



(51) International Patent Classification:

H04W 72/12 (2009.01) H04W 52/30 (2009.01)
H04W 88/06 (2009.01)

(21) International Application Number:

PCT/US2013/056455

(22) International Filing Date:

23 August 2013 (23.08.2013)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/692,548	23 August 2012 (23.08.2012)	US
61/726,262	14 November 2012 (14.11.2012)	US
61/808,013	3 April 2013 (03.04.2013)	US
61/821,154	8 May 2013 (08.05.2013)	US

(71) Applicant: **INTERDIGITAL PATENT HOLDINGS, INC.** [US/US]; 200 Bellevue Parkway, Suite 300, Wilmington, DE 19809 (US).

(72) Inventors: **MARINIER, Paul**; 1805 Stravinski, Brossard, QC J4X 2J7 (CA). **TOOHER, J., Patrick**; 1200 Pauline-Julien, unit 35, Montreal, QC H2J 0A2 (CA). **PELLETIER, Ghyslain**; 2055 rue De Valmont, Chomedey, Laval, QC H7M 3J3 (CA). **PANI, Diana**; 730 Lusignan, Apt. 4, Montreal, QC H3C 1Y9 (CA).

(74) Agents: **ROCCIA, Vincent, J.** et al.; Condo Roccia LLP, One Liberty Place, Suite 2200, 1650 Market Street, Philadelphia, PA 19103 (US).

(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, BN, BR, BW, BY, BZ, CA, CH, CL, 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, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: PROVIDING PHYSICAL LAYER RESOURCES TO DIFFERENT SERVING SITES

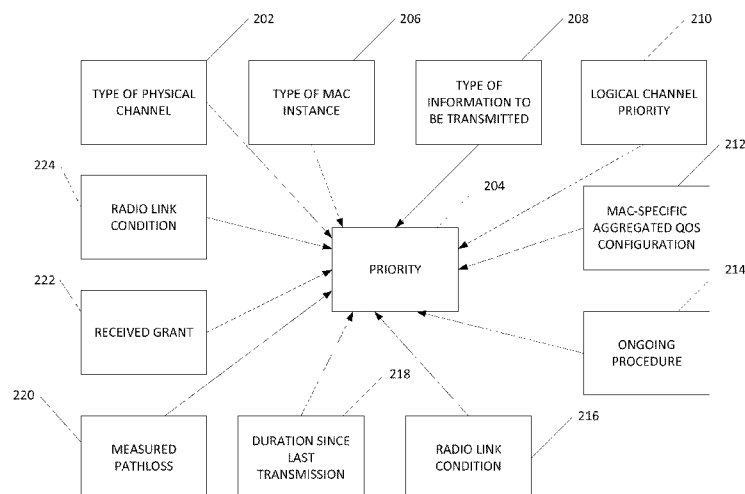


FIG. 2

(57) Abstract: Methods and systems are disclosed for providing physical layer resources to a plurality of medium access control (MAC) instances that are associated with different serving sites that are independently scheduled. For example, a WTRU may utilize a first physical layer configuration for transmitting to a first serving site associated with a first MAC instance. The WTRU may utilize a second physical layer configuration for transmitting to a second serving site associated with a second MAC instance. The WTRU may prevent conflicts between transmission requests from the first MAC instance and transmission requests from the second MAC instance. For example, preventing the conflicts may include utilizing one or more of time segregation or frequency segregation for transmissions associated with the first MAC instance and transmissions associated with the second MAC instance.