

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION**

VIRNETX INC., LEIDOS, INC.,

Plaintiffs,

v.

APPLE INC.,

Defendant.

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CIVIL ACTION NO. 6:12-CV-00855-RWS

SEALED

MEMORANDUM OPINION AND ORDER

Plaintiff VirnetX, Inc. (“VirnetX”) and Defendant Apple Inc.’s (“Apple”) dispute spans over eight years in this Court. An overview of the lengthy history of the dispute provides helpful context for the Court’s opinion below.

On August 11, 2010, VirnetX filed Case No. 6:10-cv-417 against Apple alleging infringement of 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”). Case No. 6:10-cv-417 (“417 action”), Docket No. 1. On November 6, 2012, a jury found that the first versions of Apple’s accused VPN On Demand and FaceTime features infringed the asserted patents and that the asserted patents were not invalid. 417 action, Docket No. 790. On the same day, VirnetX filed the instant case, Case No. 6:12-cv-855, accusing of infringement several redesigned products. Docket No. 1.

In the 417 action, Apple and VirnetX both filed post-trial motions, which the Court resolved in a memorandum opinion. 417 action, Docket No. 851. The matter was appealed, and the Federal Circuit affirmed-in-part, reversed-in-part and remanded for further proceedings. 417

action, Docket No. 853; *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 the Court’s denial of Apple’s motion for judgment as a matter of law on invalidity. *Id.* The Federal Circuit vacated the infringement finding for FaceTime based upon a change in claim construction, holding that the term “secure communication link” requires both “security and anonymity,” and vacated damages for VPN On Demand and FaceTime because it found that the jury relied on a flawed damages model. *Id.* at 1314.

Upon receipt of the Federal Circuit’s mandate, the Court solicited the parties’ proposals on how to proceed. 417 action, Docket No. 855. The parties submitted a status report in which VirnetX proposed the Court consolidate the remaining issues in the 417 action with the upcoming trial in the 855 action. Docket No. 864 at 4. Apple opposed the consolidation. *See* 417 action, Docket No. 873 at 45:20–46:6. After a status conference on March 10, 2015, the Court consolidated the 855 and 417 actions, designating the 855 action as the lead case with a revised schedule. Docket No. 220. After extensive motion practice (*see* Docket Nos. 315, 317–323, 326; *see also* Docket Nos. 362, 468), the consolidated action was tried to a jury, and the jury returned a verdict finding infringement of the ’135, ’151, ’504 and ’211 patents.

Again, both Apple and VirnetX filed post-trial motions (Docket Nos. 462, 463), and on July 29, 2016, the Court granted Apple’s Motion for a New Trial Based Upon the Consolidation of Cause Nos. 6:10-cv-417 and 6:12-cv-855. Docket No. 500. The Court reasoned that the consolidation and repeated discussion of the previous jury verdict resulted in an unfair trial. Docket No. 500 at 14. In its Order, the Court explained that “Cause No. 6:10-cv-417 will be retried with jury selection to begin on September 26, 2016, unless the parties agree otherwise on an

alternative date, and immediately followed by a second trial on the issue of willfulness. Cause No. 6:12-cv-855 will be retried after Cause No. 6:10-cv-417.” *Id.* at 15.

After another round of extensive motion practice (*see, e.g.*, 417 action, Docket Nos. 930–931, 937, 944–945), the 417 action was again tried to a jury. The jury found that FaceTime infringed the ’211 and ’504 patents and awarded approximately \$302 million in damages for the collective infringement by the VPN On Demand and FaceTime features in the accused Apple products. 417 action, Docket No. 1025. After the September trial, both parties submitted post-trial motions (*see* 417 action, Docket Nos. 1018–1019, 1047, 1062–1063), which the Court resolved in a memorandum opinion (Docket No. 1079). Apple’s appeal of the 417 action final judgment is pending before the Federal Circuit. *See* 417 case, Docket Nos. 1079, 1089, 1091.

While the post-trial motions were pending, on February 9, 2017, the Court requested that the parties meet and confer about the timing of the 855 trial and propose a schedule. The parties each filed a response (Docket Nos. 519, 520), and Apple simultaneously filed a motion to stay (Docket No. 518). The Court denied Apple’s motion (Docket Nos. 527, 553) and set the case on a schedule (Docket No. 539).

The Court held a jury trial in this matter from April 2, 2018 through April 11, 2018. The trial was bifurcated into (1) a liability and damages phase and (2) a willfulness phase—which were tried in succession to one jury. After the liability and damages phase, the jury returned a verdict finding both VPN on Demand and FaceTime to infringe each asserted patent and awarding \$502,567,709 in damages. Docket No. 723. After the willfulness phase, the jury returned a verdict that Apple’s infringement was willful. Docket No. 729.

Following the verdict, Apple filed its Omnibus Motion for Judgment as a Matter of Law under Rule 50(b) and for a New Trial (Docket No. 775), and VirnetX filed its Motion for Entry of

Judgment and Equitable and Statutory Relief (Docket No. 774). The Court heard argument on the motions on July 18, 2018. The Court now resolves the parties' motions below.

LEGAL STANDARD

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).

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 Prods., Inc.*, 693 F.3d 491, 499 (5th Cir. 2012). “Substantial evidence is defined as evidence of such quality and weight that reasonable and fair-minded men in the exercise of impartial judgment might reach different conclusions.” *Threlkeld v. Total Petroleum, Inc.*, 211 F.3d 887, 891 (5th Cir. 2000). The Court will “uphold a jury verdict unless the facts and inferences point so strongly and so overwhelmingly in favor of one party that reasonable men could not arrive at any verdict to the contrary.” *Cousin v. Trans Union Corp.*, 246 F.3d 359, 366 (5th Cir. 2001); *see also Int’l Ins. Co. v. RSR Corp.*, 426 F.3d 281, 296 (5th Cir. 2005). However, “[t]here must be more than a mere scintilla of evidence in the record to prevent judgment as a matter of law in favor of the movant.” *Arismendez v. Nightingale Home Health Care, Inc.*, 493 F.3d 602, 606 (5th Cir. 2007) (citing *Laxton v. Gap, Inc.*, 333 F.3d 572, 577 (5th Cir. 2003)).

In evaluating a motion for judgment as a matter of law, the court must “draw all reasonable inferences in the light most favorable to the verdict and cannot substitute other inferences that [the

court] might regard as more reasonable.” *E.E.O.C. v. Boh Bros. Const. Co., L.L.C.*, 731 F.3d 444, 451 (5th Cir. 2013). Although the court must review the record as a whole, it must disregard all evidence favorable to the moving party that the jury is not required to believe. *Ellis v. Weasler Eng’g Inc.*, 258 F.3d 326, 337 (5th Cir. 2001). However, a court may not make credibility determinations or weigh the evidence, as those are solely functions of the jury. *See id.* (citing *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150–51 (2000)). The Court gives “credence to evidence supporting the moving party that is uncontradicted and unimpeached if that evidence comes from disinterested witnesses.” *Arismendez*, 493 F.3d at 606.

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). The court can grant a new trial “based on its appraisal of the fairness of the trial and the reliability of the jury’s verdict.” *Smith v. Transworld Drilling Co.*, 773 F.2d 610, 612–13 (5th Cir. 1985). “Courts grant a new trial when it is reasonably clear that prejudicial error has crept into the record or that substantial justice has not been done, and the burden of showing harmful error rests on the party seeking the new trial.” *Sibley v. Lemaire*, 184 F.3d 481, 487 (5th Cir. 1999) (quoting *Del Rio Distributing, Inc. v. Adolph Coors Co.*, 589 F.2d 176, 179 n. 3 (5th Cir. 1979)). “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*, 773 F.2d at 612–13. The decision to grant or deny a new trial is committed to the sound discretion of the district court. *See Allied Chem. Corp. v. Daiflon, Inc.*, 449 U.S. 33, 36 (1980). “[N]ew trials should not be granted on evidentiary grounds unless, at a

minimum, the verdict is against the great[,] not merely the greater weight of the evidence.”
Conway v. Chem. Leaman Tank Lines, Inc., 610 F.2d 360, 363 (5th Cir. 1980).

I. APPLE’S OMNIBUS MOTION FOR JUDGMENT AS A MATTER OF LAW UNDER RULE 50(B) AND FOR A NEW TRIAL (DOCKET NO. 775)

A. Apple’s Motion for Judgment as a Matter of Law and New Trial on Infringement

(1) *FaceTime*

A short overview of the accused FaceTime products in this case is instructive. There are three versions of FaceTime that the Court discusses below. The “first version” was the product at issue in the 417 action, which the 417 jury found to infringe the asserted claims. A “second version” was implemented in April of 2013 and relayed 100 percent of calls. *See, e.g.*, 4/3 PM Tr. at 165:15–19. The parties agree that the “second version” does not infringe VirnetX’s patents. *Id.* And finally, at issue in this case is a “third version” of FaceTime, which was released in September 2013 via a software update. *Id.* at 165:20–22; Docket No. 775 at 2–3. At trial, the design and operation of this third product was disputed, and the jury determined that the third version infringed each of the asserted claims. Docket No. 723.

a. *Indication*

VirnetX accuses the third version of FaceTime of infringing claims 1, 2, 5 and 27 of the ’504 patent and claims 36, 47 and 51 of the ’211 patent. Each asserted claim of the ’504 and ’211 patents requires a “domain name service system” that is configured “to comprise an indication,” in the case of the ’504 patent, or “to indicate,” in the case of the ’211 patent, that “the domain name service system supports establishing a secure communication link.” The term “secure communication link” requires “a direct communication link that provides data security and anonymity.” Docket No. 262; *see also VirnetX*, 767 F.3d at 1317–19. The Court’s construction of “indication” is “an indication other than merely returning of requested DNS records, such as an

IP address or key certificate, that the domain name service system supports establishing a secure communication link.” Docket No. 180 at 10.

According to Apple, VirnetX’s expert, Dr. Mark Jones, opined that the claimed “domain name service system” was met by Apple’s FaceTime invitation server, push notification servers and registration database. Docket No. 775 at 1. Specifically, Apple suggests that Dr. Jones identified the “accept push” message as meeting the indication requirement. *Id.* at 1–2. Apple disagrees with Dr. Jones’s assessment because, in the version of FaceTime at issue in this case, the callee’s IP address was removed from the accept push message. *Id.* at 2. Apple maintains that “this change alone had the effect of directing all FaceTime calls through a relay server, an *indirect* connection that the parties agree does not infringe.” *Id.* (emphasis in original). Apple submits that, although FaceTime clients could establish peer-to-peer connections after September 2013, this was the result of a client-side software change, not a server change, so Apple does not infringe. *Id.* at 3.

In response, VirnetX identifies the following trial testimony from Dr. Jones about indication:

Q. And how does that accept push message indicate that the FaceTime domain name service system supports establishing a secured communication link?

A. Well, that accept push message is the culmination of this provisioning process that I described. And that provisioning process includes authenticating the identities of both of the parties and their phones. It includes providing them and -- the certificates for each one of the parties. There are, as I discussed, certificate names, a session token. And then coming back in that accept push message are things like the callee’s certificate, a push token, a certificate name for the callee, and other information.

