

US007620810B2

(12) United States Patent

Vaarala et al.

(54) METHOD AND NETWORK FOR ENSURING SECURE FORWARDING OF MESSAGES

- (75) Inventors: Sami Vaarala, Helsinki (FI); Antti Nuopponen, Espoo (FI)
- (73) Assignee: Mobility Patent Holding MPH Oy, Espoo (FI)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 536 days.
- (21) Appl. No.: 10/490,932
- (22) PCT Filed: Sep. 27, 2002
- (86) PCT No.: PCT/FI02/00770

§ 371 (c)(1), (2), (4) Date: Nov. 22, 2004

(87) PCT Pub. No.: **WO03/030487**

PCT Pub. Date: Apr. 10, 2003

(65) **Prior Publication Data**

US 2005/0083947 A1 Apr. 21, 2005

(30) Foreign Application Priority Data

Sep. 28, 2001 (FI) 20011910

- (51) Int. Cl.
- *H04L 9/00* (2006.01)
- (52) **U.S. Cl.** **713/161**; 713/151; 380/247; 455/432.1; 455/436; 370/401

See application file for complete search history.

(10) Patent No.: US 7,620,810 B2

(45) **Date of Patent:** Nov. 17, 2009

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,170,057	B1 *	1/2001	Inoue et al 713/153
, ,			
6,418,130		7/2002	Cheng et al 370/331
6,587,680	B1 *	7/2003	Ala-Laurila et al 455/411
6,839,338	B1 *	1/2005	Amara et al 370/338
6,839,770	B1	1/2005	Dillon
6,904,466	B1 *	6/2005	Ishiyama et al 709/245
6,976,177	B2 *	12/2005	Ahonen 726/3
7,146,428	B2 *	12/2006	Luo 709/237
7,174,018	B1 *	2/2007	Patil et al 380/258
7,245,405	B2	7/2007	Friedman
7,325,063	B2	1/2008	Dillon
2002/0066036	A1*	5/2002	Makineni et al 713/201

(Continued)

OTHER PUBLICATIONS

IBM, "IP Mobility Support," Memo: Oct. 1996.

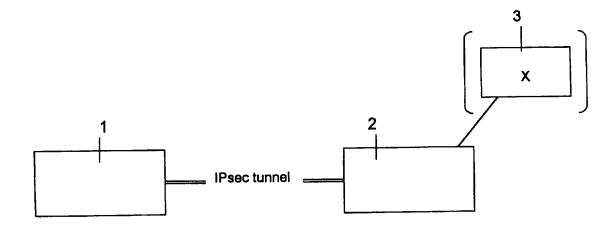
(Continued)

Primary Examiner—Nasser G Moazzami Assistant Examiner—Fikremariam Yalew (74) Attorney, Agent, or Firm—Fasth Law Offices; Rolf Fasth

(57) **ABSTRACT**

The method and network ensure secure forwarding of a message in a telecommunication network that has at least one first terminal and another terminal. The first terminal moves from a first address to a second address. A secure connection between the first address of the first terminal and the other terminal defining at least the addresses of the two terminals is established. When the first terminal moves from the first address to a second address, the connection is changed to be between the second address and to the other terminal by means of a request from the first terminal and preferably a reply back to the first terminal.

7 Claims, 5 Drawing Sheets



U.S. PATENT DOCUMENTS

2003/0166397 A1* 9/2003 Aura 455/410 OTHER PUBLICATIONS

OTHERTOBLICATIONS

The Internet Society, "Securing L2TP using IPsec," Memo: Nov. 2001.

The Internet Society, "IP Mobility Support for IPv4," Memo: Aug. 2002.

The Internet Society, "Layer Two Tunneling Protocol—Version 3 (L2TPv3)," Memo: Mar. 2005.

* cited by examiner

D

Δ

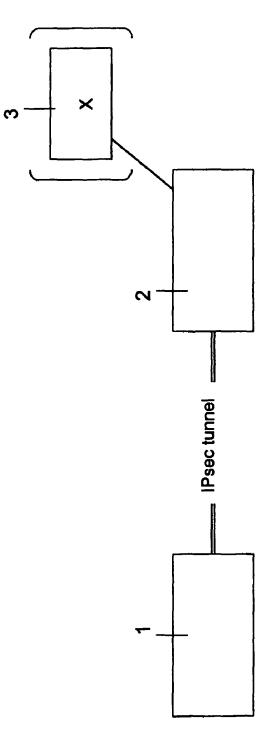
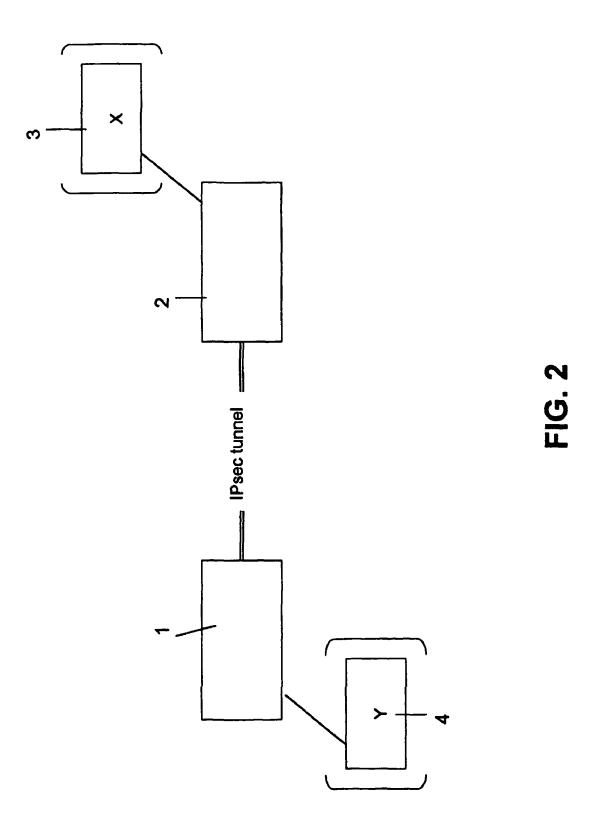


FIG. 1

CKET LARM Find authenticated court documents without watermarks at <u>docketalarm.com</u>.





Α

A

FIG. 3

DOCKET RM Find authenticated court documents without watermarks at docketalarm.com.

DOCKET A L A R M



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.