## UNITED STATES PATENT AND TRADEMARK OFFICE

## BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC., Petitioner,

v.

MPH TECHNOLOGIES OY, Patent Owner.

Case IPR2019-00822 Patent 8,346,949 B2

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

MEDLEY, Administrative Patent Judge.

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



## I. INTRODUCTION

Apple Inc. ("Petitioner") filed a Petition for *inter partes* review of claims 1–7, 9, 11–14, 20, 21, and 27–29 of U.S. Patent No. 8,346,949 B2 (Ex. 1001, "the '949 patent"). Paper 2 ("Pet."). MPH Technologies Oy, ("Patent Owner") filed a Preliminary Response. Paper 6 ("Prelim. Resp."). Institution of an *inter partes* review is authorized by statute when "the information presented in the petition . . . and any response . . . 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). Upon consideration of the Petition and Preliminary Response, we decline to institute review of the challenged claims of the '949 patent.

### A. Related Matters

Petitioner and Patent Owner indicate that the '949 patent is the subject of the following currently pending court proceeding: *MPH Techs. Oy v. Apple Inc.*, Case No. 4:18-cv-05935-PJH (N.D. Cal.). Pet. 2; Paper 5, 1. The parties also identify the following proceedings involving different, but related patents: IPR2019-00823, IPR2019-00824, IPR2019-00825, and IPR2019-00826. *Id.* 

## B. The '949 Patent

The Specification of the '949 patent describes a method and system for enabling secure forwarding of a message from a first computer to a second computer via an intermediate computer. Ex. 1001 [57]. The first computer forms a secure message by giving the message a unique identity and a destination address. *Id.* The message is sent from the first computer to the intermediate computer. *Id.* The intermediate computer uses the destination address and the unique identity to find an address to the second



computer. *Id*. The destination address is substituted with the found address to the second computer and the unique identity is substituted with another unique identity. *Id*. The message is then forwarded to the second computer. *Id*.

"An example of a telecommunication network of the invention is illustrated" per Figure 1, reproduced below. *Id.* at 9:57–58.

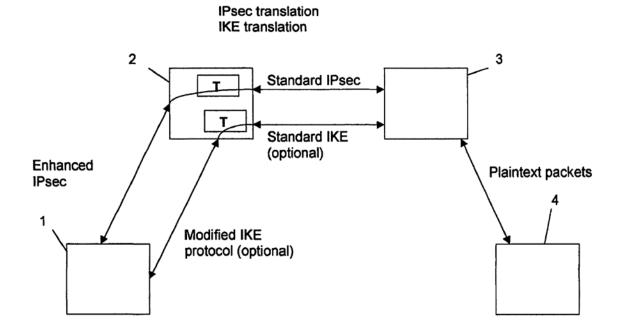


FIG. 1

Figure 1 is an illustration of a telecommunication network. *Id.* at 9:57–58. Client computer 1 is served by intermediate computer (sever 2) and host computer 4 is served by a second computer (security gateway 3). *Id.* at 9:55–61. Security gateway 3 supports the standard IP security protocol (IPsec) and optionally the Internet Key Exchange (IKE) protocol. *Id.* at 9:61–63. Client computer 1 and server 2 support a modified IPsec and IKE protocol. *Id.* at 9:63–65. In particular, an IPsec connection is formed



between client computer 1 and security gateway 3 by forming a security association (SA) between the computers with a preceding key exchange. *Id.* at 10:32–36. A security association is uniquely identified by three parameters. *Id.* at 2:28–30. The first parameter is a Security Parameters Index (SPI) which is carried in AH (Authentication Header) and ESP (Encapsulating Security Payload) headers. *Id.* at 2:29–31. The second parameter is an IP destination address, which is the address of the destination end point of the SA, and the third parameter is a security protocol identifier, which identifies whether the association is an AH or ESP security association. *Id.* at 2:32–38.

The key exchange between first and second computer takes place manually or with an automatic key exchange protocol such as the IKE protocol. *Id.* at 10:36–39. The key exchange is performed using a standard IKE protocol between server 2 and security gateway 3, and a modified IKE protocol is used between client computer 1 and server 2. *Id.* at 10:39–43. Messages to be sent to host terminal 4 from client computer 1 are first sent to server 2, wherein an IPsec translation and an IKE translation takes place. *Id.* at 10:45–47. The message is then sent to security gateway 3, which sends the message in plain text to host terminal 4. *Id.* at 10:47–49.

Figure 3, reproduced below, illustrates an example of an IPsec translation table used by the intermediate computer to change the outer IP address and SPI value. *Id.* at 9:45–47.

c-addr-1	c-addr-2	c-SPI-1	c-SPI-2	s-addr-2	s-addr-3	s-SPI-2	s-SPI-3
195.1.2.3	212.90.65.1	0x80000001	0x12341234	212.90.65.1	103.6.5.4	0x1230012	0x56785678

Figure 3 shows a partitioned table, where the left side, identified by the prefix c-, refers to the network connection between the first computer and an intermediate computer, and the right side, identified by the prefix s-,



refers to the network connection between the intermediate computer and a second computer. *Id.* at 11:25–31. The postfix number (-1, -2, or -3) identifies the host in question. *Id.* at 11:31–32. When the intermediate computer receives the packet sent, it performs an address and SPI translation, ensuring that the security gateway (host 3 of Figure 1) can accept the packet. *Id.* at 11:51–54. The intermediate computer does not have cryptographic keys to undo the IPsec processing done by the mobile terminal, and cannot decrypt the packet, but is able to use the outer IP addresses and the incoming SPI value to determine how to modify the outer address and the SPI to suite the second computer. Id. at 11:55-60. Thus, in this example, SPI is changed to 0x56785678 in the intermediate computer and the address is changed to the address of the second computer. *Id.* at 11:61–64. "The new outer source address s-addr-2 (212.90.65.1) is substituted for the outer source address c-addr-1 (195.1.2.3), and the new outer destination address s-addr-3 (103-6-5-4) is substituted for the outer destination address c-addr-2 (212.90.65.1)." *Id.* at 12:1–5. Moreover, "[t]he new SPI value, s-SPI-3 (0x56785678), is substituted for the SPI value c-SPI-2 (0x12341234)." Id. at 12:5–6. The invention accomplishes the effect of "double tunneling," while maintaining confidentiality of packets with no extra overhead compared to standard IPsec. *Id.* at 10:15–20.

## C. Disclaimer

Patent Owner filed a statutory disclaimer under 35 U.S.C. § 253(a) of claim 27 of the '949 patent. Prelim. Resp. 4 (citing Ex. 2001). We treat disclaimed claim 27 as if it never existed. *See Vectra Fitness, Inc. v. TNWK Corp.*, 162 F.3d 1379, 1383 (Fed. Cir. 1998) ("This court has interpreted the term 'considered as part of the original patent' in section 253 to mean that



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