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Narasimhan et al.

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(54) **MIMO-OFDM RECEIVER PROCESSING**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 39 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **12/179,830**

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Related U.S. Application Data

(63) Continuation of application No. 10/912,829, filed on Aug. 5, 2004, now Pat. No. 7,408,976.

(60) Provisional application No. 60/572,934, filed on May 19, 2004.

(51) **Int. Cl.**
H04B 1/69 (2006.01)

(52) **U.S. Cl.** **375/148**; 375/130

(58) **Field of Classification Search** 375/148, 375/347, 349, 299, 346, 348, 130; 455/132, 455/101; 324/614
See application file for complete search history.

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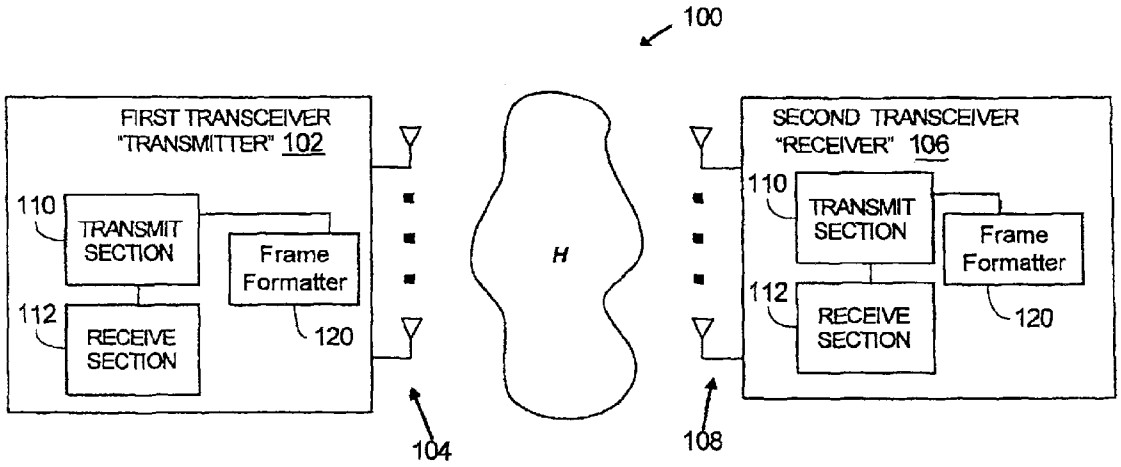
(Continued)

Primary Examiner—Khai Tran

(57) **ABSTRACT**

A receiver in a MIMO-OFDM system may process OFDM symbols received on a number (M_R) of receive antennas. The system may utilize a MIMO-OFDM frame format that includes additional long training OFDM symbols, for training additional antennas and for link adaptation, and a header with an additional SIGNAL symbol to indicate MIMO-OFDM-specific information.

