UNITED STATES DISTRICT COURT DISTRICT OF MASSACHUSETTS

CIVIL ACTION NO. 16-11613-RGS

EGENERA, INC.

v.

CISCO SYSTEMS, INC.

MEMORANDUM AND ORDER ON CROSS MOTIONS FOR SUMMARY JUDGMENT AND TO EXCLUDE EXPERT TESTIMONY

June 23, 2021

STEARNS, D.J.

Plaintiff Egenera, Inc., accuses defendant Cisco Systems, Inc., of infringing United States Patent No. 7,231,430 (the '430 patent). The case having returned to this court from the Court of Appeals for the Federal Circuit, the parties now cross move for a second round of summary judgment. Each side also seeks to exclude the testimony of their competing expert witnesses.

PROCEDURAL HISTORY

Egenera filed its Complaint for patent infringement in August of 2016.
In April of 2017, Cisco petitioned the PTAB to institute an IPR of the '430

¹ In its initial Complaint, Egenera also asserted infringement of U.S. Patents Nos. 6,971,044 (the '044 patent) and 7,178,059 (the '059 patent). On

patent. While the petition was pending, Egenera withdrew Peter Schulter as a named co-inventor of the patent. *See Egenera, Inc. v. Cisco Sys., Inc.*, 379 F. Supp. 3d 110, 113-114 ¶¶ 10-18 (D. Mass. 2019) (Inventorship Rulings). In February of 2018, the court construed the disputed claim terms and concluded, *inter alia*, that the "logic to modify" term was means-plusfunction embodying a tripartite structure of "virtual LAN server 335, virtual LAN proxy 340, and physical LAN driver 345." *See Egenera, Inc. v. Cisco Sys., Inc.*, 2018 WL 717342, at *4-7 (D. Mass. Feb. 5, 2018) (CC Order).²

Cisco's motion to dismiss, the court found the '059 patent to be directed to patent-ineligible subject matter. *Egenera, Inc. v. Cisco Sys., Inc.*, 234 F. Supp. 3d 331, 345-346 (D. Mass. 2017) (MTD Opinion). Egenera dismissed the '044 patent without prejudice after the Patent Trial and Appeal Board (PTAB) instituted *inter partes* review (IPR) on all claims. *See* Dkt ## 77 at 11-12; 78, 80, and 81.

² The full claim term is "logic to modify said received messages to transmit said modified messages to the external communication network and to the external storage network." The court rejected Egenera's argument that "logic" denotes "software, firmware, circuitry, or some combination thereof," and instead determined that, because the term did not recite sufficient structure, it would be construed as means-plus-function. CC Order, at *4-6. The court concluded that "[t]he structure for modifying and transmitting messages to the external communications network is [] 'virtual LAN server 335, virtual LAN proxy 340, and physical LAN driver 345' and equivalents," and "the structure for modifying and transmitting messages to the external storage network is 'storage configuration logic 605' and equivalents." CC Order, at *7.

After the close of discovery, Cisco moved, inter alia, to invalidate the patent on grounds of the allegedly improper withdrawal of Schulter as a named inventor. In Cisco's view, Schulter had "contribute[d] to the conception of the claimed invention" as the originator of the tripartite structure. Eli Lilly & Co. v. Aradigm Corp., 376 F.3d 1352, 1359 (Fed. Cir. 2004). The court agreed with Cisco that judicial estoppel barred Egenera from a tactical restoration of Schulter as an inventor, see Egenera, Inc. v. Cisco Sys., Inc., 348 F. Supp. 3d 99, 101-102 (D. Mass. 2018), but concluded that sufficient disputes of fact remained to preclude an award of summary judgment, see id. at 108. Following a three-day bench trial, the court made detailed findings determining that Schulter had conceived the tripartite structure and was therefore a true inventor of the '430 patent. Thus, his elimination as an inventor invalidated the patent. Inventorship Rulings at 128-129 ¶¶ 83-84.

Egenera appealed. The Court of Appeals for the Federal Circuit held that Egenera's dropping of Schulter from the roster of inventors was a correctable error, and that judicial estoppel did not apply in the circumstances of the case. *See Egenera, Inc. v. Cisco Sys., Inc.*, 972 F.3d 1367, 1376-1381 (Fed. Cir. 2020) (CAFC Opinion). The Court, on the other

hand, affirmed this court's means-plus-function construction of the "logic to modify" term. *See id.* at 1372-1376.

Now back before this court on remand, Egenera moves for partial summary judgment of no "unclean hands" and no anticipation, and to strike the reasonable royalty opinions of Dr. Stephen Becker.³ Cisco countermoves for summary judgment of unclean hands; noninfringement; nonentitlement to injunctive relief and pre-suit damages for indirect or willful infringement; and to strike the infringement opinions of Dr. Mark Jones and the reasonable royalty opinions of Dr. Ryan Sullivan.