Docket No. 779 at 2 (citing 4/3 PM Tr. at 121:5–16. According to VirnetX, the accept push message is an indication that the FaceTime servers have successfully authenticated and

provisioned devices to establish a FaceTime call. *Id.* VirnetX also points to Dr. Jones’s testimony that, under the Court’s construction, the FaceTime servers are not merely returning requested DNS records such as IP addresses or certificates and that the FaceTime servers support establishing direct, secure FaceTime calls. *Id.* (citing 4/3 PM Tr. at 122:16–123:17; 123:18–124:4). Aside from expert evidence, VirnetX also identifies the testimony of Mr. Gokul Thirumalai, an Apple corporate representative, who testified at trial that he made a server-side change in May of 2013 to facilitate direct peer-to-peer calls. *Id.* (citing 4/5 PM Tr. at 247:22–248:1).

In its reply, Apple reiterates its belief that the indication necessarily must include the callee’s IP address because the address is necessary for the caller to make a direct call. Docket No. 783 at 1. Apple also suggests that the Court’s construction requires that the “indication do something *more* than ‘merely’ return an IP address—not that it *cannot* return an IP address.” *Id.* at 2 (emphasis in original).

To put the parties’ arguments in context, a review of the claim construction is instructive. The Court construed the “indication” term in the context of the ’504 patent. At Markman, Apple proposed that an “an indication that the domain name service system supports establishing a secure communication link” be construed to mean “an affirmative signal beyond the mere returning of an IP address, public key, digital signature, or certificate that the domain name service system supports establishing a secure communication link.” Docket No. 180 at 8–9.

The Court found that Apple’s proposed construction was more correct in light of statements made by the patentees during reexamination. Specifically, the Court explained that the patentees represented to the examiner that “[t]he ’504 patent specification clearly and unequivocally disclaims merely returning an address or a public key by describing these actions as ‘conventional’ in the prior art, and that “[n]ever does the specification equate the mere return of requested DNS

records, such as an IP address or key certificate, with supporting secure communications.” *Id.* at 10 (citing Docket No. 150-14 at 5–6). These statements were found to clearly distinguish the mere return of requested DNS records, such as an IP address or key certificate, from the claimed “indication” terms. *Id.* The Court ultimately construed “an indication that the domain name service system supports establishing a secure communication link” as “an indication other than merely returning of requested DNS records, such as an IP address or key certificate, that the domain name service system supports establishing a secure communication link.” *Id.*

The Court’s construction requires an indication *other than* the mere return of an IP address, so return of an IP address is not required, and VirnetX was not required to point to the return of an IP address to establish infringement at trial. Apple posits that an IP address is nonetheless necessary for a caller to make a direct call and that the claims require indicating support for a direct link. Docket No. 783 at 1. But VirnetX presented credible evidence at trial that IP addresses from both the caller and callee are *not* necessary to set up a direct call. *See* 4/4 AM Tr. (Jones) at 29:17–30:1 (“Q. And I think that the suggestion was that there were two that -- that setting up a direct connection requires two IP addresses. Is that your impression? A. That’s what I understand the point to be. Q. All right. Dr. Jones, is that true or false? A. That’s false. Q. Will you please explain why? A. Yes. The -- on the internet when a client wants to contact another computer, a server or another device, it just needs the address of that device. It’s going to send a packet from that one -- from, say, the left to the right or the right to the left, and all these packets contain IP addresses of -- so if I’m sending from the callee to the caller, the callee’s IP address is contained in that packet that goes to the caller. That’s how direct communications are set up on the internet. You don’t need IP addresses from both parties to establish that direct communication to begin with.”). That Apple’s expert, Dr. Matthew Blaze, disagreed with Dr. Jones does not entitle Apple to JMOL.

See 4/9 AM Tr. at 130:21–131:1. It is not the Court’s job to substitute its judgment for the jury’s and to reweigh the expert testimony to determine a technical fact. See *Ellis v. Weasler Eng’g Inc.*, 258 F.3d 326, 337 (5th Cir. 2001).

Regardless, on this record, the Court concludes that VirnetX introduced substantial evidence at trial to support the jury’s verdict that the “indication” term was met by the third version of FaceTime. See 4/3 PM Tr. at 121:2–124:7. Specifically, Dr. Jones testified that the accept push message indicates that the FaceTime domain name service system supports establishing a secured communication link as a “culmination of a provisioning process” and contains the callee’s certificate, a peer-push token, session token, a certificate name for the callee, and other information. *Id.* at 121:8–122:10. Dr. Jones explained that the accept push message indicates that the FaceTime servers have successfully authenticated and provisioned both devices to establish a direct, secure FaceTime call. See *id.* at 121:5–124:4.

Dr. Jones also explained that the FaceTime servers were not conventional DNS servers:

Q. In what way does the FaceTime DNSS do something beyond merely returning DNS records?

A. Well, what it’s returning is in that -- that accept push is, first, an indication that the provisioning process has been completed and it’s the FaceTime servers that facilitating that provision process. It also includes the command number that’s indicating that this is an accept instead of reject. It’s got the certificate, it’s got a push token, and the other information I referenced as well.

Id. at 123:8–17. Even Mr. Thirumalai—Apple’s fact witness for FaceTime—did not contest Dr. Jones’s explanation of how FaceTime works. See 4/5 PM Tr. (Thirumalai) at 206:17–20 (“Are you aware of anything incorrect about the technical explanation of the operation of FaceTime that was provided by Dr. Jones? A. No, I don’t think so.”).

Apple suggests that Dr. Jones’s testimony “indicates nothing about support for a *direct* call, as [it] applies equally to a *non-infringing* relayed call.” Docket No. 793 at 1 (emphasis in

original). That the accept push message can also be used to establish a relayed FaceTime call does not change the result because “[t]he addition of features does not avoid infringement, if all the elements of the patent claims have been adopted. Nor is infringement avoided if a claimed feature performs not only as shown in the patent, but also performs an additional function.” *N. Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 945 (Fed. Cir. 1990). Although Dr. Blaze disagreed with Dr. Jones and testified that “nothing in [the accept push] indicates support for direct communication,” the jury was not required to credit Dr. Blaze’s testimony, and the Court again refuses to re-weigh evidence and invade the province of the jury. 4/9 AM Tr. at 21:5.

b. Secure Communication Link

Apple’s “anonymity defense was tried in the ’417 action. It’s a common feature to the new version of FaceTime as well as the old version.” 4/2 AM Tr. at 17:10–12. In its filings before trial, Apple represented to the Court that it did “not intend to present a defense regarding the absence of anonymity.” Docket No. 628 at 8 n.2. At trial, Apple sought a ruling from the Court precluding the presentation of its anonymity defense. While the Court agreed that Apple could not simply “repeat arguments that are identical to ones from the previous case,” it did not rule that any particular argument was foreclosed. *Id.* at 19:15–21. Regardless, however, based upon Apple’s representation that the secure communication link noninfringement argument in this case and the 417 action are identical, issue preclusion attaches to Apple’s argument in this case, and the Court declines to rule on issues already resolved by the 417 judgment. *See Aspex Eyewear, Inc. v. Zenni Optical Inc.*, 713 F.3d 1377, 1382 (Fed. Cir. 2013).

c. Domain name service system

Before the consolidated trial in 2016, the Court held that “domain name service system” did not incorporate the Court’s construction of “domain name service.” Apple does not present any new arguments in support of its construction, and the Court declines to reconsider its previous

rulings. *See* 417 action, Docket No. 266 at 20 (“Defendants seek to improperly import limitations from a preferred embodiment into the claim language. The claim language itself provides a description of the domain name service system. Thus, the Court finds that ‘domain name service system’ does not require construction.”); 417 action, Docket No. 732 at 14, n.3 (“However, the Court did not construe ‘domain name service system’ because the claim language itself provided a description of the term, i.e. that it must ‘comprise an indication that [it] supports establishing a secure communication link.’ ”). Accordingly, Apple is entitled to neither JMOL nor a new trial on this basis.

(2) VPN On Demand

VirnetX accuses Apple’s VPN on Demand feature of infringing Claims 1 and 7 of the ’135 patent and claim 13 of the ’151 patent.

A conventional DNS resolves domain names (e.g., “Yahoo.com”) into Internet Protocol (“IP”) addresses. *See* ’135 patent at 37:22–27. A user’s web browser then utilizes the IP address to request a website. *Id.* at 37:24–29. 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 38:23–25. If the request is for a secure site, the system automatically initiates a virtual private network (“VPN”) between the proxy and the secure site, but if the request is for a non-secure website, then the DNS proxy forwards the request to a conventional DNS for resolution. *Id.* at 38:43–47.

Claim 1 of the ’135 patent has three steps: (1) generating from the client computer a 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. Claim 1 and 13 of the '151 patent, respectively, require creating an “encrypted channel” and “secure channel” “between” the client and the secure server. '151 patent at 48:28–29.

The Court’s discussion of VPN on Demand, too, is informed by a review of the VPN On Demand product considered in the 417 action. The VPN On Demand accused of infringement in the 417 action maintained an “Always” and an “If Needed Mode.” The “Always” mode would check to see whether a requested site in a DNS request was on a user-configurable list and, if so, as the name suggests, would always create a VPN without sending a DNS request to a DNS server. 4/3 PM Tr. at 195:4–14. The “Always” mode ignored location: It would create a VPN without regard to whether the user was inside or outside a private network. *Id.* at 195:13–196:3. The “If Needed” mode was location-based: It would create a VPN if a user was outside the private network, but not if a user was inside the private network. 4/6 PM Tr. 151:13–24. The parties agree that the “If Needed” mode did not infringe. *See, e.g.*, Docket No. 779 at 13; 4/3 AM Tr. at 77:25–78:2.

The jury in the 417 action returned a verdict finding the “Always” mode to infringe, and the Court denied Apple’s JMOL motion of noninfringement. *VirnetX Inc. v. Apple Inc.*, 925 F. Supp. 2d 816, 830 (E.D. Tex. 2013). The Federal Circuit affirmed as to literal infringement. *VirnetX*, 767 F.3d at 1322.

VirnetX argued at trial that the redesigned VPN on Demand (“redesigned VOD”) replicates the Always mode functionality with “Evaluate Connection.” 4/3 AM Tr. at 78: 3–6. Apple contends now that it is entitled to JMOL of noninfringement for the redesigned VOD at issue in this case. Its arguments can be grouped into five categories: (1) fact-based noninfringement

arguments about the redesigned VOD functionality; (2) arguments that HTTPS probe is optional and location-based; (3) arguments about an interception requirement; (4) arguments analogizing the redesigned VOD to the “If Needed” mode in the 417 action; and (5) arguments about actual use.

a. Fact-based noninfringement arguments

In its motion, Apple first presents the Court with a series of factual representations about redesigned VOD functionality, suggesting that, under Apple’s description of the redesigned product functionality, it is entitled to JMOL of noninfringement. However, in each instance, there is substantial evidence supporting the verdict, and the Court declines to reweigh the evidence on JMOL and substitute its judgment for that of the jury.

