CLAIMS

1. A method for wireless communications by a receiver, comprising:

receiving a sequence transmitted in multiple tones of at least one short burst symbol, the sequence conveying at least one bit of information;

identifying a plurality of groups of sequence hypotheses having same values at a first set of common demodulation reference signals (DMRS) tone locations, each sequence hypothesis in a group having a second set of common DMRS tone locations;

performing group level channel, noise, and interference estimation, based on DMRS tone locations within the group;

using the channel, noise, and interference estimation for each group in the one or more groups to evaluate the corresponding sequence hypotheses in that group; and

determining, based on the evaluation, discontinuous transmission (DTX) or the sequence received and the bit of information conveyed.

2. The method of claim 1, wherein the second set of common tone locations is larger than the first set.

3. The method of claim 1, wherein the first set of common tone locations has zero or more common tone locations.

4. The method of claim 1, wherein the second set of common tone locations has at least one common tone location.

5. The method of claim 1, wherein performing channel and noise and interference estimation for each group comprises estimating an equivalent noise and interference variance for each hypothesis of that group.

6. The method of claim 1, wherein the evaluation comprises selecting a sequence hypothesis with a maximum performance metric generated based on the channel and noise and interference estimation.

7. The method of claim 1, wherein a sequence is selected only if a corresponding equivalent noise and interference variance is below a threshold value.

8. The method of claim 1, wherein the first set of common tone locations comprises DMRS tone locations at every 4th tone.

9. The method of claim 1, wherein, the second set of common tone locations comprises DMRS tone locations at every 2nd tone.

10. The method of claim 1, wherein each sequence hypothesis corresponds to a base sequence or shifted version of the base sequence.

11. An apparatus for wireless communications by a receiver, comprising:

a receiver configured to receive a sequence transmitted in multiple tones of at least one short burst symbol, the sequence conveying at least one bit of information; and

at least one processor configured to

identify a plurality of groups of sequence hypotheses having same values at a first set of common demodulation reference signals (DMRS) tone locations, each sequence hypothesis in a group having a second set of common DMRS tone locations,

perform group level channel, noise, and interference estimation estimation, based on DMRS tone locations within the group,

use the channel, noise, and interference estimation for each group in the one or more groups to evaluate the corresponding sequence hypotheses in that group, and

determine, based on the evaluation, discontinuous transmission (DTX) or the sequence received and the bit of information conveyed.

12. The apparatus of claim 11, wherein the second set of common tone locations is larger than the first set.

13. The apparatus of claim 11, wherein the first set of common tone locations has zero or

more common tone locations.

14. The apparatus of claim 11, wherein the second set of common tone locations has at least one common tone location.

15. The apparatus of claim 11, wherein performing channel and noise and interference estimation for each group comprises estimating an equivalent noise and interference variance for each hypothesis of that group.

16. The apparatus of claim 11, wherein the evaluation comprises selecting a sequence hypothesis with a maximum performance metric generated based on the channel and noise and interference estimation.

17. The apparatus of claim 11, wherein a sequence is selected only if a corresponding equivalent noise and interference variance is below a threshold value.

18. The apparatus of claim 11, wherein the first set of common tone locations comprises DMRS tone locations at every 4th tone.

19. The apparatus of claim 11, wherein, the second set of common tone locations comprises DMRS tone locations at every 2nd tone.

20. The apparatus of claim 11, wherein each sequence hypothesis corresponds to a base sequence or shifted version of the base sequence.

21. An apparatus for wireless communications, comprising:

means for receiving a sequence transmitted in multiple tones of at least one short burst symbol, the sequence conveying at least one bit of information;

means for identifying a plurality of groups of sequence hypotheses having same values at a first set of common demodulation reference signals (DMRS) tone locations, each sequence hypothesis in a group having a second set of common DMRS tone locations;

means for performing group level channel, noise, and interference estimation, based on DMRS tone locations within the group;

means for using the channel, noise, and interference estimation for each group in the one or more groups to evaluate the corresponding sequence hypotheses in that group; and

means for determining, based on the evaluation, discontinuous transmission (DTX) or the sequence received and the bit of information conveyed.

22. The apparatus of claim 21, wherein the second set of common tone locations is larger than the first set.

23. The apparatus of claim 21, wherein the first set of common tone locations has zero or more common tone locations.

24. The apparatus of claim 21, wherein the second set of common tone locations has at least one common tone location.

25. The apparatus of claim 21, wherein performing channel and noise and interference estimation for each group comprises estimating an equivalent noise and interference variance for each hypothesis of that group.

26. The apparatus of claim 21, wherein the evaluation comprises selecting a sequence hypothesis with a maximum performance metric generated based on the channel and noise and interference estimation.

27. The apparatus of claim 21, wherein a sequence is selected only if a corresponding equivalent noise and interference variance is below a threshold value.

28. The apparatus of claim 21, wherein the first set of common tone locations comprises DMRS tone locations at every 4th tone.

29. The apparatus of claim 21, wherein, the second set of common tone locations comprises

DMRS tone locations at every 2nd tone.

30. A non-transitory computer readable medium having computer executable code stored thereon for wireless communications, comprising:

code for receiving a sequence transmitted in multiple tones of at least one short burst symbol, the sequence conveying at least one bit of information;

code for identifying a plurality of groups of sequence hypotheses having same values at a first set of common demodulation reference signals (DMRS) tone locations, each sequence hypothesis in a group having a second set of common DMRS tone locations;

code for performing group level channel, noise, and interference estimation, based on DMRS tone locations within the group;

code for using the channel, noise, and interference estimation for each group in the one or more groups to evaluate the corresponding sequence hypotheses in that group; and

code for determining, based on the evaluation, discontinuous transmission (DTX) or the sequence received and the bit of information conveyed.