CROSS MOTIONS FOR JUDGMENT AS TO UNCLEAN HANDS

Relying on testimony elicited at the inventorship trial, Cisco accuses Egenera of unclean hands. "[A] determination of unclean hands may be reached when 'misconduct' of a party seeking relief 'has immediate and necessary relation to the equity that he seeks in respect of the matter in litigation,' *i.e.*, 'for such violations of conscience as in some measure affect the equitable relations between the parties in respect of something brought before the court." *Gilead Scis., Inc. v. Merck & Co.*, 888 F.3d 1231, 1239 (Fed. Cir. 2018), quoting *Keystone Driller Co. v. Gen. Excavator Co.*, 290

³ In December of 2020, in light of the Federal Circuit's mandate, the court allowed Egenera's motion to correct the inventorship to reinstate Schulter. *See* Dkt # 318.

U.S. 240, 245 (1933). In Cisco's view, Egenera committed egregious litigation misconduct when four inventors of the '430 patent, enlisted by Egenera as paid consultants and represented by Egenera's counsel, testified falsely at the inventorship trial that Peter Schulter was not an inventor, contradicting at times contemporaneous documents that they themselves had authored. This testimony "ha[d] immediate and necessary relation" to the litigation because Egenera was desperate to preserve the validity of the '430 patent and its claims against Cisco.4

As Cisco accurately points out, the court did not credit the inventors' testimony minimizing Schulter's role in the creation of the invention and characterized it as "post-hoc protestations" and an exercise in "historical revisionism." Inventorship Rulings at 129, ¶83(g). Nevertheless, the court is unable to find that Egenera's sketchy posturing of the '430 patent's "Eureka moment" rose to the level of egregious misconduct that would warrant the drastic remedy of dismissal. As the Federal Circuit noted, Egenera's account of the inventorship was staked out at a time when neither party had advocated for a means-plus-function understanding of the "logic

⁴ Cisco also notes that, by excluding Schulter, the last of the inventors to be hired by Egenera as a member of the '430 patent team, Egenera could claim an earlier priority date to skirt a problematic prior art reference.

to modify" term and was thus "consistent with its preferred claim construction." CAFC Opinion at 1377. Thereafter, Egenera was locked into its position owing in part to, as it turned out, this court's erroneous application of judicial estoppel.⁵ As was the case here, inventorship "sometimes [] is complicated." Id. at 1376. "Ultimately, inventorship is a legal conclusion premised on underlying factual findings, and one that depends on claim construction." Id. The interplay of claim construction and inventorship in this case was settled only after "a three-day trial and [an] appeal." Id. at 1378. Against this backdrop, while the court by no means endorses Egenera's less than level downplaying of Schulter's contribution to the '430 patent, the court also cannot, in light of the Federal Circuit's ruling, go so far as to conclude that the dictates of equity require dismissal. Accordingly, Cisco's motion for summary judgment of unclean hands will be denied, and Egenera's motion for summary judgment of unsoiled hands will be allowed.

⁵ Prior to the court's judicial estoppel ruling, Egenera had advocated that correction and not invalidation was the appropriate remedy for misjoinder of inventors. *See* Dkt # 136 at 13.

CISCO'S MOTION FOR JUDGMENT OF NONINFRINGEMENT

Cisco contends that, in light of the evidentiary record and the court's claim construction, Egenera cannot plausibly make out a case of infringement. "To support a summary judgment of noninfringement it must be shown that, on the correct claim construction, no reasonable jury could have found infringement on the undisputed facts or when all reasonable factual inferences are drawn in favor of the patentee." *Netword, LLC v. Centraal Corp.*, 242 F.3d 1347, 1353 (Fed. Cir. 2001). Infringement comes in two flavors. "To establish literal infringement, all of the elements of the claim, as correctly construed, must be present in the accused system." *Id.* "For infringement by equivalency, all of the elements of the claimed invention or an equivalent thereof must be present in the accused system." *Id.* at 1354.

The '430 patent is directed to solving problems in manually configuring, deploying, and maintaining enterprise and application servers, *see* '430 patent, col. 1, ll. 21-58, and discloses "a processing platform from which virtual systems may be deployed through configuration commands," *id.*, col. 2, ll. 45-47.

The platform provides a large pool of processors from which a subset may be selected and configured through software commands to form a virtualized network of computers ("processing area network" or "processor clusters") that may be deployed to serve a given set of applications or customer. The virtualized processing area network (PAN) may then be used to execute customer specific applications, such as web-based server applications. The virtualization may include virtualization of local area networks (LANs) or the virtualization of I/O storage. By providing such a platform, processing resources may be deployed rapidly and easily through software via configuration commands, e.g., from an administrator, rather than through physically providing servers, cabling network and storage connections, providing power to each server and so forth.