For example, Apple argues that “the decision to start a VPN is based on something other than a DNS request.” Docket No. 775 at 8. But at trial, VirnetX’s expert, Dr. Jones, explained that the domain name matching in VPN on Demand is based on the domain name in the DNS request. *See* 4/10 AM at 66:7–25. Dr. Jones also explained that, when VPN on Demand checks the results of the probe, it “is determining whether or not the DNS request that’s being made is being made from the outside to the firewall to the server on the inside or is being made from within the firewall.” *Id.* at 67:10–21. In its reply, Apple disagrees with Dr. Jones and states that, “[b]ecause infringement depends solely on the optional probe’s failure, any ‘determination’ is based on the probe, not the request.” Docket No. 783 at 5. But Apple’s disagreement with Dr. Jones is not a basis for JMOL, and the jury was entitled to credit Dr. Jones’s testimony on this fact.

Apple also argues that the probe failure occurs “only after a DNS request is made and returns a successful result.” Docket No. 775 at 8. But the jury was entitled to credit Dr. Jones’s trial testimony that the results of the HTTPS probe are checked after the DNS request is made, but by that point, “[t]he probe has already failed or succeeded.” *See* 4/10 Sealed Tr. at 92:3–25.

Similarly, Apple argues that the HTTPS probe cannot determine whether a server is a secure server because it accesses “a wholly separate probe server.” Docket No. 775 at 9. Apple provides no basis, however, for the Court to disregard the record evidence that the probe server and the target server are on the same private network and that redesigned VOD determines whether the target server is behind a firewall (and therefore “requires authorization for access”) based on whether the probe is able to reach the probe server. *See* 4/3 AM Tr. at 80:4–11.

Apple also suggests that redesigned VOD creates VPNs based on the DNS response, not the DNS request. Docket No. 775 at 10. But, at trial, Dr. Jones testified that, when the DNS request matched a domain name in the list and the probe failed, VPN on Demand will start a VPN “no matter what comes back” in the DNS response. *See* 4/3 AM Tr. at 81:11–23. He explained that, if the DNS response contains an IP address, VPN on Demand will discard it. *See id.* at 82:4–10.

According to Apple, with respect to claim 13 of the ’151 patent, VPN on Demand always forwards the DNS request to a DNS function that returns an IP address, regardless of whether the DNS request corresponds to a secure server. Docket No. 775 at 10–11. But there is substantial evidence in the record suggesting that, while VPN on Demand forwards all DNS requests to conventional DNS (*see* 4/4 AM Tr. at 16:21–17:15), VPN on Demand only forwards the DNS request to a DNS function that returns an IP address of a nonsecure computer—as is required by claim 13—if the DNS request does not correspond to a secure server. *See* 4/4 AM Tr. at 17:16–22 (“Q. And there is nothing in iOS 7 VPN On Demand which makes a determination whether or not to send a DNS request in DNS function on the basis of whether the request is to secure or unsecure server. Right? A. There is a check to see if it’s going to send to a DNS function that

returns an IP address within the code, yes. If you're talking about sending it to an external server, no.”).

b. The optional HTTPS probe is location based

According to Apple, the fact that the optional HTTPS is location-based is fatal to VirnetX's claim. Docket No. 775 at 7–10. Apple maintains that, to the extent the optional HTTPS probe performs any “determination,” it is a determination as to the location of the requesting device relative to the private network, not a determination as to any requested server's security. *Id.* at 9. Apple argues that Dr. Jones's infringement theory that the requesting device's location can determine whether a server is “secure” or “not secure” is “absurd.” *Id.*

The asserted claims of the '135 and '151 patents require determining whether a DNS request is requesting access to a secure web site or secure server. VirnetX introduced evidence at trial that redesigned VOD performs this determination by comparing the domain name of the DNS request against a list of domain names in a configuration file and by consulting the result of the HTTPS probe. *See* 4/3 AM Tr. at 86:14–87:22. Dr. Jones testified that, “when the name matches and the probe has failed, that indicates that to reach that computer it's going to -- it can't reach it without authorization. In other words, the probe failed. It couldn't get there. And by being on the list, the IT administrators indicated that this is a computer that can communicate in a VPN.” *Id.* at 87:16-22. This evidence satisfies the Court's claim constructions. *See* Docket No. 180 at 24 and 27 (construing “secure web site” to mean “a web site that requires authorization for access and that can communicate in a VPN” “secure server” to mean “a server that requires authorization for access and that can communicate in an encrypted channel.”).

Apple suggests that it is “absurd” for a server to be a “secure server” depending on whether the requesting device is outside the private network. The record evidence demonstrates that whether the requesting device is inside or outside the private network affects whether a server

requires authorization for access (which is a requirement of the Court’s construction of “secure server”). *See* 4/4 AM Tr. at 32:4–14.

Even Apple’s fact witness for redesigned VOD, Mr. Simon Patience, explained at trial that the location of a requesting device can bear on whether a target server is a “secure server” that requires authorization for access and can communicate in a VPN. Mr. Patience testified that redesigned VOD creates a VPN based on whether there is a firewall between the device and the target server. *See* 4/6 PM Tr. at 165:18–166:2; 164:23–165:7; 170:10–16. According to Mr. Patience, “the location probe is just another test to determine whether you’re inside or outside the firewall.” *Id.* at 167:22–168:3. Mr. Patience also confirmed that the list of domain names “is supposed to contain a list of things behind the firewall.” *Id.* at 214:8–14. Mr. Patience also testified that servers behind a firewall are secure servers. *Id.* at 198:11–17 (“Q. Do you see this server? A. Yes. Q. Is that a secure server? A. Yes. I – you could consider it to be one, yes. Q. You could consider it to be one or not? A. Well, the fact that it’s behind a firewall would tend to imply that it is a secure server, yes.”). Importantly, Mr. Patience applied the Court’s construction of “secure server,” as he also confirmed that servers behind firewalls require authorization for access that can communicate in a VPN. *Id.* at 204:11–15 (“Q. When the device is outside of the firewall, does it require authorization for access to communicate with a server within the firewall? A. Yes, because that’s what VPN is. VPN is the authorization.”).

On this record, it is clear that the fact that the HTTPS probe is location-based is not fatal to VirnetX’s claims, and Apple is not entitled to JMOL on this basis.

c. Redesigned VOD does not intercept DNS requests before they are sent to a DNS server

In its motion, Apple first characterizes the ’135 and ’151 patents as introducing a “DNS proxy” “that intercepts DNS requests *before they are sent to a DNS server* and automatically

creates a VPN if the DNS request corresponds to a secure site.” Docket No. 775 at 6–7 (emphasis in original). In its reply, Apple reprises this argument, stating that “DNS requests must be intercepted before transmission to avoid hampering anonymous communications on the Internet.” Docket No. 783 at 5 (internal citations omitted).

As a preliminary matter, the Court notes that, on a JMOL motion, it applies its claim constructions. The Court has not construed the asserted claims to require a “DNS proxy that intercepts DNS requests *before they are sent* to a DNS server.” Apple did not attempt to seek a ruling from the Court that claims have this temporal limitation, and its contention that the claims are so limited is therefore waived. *See Conoco, Inc. v. Energy & Envtl. Int’l, L.C.*, 460 F.3d 1349, 1359 (Fed. Cir. 2006) (“[L]itigants waive their right to present new claim construction disputes if they are raised for the first time after trial.”). Post-trial motions are not a vehicle to seek new constructions and retroactively apply them to the evidence introduced at trial.

d. Redesigned VOD replicates the noninfringing “If Needed” mode

According to Apple, the old “If Needed” mode of VPN on Demand was location-based: “[I]t would create a VPN if a user was outside the private network, but not if a user was inside the private network.” Docket No. 775 at 8. Apple maintains that, “like the prior ‘If Needed’ mode, the redesigned version of VOD is location-based—it creates a VPN only if a user needs one to connect to the requested site.” *Id.* In its reply, Apple also states that redesigned VOD “operates in the same way” as the old “If Needed” mode by first “attempt[ing] to connect insecurely and only creates a VPN if needed.” Docket No. 783 at 4.

The Court questions the value in comparing the accused product to a non-infringing product to determine whether the accused product infringes. Indeed, in its motion, Apple recognizes that an infringement analysis comparing accused products with old products, rather

than the claims, is “undisputedly incorrect.” Docket No. 775 at 37 (citing *Zenith Labs., Inc. v. Bristol-Meyers Squibb Co.*, 19 F.3d 1418, 1423 (Fed. Cir. 1994)).

In any event, VirnetX presented evidence that, while the “If Needed” functionality would attempt to make an unsecure connection to a domain name if it could, the redesigned VOD does not first attempt to connect insecurely. *See* 4/3 AM Tr. at 76:6–10; 80:24–82:10. VirnetX also presented evidence that, unlike redesigned VOD, which creates a VPN based on the domain name matching the results of the HTTPS probe, the “If Needed” mode triggered a VPN only if the domain name could not be resolved by conventional DNS. *Id.* at 76:17–77:14; PX308. Accordingly, Apple is not entitled to JMOL on this basis.

Apple also specifically requests a new trial based on VirnetX’s arguments at trial that Apple “moved” the infringing Always mode functionality into the redesigned VOD. Docket No. 775 at 37. To be clear, *both* parties discussed the previous iterations of VPN on Demand at length at trial. *See, e.g.*, 4/6 PM (Direct examination of Apple’s witness, Mr. Patience) Tr. at 172:9–16 (“Q. Now, how does the operation of If Needed in iOS 7 to 11 compare to the Always mode that was removed from iOS 3 to 6? A. So Always is just driven by the name of the server. It just will always create a VPN if it finds the name of a server on this list. And so it would create a VPN when it's outside of the firewall because the name is on the list. And inside the firewall it will create a VPN also because the name is on the list.”).

However, as discussed above, VirnetX presented sufficient evidence of infringement to withstand Apple’s JMOL motion, without including any reference to the previous Always mode. Indeed, the Court cannot identify any prejudice to Apple from the parties’ discussions of the Always mode. The jury’s verdict is not against the great weight of the evidence, and Apple is not entitled to a new trial on this basis.

e. Actual use

In its motion, Apple argues that VirnetX based its infringement theory on a specific and optional operating scenario for redesigned VOD but offered no evidence that anyone configured or used VOD in the infringing manner. Docket No. 775 at 11. According to Apple, VirnetX only offered evidence of redesigned VOD's capability to infringe, which is insufficient because the claim language here is not drawn to mere capability. *Id.* Apple suggests that VirnetX did not identify use of the infringing configuration by Apple or its customers.

