

CLAIMS

1. A wireless communication device comprising:
a transceiver;
a memory; and
a processor communicatively coupled to the transceiver and the memory, the processor configured to:
determine each of a first public land mobile network (PLMN) configuration and a second PLMN configuration, the first PLMN configuration directed towards PLMNs configured to connect with a first type of core network, and the second PLMN configuration directed towards PLMNs configured to connect with a second type of core network;
identify at least one parameter having a common identifier between a hybrid PLMN and a different PLMN, the hybrid PLMN configured to connect with each of the first type of core network and the second type of core network, wherein the hybrid PLMN and the different PLMN are listed in different ones of the first PLMN configuration and the second PLMN configuration;
limit an inclusion of the common identifier to one of the first PLMN configuration or the second PLMN configuration by utilizing at least one index;
and
transmit via the transceiver each of the first PLMN configuration and the second PLMN configuration to at least one user equipment.
2. The wireless communication device of claim 1, wherein the first PLMN configuration is an Evolved Packet Core (EPC) PLMN configuration directed towards an EPC network, and wherein the second PLMN configuration is a Fifth-Generation Core (5GC) PLMN configuration directed towards a 5GC network.
3. The wireless communication device of claim 2, wherein the processor configured to determine each of the first PLMN configuration and the second PLMN configuration comprises the processor configured to:
configure the EPC PLMN configuration to include a 5GC extension for each listed PLMN.

4. The wireless communication device of claim 2, wherein the processor configured to limit an inclusion of the common identifier to one of the first PLMN configuration or the second PLMN configuration by utilizing at least one index comprises the processor configured to:

list the different PLMN in the 5GC PLMN configuration with the common identifier and an index associating the common identifier with the hybrid PLMN.

5. The wireless communication device of claim 2, wherein:

the processor configured to identify at least one parameter having a common identifier between the hybrid PLMN and the different PLMN comprises the processor configured to identify at least a second parameter having a second common identifier between the hybrid PLMN and the different PLMN; and

the processor configured to limit an inclusion of the common identifier to one of the first PLMN configuration or the second PLMN configuration by utilizing at least one index comprises the processor configured to limit an inclusion of the second common identifier to one of the EPC PLMN configuration or the 5GC PLMN configuration by utilizing the at least one index.

6. The wireless communication device of claim 1, wherein the at least one parameter is a tracking area code (TAC).

7. A method of wireless communication, comprising:

determining each of a first public land mobile network (PLMN) configuration and a second PLMN configuration, the first PLMN configuration directed towards PLMNs configured to connect with a first type of core network, and the second PLMN configuration directed towards PLMNs configured to connect with a second type of core network;

identifying at least one parameter having a common identifier between a hybrid PLMN and a different PLMN, wherein the hybrid PLMN is configured to connect with each of the first type of core network and the second type of core network, and wherein the hybrid PLMN and the different PLMN are listed in different ones of the first PLMN configuration and the second PLMN configuration;

limiting an inclusion of the common identifier to one of the first PLMN configuration or the second PLMN configuration by utilizing at least one index; and

transmitting each of the first PLMN configuration and the second PLMN configuration to at least one user equipment.

8. The method of claim 7, wherein the first PLMN configuration is an Evolved Packet Core (EPC) PLMN configuration directed towards an EPC network, and wherein the second PLMN configuration is a Fifth-Generation Core (5GC) PLMN configuration directed towards a 5GC network.

9. The method of claim 8, wherein determining each of the first PLMN configuration and the second PLMN configuration comprises:
configuring the EPC PLMN configuration to include a 5GC extension for each listed PLMN.

10. The method of claim 9, further comprising:
configuring the EPC PLMN configuration to include a placeholder PLMN when all PLMNs are exclusively directed towards a 5GC network.

11. The method of claim 10, further comprising:
configuring the placeholder PLMN to include at least one of a placeholder tracking area code (TAC) or a placeholder cell identifier (Cell ID).

12. The method of claim 9, wherein limiting an inclusion of the common identifier to one of the first PLMN configuration or the second PLMN configuration by utilizing at least one index comprises:

listing the hybrid PLMN in the EPC PLMN configuration with an empty 5GC extension; and

listing the different PLMN in the 5GC PLMN configuration with the common identifier and an index associating the common identifier with the hybrid PLMN.

13. The method of claim 9, wherein limiting an inclusion of the common identifier to one of the first PLMN configuration or the second PLMN configuration by utilizing at least one index comprises:

listing the hybrid PLMN in the EPC PLMN configuration with the common identifier included in the 5GC extension; and

listing the different PLMN in the 5GC PLMN configuration with an index associating the different PLMN with the common identifier included in the 5GC extension of the hybrid PLMN.

14. The method of claim 8, wherein limiting an inclusion of the common identifier to one of the first PLMN configuration or the second PLMN configuration by utilizing at least one index comprises:

listing the different PLMN in the 5GC PLMN configuration with the common identifier and an index associating the common identifier with the hybrid PLMN.

15. The method of claim 14, further comprising configuring the EPC PLMN configuration to include a placeholder PLMN when all PLMNs are exclusively directed towards a 5GC network.

16. The method of claim 15, further comprising configuring the placeholder PLMN to include at least one of a placeholder tracking area code (TAC) or a placeholder cell identifier (Cell ID).