Id., col. 2, ll. 47-62.6

Egenera asserts claims 1, 3-5, and 7-8 of the '430 patent. Claim 1 is representative.

- 1. A platform for automatically deploying at least one virtual processing area network, in response to software commands, said platform comprising:
 - a plurality of computer processors connected to an internal communication network;
 - at least one control node in communication with an external communication network and in communication with an external storage network having an external storage address space, wherein the at least one control node is connected to the internal communication network and thereby in communication with the plurality of computer processors, said at least one control node including logic to receive messages from the plurality of computer processors, wherein said received messages are addressed to the external communication network and to the external storage network and said at least one control node including logic to modify said received messages to transmit said

⁶ Additional descriptions of the claimed invention of the '430 patent may be found in the court's Memorandum and Order on Cisco's motion to dismiss. *See* MTD Opinion at 334-336.

modified messages to the external communication network and to the external storage network;

configuration logic for receiving and responding to said software commands, said software commands specifying (i) a number of processors for a virtual processing area network (ii) a virtual local area network topology defining interconnectivity and switching functionality among the specified processors of the virtual processing area network, and (iii) a virtual storage space for the virtual processing area network, said configuration logic including logic to select, under programmatic control, a corresponding set of computer processors from the plurality of computer processors, to program said corresponding set of computer processors and the internal communication network to establish the specified virtual local area network topology, and to program the at least one control node to define a virtual storage space for the virtual processing area network. said virtual storage space hdaving a defined correspondence to a subset of the external storage address space of the external storage network; and

wherein the plurality of computer processors and the at least one control node include network emulation logic to emulate Ethernet functionality over the internal communication network.

As pertains to this motion, in its claim construction the court rejected Egenera's proposal to equate "computer processor/processor" to a "processing node," and instead construed the term to encompass a "CPU." CC Order, at *2-4.

Cisco's accused Unified Computing System (UCS) is a "scalable compute platform." Egenera Ex. 1 (Dkt # 172-1) at 41. Components of UCS include the UCS Manager, Fabric Interconnects, Fabric Extenders and I/O

Modules, B-Series Blades and C-Series Rack Servers, and I/O adapters. Each of the asserted claims recites the limitation "software commands specifying . . . a number of processors for a virtual processing area network." Egenera identifies the configConfMos software command as meeting this limitation. In Cisco's view, because configConfMos contains no field identifying a number (of CPUs or anything else), it does not satisfy the claim limitation. Further, Cisco notes that, as configConfMos associates a service profile with a blade server – a "processing node" in the jargon of the patent – Egenera's infringement theory ignores the court's claim construction of "processor" as a "CPU."

Egenera does not dispute that configConfMos does not identify an explicit numerical CPU parameter, but maintains that the command nevertheless satisfies the claim limitation. Egenera contends that because the number of CPUs in each Cisco blade server is known – it is revealed by the number following the series-identifier B- or C- in the server's model number⁷ – by associating a particular server, configConfMos specifies a known number of CPUs for the UCS. Egenera also notes that, when a server

⁷ Egenera explains, for example, that the Cicso server with model number C460 has 4 CPU sockets, and that deploying a server with fewer CPUs than sockets could cause serious problems.

is added to a UCS, the UCS discovers the properties of the server, including the number of CPUs on the server. The UCS Service Profile of a server, further, displays the number of CPUs on the server.

The court cannot conclude as a matter of law that configConfMos does not meet the asserted limitation. The parties did not seek a construction for "specifying . . . a number of processors." While the claim language can be read, as Cisco suggests, to require a specific numerical quantity, it can also be understood as identifying some number of processors as a group or selecting a group of specific processors.⁸ Cisco does not point to any support in the patent that would compel the specific value interpretation. The language in the specification, explaining that "[e]ach PAN, through software commands, is configured to have a corresponding subset of processors," '430 patent, col. 3, ll. 55-56 (emphasis added), is also consistent with the proposed less restrictive reading of the claim limitation permitting a factfinder to conclude that configConfMos specifies a number of CPUs for inclusion in the UCS, albeit indirectly, by associating a server with a known number of CPUs. See Mentor Graphics Corp. v. EVE-USA, Inc., 851 F.3d 1275, 1282 (Fed. Cir. 2017) (where the parties did not seek to construe a claim limitation to

⁸ To take a mundane example, a request to "specify[] a number of donuts" could be satisfied with a response of "twelve," "that box," or "chocolate dipped, Boston cream, and apple fritter."

indicate an RTL statement, the jury's infringement finding was supported by substantial evidence that the accused method generated a test file from which an RTL statement could be ascertained).

