

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
20 March 2008 (20.03.2008)

PCT

(10) International Publication Number
WO 2008/033985 A2

(51) International Patent Classification: **Not classified**

(21) International Application Number:

PCT/US2007/078369

(22) International Filing Date:

13 September 2007 (13.09.2007)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/845,268 14 September 2006 (14.09.2006) US

60/828,051 3 October 2006 (03.10.2006) US

11/853,704 11 September 2007 (11.09.2007) 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, 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, 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, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

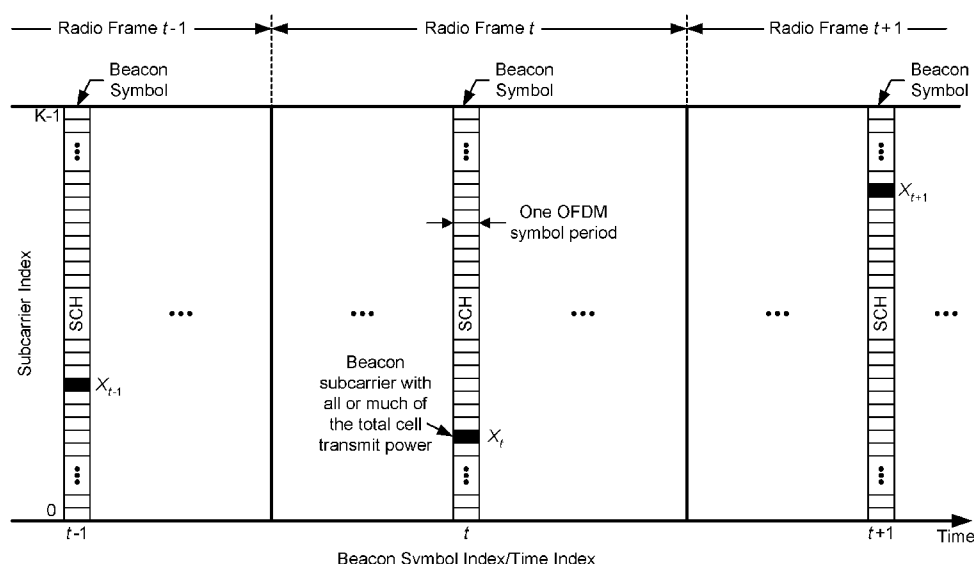
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, 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).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

[Continued on next page]

(54) Title: **BEACON ASSISTED CELL SEARCH IN A WIRELESS COMMUNICATION SYSTEM**



(57) Abstract: Techniques for transmitting synchronization signals to assist user equipments (UEs) perform cell searches are described. In one design, a base station for a cell may generate and transmit a primary synchronization signal and a secondary synchronization signal, which may be used by the UEs for initial cell search at power up. The base station may also generate and transmit one or more beacon signals, which may be used by the UEs for neighbor cell search to detect for neighbor cells. The number of beacon signals to transmit and the set of subcarriers usable for each beacon signal may be determined based on the system bandwidth. Each beacon signal may be mapped to one subcarrier in the set of subcarriers in each beacon symbol period. This one subcarrier may be determined based on a beacon hopping pattern or a beacon code and may be dependent on a cell identifier (ID).

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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *without international search report and to be republished upon receipt of that report*