(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
18 June 2009 (18.06.2009)

PCT

(10) International Publication Number
WO 2009/075630 A1

(51) International Patent Classification:
H04W 72/14 (2009.01) *H04W 72/12* (2009.01)

(21) International Application Number:
PCT/SE2008/050524

(22) International Filing Date: 7 May 2008 (07.05.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/012,510 10 December 2007 (10.12.2007) US

(71) Applicant *(for all designated States except US)*: **TELEFONAKTIEBOLAGET L M ERICSSON (PUBL)** [SE/SE]; S-164 83 Stockholm (SE).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **PARKVALL, Stefan** [SE/SE]; Västmannagatan 53, S-113 25 Stockholm (SE). **ASTELY, David** [SE/SE]; Stobaeusvägen 22, S-168 56 Bromma (SE).

(74) Agent: **HASSELGREN, Joakim**; Ericsson AB, Patent Unit LTE, S-164 80 Stockholm (SE).

(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, 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, 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).

[Continued on next page]

(54) Title: IMPROVED SCHEDULING IN A CELLULAR SYSTEM

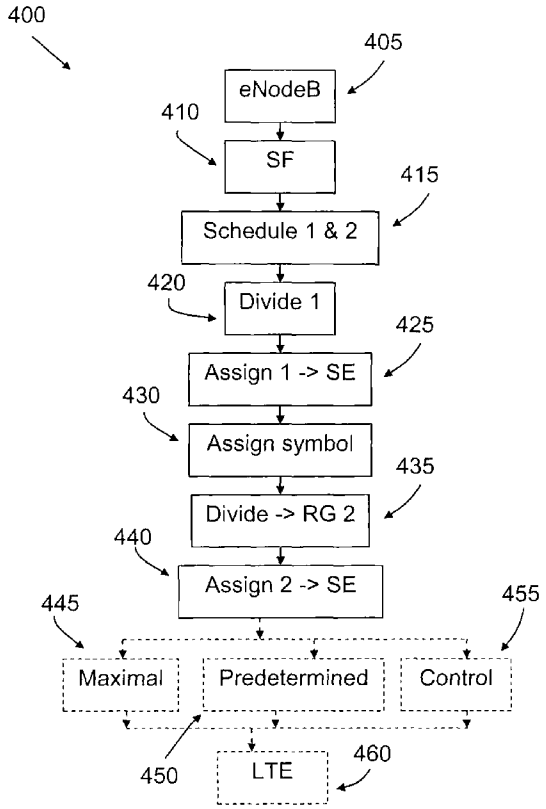


Fig 4

(57) Abstract: In a cellular system (100), transmissions are made (410) in subframes (310) which comprise subelements. The method is used for scheduling (415) first and second channels in a subframe, and comprises: • dividing (420) the transmission resources for the first channel into a first set of resource groups, • assigning (425) the resource groups of the first set to subelements in the subframe (310) in a predetermined fashion, • assigning (430) a symbol value to all subelements (210) in the subframe (310) which have not been assigned a resource groups of the first set, • dividing (435) the transmission resources for the second channel into a second set of resource groups, • assigning (440) the resource groups of the second set to subelements in the subframe by means of said symbol values.

WO 2009/075630 A1

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*