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**Ishiyama et al.**

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(54) **MOBILE COMMUNICATION SCHEME WITHOUT HOME AGENTS FOR SUPPORTING COMMUNICATIONS OF MOBILE NODES**

(75) Inventors: **Masahiro Ishiyama**, Tokyo (JP); **Atsushi Inoue**, Kanagawa (JP)

(73) Assignee: **Kabushiki Kaisha Toshiba**, Kawasaki (JP)

(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

Network Working Group, Request for Comments 2401 (pp. 1–66); Request for Comments 2402 (pp. 1–22); Request for Comments 2403 (pp. 1–7); Request for Comments 2404 (pp. 1–7); Request for Comments 2405 (pp. 1–10); Request for Comments 2406 (pp. 1–22); Request for Comments 2407 (pp. 1–32); Request for Comments 2408 (pp. 1–86); Request for Comments 2409 (pp. 1–41); Request for Comments 2410 (pp. 1–6); Request for Comments 2411 (1–11); Request for Comments 2412 (pp. 1–55); Ipsec Base Specification, Nov. 1998.

\* cited by examiner

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May 20, 1999 (JP) ..... 11-140373

(51) **Int. Cl.**<sup>7</sup> ..... **G06F 15/16**; G06F 15/173

(52) **U.S. Cl.** ..... **709/245**; 709/224; 709/228; 709/207

(58) **Field of Search** ..... 709/206–207, 709/203, 223–224, 228, 238, 242, 245, 204, 205

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*Primary Examiner*—Ario Etienne

*Assistant Examiner*—Hussein El-chanti

(74) *Attorney, Agent, or Firm*—Foley & Lardner LLP

(57) **ABSTRACT**

The disclosed mobile communication scheme enables easy change of a connected location of a mobile computer on the IP network when the mobile computer leaves its home network, without requiring the use of a home agent, while providing a sufficient level of security. The mobile computer transmits a packet from a visited site network to a correspondent by encapsulating an inner packet having a home address as an original source address within an outer packet having a current location address as a source address. The correspondent which received this encapsulated packet recognizes the source addresses of the outer and inner packets of the encapsulated packet as the current location address and the home address of the mobile computer, respectively, so that the correspondent can transmit a packet to the mobile computer thereafter by encapsulating an inner packet having the home address as a final destination address within an outer packet having the current location address as a destination address.

