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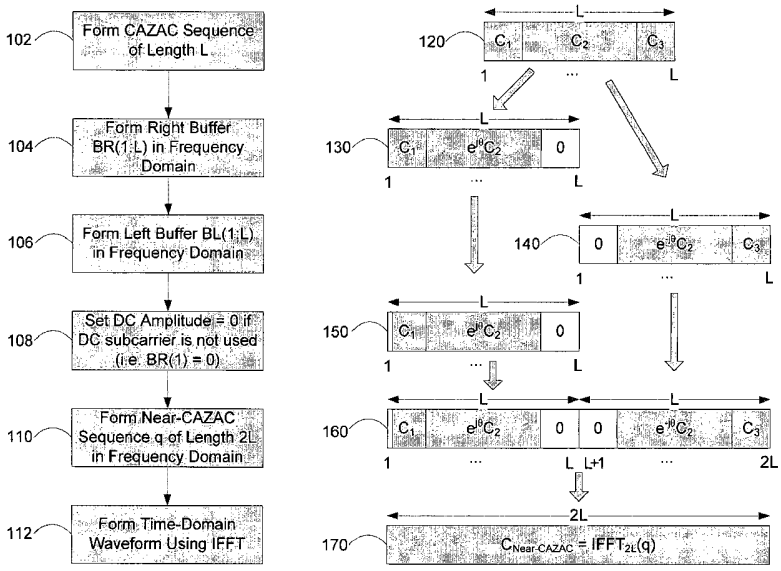
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[Continued on next page]

(54) Title: TRANSMISSION AND RECEPTION OF REFERENCE PREAMBLE SIGNALS IN OFDMA OR OFDM COMMUNICATION SYSTEMS



(57) Abstract: Techniques for generating preamble sequences for OFDM and OFDMA communication systems based on CAZAC sequences (120) with desired properties of constant amplitudes (CA) and zero autocorrelation (ZAC). Such preamble sequences may be used for synchronization and identification of individual transmitters. For example the OFDMA symbol is constructed using a CAZAC sequence in the frequency-domain (160) and the resulting time-domain waveform is a near-CAZAC sequence (170).

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/26766

A. CLASSIFICATION OF SUBJECT MATTER
IPC(7) : H04L 7/00, 7/04, 27/06; H03D 1/00
US CL : 375/343, 354, 355, 362, 365, 366
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)
U.S. : 375/343, 354, 355, 362, 365, 366

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)
IEEE, GOOGLE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,438,183 B (TAURA et al) 20 August 2002 (20.08.2002), column 1, lines 14-63, column 3, lines 14-26	1
Y	US 6,438,183 B (TAURA et al) 20 August 2002 (20.08.2002), column 1, lines 14-63, column 3, lines 14-26	2-3
A	US 2002/0086707 A (STRUHSAKER et al) 04 July 2002 (04.07.2002), paragraph 67	1-22
A	US 5,450,456 (MUELLER) 09 September 1995 (09.12.1995), column 4, lnes 1-47	1-22

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