

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

APPLE INC.,  
Petitioner

v.

MPH TECHNOLOGIES OY,  
Patent Owner

---

Case IPR2019-00819  
U.S. Patent No. 7,620,810

---

**PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE  
UNDER 37 C.F.R. § 42.23**

**Mail Stop PATENT BOARD**  
Patent Trial and Appeal Board  
U.S. Patent & Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

**TABLE OF CONTENTS**

I.	Introduction.....	1
II.	The Board Should Reject MPH’s Improper Claim Construction .....	1
III.	The Combination of Ishiyama and Murakawa Discloses the Claimed “Security Gateway” .....	5
	A. It would have been obvious to a POSA from Ishiyama’s use of IPSec for its correspondent host to be a security gateway because IPSec only has a finite number of endpoint configurations.....	5
	B. A POSA would have understood that Ishiyama’s use of tunnel mode suggests that its correspondent host would be a security gateway.....	7
	C. A POSA would have sought out references such as Murakawa for its teaching of tunnel mode implementation. ....	9
IV.	Nothing in the Prior Art Precludes Ishiyama’s “Correspondent Host” from Operating as a “Security Gateway” .....	10
V.	The Combination of Ishiyama and Murakawa Teaches the “Other Terminal” .....	14
VI.	Ishiyama Teaches the Mobile Terminal Transmitting a Message While at a Second Address to Change the Definition of a Security Association .....	17
VII.	The Combination of Ishiyama and Murakawa Teaches the “Request”/“Reply” Messages Being Encrypted.....	18
VIII.	The Combination of Ishiyama, Murakawa, and Ahonen Renders Claims 2-3 Obvious .....	19
IX.	Dependent Claims 4-6 are Unpatentable as Stated in Ground 2 of the Petition.....	22
X.	Conclusion .....	26

**PETITIONER'S EXHIBIT LIST**

<b><i>Apple (EX) Exhibit #</i></b>	<b><i>Description</i></b>
<b>1001</b>	U.S. Patent No. 7,620,810 (“810 patent”).
<b>1002</b>	Declaration of Dr. David Goldschlag in Support of Petition for <i>Inter Partes</i> Review of U.S. Patent No. 7,620,810 (“Goldschlag Decl.”).
<b>1003</b>	Prosecution History of U.S. Patent No. 7,620,810 (“Prosecution History”).
<b>1004</b>	U.S. Patent No. 6,904,466 to Ishiyama <i>et al.</i> (“Ishiyama”).
<b>1005</b>	U.S. Patent No. 7,028,337 to Murakawa (“Murakawa”).
<b>1006</b>	U.S. Patent No. 6,976,177 to Ahonen (“Ahonen”).
<b>1007</b>	U.S. Patent No. 6,954,790 to Forsl�w (“Forsl�w”).
<b>1008</b>	Demystifying the IPsec Puzzle, Sheila Frankel, Published 2001 (“Frankel”).
<b>1009</b>	IP Security - The Internet Protocol Journal – Volume 3, No. 1, William Stallings, Published March 2000.
<b>1010</b>	Mobility-aware IPsec ESP tunnels, Francis Dupont, IETF Draft Posted February 22, 2001. <a href="https://tools.ietf.org/html/draft-dupont-movesptun-00">https://tools.ietf.org/html/draft-dupont-movesptun-00</a> (“Dupont”).
<b>1011</b>	RFC2401 - S. Kent, and R. Atkinson, Security Architecture for the Internet Protocol, RFC2401, November 1998. <a href="https://tools.ietf.org/html/rfc2401.html">https://tools.ietf.org/html/rfc2401.html</a> (“RFC 2401”).
<b>1012</b>	RFC793 – Information Science Institute, Transmission Control Protocol, September 1981 (“RFC 793”).
<b>1013</b>	U.S. Patent No. 7,079,499 to Akhtar <i>et al.</i> (“Akhtar”).
<b>1014</b>	U.S. Patent No. 7,174,018 to Patil <i>et al.</i> (“Patil”).
<b>1015</b>	U.S. Patent No. 6,418,130 to Cheng <i>et al.</i> (“Cheng”).
<b>1016</b>	Curriculum Vitae of Dr. David Goldschlag.
<b>1017</b>	Declaration of Sandy Ginoza for IETF (Regarding RFC2401 and RFC793).
<b>1018</b>	Declaration of Alexa Morris for IETF (Regarding “Mobility-aware IPsec ESP tunnels” by Dupont)

<i>Apple (EX) Exhibit #</i>	<i>Description</i>
<b>1019</b>	Transcript of the Deposition of Dr. George N. Rouskas, March 20, 2020 (“Rouskas Depo.”)
<b>1020</b>	Declaration of Dr. David Goldschlag in Support of Petitioner’s Reply to Patent Owner’s Response (“Second Goldschlag Decl.”)

## I. Introduction

The Board should find unpatentable all claims of the '810 patent because Apple has shown that the prior art renders all claims invalid. MPH raises no new arguments in its Patent Owner Response (POR), but rather repeats the unavailing arguments made in its Patent Owner Preliminary Response (POPR). The Board should again reject those arguments as it did in the Institution Decision.

Essentially, MPH makes one argument as to why the combination of Ishiyama and Murakawa does not render obvious the claims of the '810 patent—that Ishiyama’s “correspondent host” is not a “security gateway.” *See* POR, 27-45. But the Board should reject this argument because it is based on an improper and unnecessary claim construction, mischaracterizes Apple’s contentions, and ignores the teachings of Ishiyama and Murakawa.

## II. The Board Should Reject MPH’s Improper Claim Construction

Disputed Constructions	
Apple	<b>Security gateway:</b> Plain and ordinary meaning.
MPH	<b>Security gateway:</b> “gateway that provides additional security functionality, such as firewall functionality.” POR, 12.  <b>Gateway:</b> “an intermediary system with two or more communication interfaces that interconnects different networks and can forward packets it receives from one network on to another network.” POR, 11-12.

# 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.