

Amendments to the Claims:

This listing of the claims will replace all prior versions of the claims in the application:

1-12. (Cancelled)

13. (Currently Amended) A receiving device comprising:

circuitry configured to receive a signal transmitted by a plurality of antennas; wherein the received signal includes ~~a single user~~ data for a single user that was combined with ~~[[a]] different sequence for each antenna~~ sequences producing a plurality of combined data sequences; wherein antenna-specific weights for the plurality of antennas are applied to each of the combined data sequences; wherein the received signal includes pilot bits for each of the plurality of antennas; and wherein the pilot bits for each antenna ~~were derived from~~ have a different sequence for that antenna;

the circuitry is further configured to derive preferred weights for the received signal based on the pilot bits for each antenna;

the circuitry is further configured to recover ~~the single user~~ data for the single user signal from each of the ~~different~~ combined data sequences; and

the circuitry is further configured to combine data from the recovered ~~single user~~ data for the single user signal from each of the different sequences.

14. (Currently Amended) A method for use by a receiving device, the method comprising:

receiving, by the receiving device, a signal transmitted by a plurality of antennas; wherein the received signal includes ~~a single user~~ data for a single user signal that was combined with ~~[[a]] different sequence for each antenna~~ sequences producing a plurality of combined data sequences; wherein antenna-specific weights

for the plurality of antennas are applied to each of the combined data sequences;
wherein the received signal includes pilot bits for each of the plurality of antennas;
and wherein the pilot bits for each antenna ~~were derived from~~ have a different
sequence for that antenna;

deriving, by the receiving device, preferred weights for the received signal
based on the pilot bits for each antenna;

recovering, by the receiving device, ~~the single user data~~ for the single user
~~signal~~ from each of the ~~different~~ combined data sequences; and

combining, by the receiving device, ~~the recovered single user data signal~~ from
the recovered data for the single user from each of the different sequences.

15. (Currently Amended) A transmitting device comprising:

circuitry is configured to generate ~~a single user data~~ for a single user signal
for transmission to a receiving device;

the circuitry is further configured to combine the ~~single user data~~ for the
single user signal with ~~[[a]] different sequence for each antenna of a plurality of~~
~~antennas~~ sequences to produce a plurality of combined data sequences; wherein
antenna-specific weights for the plurality of antennas are applied to each of the
combined data sequences;

the circuitry is further configured to produce pilot bits for each antenna of the
plurality of antennas; wherein the pilot bits for each antenna ~~are derived using~~
have a different sequence ~~from a plurality of different sequences for each~~ that
antenna to permit the receiving device to derive weights for ~~each~~ that antenna; and

the plurality of antennas configured to transmit the ~~single user data~~
~~combined with the plurality of different~~ the combined data sequences and the
produced pilot bits ~~[[for]]~~ using the plurality of antennas to the receiving device.