17. The method of claim 8, wherein:

identifying at least one parameter having a common identifier between the hybrid PLMN and the different PLMN comprises identifying at least a second parameter having a second common identifier between the hybrid PLMN and the different PLMN; and

limiting an inclusion of the common identifier to one of the first PLMN configuration or the second PLMN configuration by utilizing at least one index comprises further comprising limiting an inclusion of the second common identifier to one of the EPC PLMN configuration or the 5GC PLMN configuration by utilizing the at least one index.

18. The method of claim 17, wherein the second parameter is a cell identifier (Cell ID).

19. A wireless communication device, comprising:
a transceiver;

a memory; and
a processor communicatively coupled to the transceiver and the memory, the processor configured to:

receive via the transceiver each of a first public land mobile network (PLMN) configuration and a second PLMN configuration, the first PLMN configuration directed towards PLMNs configured to connect with a first type of core network, and the second PLMN configuration directed towards PLMNs configured to connect with a second type of core network;

select a hybrid PLMN included in one of the first PLMN configuration or the second PLMN configuration, wherein the hybrid PLMN is configured to connect with each of the first type of core network and the second type of core network;

determine whether the hybrid PLMN will be used to connect with the first type of core network or the second type of core network; and

report via the transceiver whether a parameter associated with the hybrid PLMN was ascertained via the first PLMN configuration or the second PLMN configuration, wherein a reporting of the parameter facilitates an indication of whether the hybrid PLMN is connected to the first type of core network or the second type of core network.

20. The wireless communication device of claim 19, wherein the first PLMN configuration is an Evolved Packet Core (EPC) PLMN configuration directed towards an EPC network, and wherein the second PLMN configuration is a Fifth-Generation Core (5GC) PLMN configuration directed towards a 5GC network.

21. The wireless communication device of claim 20, wherein the hybrid PLMN is listed in the EPC PLMN configuration, and wherein the processor configured to report whether the parameter associated with the hybrid PLMN was ascertained via the first PLMN configuration or the second PLMN configuration comprises the processor configured to:

report a use of an index included in the 5GC PLMN configuration, the use of the index included in the 5GC PLMN configuration indicating that the hybrid PLMN is connected to the 5GC network.

22. The wireless communication device of claim 21, wherein the processor configured to report whether the parameter associated with the hybrid PLMN was ascertained via the first PLMN configuration or the second PLMN configuration comprises the processor configured to:

configure a reporting parameter to further include an identification of the index.

23. The wireless communication device of claim 22, wherein the processor configured to report whether the parameter associated with the hybrid PLMN was ascertained via the first PLMN configuration or the second PLMN configuration comprises the processor configured to:

configure a second reporting parameter to include an explicit indication of whether the hybrid PLMN was selected from the EPC PLMN configuration or the 5GC PLMN configuration.

24. The wireless communication device of claim 22, wherein the processor configured to report whether the parameter associated with the hybrid PLMN was ascertained via the first PLMN configuration or the second PLMN configuration comprises the processor configured to:

configure a second reporting parameter to include an implicit indication of whether the hybrid PLMN was selected from the EPC PLMN configuration or the 5GC PLMN configuration.

25. A method of wireless communication, comprising:

receiving each of a first public land mobile network (PLMN) configuration and a second PLMN configuration, the first PLMN configuration directed towards PLMNs configured to connect with a first type of core network, and the second PLMN configuration directed towards PLMNs configured to connect with a second type of core network;

selecting a hybrid PLMN included in one of the first PLMN configuration or the second PLMN configuration, wherein the hybrid PLMN is configured to connect with each of the first type of core network and the second type of core network;

determining whether the hybrid PLMN will be used to connect with the first type of core network or the second type of core network; and

reporting whether a parameter associated with the hybrid PLMN was ascertained via the first PLMN configuration or the second PLMN configuration, the reporting facilitating an indication of whether the hybrid PLMN is connected to the first type of core network or the second type of core network.

26. The method of claim 25, wherein the first PLMN configuration is an Evolved Packet Core (EPC) PLMN configuration directed towards an EPC network, and wherein the second PLMN configuration is a Fifth-Generation Core (5GC) PLMN configuration directed towards a 5GC network.

27. The method of claim 26, wherein the hybrid PLMN is listed in the EPC PLMN configuration, and wherein reporting whether the parameter associated with the hybrid PLMN was ascertained via the first PLMN configuration or the second PLMN configuration comprises:

reporting a use of an index included in the 5GC PLMN configuration, the use of the index included in the 5GC PLMN configuration indicating that the hybrid PLMN is connected to the 5GC network.

28. The method of claim 27, wherein reporting whether the parameter associated with the hybrid PLMN was ascertained via the first PLMN configuration or the second PLMN configuration comprises:

configuring a reporting parameter to further include an identification of the index.

29. The method of claim 28, wherein reporting whether the parameter associated with the hybrid PLMN was ascertained via the first PLMN configuration or the second PLMN configuration comprises:

configuring a second reporting parameter to include an explicit indication of whether the hybrid PLMN was selected from the EPC PLMN configuration or the 5GC PLMN configuration.

30. The method of claim 28, wherein reporting whether the parameter associated with the hybrid PLMN was ascertained via the first PLMN configuration or the second PLMN configuration further comprises:

configuring a second reporting parameter to include an implicit indication of whether the hybrid PLMN was selected from the EPC PLMN configuration or the 5GC PLMN configuration.