(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 May 2001 (10.05.2001)

PCT

(10) International Publication Number
WO 01/33820 A1

(51) International Patent Classification[7]: H04M 3/00

(21) International Application Number: PCT/US00/24396

(22) International Filing Date:
5 September 2000 (05.09.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/163,240 3 November 1999 (03.11.1999) US
09/495,122 1 February 2000 (01.02.2000) US

(71) Applicant: ADVANCED MICRO DEVICES, INC. [US/US]; One AMD Place, Mail Stop 68, P.O. Box 3453, Sunnyvale, CA 94088-3453 (US).

(72) Inventor: WILLER, Bernd; Beethoven Strasse 8, D-85368 Moosburg (DE).

(74) Agent: RODDY, Richard, J.; Advanced Micro Devices, Inc., One AMD Place, Mail Stop 68, P.O. Box 3453, Sunnyvale, CA 94088-3453 (US).

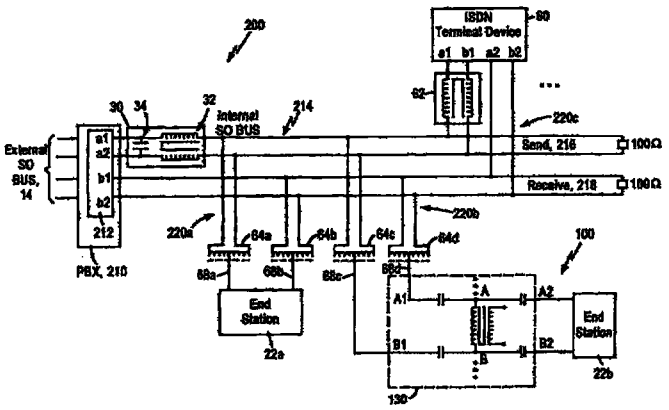
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, 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: APPARATUS AND METHOD OF COUPLING HOME NETWORK SIGNALS BETWEEN AN ANALOG PHONE LINE AND A DIGITAL BUS



(57) Abstract: An arrangement for implementing a network in an ISDN-based customer premises having a four-wire ISDN S0 bus. The ISDN-based customer premises includes a Network Termination Basic Access (NTBA) that interfaces between the residential customer premises and the public switched telephone network by mapping the two-wire ISDN signal onto the four-wire bus. A low pass filter is added to the two-wire send path to eliminate high frequency noise caused by harmonic reflections of the ISDN-based signals on the four-wire bus. Filters are also coupled between each ISDN device and the four-wire S0 bus, ensuring that the four-wire S0 bus is isolated from capacitive influences of the ISDN devices to optimize transmission of the higher frequency home network signals. The two-wire home network signals are also split by S0 transformers for transmission on the two-wire send path and the two-wire receive path of the four-wire S0 bus, effectively increasing the transmission wire radius for improved reception of the home network signals. A high pass filter is coupled between the four-wire S0 bus and analog telephone lines, enabling network stations coupled to the analog telephone lines to exchange home network signals with network stations coupled to the four-wire bus.

WO 01/33820 A1