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(54) Title: SOFTER AND SOFT HANDOFF IN AN ORTHOGONAL FREQUENCY DIVISION WIRELESS COMMUNICATION SYSTEM

(57) Abstract: Transmission patterns for pilot symbols transmitted from a mobile station or base station are provided. The patterns may be selected according to a location of the mobile station with respect to one or more antennas are provided. In some aspects, the pattern may be selected based upon the distance between the mobile station and the one or more antennas. In other aspect, the pattern may be based upon whether the mobile station is in handoff.



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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/19434

## A. CLASSIFICATION OF SUBJECT MATTER

IPC: H04Q 7/20( 2006.01)

USPC: 455/436,440,447,446

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. : 455/436,440,447,446

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 --- Y	US 6,751,444 B1 (MEIYAPPAN) 15 June 2004 (15.06.2004), Fig. 1, 5, 12. Columns 1-13	25, 28-30, 34, 36, 37, 38, 41, 43, 44 ----- 1-9, 11-14, 17-19, 23, 24, 45-48, 52-61, 63-67, 70-72, 74
Y	US 6,038,450 A (BRINK et al) 14 March 2000 (14.03.2000) Fig. 1. Columns 1-12	1-9, 11-14, 17-19, 23, 24, 45-48, 52-61, 63-67, 70-72, 74
Y	US 2003/0087640 A1 (ROTSTEIN et al) 08 May 2003 (08.05.2003) paragraphs [004, 0012, 0013]	15, 16, 62, 73
Y	US 6,061,337 A (LIGHT et al) 09 May 2000 (09.05.2000) Columns 1-8	27, 31, 33, 42



Further documents are listed in the continuation of Box C.



See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent family

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,388,998 B1 (KASTURIA) 14 May 2002 (14.05.2002) Column 1-4, Figures 1-2	26, 32, 39, 40
Y	US 6,337,983 B1 (BONTA et al) 08 January 2002 (08.01.2002) Column 7	20, 21, 49, 50
Y	US 7,069,009 B2 (LI et al) 27 June 2006 (27.06.2006) Column 8, lines 17 to 22	10