VirnetX responds that claim 13 of the '151 patent is an apparatus claim, which can be infringed by a device having the claimed structure capable of functioning as described by the claim. Docket No. 779 at 15. VirnetX contests whether direct infringement of this claim requires proof of use like a method claim and argues that the claim is drawn to structure that has a specified capability. *Id.* at 16. With respect to the method claims of the '135 patent, VirnetX points to Dr. Jones's testimony that Apple directly infringes by testing VPN on Demand and an internal Apple email documenting a VPN On Demand test plan. *Id.* at 17. VirnetX also argues that the failure of the HTTPS probe is not a condition of infringement and that the probe need only be configured to infringe. *Id.*

“[I]n every infringement analysis, the language of the claims, as well as the nature of the accused product, dictates whether an infringement has occurred.” *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1204 (Fed. Cir. 2010). “To infringe a method claim, a person must have practiced all steps of the claimed method.” *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1317 (Fed. Cir. 2009). “Direct infringement of a method claim can be based on even one instance of the claimed method being performed.” *Mirror Worlds, LLC v. Apple Inc.*, 692 F.3d 1351, 1359 (Fed. Cir. 2012) (citing *Lucent*, 580 F.3d at 1317).

An accused device may be found to infringe if it is reasonably capable of satisfying the claim limitations, even if it is also capable of noninfringing modes of operation. *Hilgraeve Corp. v. Symantec Corp.*, 265 F.3d 1336, 1343 (Fed. Cir. 2001) (collecting cases). A claim that recites *capability* and not actual operation may be infringed when it is capable of operating in the claimed mode. *Finjan*, 626 F.3d at 1204. “[W]hen the asserted claims recite capability, [Federal Circuit] case law supports finding infringement by a ‘reasonably capable’ accused device on a case-by-case basis particularly where . . . there is evidence that the accused device is actually used in an infringing manner and can be so used without significant alterations.” *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1217 (Fed. Cir. 2014).

1. Method Claims

The asserted claims of the ’135 patent are method claims for which there is record evidence supporting a finding of infringement. For example, Dr. Jones testified that Apple directly infringes by testing VPN on Demand. *See* 4/3 PM Tr. at 131:10–12. Additionally, VirnetX introduced PX1018 into the trial record, which is an internal Apple email documenting a “VPN On Demand test plan” that involves the “RequiredURLStringProbe” (i.e., the HTTPS probe). Although the jury could have found that the testing described in the document never occurred, it could equally and reasonably have concluded that the described test plan was carried out. And the Court must “draw all reasonable inferences in the light most favorable to the verdict and cannot substitute other inferences that [the court] might regard as more reasonable.” *E.E.O.C. v. Boh Bros.*, 731 F.3d at 451.

Apple suggests that actual failure of the HTTPS probe is a condition of infringement. But the asserted claims of the ’135 do not require that a VPN is always established, and the probe’s success or failure only bears on whether a VPN is created. If VPN on Demand determines that the

DNS request is not requesting access to a secure website (e.g., if the HTTPS probe did not fail), then the step need not be carried out in order for the claimed method to be performed. *See Cybersettle, Inc. v. Nat'l Arbitration Forum, Inc.*, 243 Fed. Appx. 603, 607 (Fed. Cir. 2007) (“It is of course true that method steps may be contingent. If the condition for performing a contingent step is not satisfied, the performance recited by the step need not be carried out in order for the claimed method to be performed.”).

Apple also suggests that there is no evidence that its customers directly infringe the asserted claims of the '135 patent. Docket No. 775 at 13. The record suggests that Apple infringed with the Always mode; it announced it was removing that feature; there was customer backlash; and Apple subsequently released the new version of VPN on Demand, which replicates the Always mode. *See* 4/3 PM Tr. at 133:2–134:14; PX1007; PX1012. This is at least circumstantial evidence that some subset of Apple's customers directly infringe the '135 patent with the new version of VPN on Demand. *See Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1272 (Fed. Cir. 1986). Accordingly, Apple is not entitled to JMOL of noninfringement on the method claims.

2. Apparatus claims

Claim 13 of the '151 patent is drawn to structure that has a specified capability. The structure it requires is “computer readable medium” that has “computer readable instructions[.]” The instructions are claimed by reference to the steps they perform, but the claim explicitly states that the steps are performed “when executed[.]” As such, Apple directly infringes when it makes, uses, offers to sell, sells, and imports devices containing VPN on Demand because VPN on Demand is capable of operating in an infringing mode. *See* 35 U.S.C. § 271(a); *Intel Corp. v. U.S. Int'l Trade Comm'n*, 946 F.2d 821, 832 (Fed. Cir. 1991) (“Because the language of claim 1 refers to ‘programmable selection means’ and states ‘whereby when said alternate addressing mode is

selected,’ the accused device, to be infringing, need only be capable of operating in the page mode.”).

The functional language in claim 13 does not change the infringement analysis: Functional language in an apparatus claim requires that an accused apparatus be capable of performing the recited functions. *Intel*, 946 F.2d at 832; *see also Revolution Eyewear, Inc. v. Aspex Eyewear, Inc.*, 563 F.3d 1358, 1369–70 (Fed. Cir. 2009) (“[C]laim 22 here only requires a capacity to perform a function”); *Microprocessor Enhancement Corp. v. Texas Instrum. Inc.*, 520 F.3d 1367, 1375 (Fed. Cir. 2008) (“Claim 7 . . . is clearly limited to a pipelined processor possessing the recited structure and capable of performing the recited functions”); *UltimatePointer, L.L.C. v. Nintendo Co.*, 816 F.3d 816, 826 (Fed. Cir. 2016) (“[T]he ‘generating data’ limitation reflects the capability of that structure[.]”); *MasterMine Software, Inc. v. Microsoft Corp.*, 874 F.3d 1307, 1315 (Fed. Cir. 2017) (“Though claim 8 includes active verbs—presents, receives, and generates—these verbs represent permissible functional language used to describe capabilities of the ‘reporting module.’”).

Regardless, however, VirnetX presented at least circumstantial evidence at trial of actual infringement. VirnetX introduced PX1018, in which an Apple employee explains that the “VPN On Demand test plan” would “[i]deally . . . be presented to the customer.” PX1018. The jury was entitled to infer from this evidence that Apple carried out its test plan and followed through on its plan to present it to customers. PX1018. Accordingly, Apple is not entitled to JMOL of noninfringement.

(3) *iMessage*

Apple seeks JMOL on its counterclaim that iMessage in iOS 5–8 and OS X 10.8–10.10 does not infringe because VirnetX’s claim of infringement and Apple’s counterclaim for declaratory judgment of noninfringement have not been dismissed. Docket No. 775 at 14.

In the 417 action, VirnetX asked this Court to enter judgment on Apple’s dropped invalidity theories after the 2012 trial. *See* 417 action, Docket No. 732 at 45–46. These theories and references were asserted up to the time of trial but were never presented to the jury. *Id.* at 45. Noting that there must be a “continuing case or controversy with respect to withdrawn or otherwise unasserted claims” for the Court to enter judgment, the Court declined to do so. *Id.* at 46.

“[T]he existence of a case or controversy must be evaluated on a claim-by-claim basis.” *Jervis B. Webb Co. v. S. Sys., Inc.*, 742 F.2d 1388, 1399 (Fed. Cir. 1984). And “jurisdiction must exist at all stages of review, not merely at the time the complaint was filed.” *Streck, Inc. v. Research & Diagnostic Sys., Inc.*, 665 F.3d 1269, 1282 (Fed. Cir. 2012) (internal quotation marks omitted). The Court cannot and will not enter judgment on claims and defenses that were not presented for consideration to the jury because there is no basis to do so. *See Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1553 (Fed. Cir. 1983); *Datascope Corp. v. Smec, Inc.*, 776 F.2d 320, 327 (Fed. Cir. 1985) (noting that references in pleadings do not support a judgment that particular claims are invalid when “the validity of those claims were not litigated by the parties at trial”); *Nordisk Pharm., Inc. v. Bio-Technology Gen. Corp.*, 424 F.3d 1347, 1356 (Fed. Cir. 2005) (vacating the district court’s order invalidating a claim not litigated at trial).

Parties routinely drop asserted claims and defenses in their cases as litigation progresses, and the Court declines to penalize or discourage the parties’ efforts in narrowing the case for trial. Accordingly, Apple is not entitled to JMOL of noninfringement for iMessage.

(4) Indirect Infringement

Apple also argues that it is entitled to JMOL and a new trial on indirect infringement because VirnetX failed to prove that Apple had specific intent to encourage infringement. Docket No. 775 at 15. In response, VirnetX suggests that the evidence supporting the jury's willfulness finding equally supports its finding of specific intent. Docket No. 779 at 19.

The trier of fact was provided with sufficient evidence from which to infer Apple's knowledge that use of its products would constitute infringement and Apple's specific intent. For example, for VPN on Demand, VirnetX presented evidence at trial that Apple knew about the patents-in-suit before the redesign, knew that the previous version infringed, and replicated that original design. *See* 4/3 PM Tr. at 132:20–133:1. Further, the test plan document introduced at trial includes an infringing configuration and Apple states therein that the configuration “would be presented to the customer[.]” PX1018. This is sufficient evidence from which the jury could conclude that Apple intended its customers to infringe.

For FaceTime, VirnetX presented evidence that Apple was able to avoid infringement via full relay but chose to resume infringement with direct FaceTime calls. 4/3 AM Tr. at 135:22–136:2. VirnetX also presented evidence that Apple “broke” FaceTime on older phones to force customers to resume direct calls in iOS 7. *See* 4/5 PM Tr. at 272:22–273:2; PX1020; PX1031; PX1106. Similarly, VirnetX presented evidence that Apple has encouraged its users to make FaceTime calls through marketing of the feature (*see, e.g.*, PX1098)—calls that the jury determined to be infringing.

On this record, the Court is persuaded that the jury had a sufficient evidentiary basis from which to conclude that Apple both knowingly induced infringement and possessed specific intent to encourage its customers' infringement. *See ACCO Brands, Inc. v. ABA Locks Mfr. Co.*, 501

F.3d 1307, 1312 (Fed. Cir. 2007). The jury's verdict is supported by substantial evidence and is not against the great weight of the evidence. Accordingly, Apple is not entitled to JMOL or a new trial on indirect infringement.

B. Apple's Motion for Judgment as a Matter of Law and a New Trial on Damages

The Court struggles to identify a single basis Apple provides for its JMOL on damages that it has not already considered at length in the context of *Daubert* motions and the 417 post-trial. The Court questions whether repeated review of the same arguments in detail is a judicious use of the Court's resources. To be sure, the Court concluded at summary judgment that the damages questions between the 417 action and this matter were not identical for the purposes of issue preclusion because of disputes about the hypothetical negotiation date and about the accused products' functionality. Docket No. 553 at 7. At trial, however, Apple presented damages testimony that was nearly identical to that presented in the 417 action.

In fact, a comparison of Apple's post-trial brief in the 417 action and this case reveals that Apple's arguments mirror those in the 417 action. Apple has asserted in both cases' post-trial briefing that (1) no reasonable jury could rely on the VoIP licenses; (2) Mr. Weinstein failed to apportion; (3) Mr. Weinstein's model violated the entire market value rule; (4) Apple is entitled to an offset for units that included Skype; and (5) no reasonable jury could award more than Apple's expert's prescribed royalty rate per unit. The Court considers each argument below.

