UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC.,
Petitioner,

v.

MPH TECHNOLOGIES OY,
Patent Owner.

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IPR2019-00819
Patent 7,620,810 B2

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Before KEVIN C. TROCK, JOHN D. HAMANN, and
STACY B. MARGOLIES, *Administrative Patent Judges.*

HAMANN, *Administrative Patent Judge.*

JUDGMENT
Final Written Decision on Remand
Determining Challenged Claims 4–6 Not Shown Unpatentable
35 U.S.C. §§ 144, 318(a)

I. INTRODUCTION

This case returns on remand from the United States Court of Appeals for the Federal Circuit in *Apple Inc. v. MPH Techs. OY*, Nos. 2021-1355, 2021-1356, 2022 WL 4103286 (Fed. Cir. Sept. 8, 2022).[1] In our prior Final Written Decision in this proceeding, we determined that by a preponderance of the evidence Apple Inc. ("Petitioner") (i) did not prove that claims 1–6 of U.S. Patent No. 7,620,810 B2 (Ex. 1001, "the '810 patent") are unpatentable, and (ii) proved that claim 7 of the '810 patent is unpatentable. Paper 37 ("FWD"), 54–55. On Petitioner's appeal, the Federal Circuit held that we erred in our construction for "encrypted" messages, and as a result, vacated our judgment of no unpatentability for claims 1–6 and remanded to the Board for further proceedings. *Apple*, 2022 WL 4103286, at *6, 8.

After the Federal Circuit's decision, and before the mandate issued, Patent Owner filed a statutory disclaimer under 37 C.F.R. § 1.321, which states that Patent Owner "hereby disclaims and dedicates to the public the entirety of claims 1–3 of the '810 Patent." Ex. 3003, 1; Paper 50. Accordingly, claims 1–3 are no longer part of this proceeding. And for the reasons that follow, we determine that Petitioner does not show by a preponderance of the evidence that claims 4–6 are unpatentable.

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[1] The Federal Circuit issued a joint decision, addressing Petitioner's appeal from this proceeding, as well as Petitioner's appeal from *Apple Inc. v. MPH Techs. Oy*, IPR2019-00820 ("the -820 case"). *Apple*, 2022 WL 4103286, at *1. On remand, we issue separate decisions for these cases for purposes of clarity.

A. Procedural History

Petitioner filed a Petition requesting *inter partes* review of claims 1–7 of the '810 patent. Paper 2 ("Pet."). MPH Technologies Oy ("Patent Owner") filed a Preliminary Response. Paper 8.

We instituted *inter partes* review of claims 1–7 of the '810 patent on all of the grounds raised in the Petition. Paper 10 ("Dec. on Inst."), 7, 40. As to the Decision on Institution in this proceeding, Patent Owner filed a Request for Rehearing, and requested review by the Precedential Opinion Panel ("POP"). Paper 13; Ex. 3001. Patent Owner's request for POP review was denied (Paper 16), and we denied Patent Owner's Request for Rehearing (Paper 24).

Thereafter, Patent Owner filed a Response to the Petition. Paper 23 ("PO Resp."). Petitioner filed a Reply to Patent Owner's Response. Paper 26 ("Pet. Reply"). Patent Owner filed a Sur-reply to Petitioner's Reply. Paper 29 ("PO Sur-reply"). An oral hearing was held on June 25, 2020. A transcript of the oral hearing is included in the record. Paper 36 ("Tr.").

After the remand, we authorized a simultaneous exchange of additional briefing for the parties to address the legal effect of the statutory disclaimer. Paper 52, 6. Pursuant to that authorization, Petitioner filed an Opening Brief Post-Remand (Paper 54, "Pet. Rem. Open."), Patent Owner filed an Opening Brief (Paper 55, "PO Rem. Open."), Petitioner filed a Response Brief Post-Remand (Paper 57, "Pet. Rem. Resp."), and Patent Owner filed a Response Brief (Paper 56, "PO Rem. Resp.").

