APPENDIX A

NOTE: This disposition is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

VIRNETX INC., LEIDOS, INC.,
Plaintiffs-Appellees

v.

CISCO SYSTEMS, INC.,
Defendant

APPLE INC.,
Defendant-Appellant

2018-1197

Appeal from the United States District Court for the Eastern District of Texas in No. 6:10-cv-00417-RWS, Judge Robert Schroeder, III.

JUDGMENT

JEFFREY A. LAMKEN, MoloLamken LLP, Washington, DC, argued for all plaintiffs-appellees. Plaintiff-appellee VirnetX Inc. also represented by JAMES A. BARTA, RAYINER HASHEM, MICHAEL GREGORY PATTILLO, JR.; ALLISON MILEO GORSUCH, New York, NY;

BRADLEY WAYNE CALDWELL, JASON DODD CASSADY, JOHN AUSTIN CURRY, Caldwell Cassady & Curry, Dallas, TX.

DONALD SANTOS URRABAZO, Urrabazo Law, P.C., Los Angeles, CA, for plaintiff-appellee Leidos, Inc. Also represented by ANDY TINDEL, Mann, Tindel & Thompson, Tyler, TX.

WILLIAM F. LEE, Wilmer Cutler Pickering Hale and Dorr LLP, Boston, MA, argued for defendant-appellant. Also represented by REBECCA A. BACT, MARK CHRISTOPHER FLEMING, LAUREN B. FLETCHER; THOMAS GREGORY SPRANKLING, Palo Alto, CA; BRITTANY BLUEITT AMADI, Washington, DC.

THIS CAUSE having been heard and considered, it is ORDERED and ADJUDGED:

PER CURIAM (PROST, *Chief Judge*, MOORE and REYNA, *Circuit Judges*).

AFFIRMED. See Fed. Cir. R. 36.

ENTERED BY ORDER OF THE COURT

January 15, 2019	/s/ Peter R. Marksteiner
Date	Peter R. Marksteiner
	Clerk of Court

APPENDIX B

**In the United States District Court for the
Eastern District of Texas Tyler Division**

VIRNETX INC. and	§	
SCIENCE	§	
APPLICATIONS	§	
INTERNATIONAL	§	
CORPORATION,	§	
	§	
Plaintiffs,	§	CAUSE NO. 6:10-CV-417
	§	
vs.	§	SEALED
	§	
APPLE INC.,	§	UNSEALED 10-13-2017
	§	
Defendant.	§	
	§	

MEMORANDUM OPINION AND ORDER

Before the Court are the following motions:

- Defendant Apple Inc.'s ("Apple") Rule 50(a) Motion for Judgment as a Matter of Law on Damages (Docket No. 1018);[1]

- Apple's Rule 50(a) Motion for Judgment as a Matter of Law of No Infringement (Docket No. 1019);

- Plaintiff VirnetX, Inc.'s ("VirnetX") Post-Trial Brief Regarding Willfulness (Docket No. 1047);

- Apple's Omnibus Motion for Judgment as a Matter of Law Under Rule 50(b) (Docket No. 1062); and

- VirnetX's Motion for Entry of Judgment and Equitable Relief (Docket No. 1063).

  Having considered the parties' written submissions and argument at the November 22, 2016 post-trial hearing, and for the reasons stated below, the Court rules as follows:

- Apple's Rule 50(a) Motion for Judgment as a Matter of Law on Damages (Docket No. 1018) is **DENIED-AS-MOOT**;

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[1] Unless noted otherwise, all references to the docket refer to Case No. 6:10-cv-417.

- Apple's Rule 50(a) Motion for Judgment as a Matter of Law of No Infringement (Docket No. 1019) is **DENIED-AS-MOOT**;

- VirnetX's request in its Post-Trial Brief Regarding Willfulness that the Court find that willful infringement (Docket No. 1047) is **GRANTED**;

- Apple's Omnibus Motion for Judgment as a Matter of Law Under Rule 50(b) (Docket No. 1062) is **DENIED**; and

- VirnetX's Motion for Entry of Judgment and Equitable Relief (Docket No. 1063) is **GRANTED**.

BACKGROUND

On August 11, 2010, VirnetX filed this action against Apple alleging that Apple infringed U.S. Patent Nos. 6,502,135 ("the '135 Patent"), 7,418,504 ("the '504 Patent"), 7,490,151 ("the '151 Patent"), and 7,921,211 ("the '211 Patent") (collectively, "the asserted patents"). The '135 and '151 Patents generally describe a method of transparently creating a virtual private network ("VPN") between a client computer and a target computer, while the '504 and '211 Patents disclose a secure domain name service. On November 6, 2012, a jury found that Apple's accused VPN on Demand and FaceTime features infringed the asserted patents and that the asserted patents were not invalid ("2012 jury verdict"). Docket No. 790.

Apple appealed the 2012 verdict to the Federal Circuit on multiple grounds. *See VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1313-14 (Fed. Cir. 2014). The Federal Circuit affirmed the jury's finding of infringement by VPN on Demand and affirmed this Court's denial of Apple's motion for judgment as a matter of law on invalidity. *Id*. The Federal Circuit reversed the Court's claim construction, holding that the term "secure communication link" requires both "security and anonymity" and vacated the infringement finding for FaceTime. *Id*. The Federal Circuit also vacated the damages award for both VPN on Demand and FaceTime because it found that the jury relied on a flawed damages model. *Id*. at 1314.

On remand, this case was consolidated with Case No. 6:12-cv-855 and retried between January 25 and February 2, 2016. Docket No. 425 in Case No. 6:12-cv-855. Because of the consolidation and repeated references to the prior jury's verdict in front of the jury, the Court granted a new trial and unconsolidated the cases. Docket No. 500 in Case No. 6:12-cv-855. The Court conducted another jury trial September 26 to 30, 2016 on infringement for FaceTime and damages for both FaceTime and VPN on Demand.

At trial, VirnetX asserted that FaceTime met the "anonymity" requirement of the "secure communication link" limitation by allowing participants to communicate behind third-party network address translators ("NATs"). Docket No. 1036 ("Trial Tr. 9/30/16 PM") at 37:17–40:41. VirnetX's technical expert, Dr. Mark Jones, testified that NATs hide the private IP addresses of the persons or devices participating in a

FaceTime call and therefore prevent eavesdroppers on the public internet from being able to correlate specific persons or devices behind the NAT routers participating in the call. Docket No. 1030 ("Trial Tr. 9/27/16 AM") at 48:10-51:18. VirnetX further asserted that it was entitled to a reasonable royalty of $1.20 per unit, for a total of $302,427,950, for the infringement of its patents by FaceTime and VPN on Demand.[2] Trial Tr. 9/30/16 PM at 50:16-20. VirnetX's damages expert, Roy Weinstein, testified that, based on his analysis of comparable licenses, a reasonable royalty for Apple to pay for use of the asserted patents would be between $1.20 and $1.67 per unit. Docket No. 1032 ("Trial Tr. 9/28/16 PM") at 7:15-11:25.

Apple denied that FaceTime met the "anonymity" requirement of the "secure communication link" limitation. Trial Tr. 9/30/16 PM at 53:8-15. Apple's technical expert, Dr. Matthew Blaze, testified that FaceTime is not anonymous because eavesdroppers are able to obtain the public IP addresses of the devices participating in a FaceTime call. Docket No. 1035 ("Trial Tr. 9/30/16 AM") at 20:20-21:1, 114:17-21. Dr. Blaze further testified that the private IP addresses hidden by the NATs do not provide any meaningful anonymity. Trial Tr. 9/30/16 AM at 68:10-69:8. Apple also asserted that, based on an analysis of the comparable licenses by its damages expert, Christopher Bakewell, VirnetX was entitled to a royalty rate of no more than $0.10 per unit, for a total of $25,202,329, for the infringement of VPN on

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[2] The jury was instructed that infringement by VPN on Demand was previously determined. Docket No 1021 at 4.

Demand and FaceTime. Docket No. 1033 ("Trial Tr. 9/29/16 AM") 63:11-16, 115:2-20.

On September 30, 2016, the jury returned a unanimous verdict. The jury found that FaceTime infringed the '211 and '504 patents and awarded $302,427,950 in damages for the collective infringement by the VPN on Demand and FaceTime features in the accused Apple products. Docket No. 1025.

I. APPLE'S OMNIBUS MOTION FOR JUDGMENT AS A MATTER OF LAW UNDER RULE 50(b) AND FOR A NEW TRIAL

Apple moves for judgment as a matter of law, or, alternatively, for a new trial, on non- infringement and damages. Docket No 1062 at 1. During the September 2016 trial, Apple filed two Rule 50(a) motions before the case was submitted to the jury. Docket No. 1018; Docket No. 1019. In light of Apple's Rule 50(b) motions, Apple's Rule 50(a) motions (Docket Nos. 1018 and 1019) are **DENIED-AS-MOOT**. The Court therefore turns to Apple's Rule 50(b) Motion for Judgment as a Matter of Law and for a New Trial (Docket No. 1062).

A. Applicable Law Regarding Rule 50

Judgment as a matter of law is only appropriate when "a reasonable jury would not have a legally sufficient evidentiary basis to find for the party on that issue." FED. R. CIV. P. 50(a). "The grant or denial of a motion for judgment as a matter of law is a procedural issue not unique to patent law, reviewed under the law of the regional circuit in which the appeal from

the district court would usually lie." *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1332 (Fed. Cir. 2008). The Fifth Circuit "uses the same standard to review the verdict that the district court used in first passing on the motion." *Hiltgen v. Sumrall*, 47 F.3d 695, 699 (5th Cir. 1995). Thus, a jury verdict must be upheld, and judgment as a matter of law may not be granted, unless "there is no legally sufficient evidentiary basis for a reasonable jury to find as the jury did." *Id.* at 700. "A jury verdict must stand unless there is a lack of substantial evidence, in the light most favorable to the successful party, to support the verdict." *Am. Home Assurance Co. v. United Space Alliance*, 378 F.3d 482, 487 (5th Cir. 2004).

A court reviews all evidence in the record and must draw all reasonable inferences in favor of the nonmoving party; however, a court may not make credibility determinations or weigh the evidence, as those are solely functions of the jury. *See Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150-51 (2000) ("[A]lthough the court should review the record as a whole, it must disregard all evidence favorable to the moving party that the jury is not required to believe"). Under Fifth Circuit law, a court is to be "especially deferential" to a jury's verdict, and must not reverse the jury's findings unless they are not supported by substantial evidence. *Baisden v. I'm Ready Productions, Inc.*, 693 F.3d 491, 499 (5th Cir. 2012). Consequently, "[o]nly if there existed substantial evidence that would have led reasonable jurors to reach a differing conclusion, will this court overturn the district court's judgment." *Hawkins v. Jones*, 74 F. App'x. 391, 394 (5th Cir. 2003) (citing *Portis v. First*

Nat'l Bank of New Albany, Miss., 34 F.3d 325, 327-28 (5th Cir. 1994)).

B. Applicable Law Regarding Rule 59

Under Federal Rule of Civil Procedure 59(a), a new trial may be granted on any or all issues "for any reason for which a new trial has heretofore been granted in an action at law in federal court." Rule 59(a)(1)(A). The Federal Circuit reviews the question of a new trial under the law of the regional circuit. *Z4 Techs., Inc. v. Microsoft Corp.*, 507 F.3d 1340, 1347 (Fed. Cir. 2007). "A new trial may be granted, for example, if the district court finds the verdict is against the weight of the evidence, the damages awarded are excessive, the trial was unfair, or prejudicial error was committed in its course." *Smith v. Transworld Drilling Co.*, 733 F.2d 610, 612-13 (5th Cir. 1985). "A motion for a new trial should not be granted unless the verdict is against the great weight of the evidence, not merely against the preponderance of the evidence." *Dresser-Rand Co. v. Virtual Automation Inc.*, 361 F.3d 831, 838-39 (5th Cir. 2004).

C. Analysis

Apple raises four main issues in its omnibus post-trial motion: (1) whether the evidence supports the jury's finding of infringement; (2) whether the evidence supports the jury's damages award; (3) whether Apple is entitled to a new trial on infringement; and (4) whether Apple is entitled to a new trial on damages. *See generally* Docket No. 1062.

1. Judgment as a Matter of Law of Non-infringement

Apple seeks judgment as a matter of law of non-infringement, arguing that no reasonable jury could conclude that FaceTime's peer-to-peer connection provides the anonymity required by the Federal Circuit's construction of "secure communication link." Docket No. 1062 at 3. Apple also argues that VirnetX's comparison of FaceTime to VPN on Demand was improper and cannot provide substantial evidence of infringement. *Id.* at 7. Finally, Apple contends that FaceTime's call-setup process and its dynamically changing IP addresses are irrelevant to whether FaceTime provides anonymity. *Id.*

a. Applicable Law

Infringement is a question of fact reviewed for substantial evidence. *Finisar*, 523 F.3d at 1332. To prove infringement under 35 U.S.C. § 271, a plaintiff must show the presence of every element, or its equivalent, in the accused product or service. *Lemelson v. United States*, 752 F.2d 1538, 1551 (Fed. Cir. 1985). First, the claim must be construed to determine its scope and meaning; and second, the construed claim must be compared to the accused device or service. *Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1129 (Fed. Cir. 2011) (citing *Carroll Touch, Inc. v. Electro Mech. Sys., Inc.*, 15 F.3d 1573, 1576 (Fed. Cir. 1993)).

b. Discussion

Apple contends that the evidence does not support a finding that FaceTime's peer-to-peer connection provides anonymity. *Id.* at 3. Apple argues that it was undisputed that FaceTime itself does nothing to conceal IP addresses on the connection. *Id.* Apple states that FaceTime can work with NATs but argues that, because NATs are not part of FaceTime and because FaceTime does not require the use of NATs, VirnetX's infringement should fail as a matter of law. *Id.*

Apple further argues that there is no evidence to support a finding that NATs provide anonymity. *Id.* Apple contends that because NATs were a widespread and basic component of the internet prior to the invention, NATs could not provide this anonymity, which the Federal Circuit stated is "one of the primary inventive contributions of the patent." *Id.* at 4 (quoting *VirnetX*, 767 F.3d at 1317). Apple states that Dr. Robert Short, the inventor, admitted this at trial by identifying NATs as a prior art system and stating that a figure in the patent that included NATs was not the way that he achieved anonymity. *Id.* (citing Trial Tr. 9/27/16 AM at 74:25-75:3).

Apple contends that VirnetX's infringement expert, Dr. Jones, admitted that NATs do not hide public IP addresses and conceded that, though NATs hide private IP addresses, these private addresses do not contain any identifying significance. *Id.* at 5 (citing Docket No. 1030 ("Trial Tr. 9/27/16 PM") at 48:22-49:1, 49:9-15, 123:24-124:3. Apple argues that, because NATs cannot hide public IP addresses, they are unable to prevent eavesdroppers from learning

which websites companies are visiting, which Apple describes as "the one exemplary goal of anonymity provided in the patent." *Id.* at 6. Finally, Apple states that Dr. Jones admitted that callers' private IP addresses are visible over the peer-to-peer connection. *Id.*

Apple argues that VirnetX improperly relied on a comparison between FaceTime and VPN on Demand in order to prove infringement. *Id.* at 7. Apple contends that it is legally improper to compare products for infringement purposes. *Id.* (citing *Amstar Corp. v. Envirotech Corp.*, 730 F.2d 1476, 1481-82 (Fed. Cir. 1984)). Apple further states that the record was void of evidence as to why the previous jury found VPN on Demand to be anonymous and that the undisputed evidence at trial shows that VPN on Demand contained attributes of anonymity not present in FaceTime. *Id.*

Finally, Apple contends that Dr. Jones's testimony regarding FaceTime's call-setup process and dynamically changing IP addresses is irrelevant to the question of whether FaceTime is anonymous and therefore cannot support a finding of infringement. *Id.* Apple argues that the setup of the call is protected using an encrypted connection over the FaceTime servers and therefore cannot provide the anonymity required by the patents, which, Apple argues, require the secure communication link—identified by Dr. Jones as the separate peer-to-peer connection—to provide the anonymity. *Id.* at 7-8. Apple similarly contends that dynamically changing IP addresses cannot provide the required anonymity because the changing of an IP address is dependent on the policy of the

internet service provider and therefore is not "provided" by the direct communication link. *Id.* at 8.

VirnetX responds that Apple's motion for judgment as a matter of law on non-infringement should be denied because the evidence presented at trial proved that "FaceTime Servers 'support establishing' a 'direct communication link that provides data security and anonymity,' " as required by the patents. Docket No. 1065 at 1. VirnetX argues that the testimony of Dr. Jones that an Internet eavesdropper cannot correlate the specific persons or devices located behind NAT routers that are participating in a FaceTime call, along with the admission of Apple's expert, Dr. Blaze, that this inability to correlate constitutes a kind of anonymity, provides substantial evidence to support the jury's verdict. *Id.* (citing Trial Tr. 9/27/16 PM at 48:10-51:18; Trial Tr. 9/30/16 AM at 124:4-5).

VirnetX argues that, because Apple's expert admitted that NATs provide a type of anonymity, Apple is attempting to impose additional requirements to the Federal Circuit's claim construction. *Id.* at 2. VirnetX contends that Apple has waived any claim construction arguments by raising them for the first time after trial and argues that these arguments fail on the merits regardless. *Id.*

VirnetX states that Apple's argument that NATs cannot provide the required anonymity because they were present in the prior art is not legally relevant because Apple cannot prove non- infringement by comparing the accused system to the prior art. *Id.* at 3 (citing *Zenith Elecs. Corp. v. PDI Commc'n Sys.,*

Inc., 522 F.3d 1348, 1363 (Fed. Cir. 2008)). VirnetX next argues that even if the private IP addresses, which the NATs protect, tell an eavesdropper nothing about the particular device in communication, this address is a critical piece of information necessary to correlate the communication to a specific machine or person. *Id.* at 4 (citing Trial Tr. 9/27/16 PM at 50:9-18). VirnetX therefore argues that the NATs' protection of the private IP addresses is sufficient to support a finding of infringement. *Id.*

VirnetX contends that Apple's argument that NATs are insufficient to support a finding of infringement because they cannot achieve one of the exemplary goals of the patents fails because the Court has already observed that this goal does not limit the claims. *Id.* (citing *VirnetX, Inc. v. Microsoft Corp.*, 2009 WL 2370727, at *5 n.4 (E.D. Tex. July 30, 2009). VirnetX further argues that Dr. Jones did not admit that private IP addresses are visible over the peer-to-peer connection, but instead stated only that the private IP address of the caller is visible during the link setup and is not visible over the link itself. *Id.* at 5 (citing Trial Tr. 9/27/16 PM at 115:7-116:2). VirnetX also contends that, because FaceTime was designed to support establishing links between devices located behind NATs, Apple's motion should be denied.

VirnetX argues that its comparison between FaceTime and VPN on Demand was not necessary to support the verdict and was not legally improper. *Id.* at 6. VirnetX argues that it did not attempt to prove that FaceTime and VPN on Demand were identical, nor did it rely solely on a comparison between

FaceTime and VPN to prove infringement, but instead compared FaceTime to the claims of the patent. *Id.* VirnetX further states that its comparison was relevant to rebut Apple's argument that an eavesdropper's ability to view a caller's public IP address rendered FaceTime non-anonymous. *Id.*

VirnetX also contends that Dr. Jones's testimony on FaceTime's setup process and on the dynamically changing IP addresses, while not necessary to uphold the jury's finding of infringement, offers additional support. *Id.* VirnetX argues that the setup process is relevant because it sends identifying information over FaceTime's servers, removing any need to send that information over the peer-to-peer connection on the open internet. *Id.* at 7. VirnetX also contends that Apple's choice to design the system to use IP addresses, which regularly change, provides additional anonymity to FaceTime calls. *Id.*

The evidence presented at trial supports a finding that a reasonable jury could determine that FaceTime supports "a direct communication link that provides data security and anonymity," as required by the Federal Circuit's claim construction. *See VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1317 (Fed. Cir. 2015). Apple admits that FaceTime supports a communication link between devices located behind NATs, *see* Docket No. 1062 at 3, and VirnetX presented evidence at trial that NATs provide anonymity by hiding the users private IP address, *see* Trial Tr. 9/27/16 PM at 48:10-51:18, 49:5-7, 124:16-125:5; Trial Tr. 9/30/16 AM at 98:3-9, 141:10-20, 124:4-5. In light of this testimony, the Court finds that there was substantial

evidence for the jury to conclude that FaceTime supports a direct-communication link that provides anonymity.

Apple's arguments to the contrary are unpersuasive. The presence of NATs in the prior art is unrelated to non-infringement, and the fact that NATs are not a part of FaceTime is irrelevant because the claims only require the system to "support establishing" a direct communication link that provides anonymity. Similarly, the system's ability to meet an exemplary goal listed in the patent specification is irrelevant, as the Court has already observed that this language does not limit the claims. *See VirnetX, Inc. v. Microsoft Corp.*, 2009 WL 2370727, at *5 n.4 (E.D. Tex. July 30, 2009). Finally, VirnetX's comparison of FaceTime to VPN on Demand and testimony regarding the FaceTime call-setup process and the dynamic nature of IP addresses, while not necessary to uphold the jury's verdict, was relevant to respond to Apple's trial arguments and offers further support for the jury's finding of infringement.

