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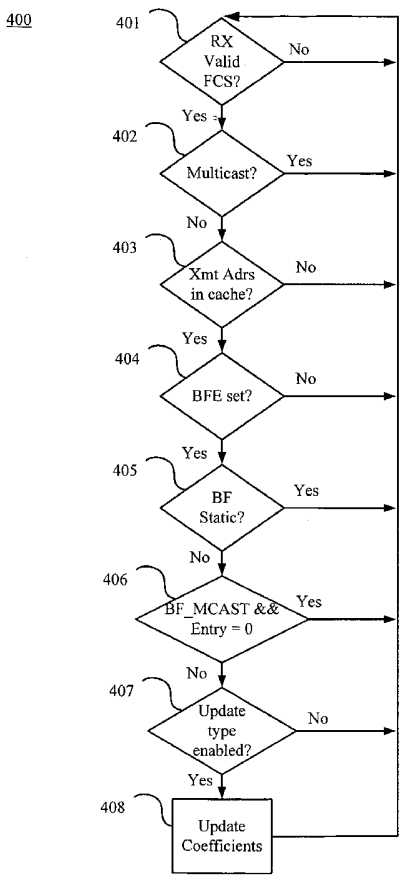
(54) Title: WIRELESS COMMUNICATION USING BEAM FORMING AND DIVERSITY



(57) Abstract: A method and apparatus for wirelessly transmitting real-time data streams is described. To ensure continuous data flow, fast diversity and slow diversity can be used. Fast diversity chooses a receive antenna based on received signal parameters, such as signal strength, during the transmission header and prior to information transfer. Slow diversity stores received signal parameters from previous packets, associates the parameters with a selected antenna, and uses the parameter history to denote a "default" antenna. Additionally, receive and/or transmit beam forming can be used to maintain continuous communication between stations. Beam forming, which combines antenna signals to maximize performance, is possible when at least two transmit/receive signal processing chains are available.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 05/27171

A. CLASSIFICATION OF SUBJECT MATTER

US: 455/277.1
IPC: H04B 1/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
US: 455/272, 277.1, 278.1; 375/267; 370/334; 342/457
IPC: H04B 1/06; H01Q 3/22

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/0164963 A1 (TEHRANI et al.) Nov. 2002 07 (07.11.2002) Fig. 3, Paragraphs [0020, 0029-0030, 0101-0104]	16
X --- Y	US 2003/0228857 A1 (Maeki) Dec. 2003 11 (11.12.2003) Abstract; figs. 2, 3, 12; Paragraphs [0026-0034, 0097, 0108, 0109]	17-18 ---- 19-20
Y	US 6,031,877 A (SAUNDERS) Feb. 2000 29 (29.02.2000) Abstract; Fig. 1; col. 5, lines 26-42; claims 1, 10.	1, 17-20
A	US 6,400,780 B1 (RASHID-FARROKHI et al.) Jun. 2002 04 (04.06.2004) Figs. 2, 3; col. 3, lines 25-35; col. 5, lines 1-60	1-15
A	US 6,453,177 B1 (WONG et al.) Sep. 2002 17 (17.09.2002) Figs. 3-7; col. 5, line 26 - col. 8, linec54; col. 10, lines 17-63	1-15
A	US 6,346,910 B1 (ITO) Feb. 2002 12 (12.02.2002) Figs. 1-3; col. 6, line 36 - col. 7, line 13; col. 11, lines 7-41	1-25
A	US 6,639,551 B2 (LI et al.) Oct. 2003 28 (28.10.2003) Fig. 3; The entire documment	1-25
A	US 6,347,234 B1 (SCHERZER) Feb. 2002 12 (12.02.2002) Fig. 1-5, 9; The entire documment	1-25

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