

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
23 February 2006 (23.02.2006)

PCT

(10) International Publication Number
WO 2006/019695 A3

(51) International Patent Classification:
H04B 1/69 (2006.01) *H04B 1/10* (2006.01)
H04B 7/10 (2006.01)

(21) International Application Number:
PCT/US2005/024567

(22) International Filing Date: 12 July 2005 (12.07.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/895,172 20 July 2004 (20.07.2004) US

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(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ,
OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,
SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,
RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

(88) Date of publication of the international search report:
6 July 2006

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: CHANNEL ESTIMATION SYSTEM FOR A WIDEBAND CODE DIVISION MULTIPLE ACCESS (WCDMA) COM-
MUNICATION SYSTEM

(57) Abstract: A channel estimation system is disclosed. The channel estimation system comprises a first memory element having a write function and a plurality of read functions, a pilot signal extraction element adapted to receive a first output of the first memory element, a programmable averaging element adapted to receive the output of the pilot signal extraction element, and a combiner adapted to receive a second output of the memory element and the output of the programmable averaging element, wherein the second output of the first memory element is delayed with respect to the first output of the first memory element.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/24567

A. CLASSIFICATION OF SUBJECT MATTER
 IPC: **H04B 1/69(2006.01),7/10(2006.01),1/10(2006.01)**

 USPC: 375/149,347,349
 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. : Please See Continuation Sheet

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

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 6,192,040 (JALLOUL et al) 20 February 2001 (20.02.2001) Column 1, lines 28 - 32, column 4, lines 46 - 50, column 4, lines 1 - 14, column 5, lines 5 - 21, column 5, lines 39 - 51, column 2, lines 12 - 19, column 1, lines 40 - 44, column 4, lines 44 - 61, column 1, lines 60 - 63	1 - 3, 10, 17 -----
Y	US 6,650,694 B1 (BROWN et al) 18 November 2003 (18.11.2003) figure 1, column 6, lines 6 - 15	5-9,11,12,14-16,18 - 2227
Y	US 5,596,607 (LARSSON et al) 21 January 1997 (21.01.1997) column 7, lines 46 - 52	5, 7, 8, 11,14, 27
Y	US 2001/0031016 A1 (SEAGRAVES) 18 October 2001 (18.10.2001)	18
A	US 2003/0095531A1 (SORENSEN et al) 22 May 2003 (22.05.2003)	
A	US 2003/0142731 A1 (BERGEL) 31 July, 2003 (31.07.2003)	

Further documents are listed in the continuation of Box C. See patent family annex.

Special categories of cited documents:		Description
"A" document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"O" document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search 17 March 2006 (17.03.2006)	Date of mailing of the international search report 19 APR 2006
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer <i>Mohammad Ghayour</i> Mohammad Ghayour Telephone No. (703)305-3900

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/24567

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,647,055 B2 (KUO) 11 November 2003 (11.11.2003)	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/24567

Continuation of B. FIELDS SEARCHED Item 1:
375/149,347,349,150,148,147,144,346,340,355
370/342,325,441,320
398/78