

(19) World Intellectual Property Organization
International Bureau



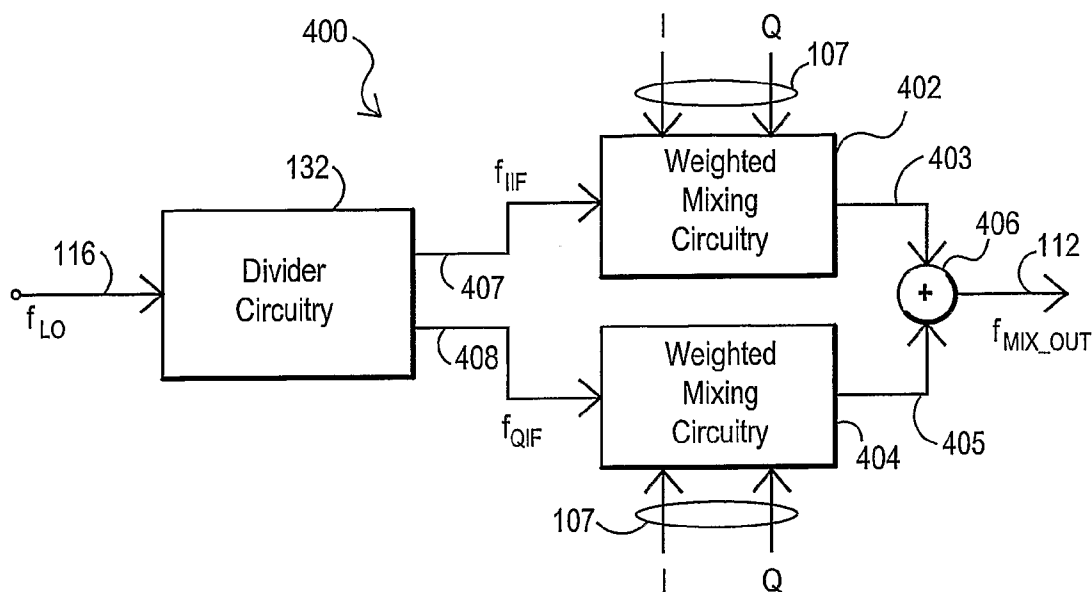
(43) International Publication Date
2 February 2006 (02.02.2006)

PCT

(10) International Publication Number
WO 2006/012270 A1

- (51) International Patent Classification⁷: **H04B 1/40**, H04L 27/36, H03C 3/40
- (21) International Application Number: PCT/US2005/022397
- (22) International Filing Date: 23 June 2005 (23.06.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
10/880,483 30 June 2004 (30.06.2004) US
60/619,345 15 October 2004 (15.10.2004) US
11/096,133 31 March 2005 (31.03.2005) US
11/096,134 31 March 2005 (31.03.2005) US
- (71) Applicant (for all designated States except US): **SILICON LABORATORIES INC.** [US/US]; 4635 Boston Lane, Austin, Texas 78735 (US).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **WELLAND, David R.** [US/US]; 112 W. 32nd Street, Austin, Texas 78705 (US). **WANG, Caiyi** [US/US]; 1215 Falcon Ledge Dr., Austin, Texas 78746 (US).
- (74) Agent: **PETERMAN, Brian W.**; O'Keefe, Egan & Peterman, LLP, 1101 Capital of Texas Highway S., Building C, Suite 200, Austin, Texas 78746 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): 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, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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, HU, IE, IS, IT, LT, LU, MC, NL, 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
- 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.

(54) Title: WEIGHTED MIXING CIRCUITRY FOR QUADRATURE PROCESSING IN COMMUNICATION SYSTEMS



(57) Abstract: Mixing circuitry for quadrature processing in communication systems and related methods are disclosed. The weighted mixing circuitry allows for arbitrary dividers to be utilized in generating the mixing signals for quadrature processing and thereby provides a significant advantage over prior architectures where 90 degree offset I and Q mixing signals were needed for quadrature mixing.

WO 2006/012270 A1