

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
25 March 2004 (25.03.2004)

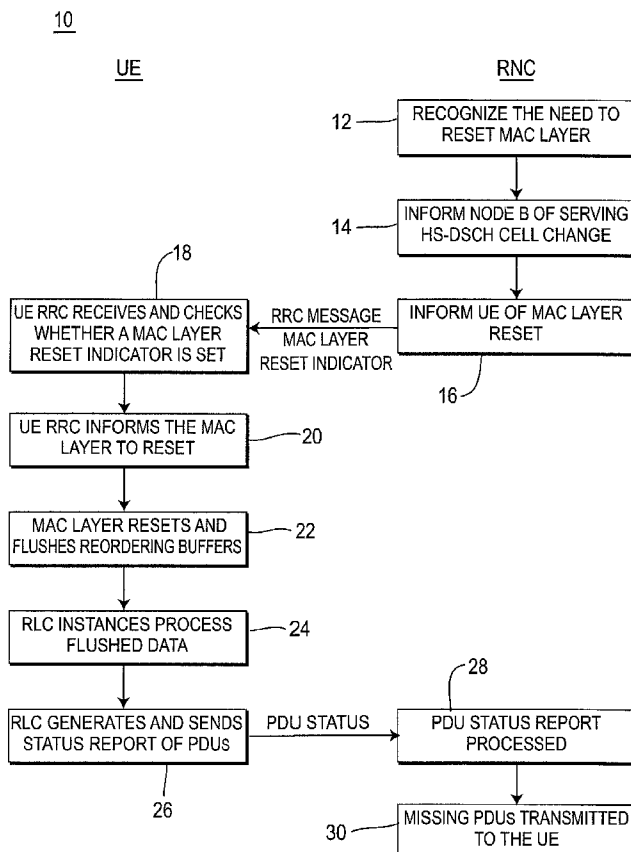
PCT

(10) International Publication Number
WO 2004/025842 A3

- (51) International Patent Classification⁷: **H04L 12/56**, (72) Inventors: **TERRY, Steven, E.**; 15 Summit Avenue, Northport, NY 11768 (US). **CHAO, Yi-Ju**; 15345 Woodside Lane, Minnetonka, MN 55345 (US).
- (21) International Application Number: PCT/US2003/028360 (74) Agent: **DONCH, John, Jr., C.**; Volpe and Koenig, P.C., United Plaza, Suite 1600, 30 S. 17th Street, Philadelphia, PA 19103 (US).
- (22) International Filing Date: 10 September 2003 (10.09.2003) (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/410,737 12 September 2002 (12.09.2002) US
10/616,331 9 July 2003 (09.07.2003) US
- (71) Applicant: **INTERDIGITAL TECHNOLOGY CORPORATION** [US/US]; 300 Delaware Avenue, Suite 527, Wilmington, DE 19801 (US). (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

[Continued on next page]

(54) Title: SYSTEM FOR EFFICIENT RECOVERY OF NODE-B BUFFERED DATA FOLLOWING MAC LAYER RESET



(57) Abstract: A method and system for the UE and RNC to reduce transmission latency and potentially prevent loss of PDUs upon a MAC layer reset. UE generation of the status PDU is coupled with the MAC layer reset. The RNC generates a message with a MAC reset indication (16). Following the MAC layer reset all PDUs stored in the UE MAC layer reordering buffers (22) are flushed to RLC entities (24) and then processed by RLC entities prior to the generation of a PDU status report (26). The PDU status report provides to the RNC the status of all successfully received PDUs. Upon reception of a PDU status report in the RNC (28), missing PDUs are realized and retransmitted to the UE (30).



ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
15 July 2004

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.