

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
17 June 2004 (17.06.2004)

PCT

(10) International Publication Number
WO 2004/051872 A2

- (51) International Patent Classification⁷: **H04B**
- (21) International Application Number:
PCT/US2003/038243
- (22) International Filing Date: 2 December 2003 (02.12.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/430,854 4 December 2002 (04.12.2002) US
60/438,560 6 January 2003 (06.01.2003) US
- (71) Applicant: **INTERDIGITAL TECHNOLOGY CORPORATION** [US/US]; 300 Delaware Avenue, Suite 527, Wilmington, DE 19801 (US).
- (72) Inventors: **DICK, Stephen, G.**; 61 Bobann Drive, Nesconset, NY 11767 (US). **RUDOLF, Marian**; 2046

Rue de la Visitation, Montreal, Québec H2L 3C7 (CA).
MILLER, James, M.; 18 Louisburg Square, Verona, NJ 07044 (US).

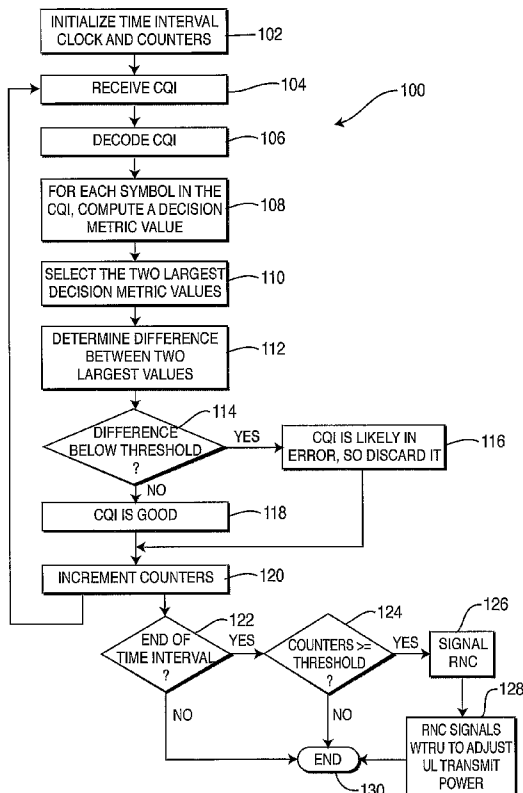
(74) Agent: **GELMAN, Steven, J.**; Volpe and Koenig, P.C., United Plaza, Suite 1600, 30 South 17th Street, Philadelphia, PA 19103 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, 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.

(84) Designated States (*regional*): ARIPO patent (BW, 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: RELIABILITY DETECTION OF CHANNEL QUALITY INDICATOR (CQI) AND APPLICATION TO OUTER LOOP POWER CONTROL



(57) Abstract: A method for improving the reliability of a channel quality indicator (CQI) message in a wireless communications network begins with receipt of the CQI message. The CQI message is then decoded, and a decision metric value for each symbol in the CQI message is computed. A largest decision metric value and a second largest decision metric value for the CQI message are determined. The reliability of the CQI message can be determined by comparing the two largest decision metric values. This method may be applicable to high-speed downlink packet access in time division duplex, frequency division duplex, or other modes of transmission.



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).

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.

Published:

- *without international search report and to be republished upon receipt of that report*