

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

MPH TECHNOLOGIES OY,
Patent Owner.

Case IPR2019-00821
Patent 8,037,302 B2

Before SALLY C. MEDLEY, KAMRAN JIVANI, and
JOHN D. HAMANN, *Administrative Patent Judges*.

HAMANN, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Apple Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–16 of U.S. Patent No. 8,037,302 B2 (Ex. 1001, “the ’302 patent”) pursuant to 35 U.S.C. § 311. MPH Technologies Oy (“Patent Owner”) filed a Patent Owner Preliminary Response (Paper 8, “Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). An *inter partes* review may be instituted if “the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). On April 24, 2018, the Supreme Court held that a decision to institute under 35 U.S.C. § 314 may not institute on fewer than all claims challenged in the Petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

Upon consideration of the Petition and the Preliminary Response, we determine that the information presented shows there is a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of at least one challenged claim of the ’302 patent. Accordingly, we institute *inter partes* review on all of the challenged claims based on all of the grounds identified in the Petition.

A. Related Matter

The parties identify *MPH Techs. Oy v. Apple Inc.*, Case No. 4:18-cv-05935-PJH, in the U.S. District Court for the Northern District of California, as a matter that may affect or would be affected by a decision in this proceeding. Pet. 2; Paper 7, 1.

B. The Challenged Patent (Ex. 1001)

The '302 patent relates to providing “secure connections in telecommunication networks” more efficiently. Ex. 1001, 1:13–14, 4:55–63, 7:3–5. In particular, the '302 patent relates to reducing the handover latency for secure connections, such as those employing Internet Protocol (“IP”) Security (“IPSec”) with mobile terminals¹ (i.e., terminals that can move from one network to another). *Id.* at 4:55–63, 7:3–5, 7:39–41.

According to the '302 patent, IPSec comprises a set of rules for “provid[ing] the capability to secure communications” between hosts. *Id.* at 1:38–39. These rules describe, *inter alia*, the concept of a Security Association (“SA”), which the '302 patent describes as “a one-way relationship between a sender and a receiver that offers [negotiated IPSec] security services to the traffic carried on it.” *Id.* at 1:62–65. SAs are identified, in part, by the IP addresses of the hosts. *E.g., id.* at 2:14–16. The '302 patent discloses that when a new SA is formed, “it is registered for immediate and/or later use” in a Security Association Database (“SAD”), “which is the nominal place to store IPSec SAs in the IPSec model.” *Id.* at 7:45–53. Each host participating in the forming of the SA maintains a copy of the SAD, according to the '302 patent. *Id.* at 7:47–48.

In addition, the '302 patent discloses that IPSec is intended to work with static network topologies. *Id.* at 3:19–22. For example, IPSec can secure communications between static hosts across a local area network (“LAN”), as well as across a private or public wide area network (“WAN”).

¹ The '302 patent discloses that “the term[s] mobility and mobile terminal do[] not only mean physical mobility, . . . [but also] mean[] moving from one network to another, which can be performed by a physically fixed terminal as well.” Ex. 1001, 3:51–55.

Id. at 1:38–40. IPSec, however, “does not work well with mobile” terminals, according to the ’302 patent, because when “a mobile terminal moves from one network to another [and changes addresses], an IPSec connection set up is required,” which typically “is expensive in terms of latency,” requiring “several seconds to complete.” *Id.* at 4:52–60.

To address this problem, the ’302 patent discloses avoiding the need, if possible, to set up an IPSec connection when the mobile terminal moves networks by relying on a SA that is already established. *E.g., id.* at 10:39–43, 10:51–56. Figure 2, shown below, is a “signalling diagram,” which describes the invention of the ’302 patent. *Id.* at 9:5–6.

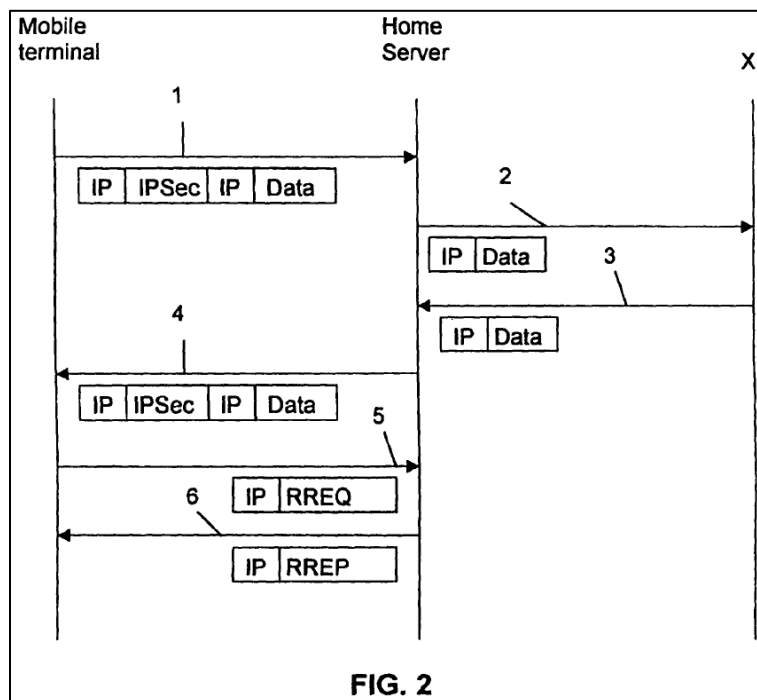


Figure 2 “describes an example of the method of the invention for sending messages when a mobile terminal moves to a new address.” *Id.* at 10:9–11. We focus on steps 1 and 5 between the mobile terminal and home server, because these are the illustrated steps relevant to our analysis below.

First, a SA is established between a first address of the mobile terminal and the address of the home server. *Id.* at 10:12–16. This SA is used to send a message from the mobile terminal to the home server, as illustrated in step 1. *Id.* at 10:21–25. Subsequently, the mobile terminal moves to a new network and obtains a new address from the new network. *Id.* at 10:39–40. “The mobile terminal then checks whether an SA . . . already exists between the new . . . address and the home server address. This check is normally done by inspecting the contents of” a SAD, “as specified by the IPsec protocol.” *Id.* at 10:40–46.

If a SA between the mobile terminal’s new address and the home server’s address “already exists, this SA is registered to be the actual SA to be used.” *Id.* at 10:51–56. Put differently, the SA is registered as an active connection (i.e., “a stored mobility binding that maps a given terminal address to one or more” SAs to determine to what address to forward packets). *E.g., id.* at 8:13–14, 10:12–27. “This happens by means of a signalling message . . . done between the mobile terminal and the home server, described by step[] 5” *Id.* at 10:56–59; *see also id.* at 7:59–63 (describing sending a Registration Request signalling message to register the actual connection to use). Alternatively, the ’302 patent discloses that in lieu of a Registration Request, properly authenticated traffic from a new address can be used “as an implicit registration request, and a mobility binding update [can be] performed automatically.” *Id.* at 11:31–33. “When a[] . . . SA does not exist between the [mobile terminal’s] new . . . address and the home server[’s] address, . . . a[] . . . SA setup” occurs instead. *Id.* at 10:66–67.

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