

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
10 May 2007 (10.05.2007)

PCT

(10) International Publication Number
WO 2007/053842 A3(51) International Patent Classification:
H04L 27/26 (2006.01)**Michael, Mao** [US/US]; 8514 Rumex Lane, San Diego, California 92129 (US).(21) International Application Number:
PCT/US2006/060413(74) Agents: **OGROD, Gregory, D.** et al.; 5775 Morehouse Drive, San Diego, California 92121 (US).

(22) International Filing Date: 31 October 2006 (31.10.2006)

(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, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, 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, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/264,532 31 October 2005 (31.10.2005) US(71) Applicant (for all designated States except US): **QUALCOMM Incorporated** [US/US]; 5775 Morehouse Drive, San Diego, California 92121 (US).

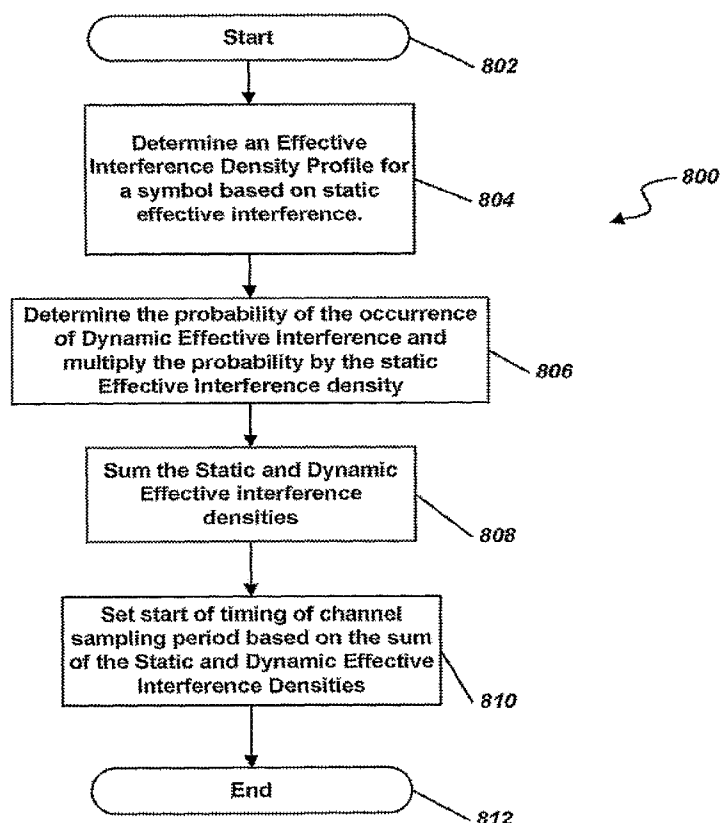
(72) Inventors; and

(75) Inventors/Applicants (for US only): **VRCELJ, Bojan** [YU/US]; 7532 Charmant Drive, #335, San Diego, California 92122 (US). **LING, Fuyun** [US/US]; 17264 Sangallo Lane, San Diego, California 92127 (US). **WANG,**

(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,

[Continued on next page]

(54) Title: METHODS AND APPARATUS FOR DETERMINING TIMING IN A WIRELESS COMMUNICATION SYSTEM



(57) Abstract: Methods and apparatus for setting timing of sampling of one or more symbols. The disclosed methods account for at least three types of effective interference (EI) and are used to set the timing of a sampling window for sampling received symbols. The methods includes setting timing based on determining an energy density function accounting for both static and dynamic EI, determining the minimum of a total energy profile and sliding the sampling window to ensure that the minimum point is at a predetermined point, and determining and using a composite energy profile accounting for short term and long term fading effects. The disclosed apparatus include a transceiver employing one or more of the disclosed methods for setting timing when receiving the symbols.

WO 2007/053842 A3



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:
16 August 2007

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))*

(48) Date of publication of this corrected version:
3 April 2008

(15) Information about Correction:
see Notice of 3 April 2008