B. Related Matters

The parties identify as related matters the following: (i) *MPH Techs. Oy v. Apple Inc.*, No. 5:18-cv-05935-PJH (N.D. Cal.); (ii) *Apple Inc. v. MPH*

Techs. Oy, IPR2019-00820 (PTAB) (involving related U.S. Patent No.
7,937,581 B2); (iii) *Apple Inc. v. MPH Techs. Oy*, Appeal No. 21-1355 (Fed.
Cir.); (iv) *MPH Techs. Oy v. Apple Inc.*, Appeal No. 21-1390 (Fed. Cir.);
(v) Ex Parte Reexamination No. 90/015,174, filed Dec. 14, 2022; and
(vi) Ex Parte Reexamination No. 90/015,175, filed Dec. 14, 2022. Paper 49,
1–2; Paper 53, 1.

C. The Challenged Patent

The '810 patent relates to "secur[ing] mobile connections in
telecommunication networks." Ex. 1001, 1:13–14. In particular, the '810
patent describes reducing the handover latency and computational overhead
for secure connections, such as those employing Internet Protocol ("IP")
Security ("IPSec") with mobile terminals[2] (i.e., terminals that can move
from one network to another). *Id.* at 1:13–15, 1:57–64, 4:10–31, 6:48–50,
7:28–42, 10:34–42.

IPSec comprises a set of rules defined by the Internet Engineering
Task Force ("IETF") to "provide[] the capability to secure communications
between arbitrary hosts," according to the '810 patent. *Id.* at 1:57–64, 2:3,
2:6–10. The '810 patent states that these rules describe, *inter alia*, providing
"access control based on the distribution of cryptographic keys." *Id.* at
2:11–20. The '810 patent also describes the concept of a Security
Association ("SA"), which according to the '810 patent is "a one-way
relationship between a sender and a receiver that offers [negotiated] security
services to the traffic carried on it." *Id.* at 2:21–24.

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[2] The '810 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, 4:27–31.

The '810 patent discloses that IPSec supports two modes of operation (i.e., transport mode and tunnel mode). *Id.* at 3:8–9. "Typically, transport mode is used for end-to-end communication between two hosts." *Id.* at 3:10–13. "Tunnel mode . . . is generally used for sending messages through more than two components," such as "when one or both ends of a SA is a security gateway, such as a firewall or a router that implements IPSec." *Id.* at 3:16–21.

"IPSec is intended to work with static network topolog[ies]," according to the '810 patent. *Id.* at 4:10–11. For example, IPSec can secure communications between hosts across a local area network ("LAN"), as well as across a private or public wide area network ("WAN"). *Id.* at 1:57–59. Figure 1, shown below, "illustrates an example of a telecommunication network to be used in the invention" of the '810 patent. *Id.* at 8:40–41.
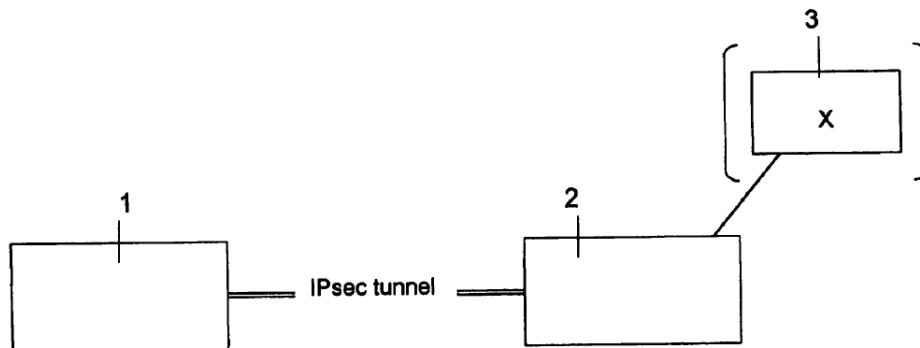

FIG. 1

Figure 1 depicts an example telecommunication network comprising "computer 1 . . . and computer 2[,] a destination computer, to which the secure messages are sent . . . by means of an IPSec tunnel established between computer 1 and computer 2." *Id.* at 8:54–58. The '810 patent adds: "Computer 2 [can] be a security gateway for a third computer 3. Then, the

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