40 Claims, 8 Drawing Sheets



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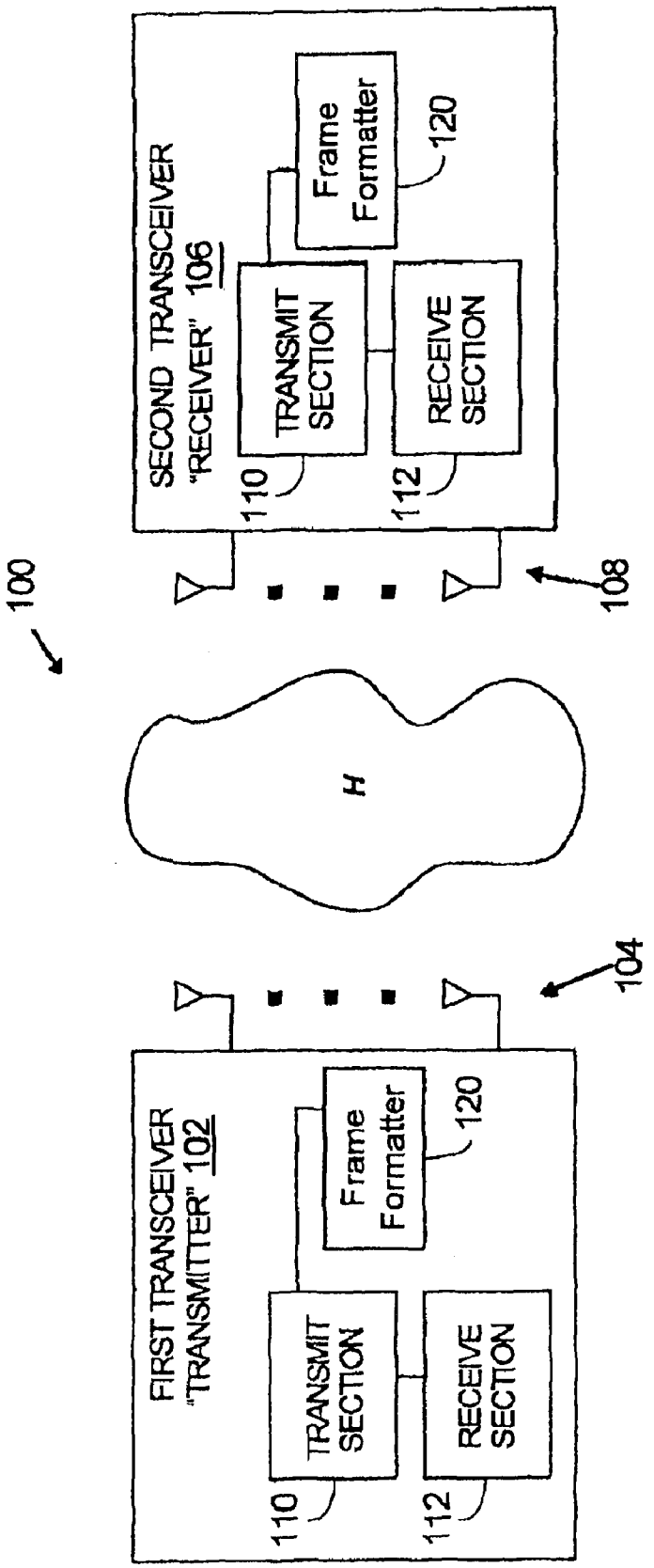

