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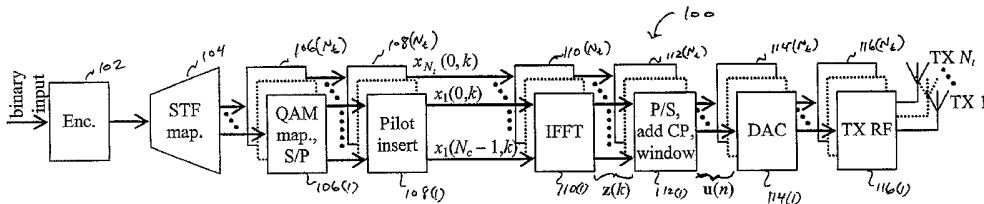
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(54) Title: PILOT TONES IN A MULTI-TRANSMIT OFDM SYSTEM USABLE TO CAPTURE TRANSMITTER DIVERSITY BENEFITS



(57) Abstract: In a wireless transmitter (100) having a plurality of spatial streams differentiable at a receiver (200), wherein data is encoded (102) and transmitted over a communication channel with pilot tones (108) to provide the receiver with information about the effects of the communication channel and/or receiver impairments on the spatial streams transmitted, the benefits can be provided by identifying a plurality of symbol periods within which symbols representing some of the encoded data re to be transmitted, identifying pilot tone values for the plurality of symbol periods, wherein the identified pilot tone values are such that the receiver, when receiving at least some of the pilot tones having the identified pilot tone values, is provided with signals enabling the receiver to characterize the communication channel and/or transmitter impairments and/or receiver impairments to obtain transmit stream diversity gain, and transmitting the symbols and the pilot tones over the plurality of spatial streams for the plurality of symbol periods.



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INTERNATIONAL SEARCH REPORT

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B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 375/146,260,267,299; 370/208,210 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) EAST Key Words Search (pilot with (symbol or subcarrier); non\$1zero near3 pilot; MIMO or diversity or antennae or antennas)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/0122381 A1 (WU et al) 05 September 2002 (05.09.2002), paragraphs [0026], [0027], [0038], and [0040] to [0042].	1-28
A	US 2002/0136176 A1 (ABETA et al) 26 September 2002 (26.09.2002), paragraphs [0031] to [0037].	1-4, 14-17 and 27-28
A	US 2003/0072254 A1 (MA et al) 17 April 2003 (17.04.2003), paragraphs [0061] to [0064] and [0070].	1-28
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