

(51) International Patent Classification:
H04L 5/00 (2006.01)(21) International Application Number:
PCT/US2017/051904(22) International Filing Date:
15 September 2017 (15.09.2017)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/400,049 26 September 2016 (26.09.2016) US
15/704,733 14 September 2017 (14.09.2017) US(71) Applicant: **QUALCOMM INCORPORATED** [US/US];
Attn: International IP Administration, 5775 Morehouse Drive,
San Diego, California 92121-1714 (US).(72) Inventors: **HOSSEINI, Seyedkianoush**; 5775 Morehouse
Drive, San Diego, California 92121-1714 (US). **CHEN,
Wanshi**; 5775 Morehouse Drive, San Diego, California
92121-1714 (US). **GAAL, Peter**; 5775 Morehouse Drive,
San Diego, California 92121-1714 (US). **SUN, Jing**; 5775
Morehouse Drive, San Diego, California 92121-1714 (US).
PATEL, Shimmam Arvind; 5775 Morehouse Drive, San
Diego, California 92121-1714 (US).(74) Agent: **TONKINSON, Michael, S.**; Holland & Hart LLP,
P.O. Box 11583, Salt Lake City, Utah 84147 (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, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP,
KR, KW, KZ, LA, LC, LK, LR, LS, 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, ST, 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))

(54) Title: DYNAMIC TIME DIVISION DUPLEXING

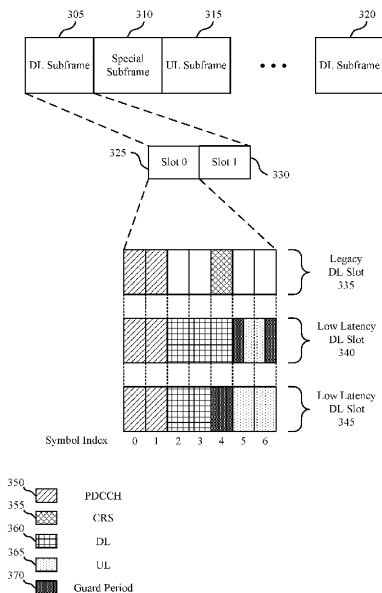


FIG. 3

(57) Abstract: Methods, systems, and devices for wireless communication are described. A base station may allocate resources for communication with a user equipment (UE). The resources may include one or more subframes, and each subframe may include one or more shortened transmission time intervals (sTTIs). Each sTTI may be assigned a transmission direction according to a time division duplex (TDD) pattern. Based on traffic needs and/or interference from other UEs and/or base stations, the base station may determine to modify the TDD pattern used for communication. Accordingly, a base station may transmit an indicator in a control message or control region of a TTI or sTTI, to indicate to users that a transmission direction of an sTTI in the TDD pattern is being changed. Subsequently, a user may communicate with the base station according to the reconfigured TDD pattern.