

WHAT IS CLAIMED IS:

1. A method of wireless communication performed by a user equipment (UE), comprising:
receiving, from another UE, a particular transmission on a particular transmission resource; and
transmitting, on a feedback resource selected based at least in part on the particular transmission resource, a feedback message using a multiple access signature determined based at least in part on a characteristic of the particular transmission.
2. The method of claim 1, wherein the UE is configured to determine, for the feedback message, at least a cyclic shift, and wherein the multiple access signature is based on the cyclic shift. ~~one of:~~
 - ~~a sequence identifier,~~
 - ~~a time-division orthogonal cover code,~~
 - ~~a frequency-division orthogonal cover code, or~~
 - ~~a cyclic shift.~~
3. The method of claim 2, wherein information identifying at least one of candidate sequence identifier, time-division orthogonal cover code, frequency-division orthogonal cover code, or cyclic shift is received via radio resource control signaling of a resource pool configuration message.
4. The method of claim 1, wherein the feedback resource is a ~~system-wide~~ periodic feedback resource.
5. The method of claim 1, wherein the feedback resource is associated with a many-to-one mapping from control-data resources to feedback resources.
6. The method of claim 1, wherein the particular transmission includes control information and payload data.
7. The method of claim 1, wherein the feedback resource is determined based at least in part on a decode processing capability of the UE.
8. The method of claim 1, wherein the multiple access signature is determined based at least in part on a slot in which the particular transmission ends and a feedback resource periodicity.

9. The method of claim 1, wherein the multiple access signature is determined based at least in part on a resource pool configuration.
10. The method of claim 1, wherein the multiple access signature is determined based at least in part on a priority of the particular transmission.
11. The method of claim 1, wherein the multiple access signature is determined based at least in part on a quality of service parameter.
12. The method of claim 1, wherein a reference signal sequence and a set of time-frequency resources for a reference signal associated with the feedback message are determined based at least in part on the multiple access signature.
13. The method of claim 1, wherein a reference signal is used to demodulate feedback information of the feedback message.
14. The method of claim 1, further comprising:
transmitting a reference signal for the feedback message using orthogonal resources concurrent with transmitting the feedback message using the multiple access signature.
15. The method of claim 1, where the feedback message is a one-bit information message.
16. The method of claim 1, where the feedback message is an acknowledgement message or a negative-acknowledgement message.
17. The method of claim 1, where a set of possible multiple access sequences is a cyclically shifted version of a base sequence.
18. The method of claim 17, wherein the UE is configured to use, for the cyclically shifted version of the base sequence, a cyclic shift determined based at least in part on a slot in which the particular transmission ends and a feedback resource periodicity.
19. A user equipment (UE) for wireless communication, comprising:
a memory; and

one or more processors operatively coupled to the memory, the memory and the one or more processors configured to:

receive, from another UE, a particular transmission on a particular transmission resource; and

transmit, on a feedback resource selected based at least in part on the particular transmission resource, a feedback message using a multiple access signature determined based at least in part on a characteristic of the particular transmission.

20. The UE of claim 19, wherein the UE is configured to determine, for the feedback message, at least a cyclic shift, and wherein the multiple access signature is based on the cyclic shift. ~~one of:~~

~~a sequence identifier,~~

~~a time-division-orthogonal cover code,~~

~~a frequency-division-orthogonal cover code, or~~

~~a cyclic shift.~~

21. The UE of claim 20, wherein information identifying at least one of candidate sequence identifier, time-division orthogonal cover code, frequency-division orthogonal cover code, or cyclic shift is received via radio resource control signaling of a resource pool configuration message.

22. The UE of claim 19, wherein the feedback resource is a ~~system-wide~~ periodic feedback resource.

23. The UE of claim 19, wherein the feedback resource is associated with a many-to-one mapping from control-data resources to feedback resources.

24. The UE of claim 19, wherein the particular transmission includes control information and payload data.

25. The UE of claim 19, wherein the particular transmission resource includes a slot and a sub-channel.

~~25-26.~~ A non-transitory computer-readable medium storing one or more instructions for wireless communication, the one or more instructions comprising:

one or more instructions that, when executed by one or more processors of a user equipment (UE), cause the one or more processors to:

receive, from another UE, a particular transmission on a particular transmission resource; and

transmit, on a feedback resource selected based at least in part on the particular transmission resource, a feedback message using a multiple access signature determined based at least in part on a characteristic of the particular transmission.

26-27. The non-transitory computer-readable medium of claim ~~25~~26, wherein the UE is configured to determine, for the feedback message, at least one of:

- a sequence identifier,
- a time-division orthogonal cover code,
- a frequency-division orthogonal cover code, or
- a cyclic shift.

27-28. The non-transitory computer-readable medium of claim ~~26~~27, wherein information identifying at least one of candidate sequence identifier, time-division orthogonal cover code, frequency-division orthogonal cover code, or cyclic shift is received via radio resource control signaling of a resource pool configuration message.

28-29. ~~An apparatus~~ A user equipment (UE) for wireless communication, comprising:
means for receiving, from another ~~apparatus~~UE, a particular transmission on a particular transmission resource; and
means for transmitting, on a feedback resource selected based at least in part on the particular transmission resource, a feedback message using a multiple access signature determined based at least in part on a characteristic of the particular transmission.

29-30. The ~~apparatus~~UE of claim ~~28~~29, wherein the apparatus is configured to determine, for the feedback message, at least one of:

- a sequence identifier,
- a time-division orthogonal cover code,
- a frequency-division orthogonal cover code, or
- a cyclic shift.

30-31. The ~~apparatus~~UE of claim ~~29~~30, wherein information identifying at least one of candidate sequence identifier, time-division orthogonal cover code, frequency-division orthogonal cover code, or cyclic shift is received via radio resource control signaling of a resource pool configuration message.

32. The UE of claim 29, wherein the particular transmission resource includes a slot and a sub-channel.