(1) *Reliance on the VoIP licenses*

Apple argues that Mr. Weinstein failed to account for the differences between the Voice-over-IP licenses he considered and the hypothetical VirnetX-Apple license. Specifically, Apple argues: (1) that each VoIP license is for a longer period of time and for more patents than the hypothetical license; (2) that the VoIP licenses cover products that are less complex and have fewer

features than the accused products; (3) that the VoIP licenses were litigation licenses; (4) that the VoIP licenses were paired with IP PBX servers, which Apple does not sell; and (5) that Mr. Weinstein devalued the Microsoft license. Docket No. 775 at 18–22.

“Prior licenses . . . are almost never perfectly analogous to the infringement action.” *Ericsson*, 773 F.3d at 1227. “For example, allegedly comparable licenses may cover more patents than are at issue in the action, include cross-licensing terms, cover foreign intellectual property rights, or, as here, be calculated as some percentage of the value of a multicomponent product.” *Id.* These differences must be explained to the jury so they can account for “the need to discount reliance on a given license to account only for the value attributed to the licensed technology.” 773 F.3d at 1228; *see also VirnetX*, 767 F.3d at 1330 (“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.”).

To some extent, each of Apple’s criticisms is a *Daubert* attack on Mr. Weinstein’s opinion, and the Court has already held that Apple’s concerns are related to the weight of this testimony, not its admissibility. Docket No. 362 at 3 (“Although Apple presents valid criticisms of Dr. Jones’s opinions, they go to the weight of the evidence rather than admissibility.”). Nevertheless, Mr. Weinstein explained the factual circumstances surrounding each license he relied on at length to the jury. *See* 4/5 AM Tr. at 40:10–61:25. The Court can identify no error in the jury relying on these licenses in determining the appropriate royalty rate in this case.

(2) Failure to apportion

Apple also challenges Mr. Weinstein’s opinion to the extent he failed to apportion the VirnetX licensing policy. According to Apple, the policy applies to the price of the end product, but “[n]othing in the policy explains what, if any, apportionment was done to devise that policy.”

Docket No. 775 at 23. Even if the policy and licenses are apportioned, however, Apple contends that the Apple devices are more complex than the VoIP phones and that this difference was not accounted for. *Id.* Apple also suggests that Mr. Weinstein’s opinion is faulty because he opined that a per-unit royalty rate should remain constant regardless of the number of accused features in the accused device. *Id.* at 23. And Apple maintains that the royalty rate is improper because it exceeds the market price of FaceTime. *Id.* at 24.

To the extent Apple complains that Mr. Weinstein failed to apportion the *licenses*, such apportionment is not necessary because the rates in the license agreements are real-world rates, apportioned to reflect the value of VirnetX’s technology to those companies who entered into them. *See also Ericsson Inc. v. D-Link Corp.*, No. 6:10-cv-473, 2013 WL 2242444, *2–3 (E.D. Tex. May 21, 2013) (“It goes without saying that the licensees would not have paid value for portions of the 802.11 standard unrelated to Ericsson’s patents. Therefore, Mr. Bone’s report does not implicate the entire market value rule.”); 4/4 PM Tr. at 11:13–12:14 (Larsen).

Apple has not identified any authority suggesting that a company’s general licensing policy—that it applies to all potential licensees—must be apportioned on a per-defendant basis before it can be admissible or relevant to damages. Regardless, Mr. Weinstein understood the licensing policy to be apportioned. *See* 4/5 AM Tr. 121:9–12 (“Well, I think I’ve testified how I believe that VirnetX’s licensing policy contemplates rates that are apportioned to reflect the contribution that VirnetX’s technology makes to the final products of licensees.”). That Mr. Weinstein could not describe how the apportionment “was done” in the initial licensing policy does not render his opinion unreliable, and goes to the credibility the trier of fact could assign to his testimony. *See* Docket No. 775 at 18. Ultimately, Mr. Weinstein’s damages calculations were

based on real-world license agreements entered into pursuant to the policy, which were described in detail for the jury to evaluate.

Apple suggests that Mr. Weinstein’s opinion that the per-unit royalty rate should remain constant regardless of the number of accused features present in the given device is improper. Docket No. 775 at 22–23. But the jury heard substantial evidence explaining the basis for this opinion that the royalty rate was not dependent on the number of accused features. *See, e.g.*, 4/5 AM Tr. at 86:19–94:7. The Court is not persuaded that Mr. Weinstein’s opinion is unreliable, and the jury was entitled to credit his opinion.

Apple also makes a number of factual arguments for which the Court declines to substitute its judgment for that of the jury. For example, Apple claims that the royalty for FaceTime could not have been more than the alleged price of FaceTime. Docket No. 775 at 23–24, 26. This argument was presented to the jury, and the jury was entitled to reject Apple’s argument that its pricing of FaceTime was a “market price” that reflected the value of the product. *Compare* 4/9 PM Tr. at 260:23–261:7, *with* 4/5 PM Tr. at 169:17–172:3.

Additionally, Apple suggests that, because VirnetX accused a single implementation of redesigned VOD of infringement and because VOD has other, noninfringing modes of operation, the damages award is greater than VOD’s footprint in the marketplace. Docket No. 775 at 24. In response, VirnetX suggests that Apple discounts the “huge importance of the presence of the infringing functionality in VPN On Demand.” Docket No. 779 at 28 (citing 4/5 AM Tr. at 64:18–66:19, 68:7–70:16; PX1007; PX 1121; PX1012.03; PX1010). In its reply, Apple reprises its argument that there is no evidence that anyone used redesigned VOD to infringe, but the Court has already rejected this argument with respect to liability above. Accordingly, Apple is not entitled to JMOL on this basis.

(3) Entire market value rule (“EMVR”)

Apple argues that use of VirnetX’s licenses to calculate per-unit rates violates the EMVR. Docket No. 775 at 25. As the Federal Circuit explained in *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014), the entire market value rule has two parts: a substantive legal rule and a separate, evidentiary principle. The substantive legal rule mandates that an ultimate reasonable royalty award be based on the incremental value that the patented invention adds to the end product. *Id.* The evidentiary principle, applicable specifically to the choice of a royalty base, is that where a multi-component product is at issue and the patented feature is not the item which imbues the combination of the other features with value, care must be taken to avoid misleading the jury by placing undue emphasis on the value of the entire product. *Id.*

Mr. Weinstein’s reliance on *actual* licenses entered into for the patented technology does not violate the EMVR. Importantly, the jury was never tasked with applying a royalty rate percentage to the entire value of any Apple product. Instead, Mr. Weinstein’s model applied a per-unit rate of \$1.20 based on certain VirnetX licenses (the per-unit royalty rate) to the number of accused units sold (the royalty base). As was true in the 417 action, the Court also instructed the jury not to consider any outside knowledge they may have had about the total revenue or total price of the accused products, which it presumes the jury followed. *See* Docket No. 721 (jury instructions) (“VirnetX has relied on license agreements in which royalties were based on a percentage of the entire price of the licensed end-products. But in determining a reasonable royalty, you must not rely on the overall price of Apple’s accused products at issue in this case.”); *See Francis v. Franklin*, 471 U.S. 307, 324 n.9 (1985). Accordingly, this is not a basis for judgment as a matter of law or a new trial.

(4) Skype offset

Next, Apple argues, as it did in the 417 action, that “it is entitled to a partial offset of any damages for products that are already licensed, including, for example, accused devices that already include Skype.” Docket No. 775 at 25–26; 417 action, Docket No. 1079 at 14. As was true in the 417 action, “Apple never pled a license defense, and Apple presented no evidence that its devices are shipped with Skype included.” 417 action, Docket No. 1079 at 17. “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.” *Id.* Finding no basis to reconsider its prior ruling, the Court denies Apple’s motion for judgment as a matter of law on this basis.

(5) Royalty rate

Apple also asserts in its motion that “no reasonable jury” could disagree with its damages expert. Docket No. 775 at 26–27. The Court declines to substitute its judgment for that of the jury and will not reweigh the evidence and credit Apple’s expert over Mr. Weinstein. The jury was free to disbelieve Apple’s expert and credit Mr. Weinstein’s testimony, which provided substantial evidence for its verdict. *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 848 (Fed. Cir. 2010). Accordingly, Apple’s motion for JMOL on this basis is denied.

C. Apple’s Motion for Judgment as Matter of Law and New Trial on Willfulness

The issue of willfulness was bifurcated; after the jury returned a verdict finding Apple liable for infringement and damages, the jury was tasked with the question of willfulness in a second “phase” of trial. After approximately two hours and thirty minutes of deliberations, the jury ultimately returned a verdict that Apple’s infringement was willful.

Apple now moves for judgment as a matter of law and a new trial on the issue of willfulness. A jury’s finding of willfulness merely “opens the door” to the Court exercising its

discretion to enhance damages. *See Read Corp. v. Portec, Inc.*, 970 F.2d 816, 826 (Fed. Cir. 1992) (“a finding of willful infringement does not mandate that damages be enhanced”); *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1933 (2016).

As is discussed in detail, *infra* Section II.A, the Court has exercised its discretion to decline enhancing damages in this matter. Because the Court declines to award enhanced damages, Apple’s willfulness JMOL and new trial motions are moot. *See Presidio Components, Inc. v. American Technical Ceramics Corp.*, Case No. 14-02061-H-BGS (S.D. Cal. Aug. 17, 2016) at 21 (noting that Defendant’s JMOL motion on willfulness was “essentially moot because the Court, exercising its sound discretion, ultimately declines to award [Plaintiff] enhanced damages despite the jury’s finding of willful infringement.”); *Schwendimann v. Arkwright Advanced Coating, Inc.*, No. CV 11-820 (JRT/HB), 2018 WL 3621206, at *21 (D. Minn. July 30, 2018) (citing *Laitram Corp. v. NEC Corp.*, 115 F.3d 947, 955 (Fed. Cir. 1997)) (“A court’s denial of enhanced damages renders a motion for judgment as a matter of law on willful infringement moot.”); *Greatbatch Ltd. v. AVX Corp.*, Case No. 13-723 (D. Del. Mar. 30, 2018) at 14 (concluding that, after two trials on the asserted patents and products and having reviewed all of the evidence, the Court determined it could deny enhanced damages “before a finding on willfulness”); *Erfindergemeinschaft Uropep Gbr v. Eli Lilly And Company et al*, Case No. 2:15-cv-1202 (Bryson, J.), Docket No. 346, 4/25/17 Trial Tr. at 1390:25–1391:3 (granting Rule 50 motion on willfulness); 1500:14–22 (later explaining that, “had willfulness gone to the jury and had there been a verdict of willful infringement in this case, I – based on the evidence I heard in the course of the trial, I would have exercised my discretion not to award enhanced damages under 35 USC, Section 284.”).

D. Apple's Remaining Arguments for New Trial

In its omnibus motion, Apple moved for JMOL and a new trial on several grounds discussed above. Aside from the arguments already considered, Apple made additional arguments which the Court addresses below.

(1) *Domain name service system instruction*

At trial, the Court gave the jury the following instruction:

You have heard discussion about a construction for the word “domain name service.” You were instructed that the construction for “domain name service system,” an element of all of the asserted claims of the '504 and '211 patents, does not incorporate or include the Court's construction for the term “domain name service.”

