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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
8 July 2004 (08.07.2004)

PCT

(10) International Publication Number
WO 2004/057822 A3

(51) International Patent Classification[7]: H04L 29/06, 12/46

(21) International Application Number:
PCT/US2003/040960

(22) International Filing Date:
19 December 2003 (19.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/325,657 19 December 2002 (19.12.2002) US

(71) Applicant: **INTEL CORPORATION** [US/US]; 2200 Mission College Boulevard, Santa Clara, CA 95052 (US).

(72) Inventors: **LIU, Changwen**; 11392 NW Kenzie Lane, Portland, OR 97229 (US). **ANDREWS, Michael**; 12650 SW Tiger Lilly Lane, Beaverton, OR 97008 (US). **IYER, Prakash**; 16617 NW Avondale Drive, Beaverton, OR 97006 (US).

(74) Agents: **STEFFEY, Charles, E.** et al.; Schwegman, Lundberg, Woessner & Kluth, P.A., P.O. Box 2938, Minneapolis, MN 55402 (US).

(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, 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.

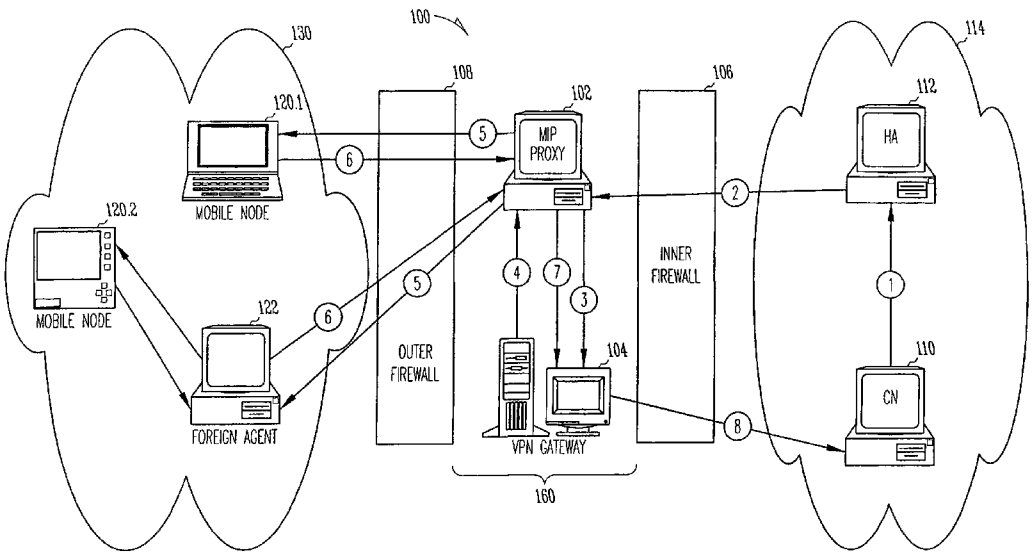
(84) Designated States *(regional)*: ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

(88) Date of publication of the international search report:
10 September 2004

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR INTEGRATING MOBILE IP WITH VIRTUAL PRIVATE NETWORKS (VPN)



(57) Abstract: Systems and methods provided a secure network path through an inner and outer firewall pair between a mobile node on a foreign network and a corresponding node on a home network. One aspect of the systems and methods includes providing a mobile IP proxy between the mobile node and a VPN gateway inside the firewalls. The mobile IP proxy acts as a surrogate home agent to the mobile node, and acts as a surrogate mobile node to a home agent residing on the home network.

WO 2004/057822 A3

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.