

CLAIMS

1. A method for wireless communication at a wireless device, comprising:
determining a location of a channel state information (CSI) resource and a CSI reporting resource for a CSI report,
the CSI report being based on the CSI resource,
the CSI report being based on one of a first CSI reporting configuration or a second CSI reporting configuration,
the first CSI reporting configuration being associated with transmission time intervals (TTIs) of a first duration,
the second CSI reporting configuration being associated with TTIs of a second duration,
wherein the CSI reference resource spans one symbol or two symbols; and
transmitting the CSI report in accordance with the determination.
2. The method of claim 1, further comprising:
identifying a first pattern of first non-zero power (NZP) reference signal resources and first IM resources for the first CSI reporting configuration, wherein the first pattern is associated with a first periodicity and a first offset; and
determining a second pattern of second NZP reference signal resources and second IM resources for the second CSI reporting configuration, wherein the second pattern is associated with a second periodicity and a second offset.
3. The method of claim 2, wherein the second periodicity is higher than the first periodicity.
4. The method of claim 2, wherein the first pattern and the second pattern are completely overlapping, the first periodicity is equivalent to the second periodicity, and the second offset is equivalent to the first offset.
5. The method of claim 2, further comprising:
determining a third pattern of zero power (ZP) reference signal resources based at least in part on the first pattern; and

determining a fourth pattern of zero power (ZP) reference signal resources based at least in part on the second pattern.

6. The method of claim 2, wherein the first NZP reference signal resources overlap with the second NZP reference signal resources.

7. The method of claim 2, wherein a resource element density of the second pattern is lower than a resource element density of the first pattern.

8. The method of claim 1, further comprising:
 identifying a first plurality of CSI processes associated with the first CSI reporting configuration and a second plurality of CSI processes associated with the second CSI reporting configuration;
 receiving a request for the CSI report;
 identifying the number of supported CSI processes as a maximum number of supported CSI processes; and
 updating measurements for a first subset of the first plurality of CSI process or a second subset of the second plurality of CSI processes, or both, based at least in part on the maximum number of supported CSI processes.

9. The method of claim 8, wherein updating the measurement comprises updating a lowest-indexed CSI process of the first plurality of CSI processes.

10. The method of claim 8, wherein updating the measurement comprises updating a lowest-indexed CSI process of the first plurality of CSI processes and a lowest-indexed CSI process of the second plurality of CSI processes.

11. The method of claim 1, further comprising:
 identifying a first plurality of CSI processes associated with the first CSI reporting configuration and a second plurality of CSI processes associated with the second CSI reporting configuration;
 receiving a request for the CSI report, wherein the request is associated with the second CSI reporting configuration;
 identifying the number of supported CSI processes as a maximum number of

supported CSI processes for the second CSI reporting configuration; and

updating measurements for a first subset of the second plurality of CSI processes based at least in part on the maximum number of supported CSI processes for the second CSI reporting configuration.

12. The method of claim 1, further comprising:

identifying a first plurality of CSI processes associated with the first CSI reporting configuration and a second plurality of CSI processes associated with the second CSI reporting configuration;

receiving a request for the CSI report, wherein the request is associated with the first CSI reporting configuration;

identifying the number of supported CSI processes as a maximum number of supported CSI processes for the first CSI reporting configuration; and

updating measurements for a first subset the first plurality of CSI processes based at least in part on the maximum number of supported CSI processes for the first CSI reporting configuration.

13. The method of claim 1, further comprising:

associating a first CSI process with the first CSI reporting configuration and a second CSI process with the second CSI reporting configuration.

14. The method of claim 13, further comprising:

generating a first CSI report for the first CSI process or a second CSI report for the second CSI process, or both, wherein the CSI report comprises the first CSI report or the second CSI report, or both.

15. The method of claim 13, wherein the first CSI process is operated independently from the second CSI process.

16. The method of claim 15, wherein the first CSI process for the first CSI reporting configuration is triggered independently from the second CSI process for the second CSI reporting configuration.

17. The method of claim 15, wherein the first CSI process for the first CSI

reporting configuration is associated with a first periodicity and a first offset, and wherein the second CSI process for the second CSI reporting configuration is associated with a second periodicity and a second offset.

18. The method of claim 13, wherein the first CSI process is operated jointly with the second CSI process.

19. The method of claim 1, further comprising:
generating first CSI for the first CSI reporting configuration and second CSI for the second CSI reporting configuration, wherein a size of the first CSI is greater than a size of the second CSI; and
generating the CSI report comprising the first CSI or the second CSI, or both.

20. The method of claim 19, wherein generating the first CSI comprises determining a first channel quality indicator (CQI) for at least one subband of a first size, and wherein generating the second CSI comprises determining a second CQI for at least one subband of a second size that is larger than the first size.

