.

30. The apparatus of claim 17, wherein uplink and downlink subframe configurations for TDD communications using at least one of the first or second regions of the first frequency spectrum is determined based on coordination between the first and second operators.

31. The apparatus of claim 17, wherein the first and second regions of the first frequency spectrum are mapped to separate component carriers.

32. The apparatus of claim 31, further comprising:
means for identifying a first portion of a first carrier assigned to the first region of the first operator, wherein uplink and downlink subframe configurations for TDD communications using the first portion and a first portion of a second carrier assigned to the first region of the first operator are synchronized between the first and second carriers;

means for identifying a second portion of the first carrier, wherein uplink and downlink subframe configurations for TDD communications using the second portion and a second portion of the second carrier are not synchronized between the first and second carriers; and

means for communicating with one or more user equipments (UEs) using the first and second portions of the first carrier.

33. An apparatus for wireless communication by a base station, comprising:
at least one processor configured to:

identify a first region of a first frequency spectrum assigned to a first operator, wherein uplink and downlink subframe configurations for Time Division Duplex (TDD) communications using the first region and a first region of a second frequency spectrum assigned to a second operator are synchronized between the first and second operators;

identify a second region of the first frequency spectrum, wherein uplink and downlink subframe configurations for TDD communications using the second region and a second region of the second frequency spectrum are not synchronized between the first and second operator; and

communicate with one or more user equipments (UEs) using the first and second regions of the first frequency spectrum; and
a memory coupled to the at least one processor.

34. A computer-readable medium for wireless communication by a base station, storing instructions executable by at least one processor to perform a method comprising:

identifying a first region of a first frequency spectrum assigned to a first operator, wherein uplink and downlink subframe configurations for Time Division Duplex (TDD) communications using the first region and a first region of a second frequency spectrum assigned to a second operator are synchronized between the first and second operator;

identifying a second region of the first frequency spectrum, wherein uplink and downlink subframe configurations for TDD communications using the second region

and a second region of the second frequency spectrum are not synchronized between the first and second operators; and

communicating with one or more user equipments (UEs) using the first and second regions of the first frequency spectrum.