



(51) International Patent Classification:
H04L 5/00 (2006.01) *H04W 72/00* (2009.01)

(21) International Application Number:
PCT/EP2010/069630

(22) International Filing Date:
14 December 2010 (14.12.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/286,335 14 December 2009 (14.12.2009) US

(71) Applicant (for all designated States except US): **TELEFONAKTIEBOLAGET L M ERICSSON (PUBL)** [SE/SE]; S-16483 Stockholm (SE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BALDEMAIR, Robert** [AT/SE]; Ängkärrsgatan 3, S-17170 Solna (SE). **GERSTENBERGER, Dirk** [DE/SE]; Birger Jarlsgatan

113C, S-11356 Stockholm (SE). **LARSSON, Daniel** [SE/SE]; Storgatan 50, S-17152 Solna (SE). **WIEMANN, Henning** [DE/DE]; Kelmbergweg 7, 52080 Aachen (DE).

(74) Agent: **SCHWARZ, Markku**; Thomas-Wimmer-Ring 15, 80539 München (DE).

(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, 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, 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, PE, PG, PH, PL, PT, RO, RS, RU, 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,

[Continued on next page]

(54) Title: METHODS AND DEVICES FOR DATA TRANSMISSION VIA A PLURALITY OF CARRIERS

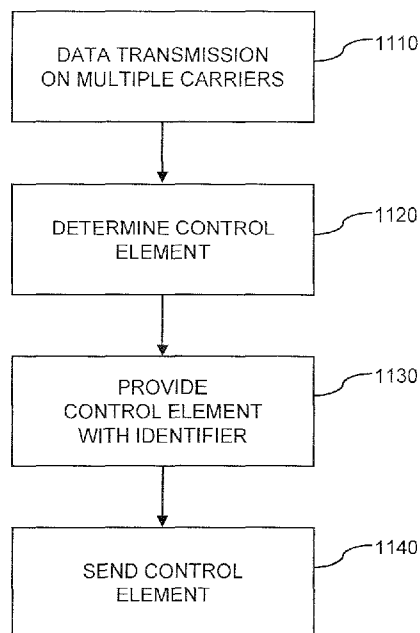


FIG. 11

(57) Abstract: A communication system includes a transmitting communication device (310) and a receiving communication device (320). The transmitting communication device (310) determines a control element, e.g., a control element of a Media Access Control protocol, associated with one of the carriers and provides the control element with an identifier specifying the carrier the control element is associated with. The transmitting communication device (310) sends the control element with the identifier on one of the carriers to the receiving communication device (320). The receiving communication device (320) receives the control element and determines, from the identifier received with the control element, the carrier the control element is associated with. Further, the receiving communication device (320) determines, on the basis of parameters indicated by the control element, a data transmission property of the carrier the control element is associated with.



GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, 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))*