IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	Docket No. MP0136.C1
Ravi NARASIMHAN	Confirmation No. 2582
Application No. 10/189,385	Group Art Unit: 2616
Filed: July 5, 2002	Examiner: Steven H. D. NGUYEN

For: MULTICARRIER TRANSMIT DIVERSITY

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. BOX 1450
Alexandria, VA 22313-1450

REPLY AND AMENDMENT UNDER 37 C.F.R. § 1.111

Sir:

In response to the Non-Final Office Action mailed May 30, 2007 (Paper No. 20070526) ("Office Action"), Applicant respectfully requests reconsideration of the application in view of the following Amendments and Remarks.

Amendments to the Claims are reflected in the listing of claims which begins on page 2.

Remarks begin on page 25.

Applicant believes that no extensions of time are required at this time. However, if extensions of time are necessary to prevent abandonment of this application, such extensions of time are hereby petitioned for under 37 C.F.R. §1.136(a).

Applicant believes that no further fees for net addition of claims are required at this time. Alternatively, any fees required for further extensions of time and any fees for the net addition of claims are hereby authorized to be charged to our Deposit Account No. 23-1951.

AMENDMENTS TO THE CLAIMS

Please **AMEND** claims 1, 3, 9, 11, 13, 15, 22, 24, 26, 28, 34, 36, 38, 40, 47, 49, 51, 56, 57, 59, 65, and 67 as shown below.

Please **CANCEL** claims 2, 10, 27, 35, 52, 58, and 66 as shown below.

The following is a complete list of all claims in this application.

1. (Currently Amended) A diversity transmitter, comprising:

a symbol encoder to encode data in a multicarrier frequency domain symbol;

a space frequency encoder responsive to said symbol encoder to derive and output a modified symbol based on the multicarrier frequency domain symbol and output the unmodified multicarrier frequency domain symbol;

a conversion unit responsive to said space frequency encoder to convert the unmodified multicarrier frequency domain symbol and the modified symbol into corresponding time domain counterparts; and

first and second RF transmission units to transmit the corresponding time domain counterparts of the unmodified multicarrier frequency domain symbol and the modified symbol respectively,

wherein the modified symbol comprises a re-ordered subcarrier complex conjugate of the multicarrier frequency domain symbol.

2. (Canceled)

3. (Currently Amended) The transmitter of Claim 1 ~~2~~, wherein the multicarrier frequency domain symbol comprises an OFDM encoded symbol.

4. (Original) The transmitter of Claim 3, wherein the OFDM encoded symbol is encoded in compliance with at least one of IEEE Standard 802.11a and IEEE Standard 802.11g supplements to the IEEE Standard 802.11 (1999).

5. (Original) The transmitter of Claim 1, wherein the first and second RF transmission units comprise an RF upconverter to modulate the corresponding time domain counterparts of the multicarrier frequency domain symbol and the modified symbol respectively onto first and second carrier signals, the first and second carrier signals operating in a common frequency channel.

6. (Original) The transmitter of Claim 1, wherein the corresponding time domain counterparts are transmitted by the first and second RF transmission units at approximately the same time.

7. (Original) The transmitter of Claim 1, wherein the corresponding time domain counterparts are transmitted by the first and second RF transmission units in a staggered sequence.

8. (Original) The transmitter of Claim 1, wherein said conversion unit comprises first and second conversion units to separately convert the multicarrier frequency domain symbol and the modified symbol into their respective corresponding time domain counterparts.

9. (Currently Amended) A diversity aware receiver, comprising:

an RF receiver capable of receiving a time domain signal, the time domain signal capable of defining at least one of a multicarrier frequency domain symbol and a modified symbol based on the multicarrier frequency domain signal;

a conversion unit responsive to said RF receiver to generate a composite signal based on the time domain signal, the composite signal including at least an incomplete analog sum of the multicarrier frequency domain symbol and the modified symbol; and

a space frequency decoder responsive to said conversion unit to decode the modified multicarrier frequency domain symbol portion of the composite signal and together with an unmodified multicarrier frequency domain symbol portion of the composite signal recover a corrected multicarrier frequency domain symbol from the composite signal,

wherein the modified symbol comprises a re-ordered subcarrier complex conjugate of the multicarrier frequency domain symbol.

10. (Canceled)

11. (Currently Amended) The receiver of Claim 9 ~~10~~, wherein the multicarrier frequency domain symbol comprises an OFDM encoded symbol.

12. (Original) The receiver of Claim 11, wherein the OFDM encoded symbol is encoded in compliance with at least one of IEEE Standard 802.11a and IEEE Standard 802.11g supplements to the IEEE Standard 802.11 (1999).

13. (Currently Amended) A diversity transceiver, comprising:

a receiver; and

a diversity transmitter, comprising:

a symbol encoder to encode data in a first multicarrier frequency domain symbol;

a space frequency encoder responsive to said symbol encoder to derive and output a first modified symbol based on the first multicarrier frequency domain signal and to output the unmodified multicarrier frequency domain symbol;

a conversion unit responsive to said space frequency encoder to convert the first multicarrier frequency domain symbol and the first modified symbol into corresponding time domain counterparts; and

first and second RF transmission units to transmit the corresponding time domain counterparts of the first multicarrier frequency domain symbol and the first modified symbol respectively,

wherein the first modified symbol comprises a re-ordered subcarrier complex conjugate of the first multicarrier frequency domain symbol.

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