4/10 AM Tr. at 128:10–15. Apple challenges this instruction as confusing to the jury, prejudicial to Apple and irrelevant to the issues in the case. Docket No. 775 at 35. In its motion, Apple does not explain what prejudice Apple has suffered as a result of the instruction. In fact, Apple explains in its reply that its own expert “*agreed* that the ‘domain name service’ construction was not incorporated into ‘domain name service system.’ ” Docket No. 783 at 14 (citing 4/9 AM Tr. at 113:23–114:1). The Court can identify at least one instance in the record where Dr. Blaze, in response to Apple's examination, suggested that the construction for “domain name service” applied to “domain name service system.” *See* 4/9 AM Tr. at 104:13–24 (“Q. I have put up on Slide 57 three of the Court's claim constructions. Okay? A. Right. Q. Secure communication link, domain name service, and the indication term. Okay? A. Yes. Q. Which one of these claim constructions does not apply to the '504 and '211 patents, sir? A. Well, the – I'm not sure what – I'm not sure what you're asking. There's a domain name service. There's an indication. There's a secure communication. All these terms are here.”). This testimony justifies the Court's instruction.

But even if Apple was correct that the instruction was unnecessary, it is unclear what prejudice Apple suffered from the Court explaining the nuances of its claim construction to the jury. Accordingly, this is not a basis for a new trial.

(2) *EMVR and hypothetical negotiation instructions*

Apple asks the Court for a new trial based on its exclusion of Apple's proposed EMVR instruction and based upon the formulation of its hypothetical negotiation instruction. As the Court concluded above, Mr. Weinstein's testimony did not implicate the entire market value rule, so any instruction thereto would have been inappropriate. Indeed, as in the 417 case, "[t]hrough 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." 417 action, Docket No. 1079; *see* Docket No. 721 (jury instructions) ("VirnetX has relied on license agreements in which royalties were based on a percentage of the entire price of the licensed end-products. But in determining a reasonable royalty, you must not rely on the overall price of Apple's accused products at issue in this case.").

The Court presumes that the jury followed this instruction. *See Francis v. Franklin*, 471 U.S. 307, 324 n.9 (1985). Again, "[f]urther 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." 417 action, Docket No. 1079 at 28.

Apple also challenges the Court's instructions on the hypothetical negotiation. The Court provided the same instruction in the 417 retrial and again concludes that the instruction as a whole properly conveyed to the jury that the reasonable royalty should reflect the fair market value of the technology. Moreover, Apple has not identified what meaningful difference there is between the Court's instruction and Federal Circuit case law. *Compare* 4/10 AM Tr. at 135:5–8, *with Lucent*,

580 F.3d at 1324 (explaining that, in analyzing the hypothetical negotiation, the Court must ask, “Had the Infringer not infringed, what would the Patent Holder have made?” and that “the hypothetical negotiation or the ‘willing licensor-willing licensee’ approach, attempts to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began.”) (internal citations omitted). Accordingly, Apple is not entitled to a new trial on this basis.

Accordingly, Apple’s motion for a new trial based on the hypothetical negotiation instruction and on the exclusion of its EMVR instruction is **DENIED**.¹

(3) *Great weight of the evidence*

Apple also argues that it is entitled to a new trial because the damages award is excessive and against the weight of the evidence. Docket No. 775 at 42–44. Apple reasons that VirnetX improperly asked the jury to “punish” Apple for its previous infringement and that Mr. Weinstein’s damages methodology is faulty. The Court has discussed Mr. Weinstein’s methodology at length, and declines to reconsider it here.

Apple cites the following statement as “suggesting that Apple should get a worse deal than every other licensee because it previously infringed”: “[Apple] showed up having been trespassing on this property for years. And so in 2013 they say, Yeah, we’re an agreed infringer, but we want a better rate than anyone who showed up and took a license voluntarily. We want a better rate than anybody.” Docket No. 775 at 43; 4/10 Tr. at 161:12–16. Apple fails to articulate, however, how this comment suggests that Apple should be punished for its previous infringement. *Id.*

In support, Apple cites *Gilster v. Primebank*, 747 F.3d 1007, 1011 (8th Cir. 2014). But the remarks in this case are a far cry from those at issue in *Gilster*. In *Gilster*, the Eighth Circuit

¹ The Court notes that it provided the same hypothetical negotiation instruction in the 417 action and, likewise, denied Apple’s motion for a new trial on this basis as well. *See* 417 action, Docket No. 1079 at 28.

reversed a district court's denial of a new trial motion when, during closing argument in a sexual harassment case, Plaintiff's counsel referred "to an experience in her own life . . . 'plainly calculated to arouse the jury's sympathy' . . . [and] ended the argument by 'giving' the jury the 'power and the responsibility for correcting injustices.'" 747 F.3d at 1011. Specifically, the Eighth Circuit noted that "improper vouching permeated counsel's rebuttal argument." *Id.* These circumstances are not present here, and the Court declines to grant a new trial based on VirnetX's closing argument.

(4) *Mr. Weinstein's testimony*

Apple also asks the Court to grant a new trial because Mr. Weinstein's testimony should have been excluded. Docket No. 775 at 39. As discussed at length above and in previous orders, Mr. Weinstein's methodology withstands Apple's *Daubert* challenge, and Apple is not entitled to a new trial on this basis.

(5) *The exclusion of Patent Office ("PTO") proceedings*

Apple contends that it is entitled to a new trial because the Court excluded evidence from parallel PTO proceedings. Docket No. 775 at 39. Apple suggests that the fact that the PTO has issued final written decisions finding each claim unpatentable over the prior art is relevant to damages. *Id.*

The Court is not persuaded that exclusion of the PTO proceedings warrants a new trial. VirnetX's appeals of those proceedings are ongoing, and none of the asserted claims has been cancelled. It is particularly unclear what probative value the PTO proceedings have in light of the fact that invalidity is not an issue in this case.

To the extent Apple argues the decisions are relevant to damages, the relevance of the decisions is minimal because a number of the “decisions” cited in Apple’s offer of proof² on PTO proceedings were issued *after* the parties’ alleged hypothetical negotiation date of September 2013. *Compare* Docket No. 721 at 18 (“If infringement is found, the date of the hypothetical negotiation would be September 2013, when the redesigned versions of VPN on Demand and FaceTime were released.”), *with* Docket No. 692 (Apple’s offer of proof).

Apple suggests that the evidence would have been relevant to the utility and advantages of the patented property over old modes or devices. *Id.* But, contrary to its assertions, Apple was not *precluded* from introducing evidence that the claimed invention “has no utility or advantages over old modes or devices.” *Id.* The Court only prohibited the use of the PTO proceedings, and Apple was free to present whatever evidence relating to *Georgia-Pacific* factors 9 and 10 it so chose. Apple is not entitled to a new trial on this basis.

* * *

Having considered each of Apple’s arguments in its motion for judgment as a matter of law and a new trial of noninfringement, the Court concludes that Apple’s motion should be **DENIED.**

II. VIRNETX’S MOTION FOR ENTRY OF JUDGMENT AND EQUITABLE AND STATUTORY RELIEF (DOCKET NO. 774)

In its motion for post-trial relief, VirnetX seeks (1) enhanced damages; (2) attorneys’ fees pursuant to 35 U.S.C. § 285; (3) supplemental damages; (4) an injunction or sunset royalty; (5) pre-judgment interest; and (6) post-judgment interest and costs. The Court addresses each request in turn.

² The Court notes that, in its offer of proof on PTO proceedings, Apple only “submits that the evidence is relevant and admissible because it tends to show . . . VirnetX’s damages demand is excessive and unjustified given that the asserted claims have been held unpatentable, subject only to Federal Circuit appeal.” Docket No. 692 at 21–22.

A. Enhanced damages

The jury returned a verdict finding Apple’s infringement willful. Docket No. 729. VirnetX argues that a 100 percent enhancement of the jury’s verdict is warranted under the *Read* factors. The Court disagrees. As detailed below, the Court concludes that enhancement is inappropriate under the totality of the circumstances.

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). When deciding how much to award in enhanced damages, district courts often apply the non-exclusive factors articulated in *Read*. . . .” *Georgetown Rail Equip. Co. v. Holland L.P.*, 867 F.3d 1229, 1244–45 (Fed. Cir. 2017). 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. *Read*, 970 F.2d 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).

(1) Copying

The first *Read* factor is “whether the infringer deliberately copied the ideas or design of another.” As to this factor, VirnetX argues that Apple copied (or was reckless to whether it copied) VirnetX’s inventive methods and systems. Docket No. 774 at 9. Apple contests that it copied any of VirnetX’s ideas or designs and argues that its engineers made a good-faith effort to redesign its features to avoid further infringement. Docket No. 778 at 6. In its reply, VirnetX maintains that the copying factor is met here because Apple went “back to including already-adjudicated infringing components in its products.” Docket No. 782 at 4.

While substantial evidence was presented at trial supporting both sides’ view of how the redesigned products worked, the jury presumably found the facts to be more consistent with VirnetX’s characterization than Apple’s. By replicating the operation and functionality of its products that were already adjudicated to infringe, Apple “copied” the ideas or designs of VirnetX. *See PPC Broadband, Inc. v. Corning Optical Commc’ns RF, LLC*, No. 511CV761GLSDEP, 2016 WL 6537977, at *6 (N.D.N.Y. Nov. 3, 2016), appeal dismissed, No. 16-4106, 2016 WL 10655596 (2d Cir. Dec. 12, 2016). After the 417 product functionality was adjudicated to infringe, Apple was at least deliberately reckless towards copying VirnetX’s ideas when it reimplemented those features in the redesigns. *Barry v. Medtronic, Inc.*, 250 F. Supp. 3d 107, 114 (E.D. Tex. 2017). Accordingly, the “copying” factor favors enhancement.

(2) Investigation and good-faith belief

Next, the Court considers “whether the infringer, when he knew of the other’s patent protection, investigated the scope of the patent and formed a good-faith belief that it was invalid

or that it was not infringed.” As the Court explained in the 417 action, “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.” 417 action, Docket No. 1079 at 47 (citing *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); *VirnetX*, 767 F.3d at 1324 (noting that actions by the PTO are of limited value when attempting to establish a good faith belief of invalidity)).

With respect to infringement and redesigned VOD, although the jury did not agree, Apple had at least a good-faith belief that the redesign did not infringe based on its location-based reconfiguration. As to FaceTime, the Court notes that Apple raised a noninfringement argument regarding the “indication” term for which there was substantial evidence. The Court cannot conclude on this record that Apple’s noninfringement positions were not in good faith.

Apple also obtained an written opinion of counsel from Mr. Lee Van Pelt, but the Court assigns his opinion little weight because it was obtained after the redesigns were released. Apple claimed to have obtained an earlier, “oral” opinion from Mr. Van Pelt, but the witness alleged to have received the oral opinion stated that he did not “have personal knowledge of a verbal opinion from Mr. Pelt.” 4/11 PM Tr. at 28:24–29:2. The Court likewise assigns this unsubstantiated opinion little weight.

