

(51) International Patent Classification:
H03F 3/45 (2006.01) **H03F 1/34** (2006.01)(21) International Application Number:
PCT/US2010/034632(22) International Filing Date:
13 May 2010 (13.05.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/454,326 16 May 2009 (16.05.2009) US(71) Applicant (for all designated States except US): **ALCATEL-LUCENT USA INC.** [US/US]; 600-700 Mountain Avenue, Murray Hill, NJ 07974-0636 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHEN, Young-kai** [US/US]; 54 Hillcrest Avenue, Berkeley Heights, NJ 07922 (US). **LEE, Jaesik** [KR/US]; 298 Janine Way, Bridgewater, NJ 08807 (US). **AROCA, Ricardo, Andres** [CA/CA]; 390 Queens Quay West, Apartment 809, Toronto, ON M5V 3A6 (CA).(74) Agents: **MCCABE, John, F.** et al.; Alcatel-lucent Usa Inc., Docket Administrator - Room 3D-201, 600-700 Mountain Avenue, Murray Hill, NJ 07974-0636 (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, CL, 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, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

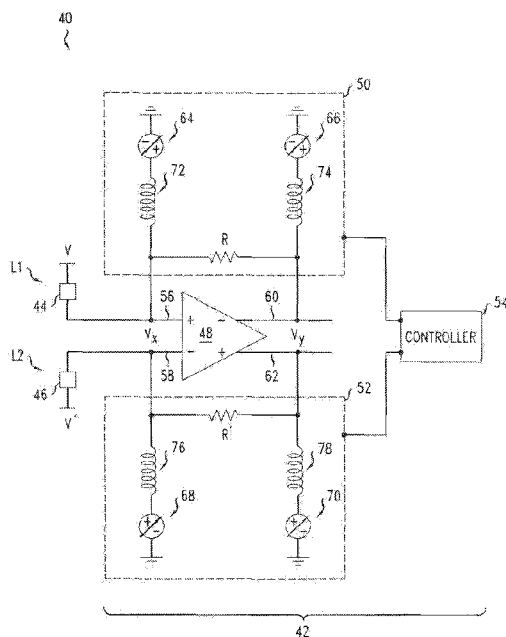
Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

[Continued on next page]

(54) Title: TRANSIMPEDANCE AMPLIFIER WITH DISTRIBUTED CONTROL OF FEEDBACK LINE

FIG. 2



(57) Abstract: An apparatus includes an electronic amplifier and an electrical feedback line, a plurality of electrical sources, and an electronic controller. The electrical feedback line connects an output of the electronic amplifier to an input thereof. The electrical sources connect to nodes on the electronic feedback line. The electronic controller is configured to adjust the electrical sources in a manner responsive to a current input to the electrical feedback line.



(88) Date of publication of the international search report:
3 February 2011