

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
11 June 2009 (11.06.2009)

PCT

(10) International Publication Number
WO 2009/072960 A3

- (51) International Patent Classification:
H04B 7/06 (2006.01)
- (21) International Application Number:
PCT/SE2008/051155
- (22) International Filing Date: 9 October 2008 (09.10.2008)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/991,849 3 December 2007 (03.12.2007) US
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IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
23 July 2009

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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID,

(54) Title: PRECODER FOR SPATIAL MULTIPLEXING, MULTIPLE ANTENNA TRANSMITTER

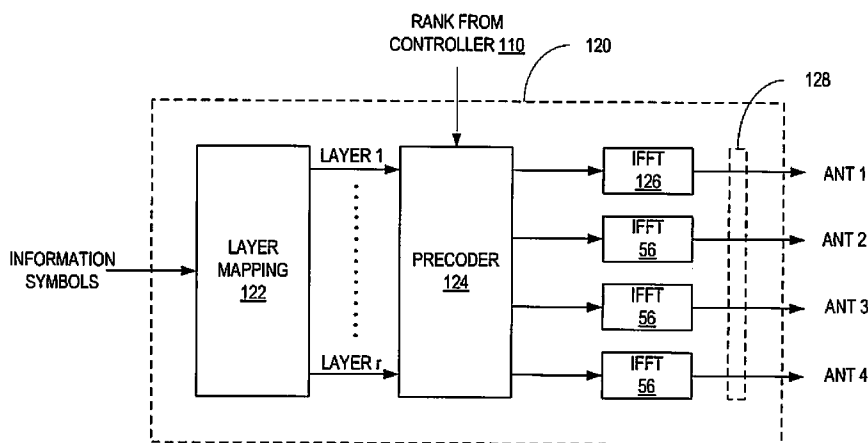


FIG. 2

(57) Abstract: A transmitter (100) selects a transmission rank and chooses a predetermined precoder sequence for the selected transmission rank comprising one or more precoding filters derived from a single generator matrix. During transmission, a precoder (124) spatially codes data for transmission to a remote device using different ones of the precoding filters during different precoding intervals in a precoding period according to the selected precoder sequence.

WO 2009/072960 A3

INTERNATIONAL SEARCH REPORT

International application No

PCT/SE2008/051155

A. CLASSIFICATION OF SUBJECT MATTER INV. H04B7/06				
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) H04B				
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 practical, search terms used) EPO-Internal				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	"3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Physical Channels and Modulation (Release 8)" 3GPP DRAFT; 36211-120, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, no. 20070600, 5 July 2007 (2007-07-05), XP050088053 page 13; figure 5 pages 14-16 <div style="text-align: center;">----- -/--</div>	1-42		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.				
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Date of the actual completion of the international search <div style="text-align: center; font-weight: bold;">25 May 2009</div>		Date of mailing of the international search report <div style="text-align: center; font-weight: bold;">02/06/2009</div>		
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer <div style="text-align: center; font-weight: bold;">Yang, Betty</div>		

INTERNATIONAL SEARCH REPORT

International application No
PCT/SE2008/051155

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>TEXAS INSTRUMENTS: "Further Details on Codebook-Based Pre-coding for E-UTRA" 3GPP DRAFT; R1-070270 TI MIMO PRECODING, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, vol. RAN WG1, no. Sorrento, Italy; 20070115, 10 January 2007 (2007-01-10), XP050104305 the whole document</p>	1-42