On balance, Apple did not rely on a timely opinion of counsel. To the extent it had a good-faith belief in invalidity based on the PTO proceedings, the weight of such belief is minimized by the fact that invalidity was no longer an issue in this case. But the Court is persuaded that Apple

maintained a good faith belief that its redesigns did not infringe. Indeed, unlike in the 417 retrial,³ Apple maintained reasonable noninfringement positions for both products at issue in the case. Considering the totality of the circumstances, this factor is neutral.

(3) *Infringer’s behavior as a party to the litigation*

For the next *Read* factor, the Court considers Apple’s “behavior as a party to the litigation.” The Court is not persuaded that Apple committed litigation misconduct in this trial. The Court agrees with VirnetX that Apple violated a ruling *in limine* by cross-examining VirnetX’s CEO, Mr. Kendall Larsen, on his divorce. 4/4 PM Tr. at 168:20–168:1. The Court also notes that Apple’s expert, Dr. Blaze, implied to the jury that the construction of “domain name service system” incorporated the construction of “domain name service,” which the Court remedied by including a corrective instruction in its jury charge. When the Court considers these actions independently of the 417 action and in the context of this case alone, the Court is not persuaded that Apple’s behavior as a party to the litigation supports enhancement, and this factor weighs neutral.

(4) *Size and financial condition*

Read factor 4, the infringer’s size and financial condition, weighs in favor of enhancement. This factor can weigh against enhancement when the infringer is in such perilous financial condition that an award of enhanced damages might put it out of business. *Idenix Pharm. LLC v. Gilead Scis., Inc.*, 271 F. Supp. 3d 694, 701 (D. Del. 2017) (citing *Virginia Panel Corp. v. Mac Panel Co.*, 887 F.Supp. 880, 885 (W.D. Va. 1995), *aff’d*, 133 F.3d 860 (Fed. Cir. 1997)). In cases

³ After the first trial in the 417 action, the Federal Circuit affirmed the finding that none of the asserted claims were invalid and that VPN on Demand infringed. *VirnetX, Inc.*, 767 F.3d at 1313–14 (“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 *1314 Demand product.”). Accordingly, for the retrial, infringement by VPN on Demand was not submitted to the jury.

where enhanced damages would not unduly prejudice the defendant's noninfringing business, it can weigh in favor of enhancement. *See, e.g., Creative Internet Advert. Corp. v. Yahoo! Inc.*, 689 F. Supp. 2d 858, 866 (E.D. Tex. 2010); *Ericsson Inc. v. TCL Commc'n Tech. Holdings, Ltd.*, No. 2:15-CV-00011-RSP, 2018 WL 2149736, at *11 (E.D. Tex. May 10, 2018).

As the Court noted in the 417 action, "it is undisputed that Apple is one of the largest and most financially successful companies in the world." 417 action, Docket No. 1079 at 45. *See also Arctic Cat Inc. v. Bombardier Recreational Prod., Inc.*, 198 F. Supp. 3d 1343, 1352 (S.D. Fla. 2016), *aff'd*, 876 F.3d 1350 (Fed. Cir. 2017) ("Where, as here, BRP is a multi-billion dollar enterprise and the market leader—due in significant part to sales of products found to willfully infringe Arctic Cat's patents—enhancement of damages is particularly warranted."). And the Court cannot conclude "that a trebled award would "unduly prejudice [Apple's] non-infringing business." *Georgetown Rail Equip. Co. v. Holland L.P.*, No. 6:13-CV-366, 2016 WL 3346084, at *19 (E.D. Tex. June 16, 2016), *aff'd*, 867 F.3d 1229 (Fed. Cir. 2017).

(5) Closeness of the case

The next *Read* factor, "closeness of the case," disfavors enhancement. In ruling on Apple's post-trial motions, the Court determined that the verdict was supported by substantial evidence. But the Court is also persuaded that Apple presented reasoned and justified defenses. *Apple Inc. v. Samsung Elecs. Co.*, 258 F. Supp. 3d 1013, 1033 (N.D. Cal. 2017) (citing *Finjan*, 2016 WL 3880774 at *17; *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, No. 09-CV-05235-MMC, 2017 WL 130236, at *4 (N.D. Cal. Jan. 13, 2017)). A testament to the closeness of the case is the fact that the jury deliberated for over five hours between the two phases of the case.

(6) Duration of misconduct and (7) remedial action

Factors 6 and 7—the duration of the misconduct and the remedial action taken by the infringer—weigh against enhancement. Apple took remedial action quickly after the 417 verdict to redesign its products, collaborating with engineers, management, and its legal team. *See, e.g.*, 4/6/18 AM Tr. at 68:24–69:19; 4/11 PM Tr. at 6:24–8:21, 13:14–15:21. The Court is not persuaded that Apple’s remedial action was not in good faith. Although ultimately the jury found that the redesign was infringing, the Court declines to penalize Apple for shifting course and attempting to make changes in light of the 417 verdict.

(8) Motion for harm

Similarly, there is no evidence of a “motivation for harm” that would support enhancement. VirnetX asserts that Apple’s release of a redesign and participation in post-grant review at the Patent Office is evidence of its “motivation to harm.” Docket No. 774 at 24–25. However, VirnetX points to no evidence that Apple’s decision to release redesigns was anything other than profit-driven, let alone motivated to harm VirnetX. In the absence of any supporting authority, the Court also declines to infer motivation to harm a patent owner from participation in post-grant proceedings. Accordingly, this factor is neutral. *See, e.g., Georgetown Rail*, No. 6:13-CV-366, 2016 WL 3346084, at *20 (finding this factor neutral when there was “nothing to suggest that Holland acted out of spite or ill-will toward Georgetown or for any reason other than a desire to capture a piece of the market”); *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).

(9) Concealment

Finally, the Court considers the ninth *Read* factor, whether Apple concealed its infringement. As the Court described in Section I.A.(1), there are three relevant versions of FaceTime in this case. First, there is the adjudged-infringing version of FaceTime that was at issue in the 417 action. A second version—that the parties agree did not infringe—was implemented in April 2013 and relayed 100 percent of calls. The jury determined the third version of FaceTime, at issue in this case, infringed each of the asserted claims.

The third version of FaceTime was released on September 18, 2013, the day iOS 7 was released. 4/5 PM Tr. at 216:14–17 (Thirumalai); *id.* at 250:13–18. On that date, Apple stopped relaying 100 percent of FaceTime calls. Apple’s corporate representative and fact witness for FaceTime, Mr. Thirumalai, was instrumental in enacting the 100 percent relay non-infringing alternative in April 2013. He was also a member of the team studying ways to reduce relay usage. Mr. Thirumalai made a server change in May of 2013 facilitating peer-to-peer calls. *Id.* at 216:18–218:6; 214:25–215:3; 247:23–248:16. Despite this, however, Apple misrepresented to VirnetX’s counsel during two different depositions—both occurring long after Apple had stopped relaying 100 percent of FaceTime calls—that Apple had never made the change back to supporting direct peer-to-peer FaceTime calls. 4/6 AM Tr. at 25:14–16 (Thirumalai) (“Q: On May 15, 2014, did you tell us that 100 percent of FaceTime calls were being relayed? A: Yes.”); *id.* at 29:4–14; *cf.* 4/11 AM Tr. at 121:4–122:5 (Stauffer) (testifying that, as of 2014, it was *not true* that Apple had relayed 100 percent of FaceTime calls since April 2013).

The evidence clearly supports a finding that Apple attempted to conceal its infringement, and this factor weighs in favor of enhancement.

* * *

Having considered each *Read* factor, the Court concludes that enhancement is inappropriate. In favor of enhancement are the facts that Apple is a large, successful company, that Apple “copied” VirnetX’s ideas in a redesign and that an Apple engineer and corporate witness misled VirnetX in depositions about key infringement facts. The Court should not be interpreted as condoning such conduct. At the same time, however, this case was close, the misconduct brief and the remediation effort significant.

Aside from the *Read* factors, the Court also considers the size of the jury verdict. Enhanced damages inherently deter future, similar conduct. *Affinity Labs of Texas, LLC v. BMW N. Am., LLC*, 783 F. Supp. 2d 891, 899 (E.D. Tex. 2011) (“General deterrence of infringing activity is also a factor to be considered.”). The jury’s damages number is supported by the evidence in this case. But the Court is not persuaded that any enhancement of the verdict would lead to any additional deterrence of future conduct.

“Awards of enhanced damages under the Patent Act over the past 180 years establish that they are not to be meted out in a typical infringement case, but are instead designed as a ‘punitive’ or ‘vindictive’ sanction for egregious infringement behavior. The sort of conduct warranting enhanced damages has been variously described [by the Supreme Court] as willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant, or—indeed—characteristic of a pirate.” *Halo*, 136 S. Ct. at 1932. In light of its full consideration of the totality of the circumstances, the Court cannot conclude that Apple’s conduct mandates enhancement. *See id.* at 1933 (“Section 284 allows district courts to punish the full range of culpable behavior. Yet none of this is to say that enhanced damages must follow a finding of egregious misconduct.”). Accordingly, the Court exercises its discretion to deny VirnetX’s request for enhanced damages.

B. Attorneys' fees pursuant to 35 U.S.C. § 285

VirnetX asks the Court to award it attorneys' fees for "the reasons related to the closeness of the case and litigation conduct under the *Read* factors." Docket No. 774 at 30. As the Court has concluded above, Apple's behavior in this case did not amount to litigation misconduct, and the substantive strength of Apple's positions do not stand out from others. Accordingly, VirnetX's request for attorneys' fees is **DENIED**.

C. Supplemental damages

VirnetX requests supplemental damages at the jury's implied royalty rate to account for units not included in the jury verdict. Docket No. 774 at 33–34. Apple requests the Court stay any accounting of these units until the resolution of all appeals in this case, in the 417 action and of the PTO proceedings. Docket No. 778 at 27. According to Apple, the appeals could moot damages awards in this action. *Id.*

Because Apple does not oppose VirnetX's request for supplemental damages at the implied royalty rate, the Court **GRANTS** VirnetX's motion for supplemental damages. A stay of accounting is not warranted in this case, and Apple is directed to provide VirnetX an accounting of post-verdict, pre-judgment infringing units within **thirty (30) days**.

D. Injunction or sunset royalty

VirnetX seeks a permanent injunction. Docket No. 774 at 35–42. If the Court declines to enter an injunction, VirnetX alternatively seeks a sunset royalty. *Id.*

(1) Injunction

"According to well-established principles of equity, a plaintiff seeking a permanent injunction must satisfy a four-factor test before a court may grant such relief." *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006). "A plaintiff must demonstrate: (1) that it has

suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.” *Id.* Because the Court concludes that VirnetX failed to demonstrate irreparable injury, the Court will deny VirnetX’s request for an injunction.