**16 Claims, 9 Drawing Sheets**

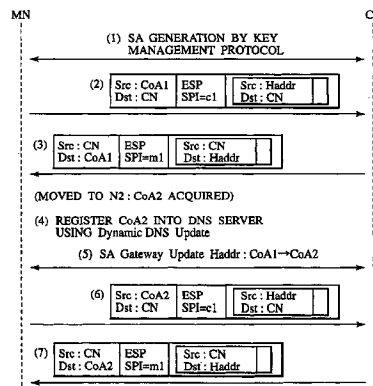


FIG. 1  
PRIOR ART

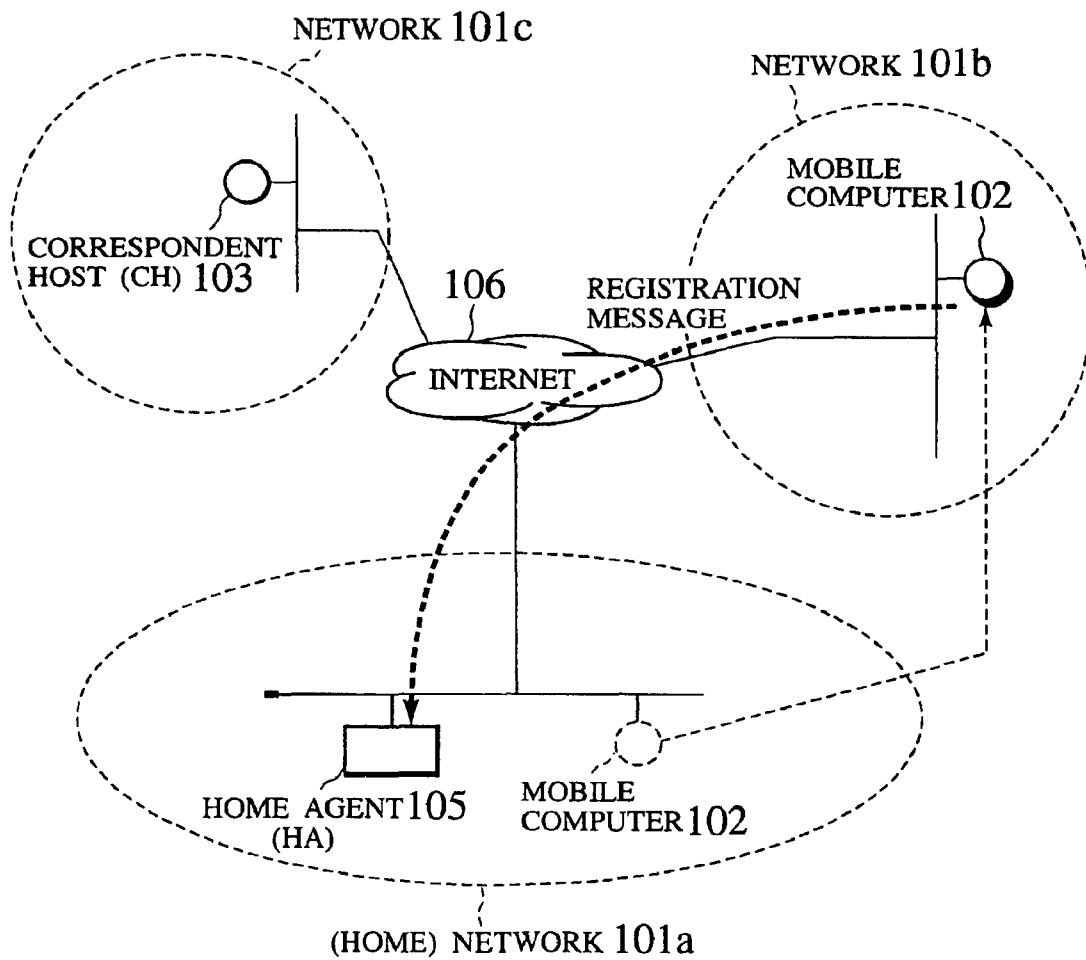


FIG. 2

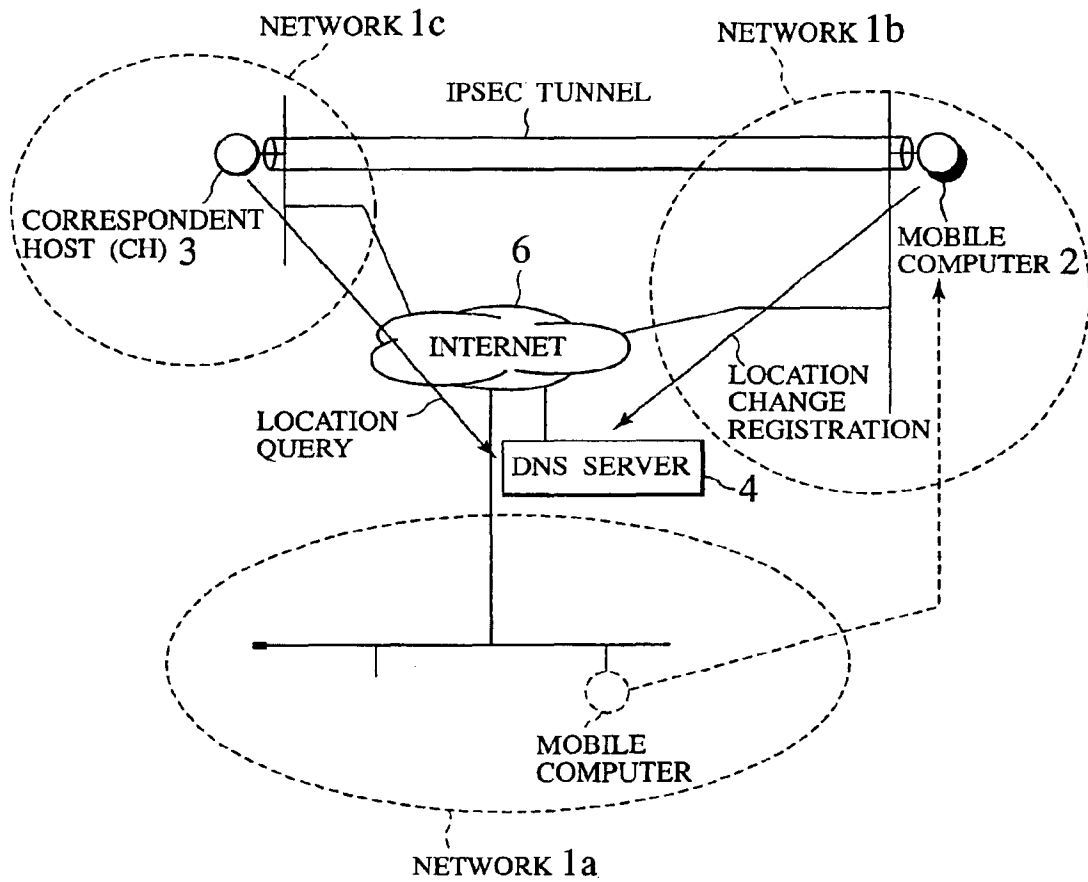


FIG. 3

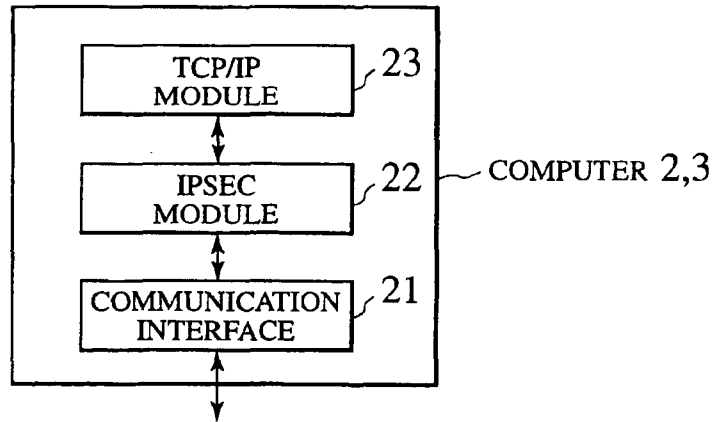


