REMARKS/ARGUMENTS

After the foregoing Amendment, claims 13-15 are currently pending in this application. Claims 13-15 are amended.

Claim Rejections - 35 USC § 102

Claim 15 is rejected under U.S.C. 102(b) as being unpatentable over Yoshida et al., Yoshida hereinafter (U.S. 6,359,864, of a record).

Yoshida discloses in FIG. 1 that user spreading circuits 101-1 to 101-k in the transmitter are used to spread users signals 10-1 to 10-k stations with unique codes. Each respective user is assigned a unique code for use in the transmission of data. Yoshida also discloses that the receiver detects the reception signal and extracts the user signal. However, Yoshida does not teach or suggest the combining the single user data signal with a different sequence for each of a plurality of antennas. Yoshida clearly states each respective user is assigned a unique code which is used to transmit and receive data. Also, Yoshida does not teach or suggest producing pilot bits for each antenna of a plurality of antennas, wherein the pilot bits for each antenna are derived using different sequences for each antenna to permit the receiving device to derive weights for each antenna. Yoshida describes the pilot signal spreading circuits (encoder) as, "pilot spreading circuits 104-1 to

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104-N (N is an integer not less than two). Also, Yoshida does not teach or suggest the plurality of antennas configured to transmit the single user data combined with the plurality of different sequences and the produced pilot bits for the plurality of antennas to the receiving device.

Based on the arguments presented above, withdrawal of the 102(b) rejection of claim 15 is respectfully requested.

Claim Rejections - 35 USC § 103(a)

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al., Yoshida hereinafter (U.S. patent number 6,359,864, of a record) in view Vook et al., Vook hereinafter (U.S. patent number 5,982,327, previously cited by Applicant).

Yoshida discloses in FIG. 2 that a user will receive the signal produced and transmitted from one of the spreading circuits 101-1 to 101-k comprising a unique code. Yoshida also discloses that the receiver detects the reception signal and extracts the user signal. However, Yoshida does not teach or suggest the received signal includes a single user data that was combined with a different sequence for each antenna of the plurality of antennas. Yoshida clearly states each respective user is assigned a unique code. Also, Yoshida does not teach or suggest the received signal includes for each of the plurality of antennas pilot bits, wherein the pilot bits

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for each antenna were derived from a different sequences for that antenna. Also, deriving of the preferred weights for the received signal are based on the pilot bits for each antenna. Yoshida describes the pilot signal spreading circuits (encoder) as, "pilot spreading circuits 104-1 to 104-N (N is an integer not less than two). Describing the pilot encoder as an integer not less than two cannot be interpreted as the pilot bits for each antenna which are derived using different sequences.

Vook teaches a method of a subscriber unit receiving the same data signal over several antennas based on a process using at least two covariance matrices and at least two steering vectors determined from the pilot symbols. Vook also teaches that if more than one transmitter is assigned to transmit to the receiver in a time-frequency slot, then an access technique called spatial division multiple access (SDMA) is used by the receiver. Vook teaches the communication receiver to receive, separately, the signals transmitted by the multiple transmitters sharing the same time-frequency slot. However, Vook does not teach the recovering of a single user data signal from each of the different sequences and combining of the recovered single user data signal from each of the different sequences. Covariance matrices and steering vectors are not sequences.

Based on the arguments presented above, withdrawal of the 103(a) rejection of claims 13 and 14 is respectfully requested.

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Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephonic interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

In view of the foregoing amendment and remarks, Applicant respectfully submits that the present application is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

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