FIG. 1

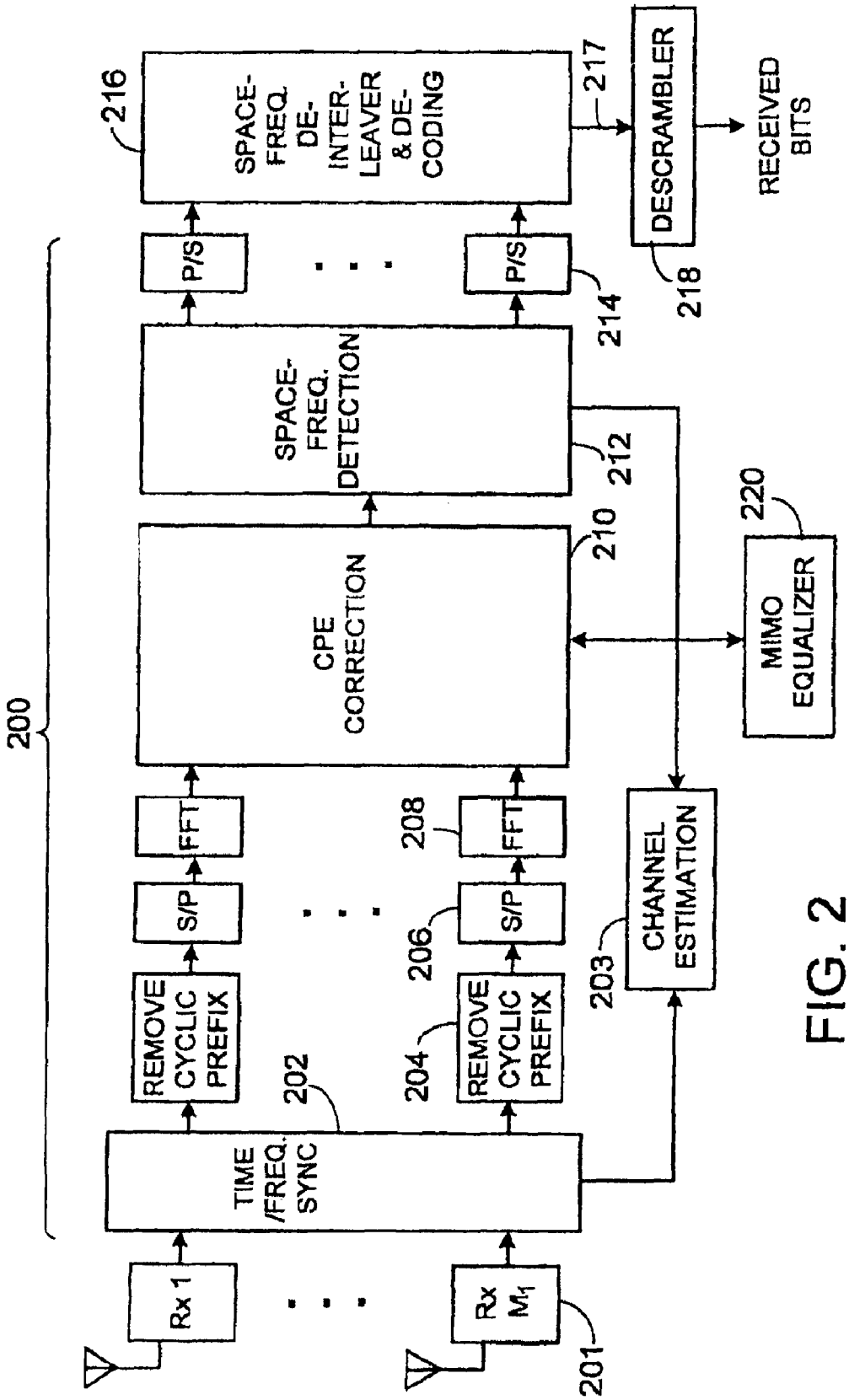

FIG. 2

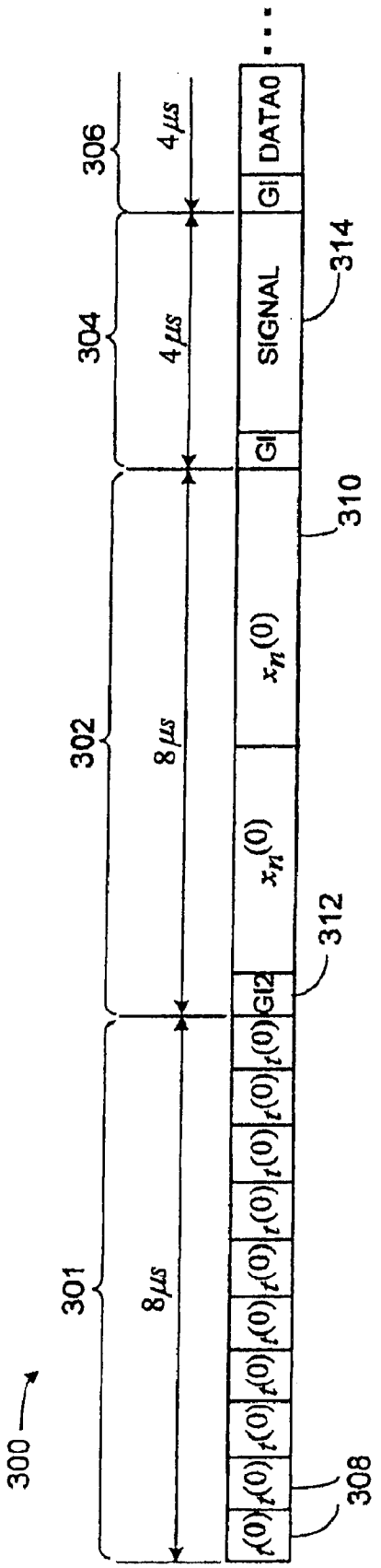

FIG. 3

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