21. The method of claim 19, wherein generating the first CSI comprises determining the first CSI according to one of a plurality of reporting modes, and wherein generating the second CSI comprises determining the second CSI according to a subset of the plurality of reporting modes.

22. The method of claim 19, further comprising:
receiving uplink data for transmission with the CSI report, wherein the second CSI is generated based at least in part on the uplink data.

23. The method of claim 22, wherein the CSI report and data are transmitted according to a first interval.

24. An apparatus for wireless communication, comprising:
a processor;
memory coupled with the processor; and
instructions stored in the memory and operable, when executed by the processor,

to cause the apparatus to:

- determining a location of a channel state information (CSI) resource e to and a CSI reporting resource for a CSI report,
- the CSI report being based on the CSI resource,
- the CSI report being based on one of a first CSI reporting configuration or a second CSI reporting configuration,
- the first CSI reporting configuration being associated with transmission time intervals (TTIs) of a first duration,
- the second CSI reporting configuration being associated with TTIs of a second duration,
- wherein the CSI reference resource spans one symbol or two symbols; and
- transmit the CSI report in accordance with the determination.

25. The apparatus of claim 24, wherein the instructions are further executable by the processor to:

- identify a first pattern of first non-zero power (NZIP) reference signal resources and first IM resources for the first CSI reporting configuration, wherein the first pattern is associated with a first periodicity and a first offset; and
- determine a second pattern of second NZP reference signal resources and second IM resources for the second CSI reporting configuration, wherein the second pattern is associated with a second periodicity and a second offset.

26. The apparatus of claim 24, wherein the instructions are further executable by the processor to:

- identify a first pattern of first non-zero power (NZP) reference signal resources and first IM resources for the first CSI reporting configuration, wherein the first pattern is associated with a first periodicity and a first offset; and
- receive an indication of a presence of one or more NZP reference signal resources and one or more IM resources for the second CSI reporting configuration in a TTI of the first duration, wherein the TTI of the first duration comprises a subset of the first NZP reference signal resources and a subset of the first IM resources of the first pattern.

27. The apparatus of claim 24, wherein the instructions are further executable by the processor to:

associate a first CSI process with the first CSI reporting configuration and a second CSI process with the second CSI reporting configuration.

28. The apparatus of claim 24, wherein the instructions are further executable by the processor to:

generate first CSI for the first CSI reporting configuration and second CSI for the second CSI reporting configuration, wherein a size of the first CSI is greater than a size of the second CSI; and

generate the CSI report comprising the first CSI or the second CSI, or both.

29. A non-transitory computer readable medium storing code for wireless communication, the code comprising instructions executable by a processor to:

determining a location of a channel state information (CSI) resource and a CSI reporting resource for a CSI report,

the CSI report being based on the CSI resource,

the CSI report being based on one of a first CSI reporting configuration or a second CSI reporting configuration,

the first CSI reporting configuration being associated with transmission time intervals (TTIs) of a first duration,

the second CSI reporting configuration being associated with TTIs of a second duration,

wherein the CSI reference resource spans one symbol or two symbols; and

transmit the CSI report in accordance with the determination.

30. The non-transitory computer-readable medium of claim 29, wherein the instructions are further executable by the processor to:

identify a first pattern of first non-zero power (NZP) reference signal resources and first IM resources for the first CSI reporting configuration, wherein the first pattern is associated with a first periodicity and a first offset; and

determine a second pattern of second NZP reference signal resources and second

IM resources for the second CSI reporting configuration, wherein the second pattern is associated with a second periodicity and a second offset.

31. The non-transitory computer-readable medium of claim 29, wherein the instructions are further executable by the processor to:

associate a first CSI process with the first CSI reporting configuration and a second CSI process with the second CSI reporting configuration.

32. The non-transitory computer-readable medium of claim 29, wherein the instructions are further executable by the processor to:

generate first CSI for the first CSI reporting configuration and second CSI for the second CSI reporting configuration, wherein a size of the first CSI is greater than a size of the second CSI; and

generate the CSI report comprising the first CSI or the second CSI, or both.

33. The method of claim 1, wherein the location of the CSI resource relative to the CSI reporting resource for the CSI report of the TTIs of the first duration differ from the location of the CSI resource relative to the CSI reporting resource for the CSI report associated of the TTIs of the second duration.

34. The method of claim 1,
the first reporting configuration comprising reporting based on a first CSI resource,

the second reporting configuration comprising reporting based on a second CSI resource, and

the CSI resource being one of the first CSI resource or the second CSI resource.

35. The method of claim 34,
the first CSI resource having a first periodicity, and
the second CSI resource having a second periodicity.