

CLAIMS

1. A method of wireless communication, comprising: performing, at a user equipment (UE), measurements to determine coverage conditions, including channel conditions, at a current location of the UE, and whether those coverage conditions support narrowband frequency hopping for transmissions; determining, at the UE, that the coverage conditions of the UE support narrowband frequency hopping for transmissions, wherein the narrowband frequency hopping includes uplink transmission of data without a gap between hopped frequencies; and indicating, by the UE and in response to the determining, that the UE is configured with capabilities to support the narrowband frequency hopping without a gap.
2. The method of claim 1, further comprising: detecting, at the UE, the data for the uplink transmission, wherein the transmission of the data without the gap between hopped frequencies includes transmitting the data, by the UE, on the hopped frequencies without retuning a wideband baseband radio of the UE between two frequencies of the hopped frequencies.
3. The method of claim 2, wherein a first frequency of the hopped frequencies is a frequency of a first narrowband, and a second frequency of the hopped frequencies is a frequency of a second narrowband, and wherein the transmission of the data hops between the first and second frequency without retuning.
4. The method of claim 1, wherein the determining includes determining coverage conditions that support communications in a coverage extension (CE) mode, wherein the CE mode includes the narrowband frequency hopping without the gap.
5. The method of claim 1, wherein the transmission of the data without the gap includes narrowband frequency signaling.
6. The method of claim 1, wherein the UE is configured for advanced communication operations in Long Term Evolution Advanced (LTE-A).
7. The method of claim 1, further including: determining, by the UE, that the UE is configured with lesser capabilities to support the narrowband frequency hopping with a retuning gap.
8. An apparatus configured for wireless communication, the apparatus comprising: at least one processor; and a memory coupled to the at least one processor, wherein the at least one processor is configured: to perform, at a user equipment (UE), measurements to determine coverage conditions, including channel conditions, at a current location of the UE, and whether those coverage conditions support narrowband frequency hopping for transmissions; to determine, at the UE, that the coverage conditions of the UE support narrowband frequency hopping for transmissions, wherein the narrowband frequency hopping includes uplink transmission of data without a gap between hopped frequencies; and to indicate, by the UE and in response to the

determination, that the UE is configured with capabilities to support the narrowband frequency hopping without a gap.

9. The apparatus of claim 8, further comprising configuration of the at least one processor: to detect, at the UE, the data for the uplink transmission, wherein the transmission of the data without the gap between hopped frequencies includes transmitting the data, by the UE, on the hopped frequencies without retuning a wideband baseband radio of the UE between two frequencies of the hopped frequencies.

10. The apparatus of claim 9, wherein a first frequency of the hopped frequencies is a frequency of a first narrowband, and a second frequency of the hopped frequencies is a frequency of a second narrowband, and wherein the transmission of the data hops between the first and second frequency without retuning.

11. The apparatus of claim 8, wherein the configuration of the at least one processor to determine includes configuration of the at least one processor to determine coverage conditions that support communications in a coverage extension (CE) mode, wherein the CE mode includes the narrowband frequency hopping without the gap.

12. The apparatus of claim 8, wherein the transmission of the data without the gap includes narrowband frequency signaling.

13. The apparatus of claim 8, wherein the UE is configured for advanced communication operations in Long Term Evolution Advanced (LTE-A).

14. The apparatus of claim 8, further including configuration of the at least one processor to determine, by the UE, that the UE is configured with lesser capabilities to support the narrowband frequency hopping with a retuning gap.

15. The method of claim 1, wherein the indicating includes: transmitting, by the UE to a base station, an indication in a dummy Non-Access Stratum (NAS) message or Radio Resource Control (RRC) message.

16. The method of claim 1, wherein the capabilities to support the narrowband frequency hopping without a gap correspond to ability of the UE to handle wideband baseband processing.

17. The method of claim 15, wherein the transmitting includes transmitting the indication in the dummy NAS message.