As irreparable injury, VirnetX argues Apple’s infringement has prevented VirnetX from capitalizing on its own product, the Gabriel application. According to VirnetX, the Gabriel product—for which it charges a fee—is forced to compete against Apple’s infringing products that include VirnetX’s technology at no additional cost. *Id.* at 35–36. VirnetX contends that this harm is connected to the patented features and demand for the infringing product because Apple “must use VirnetX’s patented technology in order to offer its Facetime and the infringing mode of VPN on Demand.” *Id.* at 36. VirnetX also argues that the prevalence of Apple’s products in the marketplace have harmed VirnetX’s reputation as an innovator. *Id.* With respect to whether monetary damages can adequately compensate VirnetX, VirnetX claims that “an ongoing royalty fails to account for other contractual terms that VirnetX could otherwise negotiate with Apple, such as terms prohibiting Apple from challenging the validity of the patents and terms constraining Apple’s ability to contest whether royalties are owed for future products,” and that “[n]o monetary remedy can compensate for these terms.” *Id.* at 37–38. For balance of harms, VirnetX suggests that the jury’s willfulness finding and the fact that “VirnetX’s patented technology is critical to its business” tilts the equities towards VirnetX. *Id.* at 39. Finally, VirnetX maintains that an injunction promotes the public interest because “Apple’s infringing products are not essential for public health or welfare.” *Id.* at 39.

In 2013, Judge Davis considered similar arguments from VirnetX regarding an injunction and rejected them. *VirnetX Inc. v. Apple Inc.*, 925 F. Supp. 2d 816, 845 (E.D. Tex. 2013). The only operative fact that has changed since 2013 is that, now, VirnetX has released its Gabriel product.⁴ The Court now considers whether the release of Gabriel justifies entry of an injunction.

VirnetX suggests that, now that Gabriel has been released, “VirnetX . . . directly competes with Apple for end-users of secure communication software with the patent-practicing features and continues to suffer competitive harm in the form of lost sales and reputational harm caused by Apple’s distribution of the infringing features.” Docket No. 774 at 34.

The Court is not persuaded that Gabriel competes with the infringing Apple products. Gabriel, unlike FaceTime or redesigned VOD, is a cross-platform application compatible with Apple, Android, Windows, and Linux devices. Docket No. 778-9. These non-Apple devices cover 50 percent of the U.S. smartphone market and nearly 80 percent of the U.S. computer operating system market. For the majority of Gabriel-compatible systems, Apple’s products present no competition at all.

The Court also notes that VirnetX has entered into a license with another competitor: Skype. Skype has been downloaded over 1 billion times on Android (non-Apple) devices, 4/5 PM Tr. 162:1–163:2, whereas Gabriel has only been downloaded between 500 and 1,000 times on the Android platform. Docket Nos. 778-12, 778-25. VirnetX’s decision to license a significant competitor who posed a major threat to its flagship product cautions against any finding of irreparable harm. *Nichia Corp. v. Everlight Ams., Inc.*, 855 F.3d 1328, 1343 (Fed. Cir. 2017).

⁴ The Court notes, however, that Judge Davis concluded that, even if Gabriel had been on the market, “Apple does not directly compete with VirnetX. Apple sells phones, not security software. Additionally, Apple’s sale of cell phones has not restricted VirnetX’s ability to market and sell its Gabriel technology to other tablet, cellphone or computer manufacturers. VirnetX’s damages are limited to the loss of Apple as a customer.” *VirnetX*, 925 F.Supp.2d at 846.

Even in markets where Apple products and Gabriel do compete, Gabriel functionality differs from FaceTime and redesigned VOD. VirnetX markets Gabriel as an “integrated set of secure applications including Mail, Messaging, File Sharing & Backup, Voice Calls and Video Calls.” Docket No. 778-9. VirnetX markets the security of Gabriel to its small-to-medium business customers, seeking to appeal to companies that place a high value on security. Docket No. 778-14 at 17. FaceTime and VPN on Demand, however, do not offer mail, messaging, or file-sharing and back up, and Apple primarily serves the consumer market. *See, e.g.*, PX-1134–8; PX-1182–8; PX-1186–5.

The record amply demonstrates that VirnetX’s Gabriel product and Apple’s accused products do not compete. The only other irreparable harm VirnetX identifies is reputational harm. But the reputational harm VirnetX complains of—being deemed a “patent troll” in online publications—may occur regardless of whether the Court enters an injunction. Moreover, it is unclear that Apple’s actions have led to these statements.

On this record, the Court concludes that VirnetX will not suffer irreparable harm absent an injunction, and VirnetX’s request for an injunction is **DENIED**.

(2) *Sunset royalty*

In the alternative, VirnetX seeks an ongoing royalty. Apple asks this Court to deny an ongoing royalty only on the basis of its JMOL and new trial arguments, which the Court has already rejected. Docket No. 778 at 28.

The Federal Circuit has interpreted 35 U.S.C. § 283 to permit a court to award an ongoing royalty for patent infringement in lieu of an injunction. *Prism Techs. LLC v. Sprint Spectrum L.P.*, 849 F.3d 1360, 1377 (Fed. Cir. 2017). Ongoing royalties may be based on a post-judgment hypothetical negotiation using the Georgia–Pacific factors. *Arctic Cat Inc. v. Bombardier*

Recreational Prod. Inc., 876 F.3d 1350, 1370 (Fed. Cir. 2017). The amount of the ongoing royalty is “committed to the sound discretion of the district court” to be determined in accordance with principles of equity. *Amado v. Microsoft Corp.*, 517 F.3d 1353, 1364 n.2 (Fed. Cir. 2008).

At the outset, the Court determines that imposition of an ongoing royalty is an appropriate exercise of the Court’s discretion in this case. *Whitserve, LLC v. Computer Packages, Inc.*, 694 F.3d 10, 35 (Fed. Cir. 2012). Here, it is clear from the verdict form that the jury awarded damages for past infringement. *See* Docket No. 723 at 4 (“What royalty do you find, by a preponderance of the evidence, would fairly and reasonably compensate VirnetX for any infringement that you have found”); *see also* *Whitserve*, 694 F.3d at 35 (“The jury was instructed to award ‘damages,’ which by definition covers only past harm.”). Because the jury’s verdict does not compensate VirnetX for future infringement, the Court will award an ongoing royalty. *Telcordia Techs., Inc. v. Cisco Sys., Inc.*, 612 F.3d 1365, 1379 (Fed. Cir. 2010).

The jury’s implied royalty rate is \$1.20, which is supported by substantial evidence. *See supra* Section II.B. From this starting point, the Court conducts a renewed analysis of a reasonable royalty based on a post-verdict hypothetical negotiation. *See Erfindergemeinschaft UroPep GbR v. Eli Lilly & Co.*, No. 2:15-cv-1202-WCB, 2017 WL 3034655, at *7 (E.D. Tex. July 18, 2017). The burden is on VirnetX to show that it is entitled to a royalty rate in excess of the rate initially determined by the jury. *Creative Internet Advertising Corp. v. Yahoo! Inc.*, 674 F. Supp. 2d 847, 855 (E.D. Tex. 2009).

“There is a fundamental difference . . . between a reasonable royalty for pre-verdict infringement and damages for post-verdict infringement.” *Amado*, 517 F.3d. at 1361. “Prior to judgment, liability for infringement, as well as the validity of the patent, is uncertain, and damages are determined in the context of that uncertainty.” *Id.* at 1362. Once a judgment of validity and

infringement has been entered, however, the calculus is markedly different because different economic factors are involved. *Id.* (citing *Paice LLC v. Toyota Motor Corp.*, 504 F.3d 1293, 1315 (Fed. Cir. 2007)).

VirnetX asks the Court to enhance the ongoing royalty to \$3.00 per unit based on the “totality of the circumstances . . . in combination with the changed post-judgment economic circumstances.” Docket No. 782 at 14–15. The Court declines to enhance the verdict for willfulness for at least the reasons detailed in its analysis of enhanced damages. Importantly, VirnetX bears the burden to show that an enhanced royalty rate is appropriate, and its general statements about “changed circumstances” do not meet that burden. Accordingly, the Court will not enhance the ongoing royalty and **SETS** the ongoing royalty at the jury’s implied rate of \$1.20 per unit. Apple is **ORDERED** to provide an accounting of infringing units on a quarterly basis.

E. Pre-judgment interest

VirnetX seeks pre-judgment interest at the prime rate compounded annually, to be applied to the jury award beginning at the date of the hypothetical negotiation. Docket No. 774 at 43.

Apple asks the Court to withhold prejudgment interest because “the jury award was generous enough” and will compensate “VirnetX far beyond what the parties would have agreed to in September 2013.” Docket No. 778 at 44–45. If any prejudgment interest is awarded, Apple requests that it be measured from February 4, 2016 because VirnetX “caused” delay by requesting consolidation and “forc[ing] deconsolidation and two retrials.” *Id.* at 45.

Apple’s argument against prejudgment interest was not raised in response to the 417 retrial. *See* Docket No. 1079 at 55–57. Regardless, however, the Court declines to assign responsibility for the lengthy timeline of this case to either party. The Court is not persuaded by Apple’s

argument against prejudgment interest and **AWARDS** prejudgment interest to VirnetX at the prime rate, compounded annually, beginning at the date of the hypothetical negotiation.

F. Post-judgment interest and costs

VirnetX seeks post-judgment interest, which Apple opposes only insofar as “the Court has not yet ruled on the parties’ post-trial motions, which may affect whether VirnetX is the prevailing party.” Docket No. 778 at 45. Having resolved the parties’ motions above, the Court **AWARDS** VirnetX post-judgment interest pursuant to 28 U.S.C. § 1961. Additionally, VirnetX is the prevailing party and is **AWARDED** costs pursuant to Federal Rule of Civil Procedure 54(d) and 28 U.S.C. §1920.

CONCLUSION

As set forth above, the Court has ruled as follows:

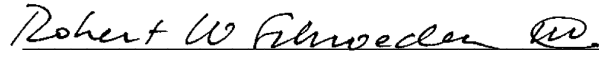
- Apple’s Omnibus Motion for Judgment as a Matter of Law under Rule 50(b) and for a New Trial (Docket No. 775) is **DENIED** in all respects; and
- VirnetX’s Motion for Entry of Judgment and for Equitable and Statutory Relief (Docket No. 774) is **DENIED-IN-PART** and **GRANTED-IN-PART**.

Specifically, with respect to VirnetX’s Motion, the Court has ruled as follows:

- VirnetX’s request for enhanced damages is **DENIED**;
- VirnetX’s request for attorneys’ fees is **DENIED**;
- VirnetX’s request for supplemental damages is **GRANTED**;
- VirnetX’s request for an injunction is **DENIED**;
- VirnetX’s request for a sunset royalty is **GRANTED** and the royalty rate is set at \$1.20;
- VirnetX’s request for pre-judgment and post-judgment interest are **GRANTED**; and
- VirnetX’s request for costs is **GRANTED**.

In light of the above, Apple's Motions for Judgment as a Matter of Law Pursuant to Rule 50(a) (Docket Nos. 713, 714 and 718) are **DENIED AS MOOT**. Final judgment will be entered in accordance with this order.

So ORDERED and SIGNED this 30th day of August, 2018.


ROBERT W. SCHROEDER III
UNITED STATES DISTRICT JUDGE