Accordingly, Apple's motion for judgment as a matter of law of non-infringement is **DENIED**.

2. Judgment as a Matter of Law on Damages

Apple argues that the testimony of VirnetX's damages expert, Mr. Weinstein, shows that the jury's damages verdict did not have a legally sufficient basis. Docket No. 1062 at 10. Apple contends that VirnetX presented no "particularized expert testimony explaining how various differences between the real

and hypothetical license negotiations … would factor into the appropriate royalty for [Apple's] infringement" that would have permitted the jury to arrive at over $302 million in damages. *Id.* (citing *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1329 (Fed. Cir. 2009)). Apple states that the only economically reliable evidence establishes that the royalty rate could not be more than $0.10 per unit, well below the $1.20 per-unit rate awarded by the jury.

Apple argues that Mr. Weinstein's damages model does not apportion the incremental value that the patented invention added to the end product. *Id.* at 10-11 (citing *CSIRO v. Cisco Sys., Inc.*, 809 F.3d 1295, 1301 (Fed. Cir. 2015)). Apple contends that Mr. Weinstein relied on VirnetX's licensing policy and suggests that there is no evidence in the record that the licensing policy is apportioned. *Id.* at 12. Apple argues that the testimony of Kendall Larsen, VirnetX's president, who stated that VirnetX's policy was to license its patents as a family, shows that the licenses upon which Mr. Weinstein relied are not apportioned. *Id.*

Apple states that Mr. Weinstein admitted that his per-unit rates are not apportioned for the accused products or features. *Id.* at 13. Though Mr. Weinstein claimed his $1.20 rate was apportioned because he included only revenues related to Voice over Internet Protocol ("VoIP") phones, Apple contends that there is no proof in the record that these rates reflect the value of VirnetX's technology in those phones and that Mr. Weinstein admitted that VirnetX does not charge the same rate to all its licensees. *Id.* Further, Apple

argues that Mr. Weinstein admitted that Apple devices are far more complex that VoIP phones but made no adjustment for this difference. *Id.*

Apple states that Mr. Weinstein relied on the value of VPN on Demand and FaceTime and not on the value that VirnetX's technology added to those features. *Id.* at 14. Apple argues that this reliance was inappropriate because both features have modes that indisputably do not incorporate the patented technology and because both features include other, unaccounted-for technologies not patented by VirnetX. *Id.* Apple further contends that Mr. Weinstein did not account for the fact that each of the license agreements in his analysis included licenses to more patents than were at issue in this case and that Mr. Weinstein failed to account for that difference. *Id.* at 15-16.

Apple next argues that the VoIP licenses relied on by Mr. Weinstein were not sufficiently comparable to the Apple devices and therefore cannot support the damages award. *Id.* at 16. Apple first contends that Mr. Weinstein made no adjustment to render the VoIP licenses comparable to the license that VirnetX and Apple would have negotiated in a hypothetical negotiation. *Id.* Next, Apple argues that Mr. Weinstein admitted that several of the companies whose licenses Mr. Weinstein relied on do not compete with Apple and that the licensed VoIP phones are far less complex than the accused Apple devices. *Id.* at 16-17. Third, Apple states that the VoIP licenses are not comparable because each was entered into in 2012 and 2013, well after the June 2009 hypothetical negotiation. *Id.* at 17. Fourth, Apple states that the

royalties paid under the VoIP licenses do not reflect the value of the patented technology and instead reflect the value of avoiding litigation. *Id*. Finally, Apple contends that the low number of units (5.2 million combined units) and low amount of royalties ($14.1 million combined) that were subject to the VoIP licenses (and which were estimated through 2022) undermine their comparability and reliability. *Id.* at 18.

Apple also argues that Mr. Weinstein's damages model violated the entire market value rule. *Id.* Apple states that there was no showing that VirnetX's patented technology drives sales of Apple's products and argues that VirnetX nonetheless presented a damages model at trial that relied on percentage-based rates applied to Apple's end-product revenues. *Id.* at 19. Apple argues that VirnetX introduced testimony regarding its licensing policy, which applies a one to two percent royalty rate to end-product prices, then relied on the percentage-based royalty rates in its VoIP licenses, which are applied to end-product prices. *Id.* Apple further contends that VirnetX elicited the price of the licensees' products and compared that price to the price of Apple's accused devices. *Id.* Apple argues that by giving the jury these pieces of information, VirnetX invited the jury to apply a percentage-based royalty to the entire revenue of the accused devices, which is the same model the Federal Circuit held to be legally erroneous in the first appeal. *Id.*

Apple next contends that it is entitled to a partial offset of any damages award for products that are

already licensed, including, for example, accused devices that already include Skype. *Id.* at 20. Apple states that Skype is available for download on the accused devices and argues that these devices that contain Skype are already licensed, rendering any award for those devices impermissible. *Id.* (citing *Aero Prods., Int'l v. Intex Recreation Corp.*, 466 F.3d 1000, 1017, 1019 (Fed. Cir. 2006); *Bowers v. Baystate Techs., Inc.*, 320 F.3d 1317, 1327-28 (Fed. Cir. 2003).

Finally, Apple argues that no reasonable jury could award more than $25.2 million in damages. *Id.* at 21. Apple states that the $1.20 per-unit rate offered by Mr. Weinstein and adopted by the jury is the economically unsound average of Mr. Weinstein's translated per-unit rates from the five VoIP licenses and the Microsoft license. *Id.* Apple contends that of the licenses considered by Mr. Weinstein, only the Microsoft license was comparable because it was the only license to include products with as many features as the accused products. *Id.* Apple states that Mr. Weinstein admitted that his rate for the Microsoft license, $0.19 per unit, was flawed because it did not account for Microsoft's foreign sales. Apple argues that Mr. Weinstein admitted that if these sales were taken into account, the royalty rate would be $0.10 per unit, which would lead to a damages award of approximately $25.2 million. *Id.*

In response, VirnetX argues that Apple is inappropriately re-urging its failed Daubert motion against Mr. Weinstein's theory and requests that the Court decline to consider Apple's Rule 50 arguments relating to his damages theory. Docket No. 1065 at 8

(citing *Rembrandt Wireless Techs., LP v. Samsung Elecs. Co., Ltd.*, et al., 2016 WL 362540, *3-4 (E.D. Tex. Jan. 29, 2016) (declining to consider JMOL arguments previously made in a Daubert motion and stating that "[t]he Federal Circuit held that a JMOL is not the appropriate context for renewing attacks on an expert's methodology")). VirnetX further states that Apple's arguments are factually and legally incorrect and that VirnetX has met its burden of proof on damages through Mr. Weinstein's testimony. *Id.*

VirnetX states that Mr. Weinstein's damages opinions were properly apportioned and based on comparable licenses. *Id.* at 9. VirnetX contends that Mr. Weinstein's analysis was based on actual agreements in which companies paid an apportioned value to VirnetX for the patented technology and that he therefore did not need to present all the details of how the VirnetX licensing policy was apportioned to the patents-in-suit because the real-world market had already done the apportionment for him. *Id.* VirnetX argues that Apple's argument against Mr. Weinstein's damages is therefore one of evidentiary weight and is not an appropriate ground for judgment as a matter of law. *Id.* at 12.

VirnetX further states that Mr. Weinstein properly apportioned his royalty rate to account for unpatented technology. *Id.* VirnetX argues that the fact that VirnetX charges less as products become more complex, as reflected in the different royalty rates charged to companies, shows that Mr. Weinstein's model is apportioned to Apple's products. *Id.* at 13. VirnetX also argues that the fact that the per-unit

rate applied to Apple is much lower than the one to two percent of revenue that VirnetX licensees typically pay. *Id.* VirnetX states that Apple has no legal support for its argument that Mr. Weinstein was also required to identify the value of the unpatented features of the accused products and contends that Apple's damages expert, Christopher Bakewell, also failed to identify the value of these features. *Id.* VirnetX further argues that Apple has cited no evidence that its customers use the unpatented elements of the VPN on Demand and FaceTime or that the features provide any value to its customers. *Id.* at 14.

VirnetX next states that Mr. Weinstein properly accounted for the differences between VirnetX's licenses that support his damages theory and the hypothetical negotiation by carefully distinguishing facts related to the comparability of VirnetX's licenses in discussing Georgia- Pacific Factor 1. *Id.* at 15. VirnetX argues that the Federal Circuit has already held that the licenses are sufficiently comparable to form the basis of a royalty rate analysis. *Id.* (citing *VirnetX*, 767 F.3d at 1330-31; *CSIRO*, 809 F.3d at 1303). VirnetX contends that each of Apple's arguments about the differences between the licenses and the hypothetical negotiation go to the weight of the evidence presented to the jury and are therefore not relevant to a Rule 50 motion. *Id.* at 16-17.

VirnetX next contends that Mr. Weinstein's damages model does not violate the entire market value rule. *Id.* at 17. VirnetX argues that because Mr. Weinstein did not use the entire market value of Apple's products as his royalty base, he could not have applied

the entire market value rule. *Id.* VirnetX states that there was no evidence in the record of the total revenue or full price of the accused products. *Id.* VirnetX further argues that the entire market value rule was not violated because Mr. Weinstein specifically informed the jury that he was not asking the jury to award a percentage of Apple's products as damages and because the Court gave a cautionary instruction that forbade the jury from applying the entire market value. *Id.* at 18.

VirnetX states that Apple has waived any argument that it is entitled to a partial damages offset based on certain of its products being already licensed. *Id.* VirnetX argues that "license" is an affirmative defense that is waived if not pleaded by the defendant. *Id.* at 19 (citing *Davis v. Huskipower Outdoor Equipment Corp.*, 936 F.2d 193, 198 (5th Cir. 1991)). VirnetX further contends that the defense would not be available to Apple even if it had timely raised it because Apple devices are not shipped with Skype and because Apple cites no authority for the premise that post-sale actions of end users to modify a product can entitle a defendant to assert this defense. *Id.*

Finally, VirnetX argues that the damages award is properly supported. *Id.* VirnetX contends that Apple does not argue that the verdict is unsupported by substantial evidence but rather invites the Court to re-weigh the evidence. *Id.* Therefore, VirnetX argues, there is no basis for judgment as a matter of law.

The Court finds that the record contains sufficient evidence to support the jury's damages award. VirnetX presented competent evidence that Mr.

Weinstein's licensing model was properly apportioned and adequately accounted for similarities and differences in the comparable licenses. *See* Trial Tr. 9/28/16 PM at 6:12-120:14; Trial Tr. 9/29/16 AM at 14:5-50:17; PX1088.2; PX1088.3; PX1089.13; PX1089.2; 1089.3; PX1089.4; PX1089.6. The licenses upon which Mr. Weinstein's analysis was based were already apportioned, and Mr. Weinstein explained to the jury the differences between the licenses and the hypothetical negotiation. *See* Trial Tr. 9/28/16 PM at 18:25-31:21. Further, VirnetX did not present a theory that violated the entire market value rule, as the jury was not told the total revenue or total price of the accused products, and the Court instructed the jury not to consider any outside knowledge they may have had about these figures. *See* Trial Tr. 9/30/16 PM at 28:9-13.

Apple is also not entitled to an offset for devices that include Skype. Apple never pled a license defense, and Apple presented no evidence that its devices are shipped with Skype included. Apple also provides no explanation for why the actions of its end-users to modify its product post- sale should bring Apple under the protection of third-party licenses.

All of Apple's criticisms of Mr. Weinstein's model were addressed during his cross examination, *see* Trial Tr. 9/28/16 PM at 74:15-82:16; Docket No. 1038 ("Sealed Trial Tr. 9/28/16") at 41:1-43:2, and the jury weighed the testimony and evidence to reach its verdict. None of the criticisms identified by Apple, individually or collectively, undermine the jury's damages award.

Accordingly, Apple's motion for judgment as a matter of law on damages is **DENIED**.

3. New Trial on Infringement

Apple argues that the weight of the evidence does not support a finding of infringement by the jury and states that it should be granted a new trial as a result. Docket No. 1062 at 22. Apple repeats its arguments regarding the lack anonymity in FaceTime's peer-to-peer connection from its motion for judgment as a matter of law. *Id.* Apple similarly repeats its arguments that Dr. Jones invited the jury to render an infringement verdict on improper grounds and accordingly requests a new trial on infringement. *Id.*

Apple also contends the Court erred in allowing VirnetX to introduce evidence of the FaceTime relay redesign and thus deprived it of a fair trial on infringement. *Id.* Apple states that while VirnetX agreed that this evidence would be improper to use to suggest liability, VirnetX nonetheless repeatedly referenced the redesign with every one of the parties' expert witnesses, including the technical experts. *Id.* at 22-23. Apple asserts that these references improperly suggested the redesign was an admission of infringement and argues that a juror question requesting a technical explanation for the redesign from Apple's technical expert shows that the references confused the jury and invited speculation that the previous version had already been determined to be infringing. *Id.* at 23-24. Apple further contends that the Court's instruction that this evidence could not be used to determine liability was insufficient to overcome the prejudice introduced by the evidence. *Id.* at 24.

Apple next argues that the Court's instructions on liability were erroneous. *Id.* at 25. Apple contends that the Court erred in denying its request for the jury to be instructed "that the hiding of IP addresses as shown in the [Tunneled Agile Routing Protocol ("TARP")] embodiment is a 'key part of the novel solution to the specific problem identified in the prior art' ". *Id.* at 26-27 (quoting *VirnetX*, 767 F.3d at 1318). Apple states that this language should have been included to ensure fidelity to the Federal Circuit's mandate. *Id.* at 26. Apple argues that the Court also erred by giving VirnetX's proposed "practicing the prior art" instruction. *Id.* at 27. Apple states that it did not attempt to use invalidity arguments as part of its noninfringement case and argues that the instruction was therefore unnecessary and irrelevant. *Id.* Apple contends that the instruction was prejudicial because it inappropriately suggested that the jury should disregard Apple's argument that NATs were part of conventional internet communications and therefore do not provide anonymity. *Id.* at 28.

VirnetX responds that the verdict is not against the great weight of the evidence. Docket No. 1065 at 20. VirnetX re-urges its arguments regarding an eavesdropper's inability to correlate to a specific machine or person on a FaceTime call. *Id.* VirnetX also repeats its argument that the secure communication link itself provides anonymity and that the anonymity is enhanced by the changing nature of IP addresses and FaceTime's call setup process. *Id.* VirnetX further contends that Apple's arguments concerning Dr. Jones's testimony regarding IP addresses and the call setup process were waived because Apple

never moved to exclude this testimony through a *Daubert* motion and never objected at trial. *Id.* at 21.

VirnetX states that the Court did not err in admitting evidence regarding the cost of Apple's FaceTime redesign and argues that this evidence was relevant to damages and was therefore properly admitted. *Id.* at 22. VirnetX contends that this evidence undermined Apple's damages model, which was less than half the amount Apple spent on its redesign. *Id.* VirnetX argues that the redesign evidence also highlighted the importance of encrypted peer-to-peer connections and the lack of acceptable non-infringing alternatives. *Id.* VirnetX states that it agreed to Apple's requested instruction on this issue and that Apple never indicated that the instruction was insufficient and never objected to VirnetX's use of the evidence at trial. *Id.* at 22-23. VirnetX contends there was no undue prejudice because VirnetX never used the redesigns to imply a prior finding of infringement. *Id.* at 23. VirnetX further argues that even if the juror question relating to the redesign reflected some confusion on the part of a juror, any confusion was cleared up by the Court's instruction. *Id.* at 24.

Finally, VirnetX contends that the Court's liability instructions were correct. *Id.* at 25. VirnetX states that the Court properly refused Apple's TARP embodiment instruction because TARP is not a claim requirement. *Id.* VirnetX contends that the Federal Circuit's opinion did not provide any specific limitations on the scope of "anonymity" and did not import any aspect of TARP into the claim limitations. *Id.* at 26. VirnetX further argues that Apple's proposed

instruction was not substantially correct, but instead misleadingly suggested that TARP was a requirement of the claims. *Id.* at 26. VirnetX further argues that the Court's instruction on practicing the prior art was proper. *Id.* at 27. VirnetX contends that Apple improperly argued throughout trial that it could not infringe because NATs existed in the prior art, despite the fact that the existence of an element in the prior art is not a defense to literal infringement. *Id.* VirnetX further argues that even if Apple had not presented a practicing the prior art defense, the instruction was not prejudicial because it was legally correct and because the jury had been instructed on the nature of prior art in the preliminary instructions and was therefore unlikely to be confused on the issue. *Id.* at 28.

The Court finds that Apple is not entitled to a new trial on infringement. As stated with respect to Apple's motion for judgment as a matter of law of non-infringement, *see supra* § I.C.1, VirnetX presented substantial evidence to support the jury's finding of infringement, and Apple has not shown that the infringement finding was against the great weight of the evidence. Further, Apple has not shown that the admission of evidence of FaceTime's redesign deprived Apple of a fair trial. As the Court stated, this evidence was relevant to damages, *see* Docket No. 978 at 4, and the jury was instructed that this evidence was not to be used in its infringement determination, Trial Tr. 9/30/16 PM at 21:5-11.

Apple similarly has not shown any deficiency in the jury instructions that would entitle it to a new

trial on infringement. Refusing to give requested jury instructions requires a new trial where "(1) the requested instruction is substantially correct; (2) the requested issue is not substantially covered in the charge; and (3) the instruction concerns an important point in the trial so that the failure to give it seriously impaired the defendant's ability to effectively present a given defense." *United States v. John*, 309 F.3d 298, 304 (5th Cir. 2002). A party seeking to alter a judgment based on erroneous jury instructions must establish that "those instructions were legally erroneous," and that "the errors had prejudicial effect." *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1281 (Fed. Cir. 2000). Apple has not shown that these requirements are met here. Regarding the Court's decision not to include an instruction on TARP, the Court notes that the Federal Circuit did not include any limitation related to the TARP embodiment in its construction. *See VirnetX*, 767 F.3d at 1319. Thus, instructing the jury that the hiding of IP addresses as shown in the TARP embodiment is a "key part of the novel solution to the specific problem identified in the prior art," as Apple requested, could have potentially misled the jury into believing that TARP was a requirement of the claims. Further, Apple has not shown that the Court erred in including an instruction on practicing the prior art. Apple presented testimony that NATs were in the prior art in relation to its non-infringement arguments, *see* Trial Tr. 9/30/16 AM at 67:15-17; 67:22-25; 159:9-19; 185:24-186:2, and Apple has not argued that the Court's instruction misstated the law. Apple has therefore not shown that it is entitled to a new trial based on the jury instructions.

Accordingly, Apple's motion for a new trial on infringement is **DENIED**.

4. New Trial on Damages

Apple also requests a new trial on damages. Docket No. 1062 at 28. Apple argues that the damages verdict related to FaceTime is not separable from the damages verdict for VPN on Demand. *Id.* Apple provides five additional reasons that the Court should grant it a new trial on damages.

First, Apple argues that Mr. Weinstein's testimony should have been excluded and repeats its arguments that his damages model was based on unapportioned licenses and entire market value-based royalty rates. *Id.* at 29-30.

Second, Apple argues that VirnetX's "reasonableness" checks on damages were unreliable. *Id.* at 30. Apple states that it was error to allow Mr. Weinstein to testify that it would cost $1.3 billion to implement an agreed non-infringing alternative because Mr. Weinstein relied on Dr. Jones's opinion for the cost figure, arguing that "expert testimony based solely or primarily on the opinions of other experts is inherently unreliable." *Id.* (quoting *Hunt v. McNeil Consumer Healthcare*, 297 F.R.D. 268, 275 (E.D. La. 2014)). Apple argues that Dr. Jones's figure was based on the unreliable assumptions that Apple would have needed to relay 10,000 calls per second and would need 6,000 to 12,000 Gbps to accomplish that. *Id.* at 31. Apple states that Dr. Jones admitted that FaceTime has never needed capacities that high before. *Id.* Apple contends that VirnetX improperly

injected this number into the trial to make VirnetX's proffered damages amount appear more reasonable, resulting in an artificial inflation of the jury's damages calculation. *Id.*

Apple also argues that VirnetX invited the jury to apply the entire market value rule as a reasonableness check on its damages calculation. *Id.* at 32. Apple repeats its arguments related to damages as described in its motion for judgment as a matter of law on damages, contending again that VirnetX presented testimony that allowed the jury to apply the entire market value rule. *Id.* Apple argues that Mr. Weinstein's testimony reminded the jury of what they may have already known about the price of iPhones by testifying that Aastra VoIP phones cost about $250 and suggesting that there was a significant disparity in the price of a VoIP phone and the price of an iPhone. *Id.* at 33.

Third, Apple argues that the exclusion of the Patent Trial and Appeal Board's ("PTAB") final written decisions warrants a new trial on damages because it gave the jury the false impression that VirnetX's claimed invention provided an improvement over the prior art. *Id.* Apple states that VirnetX witnesses repeatedly testified to advantages over the prior art and argues that it should have been permitted to rebut that evidence with the final written decisions. *Id.* at 34. Apple argues that the Court's exclusion of this evidence was error and is grounds for a new trial. *Id.* at 35.

Fourth, Apple contends that the jury instructions on damages were erroneous. *Id.* Apple repeats its

argument from its motion for judgment as a matter of law on damages that the jury should have been instructed on the entire market value rule. *Id.* Apple also argues that the Court erred by instructing the jury that a reasonable royalty is "the reasonable amount that someone wanting to use the patented invention should expect to pay to the patent owner and the patent owner should *expect to receive*," instead of instructing that a reasonable royalty is "the reasonable amount someone wanting to use the patented invention would be *willing to pay* to the patent owner and the patent owner would be *willing to receive*." *Id.* at 36. (emphasis added). Apple contends that this is an incorrect statement of the law. *Id.* (citing *Aqua Shield v. Inter Pool Cover Team*, 774 F.3d 766, 770 (Fed. Cir. 2014)). Apple argues that this error led the jury to award VirnetX what it expected to receive, not what Apple would have been willing to pay at the hypothetical negotiation. *Id.* at 37.

Finally, Apple argues that the damages award is excessive and against the weight of the evidence. *Id.* According to Apple, VirnetX made several misstatements—including telling the jury that Apple employees could have seen VirnetX's licenses when the licenses were actually designated "Attorneys' Eyes Only," which VirnetX moved to seal after trial—that inflamed the jury to award an exorbitant damages award. *Id.* at 37-38. Apple argues that the jury's award is against the weight of relevant and reliable economic evidence because the only reliable royalty rate is the $0.10 per-unit rate from the Microsoft license. *Id.* at 39. Apple states that it should be granted

a new trial for these reasons or that the Court should reduce the damages to match the $0.10 royalty rate.

VirnetX responds that Apple is not entitled to a new trial on damages. Docket No. 1065 at 29. VirnetX repeats its argument that Mr. Weinstein's testimony was properly admissible and more than sufficient to support the jury's award. *Id.* VirnetX states that Apple has presented no new arguments that were not raised in Apple's *Daubert* motion—which the Court denied—and that the Court should therefore deny Apple's request for a new trial. *Id.*

VirnetX next argues that it used no improper reasonableness checks on damages. *Id.* at 30. VirnetX states that Apple presented this argument in its *Daubert* motion. *Id.* VirnetX further contends that it was not improper for Mr. Weinstein to rely on Dr. Jones's analysis and that Mr. Weinstein's opinion was based on other information as well. *Id.* at 30-31. VirnetX also argues that it did not violate the entire market value rule. *Id.* at 31. VirnetX states that the jury never heard the price of an Apple device and that Apple's arguments about the jurors' knowledge of its prices are pure conjecture. *Id.* at 31-32. VirnetX further argues that any reference to prices would have been a proper response to Apple's improper royalty stacking arguments. *Id.* at 32.

VirnetX also argues that the Court properly excluded evidence of the PTAB proceedings. VirnetX states that the Federal Circuit has already affirmed the exclusion of evidence from the PTAB proceedings in this case and that this Court rejected the same argument. *Id.* at 33-34. VirnetX argues that its

description of the invention and its criticism of Apple's infringement cannot make these proceedings relevant. *Id.* at 34. VirnetX contends that the PTAB proceedings have no effect on the presumed validity of its patents until the final exhaustion of VirnetX's appellate rights. *Id.* (citing 35 U.S.C. Section 318(b)).

VirnetX next contends that the jury instructions on damages were proper. *Id.* at 35. VirnetX states that, contrary to Apple's arguments, the Court did provide guidance to the jury about the entire market value rule by instructing the jury:

> [I]n determining a reasonable royalty, you must not rely on the overall price of Apple's accused products at issue in this case. Damages for patent infringement must be apportioned to reflect the value the invention contributes to the accused products or features and must not include value from the accused products or features that is not attributable to the patent.

Id. at 35-36 (quoting Docket No. 1021 at 4). VirnetX argues that this instruction provided the jury the necessary guidance to properly determine the royalty rate and that Apple's proposed instruction would only have made the jury more likely to improperly apply the entire market value rule. *Id.* at 36.

VirnetX also argues that the Court's instruction on the hypothetical negotiation was accurate and that Apple's proposed instruction was legally incorrect and misleading. *Id.* at 37. VirnetX states that the Court's instruction has been used by numerous courts in this

district and that it accurately captures the concept of the hypothetical negotiation. *Id.* at 37. VirnetX contends that the difference between what an infringer "should expect" to pay and what an infringer "would be willing" to pay would only be different in the case of a willful infringer. *Id.* VirnetX further states that even if the difference between those two phrases could cause confusion, the charge as a whole correctly instructed the jury on the concept. *Id.* at 38. VirnetX also contends that Apple's proposed instruction is legally inaccurate because the willingness of a patent owner to receive a certain royalty does not define the result of the hypothetical negotiation. *Id.* VirnetX further argues that the willingness of the infringer to pay a certain sum is relevant if it presented in the context of what the infringer would pay while still maintaining a reasonable expectation of profit. *Id.* at 39. VirnetX also contends that because Apple shielded the jury from its profit margins, Apple's proposed instruction did not explain the concept in proper context. *Id.*

Finally, VirnetX states that the jury's damages award was proper. *Id.* VirnetX notes that two different juries presented with nearly identical damages evidence awarded substantially similar awards. *Id.* VirnetX refers to its previous arguments regarding the substantial evidence that supported the jury's verdict and argues that Apple is simply re-urging arguments the jury rejected. *Id.* VirnetX states that Apple's belief that the jury should have reached a different conclusion does not justify a new trial. *Id.* at 40.

The Court finds that Apple is not entitled to a new trial on damages. As stated above in the Court's

analysis of Apple's motion for judgment as a matter of law on damages, VirnetX presented substantial evidence to support the jury's damages award, and Apple has not shown that the award was against the great weight of the evidence or that there was any other deficiency present in the trial that would warrant a new trial. *See supra* § I.C.2.

Apple's argument that Mr. Weinstein's testimony should be excluded is substantially the same as its *Daubert* argument, which the Court rejected. *See* Docket No. 362 in Case No. 6:12- cv-855. Apple has not presented any reason the Court should reconsider that decision.

Next, Apple's contention that Mr. Weinstein provided improper reasonableness checks is unpersuasive. Mr. Weinstein's reliance on Dr. Jones's analysis was not improper, as damages experts frequently rely on technical experts. *See Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1321 (Fed. Cir. 2014) ("Consistent with Rule 703, patent damages experts often rely on technical expertise outside of their field when evaluating design around options or valuing the importance of the specific, infringing features in a complex device."). Mr. Weinstein's opinion was also based on facts other than Dr. Jones's analysis, and those facts were identified in his expert report. *See* Trial Tr. 9/28/16 PM 28:23-30:1; Docket No. 338-2 in Case No. 6:12-cv-855 at ¶¶ 221-26. Further, the Court fails to see how VirnetX could have invited the jury to use the price of Apple's devices as a reasonableness check when it is undisputed that the price of Apple's devices was never presented to the jury and when the Court specifically

instructed the jury not to consider the full price of Apple's devices. *See* Docket No. 1021 at 4.

Apple's argument that a new trial is warranted because evidence of the PTAB proceedings was excluded is also unpersuasive. VirnetX's appeals of those proceedings are ongoing and none of the asserted claims has been cancelled. Further, because the issue of willfulness was tried to the bench, the PTAB proceedings have little, if any, relevance to the issues presented to the jury, and VirnetX's discussion of the advantages over the prior art of its patents—which are still presumed valid—did not make the PTAB proceedings relevant.

Apple's next argument, that the jury should have been instructed on the entire market value rule and that the instruction on the hypothetical negotiation was incorrect, similarly fails. Though the prices of Apple's devices were never presented to the jury, the Court instructed the jury, out of an abundance of caution, not to rely on the full price of any Apple product. *See* Docket No. 1021 at 4. The Court presumes that the jury followed this instruction. *See Francis v. Franklin*, 471 U.S. 307, 324 n.9 (1985). Further instructions on the precise contours of the entire market value rule may have led the jury to mistakenly believe that it could apply the rule despite the fact that the record did not support the rule's applicability. Further, the Court's instructions on the hypothetical negotiation do not warrant a new trial. The instruction as a whole properly conveyed to the jury that the reasonable royalty should reflect the fair market value of the technology.

Finally, the jury's verdict was not against the great weight of the evidence. The majority of Apple's arguments on this point were presented in its motion for judgment as a matter of law, which the Court has rejected above. *See supra* § I.C.2. Apple's only new argument, that VirnetX attempted to inflame the jury by using the term "non-infringing alternative" and by stating that its licenses were public, is unpersuasive. The jury was presented with substantial evidence to support its award, and the Court instructed the jury on how to properly determine damages. The Court will not second-guess the jury's decision merely because Apple claims that the jury's decision was based on passion rather than reasoned deliberation.

Accordingly, Apple's motion for a new trial on damages is **DENIED**.

D. Conclusion

For the reasons stated above, Apple's motion for judgment as a matter of law of non-infringement, motion for judgment as a matter of law on damages, motion for a new trial on infringement, and motion for a new trial on damages (Docket No. 1062) are **DENIED**.

II. VIRNETX'S REQUEST FOR A FINDING OF WILLFUL INFRINGEMENT

The parties presented the issue of willfulness through briefing and oral argument (Docket No. 1042). VirnetX filed a Post-Trial Brief Regarding Willfulness (Docket No. 1047), and in response, Apple filed an Opposition to VirnetX's Post-Trial Brief

Regarding Willfulness (Docket No. 1055). On November 22, 2016, the Court conducted a hearing on willfulness and various post-trial motions. Docket No. 1075. For the reasons set forth below, the Court finds that Apple willfully infringed VirnetX's patents by making, selling and offering for sale accused products containing the infringing VPN on Demand and FaceTime features.

A. Findings of Fact

VirnetX filed its Complaint against Apple on August 11, 2010, alleging patent infringement. Docket No. 1. On November 6, 2012, a jury found that the accused VPN on Demand and FaceTime features infringed the asserted patents and that the asserted patents were not invalid. Docket No. 790. After the jury rendered its verdict, Apple continued to sell products containing the accused features for a period of time before redesigning the accused features. PX1007; Docket Nos. 463, 475 in Case No. 6:12-cv-855.

Beginning in July 2011, Apple and other entities began filing post-grant proceedings challenging the validity of the asserted patents at the U.S. Patent and Trademark Office ("Patent Office"). Docket No. 1055-C; Docket No. 980-1 at ¶¶ 31, 36, 43, 45, 55, 60, 67, 73. Before the 2012 jury trial began, the Patent Office had rejected all asserted claims as invalid in an *inter partes* reexamination on multiple grounds and prior-art references. Docket No. 585.

Approximately five months after the jury returned its verdict, Apple announced that it would remove the infringing "Always" mode from VPN on

Demand. PX1007. After it announced the change, however, Apple received negative feedback from its customers. PX1012.03. As a result, Apple decided not to remove the infringing "Always" mode. PX1126. Six months later, Apple released a new version of VPN on Demand. Docket Nos. 463, 475 in Case No. 6:12-cv- 855. In sum, Apple continued to sell products with the infringing VPN on Demand feature for 10 months after the 2012 jury verdict.

Apple also redesigned its FaceTime feature to route all calls through relay servers approximately five months after the 2012 jury verdict. Docket No. 47 ("Hr'g Tr.") in Case No. 6:13-cv-211 at 48:25-49:4. During the 2012 trial, Apple's corporate representative estimated that it would cost Apple only $3.6 million to route its FaceTime calls via relay servers. Docket No. 613 ("Trial Tr. 11/2/12 AM") at 68:3-17. However, Apple ultimately paid $50 million to route FaceTime calls through relay servers for just 21 months. Hr'g Tr. at 24:4-6, 48:25-49:4.

The parties dispute whether Apple willfully infringed VirnetX's patents through its VPN on Demand and FaceTime features between the date of the 2012 jury verdict and the date that each feature was redesigned. For the VPN on Demand feature, the parties agree that the relevant period is November 6, 2012 to September 17, 2013, which is approximately 10 months. Docket No. 1075 at 31:21-32:11, 47:15-24. For the FaceTime feature, the parties agree that the relevant period is November 6, 2012 to April 5, 2013, which is approximately five months. *Id.*

B. Legal Standard

Willful misconduct is conduct that is "wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant, or—indeed—characteristic of a pirate." *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1932 (2016). A finding of willful infringement is appropriate only in "egregious" cases. *Id.* A plaintiff can establish willful infringement by proving the "subjective willfulness of a patent infringer." *Id.* at 1932, 1934. Subjective willfulness is characterized by recklessness, or "knowing or having reason to know of facts which would lead a reasonable man to realize his action is unreasonably risky." *Id.* at 1933. Culpability for willfulness is "measured against the knowledge of the actor at the time of the challenged conduct." *Id.* at 1933. Willful infringement must be proven by a preponderance of the evidence. *Id.* at 1934.

Prior to the *Halo* decision in June 2016, district courts applied the *Seagate* test,[3] requiring a patentee to prove by clear and convincing evidence: (1) the absence of objectively reasonable defenses (i.e., the objective prong); and (2) that the risk of infringement was either known or so obvious that it should have been known (i.e., the subjective prong). *In re Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007). Halo effectively eliminated the objective prong of the *Seagate* test. 136 S. Ct. at 1933 ("The subjective willfulness of a patent infringer, intentional or knowing, may warrant enhanced damages, without regard to

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[3] Because of the age of this case, the Court previously applied *Seagate* in these proceedings.

whether his infringement was objectively reckless."); *see also Radware, Ltd. v. F5 Networks, Inc.*, No. 5:13-CV-02024-RMW, 2016 WL 4427490, at *3 (N.D. Cal. Aug. 22, 2016) ("The Supreme Court's Halo decision eliminated Seagate's objective prong").

C. Parties' Positions

VirnetX argues that Apple, contrary to its arguments, did not actually rely on its appellate positions in its continued infringement because it attempted to redesign VPN On Demand after the 2012 jury verdict. Docket No. 1047 at 5. VirnetX contends that Apple's post-verdict behavior was reckless because the evidence indicates that Apple abandoned its VPN On Demand redesign—not based on an appellate position—but in response to customer complaints. *Id.* at 5-6. According to VirnetX, there is in fact no record evidence that Apple's continued use of the adjudged infringing version of VPN On Demand was based on Apple's appellate position. *Id.* at 7.

With respect to FaceTime, VirnetX argues that Apple's conduct was especially egregious. *Id.* VirnetX explains that during the 2012 trial, Apple's corporate representative inaccurately described the cost of implementing a non-infringing version of FaceTime, which was corrected in post-trial briefing. *Id.* According to VirnetX, Apple implemented that non-infringing relay version of FaceTime on April 5, 2013 but abandoned the version in mid-September 2013 because of the cost. *Id.* at 8. Further, VirnetX claims that the redesigned version of FaceTime had nothing to do with Apple's anonymity defense. *Id.* at 9. VirnetX argues that the combination of these events

demonstrates the recklessness and egregiousness of Apple's conduct. *Id.* at 10.

VirnetX states that, although Apple prevailed on appeal in incorporating an anonymity requirement into the claim term "secure communication link," the altered claim construction was never the basis of a reasonable non-infringement position. *Id.* at 10. VirnetX explains that this is evident from the multiple and evolving non-infringement arguments with respect to FaceTime that were presented by Apple in the three trials. *Id.* at 10-12.

VirnetX also argues that the post-grant proceedings at the Patent Office do not preclude a finding of willfulness because the final decisions that Apple relies on did not occur until 2015 and 2016. *Id.* at 12. VirnetX further states that the asserted claims are currently valid and infringed. *Id.* at 13.

VirnetX contends that Apple has already conceded willful infringement for VPN on Demand because Apple conceded the subjective prong of the *Seagate* test during the consolidated trial. *Id.* VirnetX argues that, under the new *Halo* analysis, Apple's concession is sufficient for a finding of willful infringement. *Id.* VirnetX also argues that Apple's willful infringement as to VPN on Demand and FaceTime is the law of the case because the Court already determined that Apple's post-2012-verdict sales constitute willful infringement. *Id.* at 14.

In response, Apple argues VirnetX waived any claim of willful infringement in this case when it "affirmatively represented to this Court that willfulness

'is ***not in this case***' "and that "it would be ***inappropriate*** for the Court to grant any form of relief … for something ***not at issue in this case***." Docket No. 1055 at 5 (emphasis in original). Apple also notes that the issue of willful infringement was not presented to the jury in 2012 and that the jury was neither instructed on nor asked to decide the question of willful infringement. *Id.* In addition, Apple states that the Federal Circuit did not identify willfulness as a live issue for further proceedings. *Id.*

Apple further states that the Court did not previously decide the factual issue of willful infringement in Judge Davis's February 2014 post-verdict equitable determination in the ongoing royalty action (Docket No. 48 in Case No. 6:13-cv-211). *Id.* at 7. Apple also explains that willful infringement is an issue for the jury that could not have been decided by Judge Davis; Judge Davis only presumed that Apple willfully infringed for the purposes of determining whether to enhance the ongoing royalty rate. *Id.* Apple takes the position that, even if this Court had previously decided the issue of willfulness, "the Federal Circuit expressly vacated that order in its entirety, thereby rendering any willfulness finding inapplicable." *Id.*

In addition, Apple states that it did not commit egregious conduct that would warrant a finding of willful infringement because it had a reasonable, long-held and continuing belief in the invalidity of the asserted patents. *Id.* at 8 (citing *WesternGeco L.L.C. v. ION Geophysical Corp.*, 837 F.3d 1358, 1361-63 n.2 (Fed. Cir. 2016) and *Fresenius USA, Inc. v. Baxter*

Int'l, Inc., 721 F.3d 1330, 1347 (Fed. Cir. 2013)). Apple states that it formed a good-faith belief of invalidity of the asserted patents, based upon interim invalidity decisions in post-grant proceedings before the Patent Office, more than a year before the 2012 jury verdict. *Id.* at 9-10. Apple explains that the rejections of the asserted claims are now final, confirming that its invalidity arguments were correct and, therefore, by definition reasonable. *Id.* at 11.

With respect to FaceTime, Apple argues that its post-2012 jury verdict conduct was not willful because it believed that the construction of "secure communication link" required anonymity and that its belief was confirmed on appeal to the Federal Circuit. *Id.* at 12. In addition, Apple states that VirnetX agrees that the redesign of FaceTime is non-infringing. *Id.*

With respect to VPN on Demand, Apple states that it had a good-faith belief that the features did not infringe because VPN on Demand did not "determin[e] whether" a domain name request was being made for a secure website or make any requests for a "secure server." *Id.* at 13. Apple explains that it began redesigning VPN on Demand immediately after the 2012 jury verdict in a way that VirnetX's expert agreed did not infringe. *Id.* at 13-14. Apple asserts that its redesign efforts were diligent from the time of the jury verdict to the launch of the redesign. *Id.* at 14. Apple states that it also sought the opinion of outside patent counsel to assess the suitability of the VPN on Demand redesign, who concluded that it did not infringe, prior to the implementation of the redesign. *Id.*

Apple explains that it did not concede willful infringement of VPN on Demand during the consolidated trial when it stipulated to the subjective prong of the previous Seagate test because Apple believed that it would prevail on the objective prong and was trying to streamline the issues for trial. *Id.* at 15.

D. Conclusions of Law

The Court finds that Apple willfully infringed VirnetX's asserted patents through its continued sales of the accused products containing the infringing VPN on Demand and FaceTime features after the 2012 jury verdict that found the patents infringed and not invalid.

The finding of infringement by the jury (Docket No. 598) makes Apple's continued sales after the verdict of products with the VPN on Demand and the FaceTime features unreasonably risky or reckless. *See Modis Tech. Ltd. v. Chimei Innoluz Corp.*, 822 F. Supp. 2d 639, 652 (E.D. Tex. 2011) ("And this Court holds that absent unusual circumstances that are not before this Court, a defendant is acting in the face of an unjustifiable high risk of harm if it continues to infringe in light of a jury verdict and judgment of infringement."); *Affinity Labs of Tex., LLC v. BMW N. Am., LLC*, 783 F. Supp. 2d 891, 899 (E.D. Tex. 2011) ("Following a jury verdict and entry of judgment of infringement and no invalidity, a defendant's continued infringement will be willful absent very unusual circumstances."); *DataTreasury v. Wells Fargo & Co.*, No. Case 2:06-CV-72, Docket No. 2496 (E.D. Tex. Aug. 2, 2011) at 12 ("[B]ecause U.S. Bank is an adjudged infringer, infringement going forward would

likely be willful."); *Soverain Software LLC v. Newegg Inc.*, 836 F. Supp. 2d 462, 482 (E.D. Tex. 2010), *rev'd in part and vacated in part on other grounds*, 705 F.3d 1333 (Fed. Cir. 2013), *amended on reh'g*, 728 F.3d 1332 (Fed. Cir. 2013) (finding that "[defendant] is now an adjudged infringer and [defendant's] continued infringement is both voluntary and intentional, making [defendant's] continued infringement willful."); *Presidio Components Inc. v. Am. Tech. Ceramics Corp.*, Case No. 08-CV-335-IEG NLS, 2010 WL 3070370, at *6 (S.D. Cal. Aug. 5, 2010), *aff'd in part, vacated in part*, 702 F.3d 1351 (Fed. Cir. 2012) ("[I]n light of the jury's verdict of validity and infringement, … the Court believes the rate proposed by Presidio is more reasonable. Any rate below 12 % will give ATC, who is now a willful infringer, a windfall at Presidio's expense."); *I/P Engine, Inc. v. AOL Inc.*, Case No. 2:11-CV-512, 2014 WL 309245, at *3 (E.D. Va. Jan. 28, 2014).

In light of the jury verdict finding VirnetX's patents infringed and not invalid, Apple's decision to continue infringing was unreasonably risky, despite any interim decisions in proceedings before the Patent Office. *See Safoco, Inc. v. Cameron Int'l Corp.*, Case No. 05–0739, 2009 WL 2424108, at *21 (S.D. Tex. July 31, 2009) (concluding that the "reexamination of the [patents], alone, do not foreclose Plaintiff's claims of willful infringement"); *Fujitsu Ltd. v. Belkin Int'l, Inc.*, Case No. 10-CV-03972-LHK, 2012 WL 4497966, at *34 (N.D. Cal. Sept. 28, 2012) ("[T]he grant of a reexamination and interim PTO rejections," on their own, "are not probative … on the question of patentability."); *DataQuill Ltd. v. High Tech*

Computer Corp., 887 F. Supp. 2d 999, 1018 (S.D. Cal. 2011) ("Further, courts have held that because [Patent Office] interim rejections are not binding, they are generally not relevant to issue of invalidity.").

Apple's argument that it cannot be held liable for willful infringement in light of Patent Office proceedings is unpersuasive. Apple argues that the Patent Office proceedings are still relevant despite the Federal Circuit's affirmance of the 2012 jury's finding of no invalidity. Docket No. 1055 at 8 (citing *Fresenius*, F.3d at 1340). In *Fresenius*, the Federal Circuit held that the cancellation of patent claims through Patent Office proceedings extinguishes any pending cause of action on those claims, even if there has already been a jury verdict upholding validity on the same claims. 721 F.3d at 1340. Unlike in *Fresenius*, however, the post-grant proceedings on VirnetX's patents have not resulted in cancellation of the asserted claims, as appeals of those proceedings are still ongoing. *See* 721 F.3d at 1347. Further, though Apple claims that the PTAB's final written decisions "confirm" Apple's belief in the invalidity of the asserted patents, these decisions were issued long after Apple's decision to continue infringing despite an adverse jury verdict. The later result of a Patent Office proceeding does not bear on Apple's subjective willfulness or recklessness at the time of its infringement.

Apple asserts that the proposition that post-verdict infringement generally constitutes willful infringement was determined to be improper in *Halo* and other cases because willful infringement must be evaluated based on a totality of the circumstances.

Docket No. 1055 at 8 n.2. The Court disagrees that *Halo* and subsequent cases refute the position that post-verdict infringement generally constitutes willful infringement. It is unclear how *Halo*, which functionally eliminated the objective prong of *Seagate* and lessened the requirements for a finding of willfulness, would have the effect of narrowing the range of cases where a finding of willfulness may be appropriate. Further, the general presumption that post-verdict infringement is willful is consistent with a totality-of-the-circumstances inquiry, as the presumption requires courts to consider the specific circumstances of the case. *See Affinity Labs*, 783 F. Supp. 2d at 899 ("Following a jury verdict and entry of judgment of infringement and no invalidity, a defendant's continued infringement will be willful absent very unusual circumstances.").

Finally, VirnetX has not waived the issue of willfulness in this case. Although it was not included in the complaint, willfulness was addressed in Judge Davis's order (Docket No. 48 in Case No. 6:13-cv-211) and included on the verdict form for the consolidated trial (Docket No. 425 in Case No. 6:12-cv-855 at 5). Additionally, an allegation of willfulness with respect to post-trial infringing activity could not have been included in the original complaint because, at the time of filing, VirnetX could not have anticipated the verdict, Apple's post-verdict conduct, or the willful nature of that conduct. Because the issue here is focused on post-verdict continuing sales of an infringing feature, the Court finds that willfulness is not waived. *See SynQor, Inc. v. Artesyn Techs., Inc.*, 709 F.3d 1365, 1385 (Fed. Cir. 2013) ("This court also sees no

reason why SynQor's decision not to argue pre-verdict willful infringement at trial should preclude the district court from finding willful infringement for post-verdict sales."); *Modis*, 822 F. Supp. 2d at 645,; *Affinity Labs*, 783 F. Supp. 2d at 899; *I/P Engine*, 2014 WL 309245, at *3.

E. Conclusion

For the reasons stated above, the Court finds that VirnetX has proven by a preponderance of the evidence that Apple willfully infringed the asserted patents by continuing to make and sell infringing versions of VPN on Demand and FaceTime after the 2012 jury verdict.

III. VIRNETX'S MOTION FOR ENTRY OF JUDGMENT AND EQUITABLE AND STATUTORY RELIEF

VirnetX requests that, in the event that the Court finds Apple's infringement after the 2012 verdict to be willful, the damages for that infringement should be enhanced. Docket No. 1063 at 1. VirnetX also requests attorneys' fees under 35 U.S.C. § 285, costs as the prevailing party, and pre- and post-judgment interest. *Id.* at 19-23.

A. Enhanced Damages

The Court has found that Apple's post-verdict infringement was willful, *see supra* § II.D, and now turns to the parties' arguments regarding enhanced damages.

1. Legal Standard

A court may enhance the jury's damages award by up to three times. 35 U.S.C. § 284. "The paramount determination in deciding enhancement and the amount thereof is the egregiousness of the defendant's conduct based on all the facts and circumstances." *Read Corp. v. Portec Inc.*, 970 F.2d 816 (Fed. Cir. 1992). The non-exclusive Read factors used to evaluate whether to enhance damages—and the amount of any enhancement—include the following: (1) whether the infringer deliberately copied the ideas of another; (2) whether the infringer investigated the scope of the patent and formed a good-faith belief that it was invalid or that it was not infringed; (3) the infringer's behavior as a party to the litigation; (4) the defendant's size and financial condition; (5) the closeness of the case; (6) the duration of the defendant's misconduct; (7) remedial action by the defendant; (8) the defendant's motivation for harm; and (9) whether the defendant attempted to conceal its misconduct. *Id.* at 827. An award need not rest on any particular factor, and not all relevant factors need to weigh in favor of an enhanced award. *See SRI Int'l, Inc. v. Advanced Tech. Labs., Inc.*, 127 F.3d 1462, 1469 (Fed. Cir. 1997). While the Read factors are helpful to the Court's exercise of its discretion, an analysis focused on "egregious infringement behavior" is the touchstone for determining an award of enhanced damages rather than a more rigid, mechanical assessment. *See Finjan, Inc. v. Blue Coat Sys., Inc.*, No. 13-cv- 3999, 2016 WL 3880774, at *16 (N.D. Cal. July 18, 2016).

2. Discussion

VirnetX requests enhanced damages for the time period between the first jury verdict in this case (November 6, 2012) and the date of Apple's iOS 7 redesigns (September 17, 2013). Docket No. 1063 at 1. VirnetX states that Apple sold 68,785,608 infringing units during this timeframe and requests that that the Court enhance damages for this period by 50 percent (from $1.20 a unit to a $1.80 a unit), resulting in a total damages award of $343,699,314.80. *Id.* at 1-2. VirnetX contends that its requested enhancement mirrors the enhancement ordered by Judge Davis after the 2012 trial and argues that the *Read* factors support the enhancement. *Id.* at 2.

VirnetX argues that Apple's conduct throughout the litigation demonstrates that the case was not close and supports a finding that the second *Read* factor (whether the infringer investigated the scope of the patent and formed a good-faith belief that it was invalid or that it was not infringed), the third *Read* factor (the infringer's behavior as a party to the litigation), and the fifth *Read* factor (the closeness of the case) weigh in favor of enhancing damages. *Id.* at 3.

VirnetX contends that Apple's non-infringement defenses for both VPN on Demand and FaceTime were substantively weak. *Id.* VirnetX states that the Federal Circuit noted that Apple's VPN on Demand feature operated in precisely the same manner as a preferred embodiment in the asserted patents. *Id.* (*See VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1320-21 (Fed. Cir. 2014)). With respect to FaceTime, VirnetX contends that Apple's only defense to

infringement was an argument that FaceTime was not anonymous. *Id.* VirnetX states that Apple knew this argument was incorrect, however, based on Apple's admissions at the 2012 trial that NATs hide devices and provide a level of anonymity. *Id.* at 5. VirnetX further argues there was undisputed evidence that FaceTime was designed to support connection through NAT routers. *Id.* Finally, VirnetX contends that Apple's changing positions regarding what constituted "anonymity" reflect that Apple did not have a good-faith belief that FaceTime was non-infringing. *Id.* at 6.

VirnetX further argues that the amount of the jury verdict supports the conclusion that the case was not close. *Id.* VirnetX states that the verdict matched exactly the royalty rate of $1.20 per unit that VirnetX requested and indicates an "unmistakable rejection" of the $0.10 per unit royalty rate proposed by Apple. *Id.* at 7.

VirnetX also contends that the PTAB proceedings in this case are irrelevant to the enhancement analysis. *Id.* VirnetX argues that the PTAB decisions are irrelevant because they did not issue until after the willfulness period ended and cannot support a finding that Apple had a good-faith belief in invalidity at the time of the willful infringement. *Id.* VirnetX further argues that the PTAB proceedings are not relevant because of the differences between PTAB proceedings and district court litigation. *Id.* at 8. VirnetX contends that district court claim-construction standards are more tailored to evaluating a party's actual belief in invalidity than the PTAB's standards because,

VirnetX argues, district courts seek to capture the scope of the actual invention while the PTAB looks to the broadest reasonable interpretation of the claims. *Id.* VirnetX argues that because the PTAB construed the claims to include a broader scope than what Apple agreed was the correct scope in the district court proceedings, the PTAB proceedings should have little relevance to Apple's good-faith belief in the invalidity of the patents. *Id.* at 9.

VirnetX next argues that enhancement is warranted because Apple repeatedly attempted to delay resolution of the case and to increase VirnetX's litigation costs. *Id.* at 10. VirnetX contends that Apple sought to stay the case three times, forced VirnetX to file five motions to compel, sought summary judgment on multiple grounds, all of which were denied, twice moved for a mistrial, sought post-verdict relief on nearly every conceivable ground, and attempted to inject issues about its own counsel's and jury consultant's conflicts of interest mid-trial. *Id.* at 11. VirnetX also points to Apple's attempts to invalidate VirnetX's patents at the Patent Office as another example of Apple's delaying- and cost-raising tactics. *Id.* VirnetX states that Apple has petitioned for 18 reexaminations or *inter partes reviews* ("IPRs"), paid a third party to file seven additional petitions after its time bar had expired, and has filed, caused to be filed, or moved to join 54 post-grant proceedings against VirnetX at the Patent Office. *Id.* at 11-12. VirnetX argues that Apple's conduct is an abuse of the post-grant review system and was primarily an attempt to drive up VirnetX's litigation expenses. *Id.* at 12.

VirnetX argues that Apple further added to the
length and overall cost of the case by filing a motion
to stay after the second trial, even though all the is-
sues presented in its motion occurred before the trial
and even though validity was no longer an issue in the
case because the Federal Circuit had affirmed the
first jury's finding of no invalidity. *Id.* VirnetX con-
tends that Apple similarly gambled on the outcome of
the second trial by discussing the prior verdict and
appeal during that trial, then filing a motion for new
trial based on VirnetX's discussion of the prior trial.
Id. at 13. VirnetX also argues that Apple increased
costs by litigating issues that were no longer in dis-
pute, such as infringement of the "indication" claim
term, which Apple's own expert admitted was prac-
ticed by FaceTime. *Id.*

VirnetX also contends that Apple has not litigated
this case in good faith. *Id.* at 14. In support of this
argument, VirnetX points to the testimony of an Ap-
ple employee during the 2012 trial who, the Court
found, made gross misrepresentations to the jury. *Id.*
VirnetX states that Apple witnesses in the second
trial made similar misrepresentations to the jury and
that Apple then sought to exclude these misrepresen-
tations in the retrial. *Id.* Finally, VirnetX argues that
Apple and its counsel created two serious and poten-
tially disqualifying conflicts of interest by the lateral
hiring of an appellate attorney and the hiring of a jury
consultant, both of whom had previously worked on
this case for VirnetX. *Id.* at 15. VirnetX contends that
Apple then used these potential conflicts to disrupt
and attempt to derail the trial by repeatedly

requesting advisory opinions while refusing discovery on these issues. *Id.* at 15-16.

Next, VirnetX argues that enhancement is warranted because Apple has infringed its patents for years without taking any real remedial action to stop infringing. *Id.* at 16. As to VPN on Demand, VirnetX states that the original version has been an adjudicated, infringing feature since November 2012. *Id.* VirnetX argues that Apple's redesign of the feature resulted in no meaningful change to the infringement analysis, as Apple merely moved the infringing feature from one mode of VPN on Demand to another and added components its own witnesses admitted had no utility. *Id.* As to FaceTime, VirnetX argues that Apple's redesign was based on rejected claim-construction positions and that the changes are irrelevant for purposes of infringement. *Id.* at 17. VirnetX contends that Apple's only actual attempt at a remedial measure was its "relay" redesign, which, VirnetX states, Apple abandoned because of its prohibitive cost. *Id.* at 18. VirnetX argues that Apple's redesigns were only attempts to give the appearance of non- infringement, which led to increased litigation over slightly different versions of infringing features. *Id.*

Finally, VirnetX argues that Apple's size and wealth favor enhancement. *Id.* VirnetX states that Apple is the richest publicly traded company in the world and argues that substantial enhancement is necessary to ensure Apple does not continue to willfully infringe upon the intellectual property rights of others. *Id.*

In response, Apple contends that VirnetX should not be awarded enhanced damages because VirnetX has not proven egregious infringement behavior and because the *Read* factors weigh against enhancement. Docket No. 1066 at 3, 6. Apple contends that its behavior was not egregious because it believed that the patents-in-suit were invalid—a belief, it argues, that has been confirmed by the PTAB. *Id.* at 4. Apple also argues that it had a good-faith belief in its infringement positions related to both FaceTime and VPN on Demand. Apple points to the Federal Circuit's remand as evidence of the reasonableness of its non-infringement arguments for FaceTime. *Id.* With respect to VPN on Demand, Apple states that its efforts to pursue a redesign while appealing the infringement verdict show that it did not act egregiously. *Id.* at 5.

Apple argues that each of the *Read* factors confirms that enhancement is not warranted. *Id.* at 6. Apple argues that the first factor weighs against enhancement because there is no evidence in the record that Apple copied the asserted patents. *Id.* at 7. Apple states that its engineers designed and implemented the accused features well before Apple learned of VirnetX's patents.

Apple next argues that it investigated the scope of VirnetX's patents and formed a good- faith belief that the patents were invalid and not infringed. *Id.* Apple points to the PTAB's final written decisions finding each asserted claim invalid and to the Federal Circuit's remand as evidence of the reasonableness of these beliefs. *Id.* at 8.

As to the third *Read* factor, which concerns conduct during litigation, Apple argues that it litigated fairly. *Id.* Apple contends that VirnetX's arguments regarding Apple's conduct during the 2012 trial were rejected by Judge Davis when he denied VirnetX's motion for attorneys' fees following trial. *Id.* at 8-9 (citing Docket No. 732). In Apple's view, the fact that the Federal Circuit agreed with Apple and remanded the case for retrial on both damages and infringement of FaceTime weighs strongly against enhancement. *Id.* at 9. Apple also contends there was nothing abusive about its use of post-grant proceedings at the Patent Office and argues that its filing of motions to stay, for summary judgment, and requests for mistrial was not improper, noting that VirnetX never moved for Rule 11 sanctions at any point in the case. *Id.* at 9-10. Apple further argues that its prompt handling of the potential conflicts of interest that arose during the September 2016 trial demonstrate that Apple and its counsel handled the case responsibly. *Id.* at 10-12.

According to Apple, VirnetX's conduct is also relevant to the enhancement analysis. Apple argues that VirnetX has engaged in dilatory and cost-increasing behavior in the litigation and related Patent Office proceedings. *Id.* at 12-13. Apple argues that, because VirnetX filed more than 75 petitions for extension at the PTAB, filed rejected interlocutory appeals of those proceedings, sought production of over 860,000 documents and more than 50 depositions in pretrial, and made improper arguments at the consolidated trial, VirnetX is the party that engaged in improper behavior. *Id.* Apple maintains that it acted properly during

a hard-fought case and argues that this factor weighs against enhancement. *Id.* at 14-15.

Regarding the fourth *Read* factor, the size and financial condition of the defendant, Apple argues that its success is due in large part to its culture of innovation and that the verdict should not be increased because of that success. *Id.* at 15.

Apple contends that the fifth *Read* factor, which concerns the closeness of the case, should weigh against enhancement because Apple presented reasonable and justified defenses. *Id.* For non-infringement, Apple argues that it had a strong defense for why FaceTime is not anonymous, repeating its arguments related to its motion for judgment as a matter of law of non-infringement. *Id.* at 15-16. As to VPN on Demand, Apple argues that, although the Federal Circuit found the jury's verdict of infringement to be supported by substantial evidence, Apple's defense was reasonable and justifiable. *Id.* at 17. As to invalidity, Apple again notes that it has challenged the validity of the asserted patents at the Patent Office since before the first trial and that the PTAB has issued final written decisions of unpatentability for every asserted claim. *Id.* at 18. Apple argues that these proceedings are relevant because they were pending during the willfulness period and therefore show that Apple had a good-faith belief in its invalidity positions during the relevant timeframe. *Id.* Lastly, Apple disputes VirnetX's assertion that anything can be gleaned about the strength of the case from the jury's verdict. *Id.* at 19.

Regarding the sixth *Read* factor, the duration of the misconduct, Apple argues that it promptly redesigned its product and that this factor weighs against enhancement. *Id.* at 20. Apple contends that the amount of time it took to redesign each product, 11 months for VPN on Demand and five months for FaceTime, was no more than was necessary to implement its redesigns, which required collaboration among its engineers, management, and legal team to design and implement. *Id.* Apple contends that these facts also support a finding that the seventh *Read* factor, related to remedial action, weighs against enhancement. *Id.* at 20-21.

Apple argues that the eighth *Read* factor weighs against enhancement because VirnetX presented no evidence that Apple had a motivation to harm VirnetX. *Id.* at 2. Apple likewise argues that VirnetX presented no evidence that Apple attempted to conceal any alleged misconduct and that this ninth factor should therefore weigh against enhancement. *Id.*

After carefully considering the *Read* factors in light of Apple's overall conduct, the Court finds that enhancement is appropriate in this case. Apple's continued infringement after the 2012 verdict cannot be credibly justified. *See SynQor, Inc. v. Artesyn Techs., Inc.*, 709 F.3d 1365, 1385 (Fed. Cir. 2013) ("The district court found Defendants' conduct "egregious[ ]" in continuing, and even increasing, sales in the face of an infringement verdict. … The district court made the appropriate determination for an award of enhanced damages."); *see also Imperium IP Holdings (Cayman), Ltd. v. Samsung Elecs. Co.*, No. 4:14-CV-

371, 2017 WL 4038884, at *3 (E.D. Tex. Sept. 13, 2017).

A thorough analysis of the *Read* factors as applied to this case confirms that enhancement is appropriate. Factor 2, related to investigation and good-faith belief of no liability, weighs in favor of enhancement. Apple contends that its good-faith belief in its infringement positions and its post-grant challenges to the patents' validity mitigate against an award of enhanced damages, but after the jury's verdict finding the claims infringed and valid, its reliance on these beliefs was no longer reasonable. *See Mondis Tech. Ltd. v. Chimei InnoLux Corp.*, 822 F. Supp. 2d 639, 652 (E.D. Tex. 2011), *aff'd sub nom. Mondis Tech. Ltd. v. Innolux Corp.*, 530 F. App'x 959 (Fed. Cir. 2013) (enhancing damages for post-verdict infringement despite defendant's argument that it had a good-faith belief in its appellate positions); *see also VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1324 (Fed. Cir. 2014) (noting that actions by the PTO are of limited value when attempting to establish a good faith belief of invalidity). Factor 5, the closeness of the case, also favors enhancement, because at the time of the infringement in question Apple had already been adjudicated an infringer of valid patent claims. *See Halo*, 136 S. Ct. at 1933 ("[C]ulpability is generally measured against the knowledge of the actor at the time of the challenged conduct"). Factor 4, the infringer's size and financial condition, also favors enhancement, as it is undisputed that Apple is one of the largest and most financially successful companies in the world. Although Apple now argues that this factor is neutral, it previously conceded that the factor should weigh

slightly in favor of enhancement. *See* Docket No. 18 in Case No. 6:13-cv-211 at 12.

Factor 3, the infringer's litigation conduct, weighs slightly in favor of enhancement. Apple repeatedly sought either to stay the litigation pending post-grant proceedings or to inject evidence of the proceedings into the trial, even after receiving adverse rulings from the Court and even after few, if any, relevant facts had changed since its last request, and despite the fact that invalidity was no longer in the case. *See*, *e.g.*, Docket Nos. 32, 499, and 515 in Case No. 6:12-cv-855. Similarly, though Apple moved expeditiously to remedy the potential conflicts that arose prior to and at the beginning of trial, Apple then sought multiple advisory opinions on these issues in the middle of trial. *See*, *e.g.*, Docket No. 1004.

Factors 6, 7, and 9—the duration of the misconduct, the remedial action taken by the infringer, and attempts to conceal alleged misconduct—are neutral, as Apple moved relatively quickly to redesign its products after the verdict but abandoned one of its redesigns after determining it was economically unfeasible. *See* Docket No. 438 in Case No. 6:12-cv-855 ("Trial Tr. 1/28/16") at 136:4-12; Docket No. 442 in Case No. 6:12-cv-855 ("Trial Tr. 2/1/16") at 95:21-96:14.

As to Factors 1 and 8, VirnetX has not presented any evidence of copying or motivation for harm. The parties disagree about the weight this lack of evidence should be given. VirnetX argues that the lack of evidence in the record for these two factors does not mitigate against enhancement and states that the Court

should find the factors neutral. Docket No. 1067 at 12. VirnetX contends that courts in this district have found these factors neutral under similar circumstances. *Id.* (citing *Georgetown Rail Equip. Co.*, No. 6:13-CV-366, 2016 WL 3346084, at *20; *Internet Machines LLC v. Alienware Corp.*, No. 6:10-CV-23, 2013 WL 4056282, at *20 (E.D. Tex. June 19, 2013). Apple contends that these factors should weigh against enhancement. Docket No. 1066 at 7. Apple states that the record shows that its engineers independently designed the accused technology before learning of the patents-in-suit. Docket No. 1070 at 3. Apple argues that its independent design is a mitigating factor and that "disregard[ing] the mitigating impact of factors that weigh against enhancement, such as this, would be legal error." *Id.* Further, Apple states that, for the ninth factor, attempts to conceal alleged misconduct, not only did Apple not conceal any alleged misconduct, but Apple produced extensive discovery to VirnetX, including over 860,000 documents, and made fact witnesses available for over 50 depositions.

The Court finds that these factors are neutral. Courts often find these factors neutral when there is no evidence of copying or motivation to harm. *See, e.g.*, *Boston Sci. Corp. v. Cordis Corp.*, 838 F. Supp. 2d 259, 281 (D. Del. 2012), *aff'd*, 497 F. App'x 69 (Fed. Cir. 2013); *Georgetown Rail*, No. 6:13-CV-366, 2016 WL 3346084, at *20; *Internet Machines*, 2013 WL 4056282, at *20; *Spectralytics, Inc. v. Cordis Corp.*, 834 F. Supp. 2d 920, 924 (D. Minn. 2011), *aff'd*, 485 F. App'x 437 (Fed. Cir. 2012); *PACT XPP Techs., AG v. Xilinx, Inc.*, No. 2:07-CV-563-RSP, 2013 WL 4801885,

at *1 (E.D. Tex. Aug. 30, 2013). Apple has not shown any behavior on its part relating to these factors that mitigates against an award of enhanced damages. Accordingly, Factors 1 and 8 are neutral.

As for the amount of enhancement, the Court has discretion to "increase the damages up to three times the amount found or assessed." 35 U.S.C. § 284. Having weighed the *Read* factors and having considered the totality of the circumstances in this case, the Court finds that a 50 percent enhancement is appropriate. As Judge Davis noted when setting the ongoing royalty rate after the 2012 verdict, Apple's continued sales of the infringing products constitutes willful infringement. Docket No. 48 in Case No. 6:13-cv-211.

Although Judge Davis's ongoing royalty order was vacated by the Federal Circuit due to a rejection of the VirnetX's royalty base, his ruling on enhancement is still instructive. Judge Davis found that two of the nine *Read* factors strongly favored enhancement, two slightly favored enhancement, and the remaining five factors were neutral. *Id.* at 8-9. Here, the Court finds three factors favoring enhancement, one factor slightly favoring enhancement, and five being neutral. The Court has credited Apple's remedial measures, a fact that was not fully developed when Judge Davis's order issued, but has also found several instances of litigation misconduct, which had not occurred at the time of Judge Davis's order. *See id.* On balance, the Court finds no compelling reason to deviate from the enhancement amount previously ordered by Judge Davis.

Moreover, this enhancement is in line with courts both within this district and in others when analyzing similar factual circumstances. *See Mondis*, 822 F. Supp. 2d at 653 (doubling the royalty rate by two times); *Internet Machs. LLC v. Alienware Corp.*, at *21 (E.D. Tex. June 19, 2013) (enhancing the royalty rate by 50 percent); *Affinity Labs*, 783 F. Supp. 2d at 905 (enhancing the ongoing royalty rate by 33 percent); *Imperium IP Holdings (Cayman), Ltd. v. Samsung Elecs. Co.*, No. 4:14-CV-371, 2017 WL 4038884, at *3 (E.D. Tex. Sept. 13, 2017) (enhancing the royalty rate by 50 percent); *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, No. 2:06-CV-381-JRG, 2014 WL 8708239, at *1 (E.D. Tex. Mar. 31, 2014) (enhancing damages by 50 percent where three *Read* factors favor enhancement); *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 762 F. Supp. 2d 710, 725 (D. Del. 2011), *vacated on other grounds*, 711 F.3d 1348 (Fed. Cir. 2013) (doubling damages where five *Read* factors favored enhancement).

3. Conclusion

Enhancement is appropriate here to address Apple's willful infringement and conduct. Having found three factors favoring enhancement, one factor slightly favoring enhancement, and five factors being neutral, and having considered Apple's post-verdict infringement, the Court is satisfied that a 50 percent enhancement of the damages for this timeframe is appropriate. Trebling damages for the agreed willfulness period would result in an enhancement of $165,085,459 for a total damages award of $467,513,409. However, given the totality of the

circumstances and in light of the size of the award VirnetX is otherwise due, enhancing damages to the maximum extent allowable under § 284 is not warranted, although some lesser but meaningful enhancement is appropriate in light of Apple's willful infringement. Accordingly, the royalty rate applied to the 68,785,608 units sold during the willfulness period will be increased 50 percent, from $1.20 to $1.80. VirnetX is hereby awarded enhanced damages in the amount of $41,271,364.80 against Apple and shall have and recover from Apple the total sum of $343,699,314.80 in pre-interest damages.

B. Attorneys' Fees

VirnetX requests that the Court declare this case exceptional under 35 U.S.C. § 285 and award attorneys' fees. Docket No. 1063 at 19. VirnetX has not provided an accounting of the attorneys' fees incurred.

1. Legal Standard

"The court in exceptional cases may award reasonable attorney fees to the prevailing party." 35 U.S.C. § 285. Prior to the Supreme Court's recent decision in *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749 (2014), Federal Circuit precedent required that the prevailing party produce clear and convincing evidence that the opposing party's claims were objectively baseless and brought with subjective bad faith in order to declare a case exceptional. *Brooks Furniture Mfg., Inc. v. Dutailier Int'l, Inc.*, 393 F.3d 1378, 1381-82 (Fed. Cir. 2005). Rejecting both the clear and convincing evidence standard and the two-part test, the Supreme Court has since

held that an exceptional case under § 285 is "simply one that stands out from others with respect to the substantive strength of a party's litigating position (concerning both the governing law and the facts of the case) or the unreasonable manner in which the case was litigated." *Octane Fitness*, 134 S. Ct. at 1756.

District courts "may determine whether a case is 'exceptional' in the case-by-case exercise of their discretion, considering the totality of the circumstances." *Id.* at 1757. "[A] case presenting either subjective bad faith or exceptionally meritless claims may sufficiently set itself apart from mine-run cases to warrant a fee award." *Id.* at 1756. "The predominant factors to be considered, though not exclusive, are those identified in *Brooks Furniture*: bad faith litigation, objectively unreasonable positions, inequitable conduct before the PTO, litigation misconduct, and (in the case of an accused infringer) willful infringement." *Stragent, LLC v. Intel Corp.*, No. 6:11-cv-421, 2014 WL 6756304, at *3 (E.D. Tex. Aug. 6, 2014) (Dyk, J., sitting by designation); *see also Octane Fitness*, 134 S. Ct. at 1756 n.6 ("[I]n determining whether to award fees under a similar provision in the Copyright Act, district courts could consider a 'nonexclusive' list of 'factors,' including 'frivolousness, motivation, objective unreasonableness (both in the factual and legal components of the case) and the need in particular circumstances to advance considerations of compensation and deterrence.' ") (quoting *Fogerty v. Fantasy, Inc.*, 510 U.S. 517, 535 n.19 (1994)). "Ultimately, a party's entitlement to attorney fees need only be proved by a preponderance of the evidence." *DietGoal Innovations LLC v. Chipotle Mexican Grill, Inc.*,

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No. 2:12-cv-764, 2015 WL 1284826, at *1 (E.D. Tex. March 20, 2015) (Bryson, J., sitting by designation) (citing *Octane Fitness*, 134 S. Ct. at 1758).

2. Discussion

VirnetX argues that this is an exceptional case under § 285. Docket No. 1063 at 19. VirnetX contends that cases in which willfulness is found are presumptively exceptional and that there is no reason to depart from that presumption in this case. *Id.*

VirnetX also asserts that an award of fees is supported by Apple's course of conduct in this case. *Id.* at 20. VirnetX again states that Apple's defenses were weak and designed to delay the resolution of this case and to drive up VirnetX's litigation costs. *Id.* As examples, VirnetX points to Apple's filing of over 50 post-grant proceedings, the shifting non-infringement positions of Apple and its witnesses, and a cross-country deposition that lasted less than half an hour. *Id.* VirnetX contends that the exceptional nature of the case is also exemplified by Apple's counsel's hiring of a jury consultant and lateral hiring of an appellate attorney who had both previously worked on this case for VirnetX and by its attempt to force VirnetX to deal with these conflict issues mid-trial. *Id.* VirnetX argues that fees should be awarded to deter Apple's "multi-forum kitchen-sink litigation tactics" in the future. *Id.*

In response, Apple argues that, viewed under the totality of the circumstances, this is not an exceptional case. Docket No. 1066 at 23. Apple again contends that its defenses were substantively strong, as

evidenced by the Federal Circuit's remand, this Court's denial of VirnetX's summary judgment motions, and the PTAB's final written decisions of unpatentability of the asserted claims. *Id.* at 24. Apple also argues that VirnetX's allegations of litigation misconduct are unfounded, stating that Apple's participation in PTO proceedings was proper, that its witnesses did not misrepresent facts to the jury, and that its routine litigation activity does not amount to an improper attempt to delay the litigation. *Id.* at 25.

Apple also argues that the conduct of both parties is relevant to the litigation and states that VirnetX has engaged in obstructionist tactics at the PTO and has increased the costs of this litigation through unnecessarily burdensome discovery. *Id.* at 26 (citing *Gaymar Indus., Inc. v. Cincinnati Sub-Zero Prods., Inc.*, 790 F.3d 1369, 1373 (Fed. Cir. 2015)). Apple also states that VirnetX's attempt to collect a judgment on patents that have been held invalid by the PTAB should weigh against an award of attorneys' fees. *Id.*

VirnetX is entitled to its attorneys' fees for the September 2016 trial. As stated above, Apple's continued infringement after the 2012 verdict was willful and warrants enhanced damages. *See supra* § III.A.2. While a finding of willful infringement for purposes of enhanced damages does not necessarily require a finding that a case is exceptional under § 285, "the willfulness of the infringement by the accused infringer may be a sufficient basis in a particular case for finding the case 'exceptional' for purposes of awarding attorney fees to the prevailing patent owner." *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355

F.3d 1327, 1340 (Fed. Cir. 2004); *see Brooktree Corp. v. Advanced Micro Devices, Inc.*, 977 F.2d 1555, 1582 (Fed. Cir. 1992); *see also Serio-US Indus., Inc. v. Plastic Recovery Techs. Corp.*, 459 F.3d 1311, 1321 (Fed. Cir. 2006) ("Exceptional cases usually feature some material, inappropriate conduct related to the matter in litigation, such as willful infringement, fraud or inequitable conduct ….").

Further, Apple's litigation conduct supports an award of attorneys' fees. As stated above in the context of the *Read* factors, Apple repeatedly sought either to stay the litigation pending its post-grant proceedings or to inject evidence of those proceedings into the trial, even after receiving adverse rulings from the Court. *See* Docket Nos. 32, 499, and 518 in Case No. 6:12-cv-855. Several of these requests were made even though few relevant facts had changed since the previous request was denied and despite the fact that invalidity was no longer in the case after the remand. *See*, *e.g.*, Docket Nos. 499 and 518 in Case No. 6:12-cv-855.

Similarly, Apple's handling of the conflicts issues that arose on the eve of trial favors a finding that the case is exceptional. As to the jury consultant who worked for VirnetX during the first trial and was hired by Apple for the third trial, Apple states that before it hired him, Apple received a statement that he had no conflicts on the case. Docket No. 1066-3. However, Apple's failure to ensure that its consultant actually had no conflicts unnecessarily complicated the trial. Further, Apple asked the Court for several advisory opinions regarding either a potential

mistrial or disqualification of counsel because of the conflict, all the while refusing to give VirnetX even basic discovery on the matter. *See* Trial Tr. 9/26/16 AM at 24:18-22; Trial Tr. 9/29/16 PM at 83:1-104:5. Likewise, Apple sought multiple advisory opinions on the potential conflict created by VirnetX's appellate counsel joining Apple's counsel's firm. *See* Docket No. 994; Docket No. 1004; Trial Tr. 9/29/16 PM at 83:1-104:5. While the Court finds nothing improper about VirnetX's former appellate counsel joining Apple's counsel's firm, Apple's haste in seeking advisory opinions, combined with its delay in providing VirnetX with the relevant facts, demonstrates a level of gamesmanship regarding conflicts it created that the Court finds weighs in favor of a finding of an exceptional case.

Considering the totality of the circumstances, the Court finds the case to be exceptional as to the third trial. However, the Court notes that Judge Davis declined to award attorneys' fees after the first trial and that a new trial was granted after the second trial in part because of VirnetX's own repeated references to the first jury's verdict. *See* Docket No. 732 at 44; Docket No. 893 at 1. Accordingly, the Court will award VirnetX only those attorneys' fees that are reasonably related to the September 2016 trial.

3. Conclusion

For the reasons stated above, VirnetX's request for its attorneys' fees is **GRANTED** as to fees reasonably related to the September 2016 trial. The parties are **ORDERED** to meet and confer as to which expenses fall within that category and to file a notice

detailing the agreed amount of fees or any disputes within **fourteen (14) days** of this Order.

C. Costs

In a patent case, Federal Circuit law governs the determination of which party has prevailed. *Manildra Milling Corp. v. Ogilvie Mills, Inc.*, 76 F.3d 1178, 1182 (Fed. Cir. 1996). To be the "prevailing party," the Federal Circuit requires: (1) that the party have "received at least some relief on the merits," and (2) "[t]hat relief must materially alter the legal relationship between the parties by modifying one party's behavior in a way that 'directly benefits' the opposing party." *Shum v. Intel Corp.*, 629 F.3d 1360, 1366-67 (Fed. Cir. 2010) (citations omitted). A party does not need to prevail on all claims to qualify as the prevailing party. *SSL Servs., LLC v. Citrix Sys., Inc.*, 769 F.3d 1073, 1086 (Fed. Cir. 2014).

Apple disputes that VirnetX is the prevailing party because the asserted patents are subject to final written decisions of unpatentability issued by the PTAB. Docket No. 1066 at 29. However, Apple does not contest that costs are warranted if judgment is entered for VirnetX. *Id.*

As VirnetX succeeded on each of its claims tried to the jury, it is the prevailing party in this litigation and is entitled to its costs. The parties are **ORDERED** to meet and confer to resolve any disputes surrounding the bill of costs and to submit an agreed bill of costs or any remaining disputes to the Court within fourteen (14) days of this Order.

D. Pre-Judgment Interest

Pre-judgment interest should typically "be awarded where necessary to afford the plaintiff full compensation for the infringement." *Gen. Motors Corp. v. Devex Corp.*, 461 U.S. 648, 655 (1983). "[A]n award of prejudgment interest is necessary to ensure that the patent owner is placed in as good a position as he would have been in had the infringer entered into a reasonable royalty agreement." *Id.* (citation omitted); *see also Beatrice Foods Co. v. New England Printing & Lithographing Co.*, 923 F.2d 1576, 1580 (Fed. Cir. 1991); *Bio-Rad Labs. v. Nicolet Instrument Corp.*, 807 F.2d 964, 967 (Fed. Cir. 1986). Except in unusual circumstances, a prevailing patent owner is entitled to pre-judgment interest on the damages awarded because complete compensation includes the "forgone use of the money between the time of infringement and the date of judgment." *Gen. Motors*, 461 U.S. at 655-56.

VirnetX requests pre-judgment interest at the prime rate compounded annually. Docket No. 1063 at 22. Apple contends that the Court should not award pre-judgment interest because the jury's award more than compensates VirnetX and because the PTAB has issued final written decisions of unpatentability for each of the patents-in-suit. Docket No. 1066 at 28. Apple also argues that if the Court grants VirnetX pre-judgment interest, it should be calculated as if VirnetX received the entire verdict as a lump sum, as VirnetX requests, but as a running royalty instead. *Id.*

The Court finds that no unusual circumstances exist here that preclude an award of pre- judgment interest. Consistent with the practice in this district, the Court **ORDERS** that VirnetX be awarded pre-judgment interest at the prime rate compounded annually, to be applied on the entire jury award beginning at the date of the hypothetical negotiation. *See DDR Holdings, LLC v. Hotels.com, L.P.*, No. 2:06-cv-42, 2013 WL 3187163 at *1-*2 (E.D. Tex. June 20, 2013).

E. Post-Judgment Interest

VirnetX also requests post-judgment interest under 28 U.S.C. § 1961. Docket No. 1063 at 23. VirnetX states that it is entitled to post-judgment interest that is "computed daily, at a rate equal to the weekly average 1-year constant maturity Treasury yield, as published by the Board of Governors of the Federal Reserve System, for the calendar week preceding the date of judgment, and [that] shall be compounded annually." *Id.* Apple again disputes that VirnetX is the prevailing party because the asserted patents are subject to final written decisions of unpatentability issued by the PTAB. Docket No. 1066 at 29. However, VirnetX, as the prevailing party, is entitled to post-judgment interest. Accordingly, the Court **ORDERS** Apple to pay VirnetX post-judgment interest at the statutory rate upon entry of judgment pursuant 28 U.S.C. § 1961.

CONCLUSION

For the reasons stated above, the Court **ORDERS** that:

- Apple's Rule 50(a) Motion for Judgment as a Matter of Law on Damages (Docket No. 1018) and is **DENIED-AS-MOOT**;

- Apple's Rule 50(a) Motion for Judgment as a Matter of Law of No Infringement (Docket No. 1019) is **DENIED-AS-MOOT**;

- VirnetX's request in its Post-Trial Brief Regarding Willfulness (Docket No. 1047) is GRANTED;

- Apple's Omnibus Motion for Judgment as a Matter of Law Under Rule 50(b) (Docket No. 1062) is DENIED; and

- VirnetX's Motion for Entry of Judgment and Equitable Relief (Docket No. 1063) is GRANTED.

So ORDERED and SIGNED this 29th day of September, 2017.

<u>/s/ Robert W. Schroeder III</u>
ROBERT W. SCHROEDER III
UNITED STATES DISTRICT JUDGE

APPENDIX C

**United States Court of Appeals
for the Federal Circuit**

VIRNETX, INC.,
Plaintiff-Appellee,

AND

**SCIENCE APPLICATIONS INTERNATIONAL
CORPORATION**,
Plaintiff-Appellee,

v.

CISCO SYSTEMS, INC.,
Defendant,

AND

APPLE INC.,
Defendant-Appellant.

2013-1489

Appeal from the United States District Court for
the Eastern District of Texas in No. 10-CV-0417,
Chief Judge Leonard Davis.

Decided: September 16, 2014

WILLIAM F. LEE, Wilmer Cutler Pickering Hale and Dorr, LLP, of Boston, Massachusetts, argued for defendant-appellant. With him on the brief were MARK C. FLEMING, LAUREN B. FLETCHER, and REBECCA BACT, of Boston, Massachusetts, and JONATHAN G. CEDARBAUM, BRITTANY BLUEITT AMADI, and LEAH LITMAN, of Washington, DC. Of counsel on the brief was DANNY L. WILLIAMS, Williams, Morgan & Amerson, P.C., of Houston, Texas.

J. MICHAEL JAKES, Finnegan, Henderson, Farabow, Garrett & Dunner, LLP, of Washington, DC, argued for plaintiffs-appellees. With him on the brief for Virnetx, Inc. were KARA F. STOLL and SRIKALA ATLURI, of Washington, DC, and BENJAMIN R. SCHLESINGER, of Atlanta, Georgia. Of counsel on the brief were BRADLEY W. CALDWELL, JASON D. CASSADY, and JOHN AUSTIN CURRY, Caldwell, Cassady & Curry, of Dallas, Texas. On the brief for Science Applications International Corporation were DONALD URRABAZO, ARTURO PADILLA, and RONALD WIELKOPOLSKI, Urrabazo Law, P.C., of Los Angeles, California; and ANDY TINDEL, Mann, Tindel & Thompson, of Tyler, Texas.

Before PROST,[1] *Chief Judge* and CHEN, *Circuit Judge*.[2]

PROST, *Chief Judge*.

Apple Inc. appeals from a final judgment of the U.S. District Court for the Eastern District of Texas, in which a jury found that Apple infringed U.S. Patent Nos. 6,502,135 ("'135 patent"), 7,418,504 ("'504 patent"), 7,490,151 ("'151 patent"), and 7,921,211 ("'211 patent"). The jury further found that none of the infringed claims were invalid and awarded damages to plaintiffs-appellees VirnetX, Inc. and Science Applications International Corporation ("SAIC") in the amount of $368,160,000.

For the reasons that follow, we affirm the jury's findings that none of the asserted claims are invalid and that many of the asserted claims of the '135 and '151 patents are infringed by Apple's VPN On Demand product. We also affirm the district court's exclusion of evidence relating to the reexamination of the patents-in-suit. However, we reverse the jury's finding that the VPN On Demand product infringes claim 1 of the '151 patent under the doctrine of equivalents. We also reverse the district court's construction of the claim term "secure communication link" in the '504 and '211 patents and remand for further proceedings to determine whether the FaceTime feature

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[1] Sharon Prost assumed the position of Chief Judge on May 31, 2014.

[2] Randall R. Rader, who retired from the position of Circuit Judge on June 30, 2014, did not participate in this decision.

infringes those patents under the correct claim construction. Finally, we vacate the jury's damages award and remand for further proceedings consistent with this opinion.

BACKGROUND

The patents at issue claim technology for providing security over networks such as the Internet. The patents assert priority to applications filed in the 1990s, originally assigned to SAIC. VirnetX, a Nevada-based software development and licensing enterprise, acquired the patents from SAIC in 2006.

I. The '504 and '211 Patents and FaceTime

The '504 and '211 patents share a common specification disclosing a domain name service ("DNS") system that resolves domain names and facilitates establishing "secure communication links." '504 patent col. 55 ll. 49-50. In one embodiment, an application on the client computer sends a query including the domain name to a "secure domain name service," which contains a database of secure domain names and corresponding secure network addresses. *Id.* at col. 50 ll. 54-57, col. 51 ll. 11-19, col. 51 ll. 29-32. This allows a user to establish a secure communication link between a client computer and a secure target network address. *Id.* at col. 51 ll. 34-40.

Representative claim 1 of the '504 patent recites:

1. A system for providing a domain name service for establishing a secure communication link, the system comprising:

a domain name service system configured to be connected to a communication network, to store a plurality of domain names and corresponding network addresses, to receive a query for a network address, and to comprise an indication that the domain name service system supports establishing a secure communication link.

Id. at col. 55 ll. 49-56.

Before the district court, VirnetX accused Apple of infringement based on its "FaceTime" feature. Specifically, VirnetX accused Apple's servers that run FaceTime on Apple's iPhone, iPod, iPad (collectively, "iOS devices"), and Mac computers of infringing claims 1, 2, 5, 16, 21, and 27 of the '504 patent as well as claims 36, 37, 47, and 51 of the '211 patent. In operation, FaceTime allows secure video calling between select Apple devices. J.A. 1443. To use FaceTime, a caller enters an intended recipient's e-mail address or telephone number into the caller's device (e.g., iPhone). J.A. 1451-52. An invitation is then sent to Apple's FaceTime server, which forwards the invitation to a network address translator ("NAT") which, in turn, readdresses the invitation and sends it on to the receiving device. J.A. 1821, 1824-25. The recipient may then accept or decline the call. J.A. 1453. If accepted, FaceTime servers establish a secure FaceTime call. J.A. 1453. Once connected, the devices transmit audio/video data as packets across the

secure communication path without passing through the FaceTime server. J.A. 1820, 1825.

II. The '135 and '151 Patents and VPN On Demand

A conventional DNS resolves domain names (e.g., "Yahoo.com") into Internet Protocol ("IP") addresses. *See* '135 patent col. 37 ll. 22-27. A user's web browser then utilizes the IP address to request a website. *Id.* at col. 37 ll. 24-29.

The '135 and '151 patents share a common specification disclosing a system in which, instead of a conventional DNS receiving the request, a DNS proxy intercepts it and determines whether the request is for a secure site. *Id.* at col. 38 ll. 23-25. If the proxy determines that a request is for a secure site, the system automatically initiates a virtual private network ("VPN") between the proxy and the secure site. *Id.* at col. 38 ll. 30-33. If the browser determines that the request was for a non-secure website, then the DNS proxy forwards the request to a conventional DNS for resolution. *Id.* at col. 38 ll. 43-47.

Representative claim 1 of the '135 patent recites:

1. A method of transparently creating a virtual private network (VPN) between a client computer and a target computer, comprising the steps of:

(1) generating from the client computer a Domain Name Service (DNS) request that requests an IP address corresponding to a

domain name associated with the target computer;

(2) determining whether the DNS request transmitted in step (1) is requesting access to a secure web site; and

(3) in response to determining that the DNS request in step (2) is requesting access to a secure target web site, automatically initiating the VPN between the client computer and the target computer.

Id. at col. 47 ll. 20-32.

Claims 1 and 13 of the '151 patent are similar to claim 1 of the '135 patent except that they recite initiating an "encrypted channel" and creating a "secure channel," respectively, instead of creating a "VPN." '151 patent col. 46 ll. 55-67, col. 48 ll. 18-29.

Before the district court, VirnetX accused Apple's iPhone, iPad, and iPod Touch of infringing claims 1, 3, 7, and 8 of the '135 patent and claims 1 and 13 of the '151 patent because they include a feature called "VPN On Demand." When a user enters a domain name into the browser of an iOS device, a DNS request is generated. J.A. 1393-94. VPN On Demand receives the request and checks a list of domain names for which a VPN connection should be established, known as a "configuration file." J.A. 1377. If the entered domain name matches a domain name in the configuration file, VPN On Demand contacts a VPN server to authenticate the user and, if successful, automatically establishes a VPN between the user's

browser and the target computer with which the requested domain name is associated. J.A. 1377-78, 1396-98.

III. Five-Day Jury Trial and Post-Trial Motions

On August 11, 2010, VirnetX filed this infringement action, alleging that Apple's FaceTime servers infringe certain claims of the '504 and '211 patents, and that Apple's VPN On Demand feature infringes certain claims of the '135 and '151 patents. Apple responded that FaceTime and VPN On Demand do not infringe, and that the asserted claims were invalid as anticipated by a 1996 publication by Takahiro Kiuchi et al. ("Kiuchi").

On April 25, 2012, the district court construed disputed claim terms, and a jury trial commenced on October 31, 2012. After a five-day trial, the jury returned its verdict, finding all of the asserted claims valid and infringed. The jury awarded VirnetX $368,160,000 in reasonable royalty damages. Apple moved for judgment as a matter of law ("JMOL") or, alternatively, for a new trial or remittitur. On February 26, 2013, the district court denied Apple's motions. *VirnetX, Inc. v. Apple Inc.*, 925 F. Supp. 2d 816 (E.D. Tex. 2013).

Apple now appeals the denial of its post-trial motion for JMOL or a new trial. This court has jurisdiction under 28 U.S.C. § 1295(a)(1).

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DISCUSSION

I. Claim Construction

On appeal, Apple argues that the district court erred in construing the terms "domain name" and "secure communication link," both recited in the '504 and '211 patents. For the reasons that follow, we affirm the construction of "domain name" and reverse the construction of "secure communication link."

Claim construction is a question of law that we review *de novo*. *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 744 F.3d 1272, 1276-77 (Fed. Cir. 2014) (*en banc*); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998) (*en banc*). The process of construing a claim term begins with the words of the claims themselves. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-14 (Fed. Cir. 2005) (*en banc*). However, the claims "must be read in view of the specification, of which they are a part." *Phillips*, 415 F.3d at 1315 (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (*en banc*), *aff'd* 517 U.S. 370 (1996)). Additionally, the doctrine of claim differentiation disfavors reading a limitation from a dependent claim into an independent claim. *See Inter-Digital Commc'ns, LLC v. Int'l Trade Comm'n*, 690 F.3d 1318, 1324 (Fed. Cir. 2012). Although courts are permitted to consider extrinsic evidence like expert testimony, dictionaries, and treatises, such evidence is generally of less significance than the intrinsic record. *Phillips*, 415 F.3d at 1317 (citing *C.R. Bard, Inc.*

v. U.S. Surgical Corp., 388 F.3d 858, 862 (Fed. Cir. 2004)).

A. "Domain Name"

The district court construed "domain name" as "a name corresponding to an IP address." Memorandum Opinion & Order at 16, *VirnetX, Inc. v. Cisco Sys. Inc.*, No. 6:10-cv-416 (E.D. Tex. Apr. 25, 2012), ECF No. 266 ("*Claim Construction Order*"). Apple argues, as it did below, that the proper construction is "a hierarchical sequence of words in decreasing order of specificity that corresponds to a numerical IP address." Apple insists that its construction represents the plain and ordinary meaning of the term, relying primarily on a technical dictionary definition and several examples in the specification (e.g., "Yahoo.com"). We disagree. Intrinsic evidence supports the district court's construction of "domain name." The specification of the '504 and '211 patents suggests the use of the invention for secure communications between application programs like "video conferencing, e-mail, word processing programs, telephony, and the like." '504 patent col. 21 ll. 27-29. The disclosure of such applications demonstrates that the inventors did not intend to limit "domain name" to the particular formatting limitations of websites sought by Apple, i.e., a top-level domain, second-level domain, and host name.

Additionally, fundamental principles of claim differentiation disfavor reading Apple's hierarchical limitation into the independent claims. Dependent claims in both patents require that "at least one" of the domain names stored by the system comprise a

top-level domain name. *See, e.g.*, '504 patent col. 55 ll. 57-59 ("The system of claim 1, wherein at least one of the plurality of domain names comprises a top-level domain name."); '211 patent col. 57 ll. 47-50 ("The non-transitory machine-readable medium of claim 36, wherein the instructions comprise code for storing the plurality of domain names and corresponding network addresses including at least one top-level domain name."). The specific limitation of hierarchical formatting in the dependent claims strongly suggests that the independent claims contemplate domain names both with *and without* the hierarchical format exemplified by "Yahoo.com." *See* InterDigital, 690 F.3d at 1324 ("The doctrine of claim differentiation is at its strongest … 'where the limitation that is sought to be "read into" an independent claim already appears in a dependent claim.'" (quoting *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004))).

Such intrinsic evidence is not outweighed by the extrinsic evidence of one dictionary definition. This is particularly true here, where the dictionary definition seems to contemplate web addresses on the Internet, while the specification makes clear that the claim term in question is not so limited. *See* J.A. 6139-40. Thus, we affirm the district court's construction of the term "domain name" as "a name corresponding to an IP address."

B. "Secure Communication Link"

The district court construed "secure communication link" as "a direct communication link that provides data security." *Claim Construction Order* at 13.

Apple argues that this term should be construed consistent with "VPN," which the district court construed to require not only data security but also anonymity.[3]

As an initial matter, we note that there is no dispute that the word "secure" does not have a plain and ordinary meaning in this context, and so must be defined by reference to the specification. *See* Oral Arg. 31:50-32:40, *available at* http://www.cafc. uscourts.gov/oral-argument-recordings/13-1489/all (acknowledgement by VirnetX's counsel that construction of "secure" requires consideration of the specification).

Moreover, we agree with Apple that, when read in light of the entire specification, the term "secure communication link" requires anonymity. Indeed, the addition of anonymity is presented as one of the primary inventive contributions of the patent. For example, the Background of the Invention states that "[a] tremendous variety of methods have been proposed and implemented to provide security *and anonymity* for communications over the Internet." '504 patent col. 1 ll. 32-35 (emphasis added). It goes on to define these two concepts as counterpart safeguards against eavesdropping that could occur while two computer terminals communicate over the Internet. *Id.* at col. 1 ll. 38-54. Security in this context refers to protection of data itself, to preserve the secrecy of its contents,

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[3] The district court construed VPN to mean "a network of computers which privately and directly communicate with each other by encrypting traffic on insecure paths between the computers where the communication is both secure and anonymous." *Claim Construction Order* at 8.

while anonymity refers to preventing an eavesdropper from discovering the *identity* of a participating terminal. *Id.* at col. 1 ll. 40-54.

Having thus framed the problem, the patent (as expected) proposes a solution. Specifically, the Summary of the Invention begins by explaining how the invention improves security by using a "two-layer encryption format" known as the Tunneled Agile Routing Protocol, or TARP. *Id.* at col. 3 ll. 14-17. First, an "inner layer" secures the data itself, *id.* at col. 4 ll. 5-7, and then a second "outer layer" conceals the data's "true destination," *id.* at col. 3 ll. 34-35. The fact that the Summary of the Invention gives primacy to these attributes strongly indicates that the invention requires more than just data security. *See*, *e.g.*, *C.R. Bard*, 388 F.3d at 864 (giving particular weight to statements in the Summary of the Invention because "[s]tatements that describe the invention as a whole, rather than statements that describe only preferred embodiments, are more likely to support a limiting definition of a claim term").

Consistent with this emphasis, the Detailed Description states that "the message payload is embedded behind an inner layer of encryption" and "[e]ach TARP packet's true destination is concealed behind an outer layer of encryption." '504 patent col. 9 ll. 60-61, col. 11 ll. 2-4. The concealment requirement appears throughout the specification and is implicated in every embodiment associated with the "two-layer encryption" or TARP VPN. The fact that anonymity is "repeatedly and consistently" used to characterize the invention strongly suggests that it should be read as

part of the claim. *See Eon-Net LP v. Flagstar Bancorp.*, 653 F.3d 1314, 1321-23 (Fed. Cir. 2011).

VirnetX attempts to rebut this suggestion by pointing to a single place in the specification where a "secure communication path" is referred to as providing only security, without anonymity. *See* '504 patent col. 39 ll. 24-35. But that disclosure relates to the "conventional architecture" of the prior art that suffers precisely because it "hamper[s] anonymous communications on the Internet." *Id.* at col. 39 ll. 24, 32-33. And indeed, the specification goes on to explain how the invention solves that very problem by setting up a VPN, which requires anonymity. *Id.* at col. 39 ll. 46-62.

VirnetX also argues that the specification teaches that different users have "different needs" such that some users need data security while, in other cases, "it *may* be desired" to also have anonymity. Appellee's Br. 48 (citing '504 patent col. 1 ll. 33-52). Thus, VirnetX insists, the TARP protocol (with its requirement of anonymity) is but one type of "secure communication link," and does not limit the construction of that term. To be sure, the specification mechanically prefaces most passages with the phrase "according to one aspect of the present invention." *See, e.g.*, '504 patent col. 6 l. 36. But the Background and Summary of the Invention clearly identify the TARP protocol as a key part of the novel solution to the specific problem identified in the prior art. Unsurprisingly, therefore, VirnetX has not identified even a single embodiment that provides data security but not anonymity.

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Moreover, in several instances the specification appears to use the terms "secure communication link" and "VPN" interchangeably, suggesting that the inventors intended the disputed term to encompass the anonymity provided by a VPN. *See Nystrom v. Trex Co.*, 424 F.3d 1136, 1143 (Fed. Cir. 2005) ("Different terms or phrases in separate claims may be construed to cover the same subject matter where the written description and prosecution history indicate that such a reading of the terms or phrases is proper."). For example, it states that "[w]hen software module 3309 is being installed or when the user is off-line, the user can optionally specify that all communication links established over computer network 3302 are *secure communication links*. Thus, anytime that a communication link is established, the link is a VPN link." '504 patent col. 52 ll. 15-19 (emphases added). Similarly, in the very next paragraph the specification states that "a user at computer 3301 can optionally select a *secure communication link* through proxy computer 3315. Accordingly, computer 3301 can establish a *VPN* communication link 3323 with secure server computer 3320 through proxy computer 3315." *Id.* at col. 52 ll. 25-29 (emphases added). In both of these instances, the specification equates the term "secure communication link" with a "VPN." The only counter-example VirnetX can point to is an instance where the specification states, in relation to one aspect of the invention, that "[t]he secure communication link is a virtual private network communication link over the computer network." *Id.* at col. 6 ll. 61-63. But equating the two terms with respect to one aspect of the present invention is a far cry from expressly divorcing

those terms elsewhere, particularly in the absence of any embodiment or disclosure that does so.

Thus, we reverse the district court's claim construction and conclude that the term "secure communication link" as used in the '504 and '211 patents requires anonymity. Accordingly, the term should be construed as "a direct communication link that provides data security *and anonymity*."

II. Infringement

We review the denial of a motion for JMOL or a new trial under the law of the regional circuit. *Verizon Servs. Corp. v. Cox Fibernet Va., Inc.*, 602 F.3d 1325, 1331 (Fed. Cir. 2010). The Fifth Circuit requires that a jury's determination must be upheld if it is supported by substantial evidence. *ClearValue, Inc. v. Pearl River Polymers, Inc.*, 668 F.3d 1340, 1343 (Fed. Cir. 2012) (citing *Med. Care Am., Inc. v. Nat'l Union Fire Ins. Co.*, 341 F.3d 415, 420 (5th Cir. 2003)).

A. '504 and '211 Patents

Apple argues that there was not substantial evidence to support the jury's verdict that its FaceTime servers infringe the asserted claims of the '504 and '211 patents. Apple insists that FaceTime does not infringe the "secure communication link" claim term for two reasons: first, because when properly construed it requires anonymity, which the FaceTime servers do not provide, and second, because they do not provide "direct" communication, as required by the district court's claim construction.

With respect to the first argument, we have now construed the disputed claim term so as to require anonymity. *See supra* at 13. However, the jury was not presented with the question of whether FaceTime infringes the asserted claims under a construction requiring anonymity. Thus, we remand for further proceedings to determine whether Apple's FaceTime servers provide anonymity.

With respect to the second argument, Apple argues that FaceTime servers do not provide "direct" communication because the communications are addressed to a NAT, rather than to the receiving device. Appellant's Br. 43. The district court concluded that there was substantial evidence to support the jury's finding that the NAT routers used by FaceTime do not impede direct communication, *VirnetX*, 925 F. Supp. 2d at 831, and we agree. As the district court noted, VirnetX's expert testified that the NAT routers still allow for "end-to-end communication between the two devices," J.A. 1565, because they merely translate addresses from the public address space to the private address space, but do not terminate the connection. J.A. 1465, 1536-37. Even Apple's expert admitted that the connection does not stop at the NAT routers. J.A. 1984.

Apple argues that this testimony cannot support a finding of infringement because it is inconsistent with the court's claim construction that required "direct addressability." Appellant's Br. 43-45. But the district court considered this argument and disagreed, noting that its claim construction expressly provided that "routers, firewalls, and similar

servers … do not impede 'direct' communication," and VirnetX presented evidence that NATs operate like routers or firewalls. *VirnetX*, 925 F. Supp. 2d at 831.

Thus, we do not think the district court erred in finding that there was substantial evidence on which the jury could have relied to reach its finding of infringement on this element.

B. '135 and '151 Patents

Apple also argues that there was not substantial evidence to support the jury's verdict that its VPN On Demand product infringed the asserted claims of the '135 and '151 patents for several reasons, discussed in turn below.

1. "Determining Whether"

Apple argues that its VPN On Demand feature does not infringe the asserted claims of the '135 and '151 patents because it does not "determine whether" a requested domain name is a secure website or server. Instead, Apple insists that it merely determines whether the requested website is listed in the user-created "configuration file" and initiates a VPN connection for any domain name on that list, regardless of whether or not it is secure. In response, VirnetX argues that there was substantial evidence demonstrating that the VPN On Demand system is designed and intended to be used only for accessing secure private networks. We agree with VirnetX.

Here, the evidence presented at trial supports the conclusion that Apple's VPN On Demand product

infringes the asserted claim limitation in its normal configuration. In particular, VirnetX's expert testified that Apple's technical design documents and internal technical presentations relating to the VPN On Demand system (many of which are confidential and cannot be quoted here) make clear that a VPN connection should only be established for private web addresses. Thus, regardless of whether a user could misconfigure the list by entering public domain names, Apple's planning documents, internal emails, and presentations all explained that VPN On Demand's primary use is to connect users to secure sites using a VPN. That is all that is required. *See Hilgraeve Corp. v. Symantec Corp.*, 265 F.3d 1336, 1343 (Fed. Cir. 2001).

Moreover, this description of the VPN On Demand feature is consistent with how the claimed functionality is described in the specification. For example, in one embodiment, the DNS proxy determines whether a request is for a secure site by checking the domain name against a table or list of domain names. '135 patent col. 38 ll. 23-30. In other words, the proxy identifies a request for "access to a secure site … by reference to an internal table of such sites." *Id.* That is precisely how the VPN On Demand feature operates.

We therefore conclude that the jury's finding that the VPN On Demand product infringes the "determining whether" limitation was supported by substantial evidence.

2. "Between"

a. Literal Infringement of Claim 1 of the '135 Patent and Claim 13 of the '151 Patent

Claim 1 of the '135 patent requires creating a "VPN" "between" the client and a target computer. '135 patent col. 47 ll. 20-22. Similarly, claim 13 of the '151 patent requires creating a "secure channel" "between" the client and the secure server. '151 patent col. 48 ll. 28-29. For both claims, the district court construed "between" to mean "extending from" the client to the target computer. *Claim Construction Order* at 26.

Apple argues that its VPN On Demand product fails to meet this limitation because it only secures communications between the iPhone and the VPN server, but not between the VPN server and the target computer. VirnetX responds that Apple's product is intended to be used with private networks, which are generally configured to be both secure and anonymous. In other words, VirnetX argues that the secure channel between the VPN server and the target computer is provided by the target computer itself. After considering the record as a whole, we conclude that there was substantial evidence to support the jury's verdict of infringement on this limitation.

At trial, VirnetX presented evidence and testimony to the jury that "the virtual private network extend[s] from the client computer to the target computer because it's encrypted on the insecure paths, and it's secure within the corporate network." J.A. 1400-01. VirnetX's expert testified that one of

ordinary skill would understand that the path extending from the VPN server to the target computer, *i.e.*, within the private network, would be secure and anonymous owing to protection provided by the private network. J.A. 1080 ("That network is secure, because it's been physically secured; and it also has what's called a firewall between its network and the public network. So it keeps the bad guys out."); J.A. 1379 ("If that's a private network of the company that they've set up behind a VPN server, the company would have configured that to be secure."); J.A. 1396 ("[T]hese are … private networks that are not to be accessed by others. They require authorization for access."). The jury also heard testimony that while in some situations traffic could be unsecured behind the VPN server, J.A. 1997-98, this scenario would be "atypical." J.A. 1992-93. For example, VirnetX presented evidence to the jury that Apple itself advertised that VPN On Demand is designed to connect with "private corporate networks" and "works with a variety of authentication methods." J.A. 20001. And, more to the point, the jury heard that the "private corporate networks" to which VPN On Demand is intended to connect employ security measures including VPN servers, VPN authentication servers, proxy servers, and firewalls which regulate access to private resources and prevent unauthorized users from breaching. J.A. 1080, 1379, 1401.

Apple argues that this finding of infringement necessarily rests on a series of "assumptions" about how all private networks operate in order to conclude that VPN On Demand is "typically" configured to operate in the manner accused of infringement.

Appellant's Br. 30-31. However, VirnetX's expert re-
lied on Apple's own internal technical documentation,
product specifications, and marketing presentations,
several of which describe specific security measures
used by the private networks to which VPN On De-
mand is *intended* to connect. This evidence demon-
strates not only that VPN On Demand *may* be config-
ured to interact with private networks, but that this
was apparently Apple's primary objective. Apple
would have VirnetX prove that VPN On Demand has
no non-infringing modes of operation. But, as noted
above, VirnetX bears no such burden. *See supra* at 15-
16; *see also z4 Techs., Inc. v. Microsoft Corp.*, 507 F.3d
1340, 1350 (Fed. Cir. 2007) ("[I]nfringement is not
avoided merely because a non-infringing mode of op-
eration is possible."). We cannot agree that the jury's
finding lacks substantial evidence because VirnetX
did not specifically disprove that VPN On Demand
can, in atypical situations, establish a VPN with inse-
cure networks.

Apple also responds that this evidence is insuffi-
cient because VirnetX's expert testified that VPN On
Demand only encrypts communications between the
iPhone and the VPN server—by implication leaving
the path from the VPN server to the target unen-
crypted. Appellant's Br. 29 (quoting J.A. 1392). How-
ever, the district court's construction of "VPN" does
not require that traffic on a secure path be encrypted.
Rather, the construction only requires encryption of
traffic "on insecure paths." *Claim Construction Order*
at 8. Moreover, as indicated by the '135 patent, en-
cryption is just one possible way to address data secu-
rity. '135 patent col. 1 ll. 38-39 ("Data security is

usually tackled using some form of data encryption." (emphasis added)). And VirnetX provided substantial evidence for the jury to conclude that paths beyond the VPN server may be rendered secure and anonymous by means of "physical security" present in the private corporate networks connected to by VPN On Demand. *See, e.g.*, J.A. 1401.

Accordingly, we conclude that the jury's finding that the VPN On Demand feature creates a "VPN" or a "secure channel" that extends from the client to the target computer was supported by substantial evidence. We therefore affirm the district court's denial of JMOL as to claim 1 of the '135 patent and claim 13 of the '151 patent.

b. Infringement of Claim 1 of the '151 Patent Under the Doctrine of Equivalents

Claim 1 of the '151 patent is similar to claim 13 except that it requires initiating an "encrypted channel"—rather than a "secure channel"—"between" the client and the secure server. '151 patent col. 46 ll. 66-67. With respect to infringement, VirnetX conceded that VPN On Demand does not literally practice this limitation because the private network between the VPN server and the target is "not necessarily encrypted" from end to end. J.A. 1420-21. Rather, VirnetX asserted that VPN On Demand infringes under the doctrine of equivalents because the difference between secure communication via encryption and secure communication in general is insubstantial. J.A. 1421-24. Apple argues that VirnetX's theory of equivalents is legally insufficient because it vitiates the "encrypted channel" element. Appellant's Br. 32-33.

To find infringement under the doctrine of equivalents, any differences between the claimed invention and the accused product must be insubstantial. *See Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608 (1950). Insubstantiality may be determined by whether the accused device performs substantially the same function in substantially the same way to obtain substantially the same result as the claim limitation. *Crown Packaging Tech., Inc. v. Rexam Beverage Can Co.*, 559 F.3d 1308, 1312 (Fed. Cir. 2009). This is a question of fact. *Anchor Wall Sys., Inc. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 1313 (Fed. Cir. 2003). Vitiation is not an exception to the doctrine of equivalents. *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1356 (Fed. Cir. 2012). Rather, it is a legal determination that "the evidence is such that no reasonable jury could determine two elements to be equivalent." *Id.* (citation omitted).

After considering the record as a whole, we conclude that the evidence presented at trial does not support the jury's finding of infringement under the doctrine of equivalents. VirnetX's expert testified that VPN On Demand (a) performs substantially the same function because it secures the communication between the client and the secure server, (b) does so in substantially the same way by protecting data through encryption on insecure paths that are vulnerable to eavesdroppers, and (c) achieves substantially the same result of successfully protecting the entire communication path from potential eavesdroppers. *See* J.A. 1424.

Notably, in explaining the "way" that VPN On Demand secures communications, the expert did *not* testify that VPN On Demand provides encryption on the allegedly *secure* pathway between the VPN server and the private network, but only on the *insecure* portion of the pathway. Thus, his testimony effectively equates the "security" of the private network with the "encryption" provided by the VPN server. But the patent consistently differentiates between "security" and "encryption." Both the claims and the specification of the '151 patent make clear that encryption is a narrower, more specific requirement than security. For example, the specification states that encryption is just one possible way to address data security. '151 patent col. 1 ll. 49-50 ("Data security is *usually* tackled using some form of data encryption." (emphasis added)). Additionally, one of the primary differences between the steps performed in claim 1 of the '151 patent and the steps performed in claim 13 is that claim 13 requires creating a "secure" channel, while claim 1 specifically requires that the channel be "encrypted."

In light of these distinctions in the patent itself, the jury's implicit finding that VPN On Demand achieves the result of protecting communications from eavesdropping in "substantially the same way" as contemplated by the "encrypted channel" claim limitation was not supported by VirnetX's expert's testimony. *See Crown Packaging*, 559 F.3d at 1312. No reasonable jury could have determined that the security provided by the VPN On Demand system—which includes encryption on the insecure paths but otherwise relies on the security provided by private

networks—is equivalent to the "encrypted channel" required by claim 1 of the '151 patent. The district court's denial of JMOL as to that claim must therefore be reversed.

III. Invalidity

A party challenging the validity of a patent must establish invalidity by clear and convincing evidence. *See Microsoft Corp. v. i4i Ltd. P'ship*, 131 S. Ct. 2238, 2242 (2011). Anticipation is a factual question that we review for substantial evidence. *SynQor, Inc. v. Artesyn Techs., Inc.*, 709 F.3d 1365, 1373 (Fed. Cir. 2013). A claim is anticipated only if each and every element is found within a single prior art reference, arranged as claimed. *See NetMoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008).

Apple argues that the asserted claims are anticipated by the Kiuchi reference. However, we conclude that the jury heard substantial evidence that at least one element of each asserted claim was missing from that reference. With respect to the '135, '504, and '211 patents, the jury heard evidence that Kiuchi's proxy servers at least do not teach "direct communication" between a client and target computer, which is sufficient to defeat a claim of anticipation. J.A. 2343-44. Specifically, the jury heard expert testimony that Kiuchi's client-side and server-side proxies terminate the connection, process information, and create a new connection—actions that are not "direct" within the meaning of the asserted claims. J.A. 2334-35. VirnetX distinguished such proxy activities from the operation of NAT routers which—unlike proxy servers in the prior art—do not terminate the connection.

Additionally, with respect to the '151 patent, there was substantial evidence to support VirnetX's argument that Kiuchi fails to disclose the requirement that the DNS request be "sent by a client." '151 patent col. 46 l. 57. Apple argued that the "client-side proxy" of Kiuchi meets the "client" limitation, but there was evidence that the "client" of Kiuchi is actually a web browser, a component that is distinguishable from the client-side proxy. *See* J.A. 2341. Thus, the district court did not err in denying Apple's JMOL motion with respect to invalidity.

IV. Exclusion of Evidence

At trial, to prove induced infringement, VirnetX attempted to show that Apple knew or was willfully blind to the fact that its customers' use of its products would infringe valid patent claims. In defense, Apple sought to inform the jury that, after learning of VirnetX's allegations, Apple initiated reexaminations against the asserted patents. Apple's requests for reexamination resulted in initial rejections of the asserted claims at the United States Patent and Trademark Office ("PTO"). Apple offered these rejections as evidence of Apple's reasonably-held belief that the patents were invalid. The district court, however, excluded this proffer, concluding that such non-final actions in pending reexaminations would be "highly prejudicial evidence that risks misleading the jury." *VirnetX*, 925 F. Supp. at 842.

We apply regional circuit law to evidentiary issues. The Fifth Circuit reviews a district court's exclusion of evidence under Federal Rule of Evidence 403 for "clear abuse of discretion" resulting in

substantial prejudice. *Wellogix, Inc. v. Accenture, L.L.P.*, 716 F.3d 867, 882 (5th Cir. 2013). In this case, we cannot say that the district court abused its discretion in excluding this evidence.

Apple asserts that the rejections are relevant because they establish its good faith belief that the asserted claims are invalid, thereby negating the requisite intent for inducement. Appellant's Br. 50 (citing *Commil USA, LLC v. Cisco Sys., Inc.*, 720 F.3d 1361, 1368-69 (Fed. Cir. 2013)). As an initial matter, we note that this court's precedent has often warned of the limited value of actions by the PTO when used for such purposes. *See, e.g.*, *Hoechst Celanese Corp. v. BP Chems. Ltd.*, 78 F.3d 1575, 1584 (Fed. Cir. 1996) ("[G]rant by the examiner of a request for reexamination is not probative of unpatentability."); *Acoustical Design, Inc. v. Control Elecs. Co.*, 932 F.2d 939, 942 (Fed. Cir. 1991) ("[I]nitial rejection by the [PTO] … hardly justifies a good faith belief in the invalidity of the claims."). However, in this case we need not decide whether our opinion in *Commil* justifies reliance on reexamination evidence to establish a good faith belief of invalidity. Instead, we conclude that, regardless of the evidence's relevance to a fact at issue at trial, the district court would still not have abused its discretion in finding that the probative value was substantially outweighed by the risk of unfair prejudice to the patentee, confusion with invalidity (on the merits), or misleading the jury, thereby justifying exclusion under Federal Rule of Evidence 403. *See, e.g.*, *SynQor*, 709 F.3d at 1380 (finding no abuse of discretion for excluding non-final reexamination evidence as being "confusing and more prejudicial than

probative"); *Callaway Golf Co. v. Acushnet Co.*, 576 F.3d 1331, 1342- 43 (Fed. Cir. 2009) (finding the probative value of a copending reexamination marginal and the effect likely to be highly prejudicial). Thus, we affirm the district court's exclusion of this evidence.

V. Damages

At trial, VirnetX's damages expert, Mr. Roy Weinstein, provided three reasonable royalty theories, which the district court admitted over Apple's challenges under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993).

Weinstein's first approach began with the lowest sale price of each model of the accused iOS devices containing the accused features. J.A. 1616-23. Weinstein then applied a 1% royalty rate to the base, derived from a VirnetX policy of seeking to license its patents for at least 1-2% of the entire value of products sold and several allegedly comparable licenses. J.A. 1595, 1613-14. This theory yielded a $708 million demand, consisting of $566 million for products including both FaceTime and VPN On Demand, and $142 million for those including only VPN On Demand. J.A. 1622-24, 1644.

Weinstein also offered a second damages theory, regarding FaceTime alone, relying on a mathematical theorem proved by John Nash, a mathematician who proved a number of results in game theory that have become important in economics and other fields. J.A. 1628-29. Nash was a co-winner of the 1994 Nobel Prize in Economics for some of this work, though not the theorem at issue here—published as "The

Bargaining Problem" in 18 *Econometrica* 155-62 (Apr. 1950). Like other mathematical theorems, this theorem states a number of premises and establishes a conclusion that follows from those premises. In particular, under the conditions stated in the premises, where two persons bargain over a matter, there is a "solution" to the negotiation problem satisfying stated conditions on a desirable result (bargain). That solution—in which "each bargainer get[s] the same money profit," *id.* at 162—has come to be called the Nash Bargaining Solution.

Weinstein, invoking the Nash Bargaining Solution, testified that "the parties [would have] split between themselves the incremental or additional profits that are associated with the use of the patented technology." J.A. 1630. Weinstein derived the profits associated with FaceTime from the revenue generated by the addition of a "front-facing" camera on Apple's mobile devices. Without examining the applicability to this case of all the preconditions for the Nash Bargaining Solution, he invoked the Solution as suggesting a 50/50 split of those profits, and then modified that result by 10%, explaining that VirnetX would have received only 45% of the profit because of its weaker bargaining position, leaving 55% for Apple. J.A. 1633, 1709. This calculation amounted to $588 million in damages for infringement by FaceTime. J.A. 1633-38.

Finally, Weinstein offered yet another theory for FaceTime, again relying on the Nash Bargaining Solution. This time, he claimed that FaceTime "drove sales" for Apple iOS products. J.A. 1639. Weinstein

extrapolated from a customer survey to assert that 18% of all iOS device sales would not have occurred without the addition of FaceTime. J.A. 1641. From that figure, he determined the amount of Apple's profits that he believed were attributable to the FaceTime feature, and apportioned 45% of the profits to VirnetX, consistent with his previous application of the Nash theory. Using this approach, Weinstein arrived at damages of $5.13 per unit, totaling $606 million in damages for FaceTime. J.A. 1643.

Ultimately, the jury awarded VirnetX $368 million in damages. Apple now challenges each of Weinstein's damages theories, as well as the district court's jury instruction on damages. For the reasons stated below, we vacate the jury's damages award and remand for further proceedings consistent with this opinion.

A. Jury Instruction

Upon a finding of infringement, "the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer." 35 U.S.C. § 284. The most common method for determining a reasonable royalty is the hypothetical negotiation approach, which "attempts to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began." *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324 (Fed. Cir. 2009). A reasonable royalty may be a lump-sum payment not calculated on a per-unit basis, but it may also be, and often is, a running payment that

varies with the number of infringing units. In that event, it generally has two prongs: a royalty base and a royalty rate.

No matter what the form of the royalty, a patentee must take care to seek only those damages attributable to the infringing features. Indeed, the Supreme Court long ago observed that a patentee

> must in every case give evidence tending to separate or apportion the defendant's profits and the patentee's damages between the patented feature and the unpatented features, and such evidence must be reliable and tangible, and not conjectural or speculative; or he must show, by equally reliable and satisfactory evidence, that the profits and damages are to be calculated on the whole machine, for the reason that the entire value of the whole machine, as a marketable article, is properly and legally attributable to the patented feature.

Garretson v. Clark, 111 U.S. 120, 121 (1884).

Thus, when claims are drawn to an individual component of a multi-component product, it is the exception, not the rule, that damages may be based upon the value of the multi-component product. *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 67-68 (Fed. Cir. 2012). Indeed, we recently reaffirmed that "[a] patentee may assess damages based on the entire market value of the accused product *only where* the patented feature creates the basis for customer demand or substantially creates

the value of the component parts." *Versata Software, Inc. v. SAP Am., Inc.*, 717 F.3d 1255, 1268 (Fed. Cir. 2013) (emphasis added) (quoting *SynQor*, 709 F.3d at 1383). In the absence of such a showing, principles of apportionment apply.

These strict requirements limiting the entire market value exception ensure that a reasonable royalty "does not overreach and encompass components not covered by the patent." *LaserDynamics*, 694 F.3d at 70; *see also Garretson*, 111 U.S. at 121 ("[T]he patentee must show in what particulars his improvement has added to the usefulness of the machine or contrivance."). Thus, "[i]t is not enough to merely show that the [patented feature] is viewed as valuable, important, or even essential to the use of the [overall product]." *LaserDynamics*, 694 F.3d at 68. Instead, this court has consistently held that "a reasonable royalty analysis requires a court to … carefully tie proof of damages to the claimed invention's footprint in the market place." *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 869 (Fed. Cir. 2010); *see also Cornell Univ. v. Hewlett-Packard Co.*, 609 F. Supp. 2d 279, 285 (N.D.N.Y. 2009) ("The entire market value rule indeed permits damages on technology beyond the scope of the claimed invention, but only upon proof that damages on the un-patented components or technology is necessary to fully compensate for infringement of the patented invention."). Additionally, we have also cautioned against reliance on the entire market value of the accused products because it "cannot help but skew the damages horizon for the jury, regardless of the contribution of the patented component to this revenue." *Uniloc USA, Inc.*

v. Microsoft Corp., 632 F.3d 1292, 1320 (Fed. Cir. 2011).

Apple argues that the district court misstated this law on the entire market value rule in its jury instruction. The district court instructed the jury as follows:

> In determining a royalty base, you should not use the value of the entire apparatus or product unless either: (1) the patented feature creates the basis for the customers' demand for the product, or the patented feature substantially creates the value of the other component parts of the product; or (2) the product in question constitutes the smallest saleable unit containing the patented feature.

J.A. 2515-16. Apple argues that this instruction inappropriately created a second exception that would allow a patentee to rely on the entire market value of a multi-component product so long as that product is the smallest salable unit containing the patented feature.

We agree with Apple that the district court's instruction misstates our law. To be sure, we have previously permitted patentees to base royalties on the "smallest salable patent-practicing unit." *LaserDynamics*, 694 F.3d at 67. However, the instruction mistakenly suggests that when the smallest salable unit is used as the royalty base, there is necessarily no further constraint on the selection of the base. That is wrong. For one thing, the fundamental concern about skewing the damages horizon—of using a base that misleadingly suggests an

inappropriate range—does not disappear simply because the smallest salable unit is used.

Moreover, the smallest salable unit approach was intended to produce a royalty base much more closely tied to the claimed invention than the entire market value of the accused products. Indeed, that language first arose in the *Cornell* case, where the district court noted that, rather than pursuing a "royalty base claim encompassing a product with significant non-infringing components," the patentee should have based its damages on "the smallest salable infringing unit *with close relation to the claimed invention*." 609 F. Supp. 2d at 287-88 (emphasis added). In other words, the requirement that a patentee identify damages associated with the smallest salable patent-practicing unit is simply a step toward meeting the requirement of apportionment. Where the smallest salable unit is, in fact, a multi-component product containing several non-infringing features with no relation to the patented feature (as VirnetX claims it was here), the patentee must do more to estimate what portion of the value of that product is attributable to the patented technology. To hold otherwise would permit the entire market value exception to swallow the rule of apportionment.[4]

In reaching this conclusion, we are cognizant of the difficulty that patentees may face in assigning value to a feature that may not have ever been

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[4] As, indeed, it did in this case, where VirnetX effectively relied on the entire market value of the iOS devices without showing that the patented features drove demand for those devices, simply by asserting that they were the smallest salable units.

individually sold. However, we note that we have never required absolute precision in this task; on the contrary, it is well-understood that this process may involve some degree of approximation and uncertainty. *See generally Unisplay, S.A. v. Am. Elec. Sign Co.*, 69 F.3d 512, 517 (Fed. Cir. 1995).

We conclude that the district court's jury instruction regarding the entire market value rule was legally erroneous. Moreover, that error cannot be considered harmless, as VirnetX's expert relied on the entire value of the iOS devices as the "smallest salable units," without attempting to apportion the value attributable to the VPN On Demand and FaceTime features. Thus, it is clear that the jury's verdict was tainted by the erroneous jury instruction.

B. Weinstein's First Approach: Royalty Base

In addition to the erroneous jury instruction, Apple argues that the testimony of VirnetX's expert on the proper royalty base should have been excluded because it relied on the entire market value of Apple's products without demonstrating that the patented features drove the demand for those products. For similar reasons to those stated above, we agree.

The admissibility of expert testimony is governed by the Federal Rules of Evidence and the principles laid out in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). The district court's "gatekeeping obligation" applies to all types of expert testimony. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 147 (1999). While questions regarding which facts are most relevant for calculating a reasonable royalty are

properly left to the jury, a critical prerequisite is that the underlying methodology be sound. Here, it was not, and the district court should have exercised its gatekeeping authority to ensure that only theories comporting with settled principles of apportionment were allowed to reach the jury.

Under Weinstein's first damages theory, he undisputedly based his calculations on the entire cost of the iOS devices, ranging in value from $199 for the iPod Touch to $649 for the iPhone 4S. Weinstein used the base price at which each product was sold, excluding only charges for additional memory sold separately. He called this the smallest salable unit. However, when asked whether this "remove[d] features that aren't accused in this case," Weinstein answered as follows:

> To the extent that the products that we're talking about here contain additional features, like additional memory, for instance, *that Apple was charging for*, by using the lowest saleable unit, I'm doing as much as I can to remove payments for those features ....

J.A. 1620 (emphasis added). This testimony confirms that Weinstein did not even attempt to subtract any other unpatented elements from the base, which therefore included various features indisputably not claimed by VirnetX, e.g., touchscreen, camera, processor, speaker, and microphone, to name but a few. J.A. 1143-44.

VirnetX defends Weinstein's approach by insisting that "software creates the largest share of the

product's value" for these popular iOS products. Appellee's Br. 60. But this misses the point. Whether "viewed as valuable, important, or even essential," the patented feature must be separated. *LaserDynamics*, 694 F.3d at 68. Weinstein made no attempt to separate software from hardware, much less to separate the FaceTime software from other valuable software components.

Indeed, the record supports Apple's contention that Weinstein could have apportioned a smaller per unit figure for FaceTime; namely, for the use of FaceTime on Mac computers he used a royalty base of $29—the cost of the software upgrade. J.A. 1619. And he used an even *lower* estimate to represent the patentable contributions to iOS devices in his application of the Nash Bargaining Solution, calculating incremental revenues due to FaceTime at $15 per iOS device. J.A. 1634-36. The only reason Weinstein gave for not using the $29 as the base for other iOS products was that Apple does not actually charge separately for FaceTime on those devices. J.A. 1673-74. But, as explained above, a patentee's obligation to apportion damages only to the patented features does not end with the identification of the smallest salable unit if that unit still contains significant unpatented features.[5]

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[5] Because Apple has not challenged it, we offer no opinion on whether the $29 software upgrade is itself so closely related to the patented feature that VirnetX may rely on its entire value in determining the proper royalty base for the FaceTime feature.

Thus, VirnetX cannot simply hide behind Apple's sales model to avoid the task of apportionment. This court rejects the excuse that "practical and economic necessity compelled [the patentee] to base its royalty on the price of an entire [device]." *LaserDynamics*, 694 F.3d at 69. There is no "necessity-based exception to the entire market value rule." *Id.* at 70. On the contrary, a patentee must be reasonable (though may be approximate) when seeking to identify a patent-practicing unit, tangible or intangible, with a close relation to the patented feature.

In the end, VirnetX should have identified a patent-practicing feature with a sufficiently close relation to the claimed functionality. The law requires patentees to apportion the royalty down to a reasonable estimate of the value of its claimed technology, or else establish that its patented technology drove demand for the entire product. VirnetX did neither. As we noted in *LaserDynamics*:

> Whether called "product value apportionment" or anything else, the fact remains that the royalty was expressly calculated as a percentage of the entire market value of a [multi-component product] rather than a patent-practicing [component] alone. This, by definition, is an application of the entire market value rule.

Id. at 68. In calculating the royalty base, Weinstein did not even try to link demand for the accused device to the patented feature, and failed to apportion value between the patented features and the vast number of non-patented features contained in the

accused products. Because Weinstein did not "carefully tie proof of damages to the claimed invention's footprint in the market place," *Uniloc*, 632 F.3d at 1317 (quoting *ResQNet*, 594 F.3d at 869), his testimony on the royalty base under this approach was inadmissible and should have been excluded.

C. Weinstein's First Approach: Royalty Rate

In addition to challenging Weinstein's testimony with respect to the royalty base, Apple argues that his testimony with respect to the royalty rate should also have been excluded.

After determining the royalty base, Weinstein applied a 1% royalty rate, based on six allegedly comparable licenses, as well as his understanding that VirnetX had a "policy" of licensing its patents for 1-2%. Apple argues that the licenses on which Weinstein relied were not sufficiently comparable to the license that would have resulted from the hypothetical negotiation. In particular, Apple points out that two of the licenses predated the patents-in-suit. Both of those agreements related to technology leading to the claimed invention, and one contained a software license in addition to a license for various patent applications. Apple further complains that three of the other licenses were entered into in 2012, a full three years after the date of the "hypothetical negotiation," set in June 2009. Apple argues that at the time those licenses were entered into, VirnetX was in a much better financial position (and therefore a better bargaining position) than it was in 2009. Finally, Apple notes that the sixth license covered sixty-eight VirnetX patents, and was therefore much broader than

the license to four patents Apple would be seeking in the hypothetical negotiation. It also equated to a 0.24% royalty rate, which is significantly lower than the 1-2% rate Weinstein testified VirnetX would accept.

We have held that in attempting to establish a reasonable royalty, the "licenses relied on by the patentee in proving damages [must be] sufficiently comparable to the hypothetical license at issue in suit." *Lucent*, 580 F.3d at 1325. "When relying on licenses to prove a reasonable royalty, alleging a loose or vague comparability between different technologies or licenses does not suffice." *LaserDynamics*, 694 F.3d at 79. However, we have never required identity of circumstances; on the contrary, we have long acknowledged that "any reasonable royalty analysis 'necessarily involves an element of approximation and uncertainty.'" *Lucent*, 580 F.3d at 1325 (quoting *Unisplay*, 69 F.3d at 517). Thus, we have cautioned that "district courts performing reasonable royalty calculations [must] exercise vigilance when considering past licenses to technologies *other* than the patent in suit," *ResQNet*, 594 F.3d at 869, and "must account for differences in the technologies and economic circumstances of the contracting parties," *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1211 (Fed. Cir. 2010).

With those principles in mind, we conclude that the district court here did not abuse its discretion in permitting Weinstein to rely on the six challenged licenses. To begin with, four of those licenses did indeed relate to the actual patents-in-suit, while the others

were drawn to related technology. Moreover, all of the other differences that Apple complains of were presented to the jury, allowing the jury to fully evaluate the relevance of the licenses. *See* J.A. 1600, 1650, 1678-82. No more is required in these circumstances.

Our case law does not compel a contrary result. In *ResQNet*, we faulted the district court for relying on licenses with "no relationship to the claimed invention," nor even a "discernible link to the claimed technology." 594 F.3d at 870. And in *Lucent*, we rejected reliance on licenses from "vastly different situation[s]" or where the subject matter of certain agreements was not even ascertainable from the evidence presented at trial. 580 F.3d at 1327-28. The licenses in this case—though not immune from challenge— bear a closer relationship to the hypothetical negotiation that would have occurred.

This case is therefore much more akin to the circumstances in *Finjan and ActiveVideo Networks, Inc. v. Verizon Communications, Inc.*, 694 F.3d 1312 (Fed. Cir. 2012). In Finjan, there were several differences between the single license relied upon and the hypothetical negotiation, most notably that Finjan did not compete with the licensee as it did with the defendant in the case, and that the license involved a lump sum rather than a running royalty. 626 F.3d at 1212. Nevertheless, we affirmed the damages award based on that license because "[those] differences permitted the jury to properly discount the ... license." *Id.* And in *ActiveVideo*, the damages expert relied on two agreements, one of which post-dated the hypothetical negotiations by two years, did not involve the patents-in-

suit, and did not cover the technologies in the case, while the other agreement covered both patents *and* software services. 694 F.3d at 1333. Nevertheless, we concluded that the "degree of comparability" of the license agreements was "[a] factual issue[] best addressed by cross examination and not by exclusion." *Id.* Similarly, here, though there were undoubtedly differences between the licenses at issue and the circumstances of the hypothetical negotiation, "[t]he jury was entitled to hear the expert testimony and decide for itself what to accept or reject." *i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d 831, 856 (Fed. Cir. 2010), *aff'd* 131 S. Ct. 2238 (2011).

Thus, we do not believe the district court abused its discretion by permitting Weinstein's testimony regarding the proper royalty rate based on these allegedly comparable licenses.

D. Weinstein's Second and Third Approaches: Nash Bargaining Solution

Weinstein also offered two other estimates of the damages attributable to the FaceTime feature. Both of these estimates relied on the Nash Bargaining Solution. Weinstein began by determining "incremental or additional profits that are associated with the use of the patented technology." J.A. 1630. Weinstein used two different methods to estimate the incremental profits associated with the FaceTime feature. First, he used the front-facing camera as a proxy for the FaceTime feature, and calculated the profits that he believed were attributable to the addition of the front-facing camera to certain Apple products. And second, he relied on customer surveys to assert that

18% of iOS device sales would not have occurred but for the inclusion of FaceTime, and determined the profits attributable to those sales.

Having thus purported to determine those profits, Weinstein then testified about how the parties would split those incremental profits. To do this, he began with the assumption that each party would take 50% of the incremental profits, invoking the Nash Bargaining Solution, and then adjusted that split based on "the relative bargaining power of the two entities." J.A. 1632.

Apple challenges both steps of Weinstein's analysis. First, Apple insists that Weinstein did not adequately isolate the incremental profits attributable to the patented technology under either approach. And second, Apple argues that the invocation of a 50/50 starting point based on the Nash Bargaining Solution is akin to the "25 per cent rule of thumb" that we rejected in *Uniloc* as being insufficiently grounded in the specific facts of the case. Because we agree with Apple on the second point, we need not reach the first.

In recent years, numerous district courts have confronted experts' invocations of the Nash Bargaining Solution as a model for reasonable royalty damages, with varying results. *Compare Robocast, Inc. v. Microsoft Corp.*, No. 10-1055, 2014 WL 350062 (D. Del. Jan. 29, 2014) (excluding expert testimony based on Nash Bargaining Solution because it was not sufficiently tied to the facts of the case); *Dynetix Design Solutions, Inc. v. Synopsys, Inc.*, No. 11-5973, 2013 WL 4538210, at *4-5 (N.D. Cal. Aug. 22, 2013) (excluding expert testimony on royalty rate that began

from a starting point of a 50/50 split because the expert's methodology was "indistinguishable from 25% rule"); *Oracle Am., Inc. v. Google Inc.*, 798 F. Supp. 2d 1111, 1119-21 (N.D. Cal. 2011) (excluding testimony based on Nash Bargaining Solution because it "would invite a miscarriage of justice by clothing a fifty-percent assumption in an impenetrable façade of mathematics") *with Mformation Techs., Inc. v. Research in Motion Ltd.*, No. 08-4990, 2012 WL 1142537, at *3 n.19 (N.D. Cal. Mar. 29, 2012) (declining to exclude Weinstein's testimony based on Nash Bargaining Solution because he used it only "as a check" in addition to the *Georgia-Pacific* analysis, rather than in lieu of it); *GenProbe Inc. v. Becton Dickinson & Co.*, No. 09-2319, 2012 WL 9335913, at *3 (S.D. Cal. Nov. 26, 2012) (permitting testimony based on Nash Bargaining Solution because calculation was sufficiently tied to the facts of the case, "including the competitive environment and Gen-Probe's policy of exploiting its own patents"); *Sanofi-Aventis Deutschland Gmbh v. Glenmark Pharms. Inc., USA*, No. 07-5855, 2011 WL 383861, at *12-13 (D.N.J. Feb. 3, 2011) (determining that expert's testimony asserting a 50/50 profit split was based on the specific facts of the case); *Amakua Dev. LLC v. Warner*, No. 05-3082, 2007 WL 2028186, at *20 (N.D. Ill. July 10, 2007) (permitting reliance on Nash because the "[d]efendants ha[d] not challenged the reliability of Nash's theories, and the assessment of whether the theory persuasively can be applied in the context of this case is for the jury").

For the reasons that follow, we agree with the courts that have rejected invocations of the Nash theorem without sufficiently establishing that the

premises of the theorem actually apply to the facts of the case at hand. The use here was just such an inappropriate "rule of thumb."

Previously, damages experts often relied on the "25 percent rule of thumb" in determining a reasonable royalty rate in a hypothetical negotiation. That rule hypothesized that 25% of the value of the infringing product would remain with the patentee, while the remaining 75% would go to the licensee. In *Uniloc*, however, we held the "25 percent rule of thumb" to be inadmissible "because it fails to tie a reasonable royalty base to the facts of the case at issue." 632 F.3d at 1315. In so doing, we noted that the rule did not differentiate between different industries, technologies, or parties. *Id.* at 1317. Rather, it assumed the same 25/75 royalty split regardless of the size of the patent portfolio in question or the value of the patented technology. *Id.* The problem was that the 25% rule made too crude a generalization about a vastly more complicated world.

The problem with Weinstein's use of the Nash Bargaining Solution, though somewhat different, is related, and just as fatal to the soundness of the testimony. The Nash theorem arrives at a result that follows from a certain set of premises. It itself asserts nothing about what situations in the real world fit those premises. Anyone seeking to invoke the theorem as applicable to a particular situation must establish that fit, because the 50/50 profit-split result is proven by the theorem only on those premises. Weinstein did not do so. This was an essential failing in invoking the Solution. Moreover, we do not believe

that the reliability of this methodology is saved by
Weinstein's attempts to account for the unique facts
of the case in deviating from the 50/50 starting point.
As we noted in *Uniloc*:

> It is of no moment that the 25 percent rule of
> thumb is offered merely as a starting point to
> which the *Georgia-Pacific* factors are then ap-
> plied to bring the rate up or down. Beginning
> from a fundamentally flawed premise and ad-
> justing it based on legitimate considerations
> specific to the facts of the case nevertheless
> results in a fundamentally flawed conclusion.

632 F.3d at 1317. Indeed, Weinstein's thin attempts
to explain his 10% deviation from the 50/50 baseline
in this case demonstrates how this methodology is
subject to abuse. His only testimony on the matter
was that although he "considered other splits," he ul-
timately determined that a 10% deviation—resulting
in a 45/55 split—was appropriate "to reflect the fact
that Apple would have additional bargaining power
over VirnetX back in ... 2009." JA. 1708-09. Such con-
clusory assertions cannot form the basis of a jury's
verdict. *See Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146
(1997) (noting that where an expert considers rele-
vant material but fails to provide an opinion explain-
ing how that material leads to his conclusion, "[a]
court may conclude that there is simply too great an
analytical gap between the data and the opinion prof-
fered").

More importantly, even if an expert could identify
all of the factors that would cause negotiating parties
to deviate from the 50/50 baseline in a particular case,

the use of this methodology would nevertheless run the significant risk of inappropriately skewing the jury's verdict. This same concern underlies our rule that a patentee may not balance out an unreasonably high royalty base simply by asserting a low enough royalty rate. *See Uniloc*, 632 F.3d at 1320. Although the result of that equation would be mathematically sound if properly applied by the jury, there is concern that the high royalty base would cause the jury to deviate upward from the proper outcome. *Id.* Thus, in *Uniloc*, we noted that "[t]he disclosure that a company has made $19 billion dollars in revenue from an infringing product cannot help but skew the damages horizon for the jury, regardless of the contribution of the patented component to this revenue." *Id.* Similarly, here, the use of a 50/50 starting point—itself unjustified by evidence about the particular facts—provides a baseline from which juries might hesitate to stray, even if the evidence supported a radically different split.

Even the 25% rule had its share of support in the literature, which had observed that, at least as an anecdotal matter, a 25% royalty rate was a common starting point—and not far off from a common end point—of licensing negotiations across numerous industries. *See Uniloc*, 632 F.3d at 1313 (citing Robert Goldscheider, John Jarosz and Carla Mulhern, *Use of the 25 Per Cent Rule in Valuing IP*, *37 les Nouvelles* 123, 132-33 (Dec. 2002); Stephen A. Degnan & Corwin Horton, *A Survey of Licensed Royalties*, *32 les Nouvelles* 91, 95 (June 1997)). Nevertheless, we rejected it, insisting on testimony tied to the particular facts. The same insistence is vital here.

We note that the Nash Bargaining Solution does offer at least one noticeable improvement over the 25% rule: where the 25% rule was applied to the entire profits associated with the allegedly infringing product, the Nash theory focuses only on the *incremental* profits earned by the infringer from the use of the asserted patents. But while we commend parties for using a theory that more appropriately (and narrowly) defines the universe of profits to be split, the suggestion that those profits be split on a 50/50 basis—even when adjusted to account for certain individual circumstances—is insufficiently tied to the facts of the case, and cannot be supported.

For each of the reasons stated above, we vacate the damages award and remand for further proceedings consistent with this opinion.

AFFIRMED-IN-PART, REVERSED-IN-PART, VACATED-IN-PART and REMANDED

Costs

Each party shall bear its own costs.

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APPENDIX D

NOTE: This order is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

————————————

VIRNETX INC., LEIDOS, INC.,
Plaintiffs-Appellees

v.

CISCO SYSTEMS, INC.,
Defendant

APPLE INC.,
Defendant-Appellant

————————————

2018-1197

————————————

Appeal from the United States District Court for the Eastern District of Texas in No. 6:10-c-00417-RWS, Judge Robert Schroeder III.

————————————

ON MOTION

————————————

Before PROST, *Chief Judge*, MOORE and REYNA, *Circuit Judges*.

PER CURIAM.

O R D E R

On August 7, 2019, Apple Inc. filed two motions. The first moves for the court to vacate its August 1, 2019, order denying rehearing and for leave to file a second combined petition for panel rehearing and rehearing *en banc*. The second moves for the court to stay issuance of the mandate pending consideration of the first motion, resolution of related proceedings, or the Supreme Court's consideration of Apple's petition for a writ of certiorari. VirnetX Inc. and Leidos, Inc. respond in opposition and Apple replies.

Upon consideration thereof,

IT IS ORDERED THAT:

The motions are denied.

FOR THE COURT

October 1, 2019
Date

/s/ Peter R. Marksteiner
Peter R. Marksteiner
Clerk of Court

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APPENDIX E

NOTE: This disposition is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

VIRNETX INC., LEIDOS, INC.,
Plaintiffs-Appellees

v.

CISCO SYSTEMS, INC.,
Defendant

APPLE INC.,
Defendant-Appellant

2018-1197

Appeal from the United States District Court for the Eastern District of Texas in No. 6:10-cv-00417-RWS, Judge Robert Schroeder, III.

ON PETITION FOR PANEL REHEARING AND REHEARING EN BANC

Before PROST, *Chief Judge*, NEWMAN, LOURIE, DYK, MOORE, O'MALLEY, REYNA, WALLACH, TARANTO, CHEN, and HUGHES, *Circuit Judges*[1].

PER CURIAM.

ORDER

Appellant Apple Inc. filed a combined petition for panel rehearing and rehearing *en banc*. A response to the petition was invited by the court and filed by Appellees Leidos, Inc. and VirnetX Inc. The petition was referred to the panel that heard the appeal, and thereafter the petition for rehearing en banc was referred to the circuit judges who are in regular active service.

Upon consideration thereof,

IT IS ORDERED THAT:

The petition for panel rehearing is denied.

The petition for rehearing en banc is denied.

The mandate of the court will issue on August 8, 2019.

FOR THE COURT

August 1, 2019   /s/ Peter R. Marksteiner
        Date   Peter R. Marksteiner
                                      Clerk of Court

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[1] Circuit Judge Stoll did not participate.

APPENDIX F

35 U.S.C. § 316 (2006)

§ 316 Certificate of Patentability, Unpatentability, and Claim Cancellation

(a) In general.—In an inter partes reexamination proceeding under this chapter, when the time for appeal has expired or any appeal proceeding has terminated, the Director shall issue and publish a certificate canceling any claim of the patent finally determined to be unpatentable, confirming any claim of the patent determined to be patentable, and incorporating in the patent any proposed amended or new claim determined to be patentable.

(b) Amended or new claim.—Any proposed amended or new claim determined to be patentable and incorporated into a patent following an inter partes reexamination proceeding shall have the same effect as that specified in section 252 of this title for reissued patents on the right of any person who made, purchased, or used within the United States, or imported into the United States, anything patented by such proposed amended or new claim, or who made substantial preparation therefor, prior to issuance of a certificate under the provisions of subsection (a) of this section.