FIG. 4

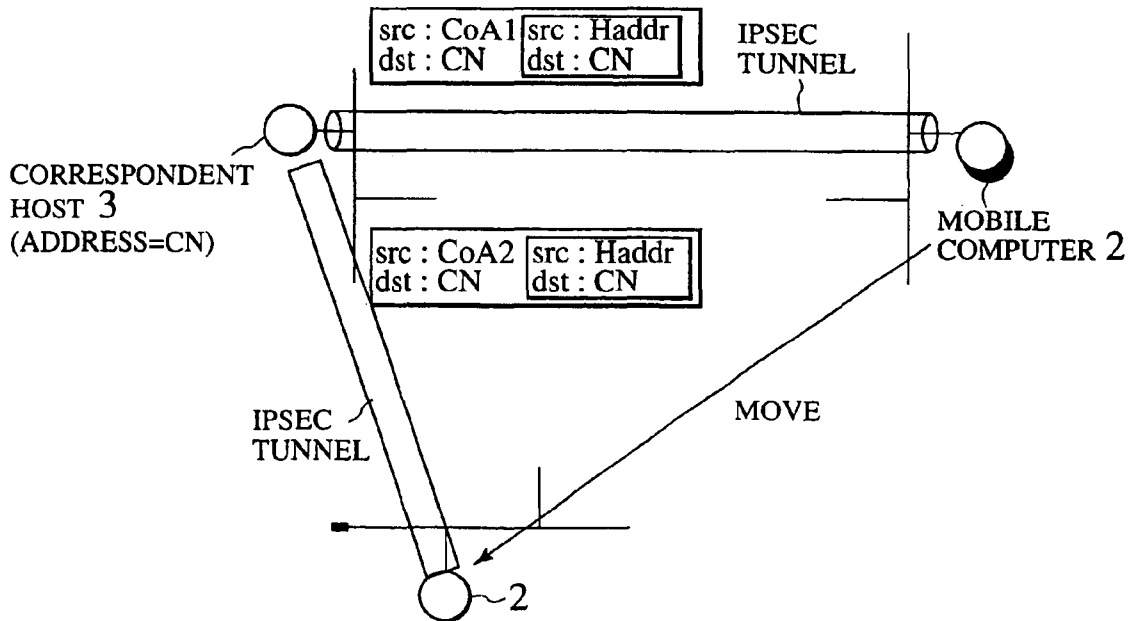
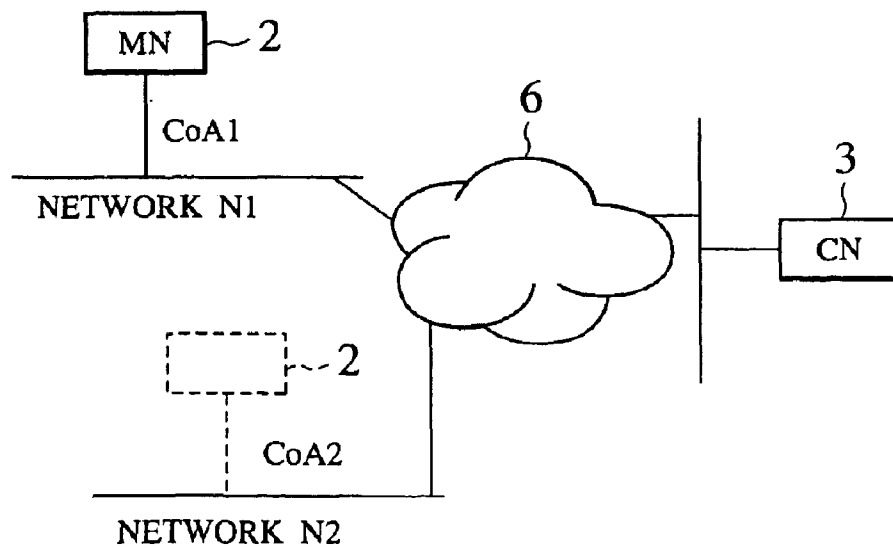


FIG. 5

HOME ADDRESS  
RESOURCE RECORD

DOMAIN NAME	AAAA	HAAAA

FIG. 6



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