

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
3 September 2009 (03.09.2009)

PCT

(10) International Publication Number
WO 2009/108808 A8

- (51) International Patent Classification:
H04L 1/18 (2006.01)
- (21) International Application Number:
PCT/US2009/035341
- (22) International Filing Date:
26 February 2009 (26.02.2009)
- (25) Filing Language:
English
- (26) Publication Language:
English
- (30) Priority Data:
61/031,612 26 February 2008 (26.02.2008) US
61/075,452 25 June 2008 (25.06.2008) US
12/392,765 25 February 2009 (25.02.2009) US
- (71) Applicant (for all designated States except US): **QUALCOMM Incorporated** [US/US]; ATTN: INTERNATIONAL IP ADMINISTRATION, 5775 Morehouse Drive, San Diego, California 92121 (US).

- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **ZHANG, Danlu** [CN/US]; 5775 Morehouse Drive, San Diego, California 92121 (US). **YAVUZ, Mehmet** [US/US]; 5775 Morehouse Drive, San Diego, California 92121 (US). **MOHANTY, Bibhu, P.** [US/US]; 5775 Morehouse Drive, San Diego, California 92121 (US). **GHOLMIEH, Aziz** [US/US]; 5775 Morehouse Drive, San Diego, California 92121 (US).
- (74) Agent: **PATEL, Rupit, M.**; Attn: International IP Administration, 5775 Morehouse Drive, San Diego, CA 92121 (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, 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,

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR LINK CONTROL IN A WIRELESS COMMUNICATION SYSTEM

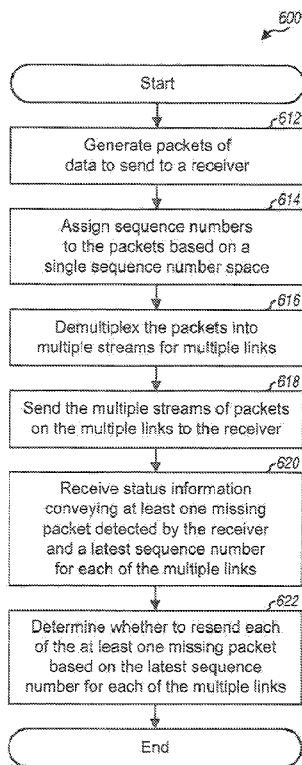


FIG. 6

(57) Abstract: Techniques for controlling transmission of packets on multiple links are described. In one design, a transmitter may generate packets of data for a receiver, assign the packets with sequence numbers from a single sequence number space, demultiplex the packets into multiple streams for multiple links, and send each stream of packets on the associated link to the receiver. The receiver may receive some packets in error, and the correctly received packets may be out of order. In one design, the receiver may maintain the largest sequence number of correctly received packets for each link. After detecting at least one missing packet, the receiver may send status information conveying the missing packet(s) and the largest sequence numbers for all links to the transmitter. The transmitter may use the largest sequence numbers for all links and its packet-to-link mapping to determine whether to quickly resend each missing packet or wait.



WO 2009/108808 A8



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, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- 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))

(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, MK, 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).

Published:

- with international search report (Art. 21(3))

(48) Date of publication of this corrected version:

30 September 2010

(15) Information about Correction:

see Notice of 30 September 2010

Declarations under Rule 4.17: