[7] According to the agreements, in step 1, when the ratio of identified candidate resource to the total number of resources in a resource selection window, is less than X%, all configured thresholds are increased by Y dB and the resource identification procedure is repeated. The value and the configurability of X is for further study, with at least one value of X is 20. Y is 3. Other conditions to stop reference signal received power (RSRP) are also for further study.

[8] However, there has been no discussion on communication apparatuses and methods for Mode 2 resource (re-)selection for packet delay budget limited scenario, for example, when $T2_{min}$ > remaining PDB.

[9] There is thus a need for communication apparatuses and methods that provide feasible technical solutions for Mode 2 resource (re-)selection for PDB-limited scenario. Furthermore, other desirable features and characteristics will become apparent from the subsequent detailed description and the appended claims, taken in conjunction with the accompanying drawings and this background of the disclosure.

SUMMARY

[10] This disclosure presents a non-limiting example which facilitates providing communication apparatuses and methods for Mode 2 resource (re-)selection for PDB-limited scenario.

[11] In one aspect, there is provided a communication apparatus comprising: circuitry which, in operation, determines a candidate resource ratio from a plurality of candidate resource ratios, wherein the candidate resource ratio is different between a first priority value and a second priority value, and identifies a plurality of candidate resources based on the candidate resource ratio; and a transmitter, which, in operation, transmits a Physical Sidelink Shared Channel (PSSCH) on at least one resource selected from the plurality of candidate resources.

[12] In another aspect, there is provided a communication method comprising: determining a candidate resource ratio from a plurality of candidate resource ratios, wherein the candidate resource ratio is different between a first priority value and a second priority value; identifying a plurality of candidate resources based on the

candidate resource ratio; and transmitting a Physical Sidelink Shared Channel (PSSCH) on at least one resource selected from the plurality of candidate resources.

[12a] In another aspect, the present disclosure refers to an integrated circuit comprising: circuitry, which, in operation, controls: determining a candidate resource ratio from a plurality of candidate resource ratios, wherein the candidate resource ratio is different between a first priority value and a second priority value; and identifying a plurality of candidate resources based on the candidate resource ratio; and transmitting a Physical Sidelink Shared Channel (PSSCH) on at least one resource selected from the plurality of candidate resources.

Claims

1. A communication apparatus comprising:

circuitry, which, in operation:

determines a candidate resource ratio from a plurality of candidate resource ratios, wherein the candidate resource ratio is different between a first priority value and a second priority value, and

identifies a plurality of candidate resources based on the candidate resource ratio; and

a transmitter, which, in operation, transmits a Physical Sidelink Shared Channel (PSSCH) on at least one resource selected from the plurality of candidate resources.

2. The communication apparatus of claim 1, wherein the plurality of candidate resources is determined from an initial set of candidate resources based on the candidate resource ratio.

3. The communication apparatus of claim 1, wherein the plurality of candidate resource ratios includes a ratio related to 20%.

4. The communication apparatus of claim 1, wherein the candidate resource ratio is configured for the communication apparatus.

5. The communication apparatus of claim 1, wherein the plurality of candidate resources are identified based on the candidate resource ratio and a Reference Signal Received Power (RSRP) threshold.

6. A communication method comprising:

determining a candidate resource ratio from a plurality of candidate resource ratios, wherein the candidate resource ratio is different between a first priority value and a second priority value;

identifying a plurality of candidate resources based on the candidate resource ratio; and

transmitting a Physical Sidelink Shared Channel (PSSCH) on at least one resource selected from the plurality of candidate resources.

7. The communication method of claim 6, wherein the plurality of candidate resources is determined from an initial candidate resources based on the candidate resource ratio.

8. The communication method of claim 6, wherein the plurality of values includes a ratio related to 20%.

9. The communication method of claim 6, wherein the candidate resource ratio is configured for the communication apparatus.

10. The communication method of claim 6, wherein the plurality of candidate resources are identified based on the candidate resource ratio and a Reference Signal Received Power (RSRP) threshold.

11. An integrated circuit comprising:

circuitry, which, in operation, controls:

determining a candidate resource ratio from a plurality of candidate resource ratios, wherein the candidate resource ratio is different between a first priority value and a second priority value;

identifying a plurality of candidate resources based on the candidate resource ratio; and

transmitting a Physical Sidelink Shared Channel (PSSCH) on at least one resource selected from the plurality of candidate resources.