Cisco also seeks judgment of noninfringement of claims 1 and 5 on another ground. Claim 1 recites "the plurality of computer processors . . . include network emulation logic to emulate Ethernet functionality over the internal communication network." Claim 5 recites "the plurality of computer processors . . . emulate Ethernet functionality over the internal communication network." Cisco does not dispute that UCS emulates Ethernet functionality (at least for purposes of this motion) but contends that because Ethernet emulation functionality resides with virtual network interface cards (NIC) and interfaces — stand-alone components separate and apart from the CPUs — the limitations are not met.

Egenera points out that in each of claims 1 and 5, the Ethernet emulation functionality is attributed to "the plurality of computer processors and at least one control node." (emphasis added). It therefore follows that the emulation functionality is not required to reside uniquely on the CPUs. Egenera contends that UCS Server CPUs satisfy the claim limitation because they "communicate on and use virtual interfaces between themselves and

UCS Fabric Interconnects over the UCS internal communication network."

Egenera Opp'n (Dkt # 171) at 17.

While Egenera is correct that Ethernet emulation functionality need not reside on the CPUs alone, the claims nonetheless require the CPUs to include some logic to emulate Ethernet functionality or to emulate Ethernet functionality in some respect. The extent of the CPU's role, as Egenera explains, is its "knowledge and use of the virtual MAC address (and other related information) over the virtual interface." Id. at 19. However. knowledge and use of a communications network is not emulation of the functionality of that network – a person dialing and making a telephone call to another's phone number merely uses a telephone network and does not emulate any functionality of that network. Egenera identifies no evidence that the CPUs in the UCS provide any aspect of the functionality of an Ethernet network. The court will accordingly allow summary judgment of noninfringement on claims 1 and 5.

CISCO'S MOTION TO EXLUDE THE INFRINGEMENT OPINIONS OF DR. JONES

Cicso seeks to exclude the infringement opinions of Egenera's expert witness, Dr. Mark Jones, on the grounds that he disregarded the court's construction of the term "computer processor/processor" as a CPU and improperly equated it to a processing node. While the court agrees with

Cisco that an expert witness must apply the court's claim construction in his or her infringement and invalidity analyses, *see Exergen Corp. v. Wal-Mart Stores, Inc.*, 575 F.3d 1312, 1321 (Fed. Cir. 2009), the court disagrees that Dr. Jones contravened this rule. As explained earlier, Dr. Jones's theory of how the accused UCS satisfies the "specifying a number of processors" limitation is at least a plausible reading of the claim language.

In a footnote, Cisco also challenges Dr. Jones's analysis of the limitation "defining interconnectivity and switching functionality among the specified processors," contending that the virtual NICs, rather than the CPUs, defined the network topology of the UCS. However, as Cisco acknowledged during claim construction in advocating for the CPU construction of "computer processor," nothing in the patent requires a direct connection between computer processors.

Cisco's final example of an alleged breach by Dr. Jones of the claim construction is a diagram presented in paragraph 72 of his report that was also included in Egenera's claim construction presentation. In this diagram, a group of processor nodes are block-colored and labeled as "computer processors." This diagram can be understood, as Egenera advocates, as indicating the location of "computer processors" on the processing nodes. While the court agrees, to avoid any potential of confusion on the part of

jurors, it will direct Egenera to make the simple adjustment of corresponding the label of "computer processors" with CPUs (106j and 106l). Subject to this prophylactic, Cisco's motion will be denied.

EGENERA'S MOTION FOR JUDGMENT OF NO ANTICIPATION

Egenera seeks judgment of no anticipation as a matter of law. To establish anticipation invalidity, "the four corners of a single[] prior art document [must] describe every element of the claimed invention, either expressly or inherently." *TriMed, Inc. v. Stryker Corp.*, 608 F.3d 1333, 1343 (Fed. Cir. 2010). A claim of patent invalidity must be proven by clear and convincing evidence. *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 95 (2011).

Egenera contends that each of Cisco's prior art references is missing at least one claim element – "a plurality of computer processors and at least one control node connected to an internal communication network." '430 patent claims 5, 7, and 8.9 Egenera notes that the PTAB, using a broader claim construction standard and a lower burden of proof, declined to institute on Cisco's petition for IPR of the '430 patent because Cisco did not

⁹ Claims 1, 3, and 4, the remaining independent claims, similarly require that "the at least one control node is connected to the internal communication network and thereby in communication with the plurality of computer processors."

sufficiently establish that the asserted references taught a control node, or a control node connected to an internal network. Egenera asserts that Cisco's anticipation contentions in this case suffer from the same deficiency.

Cisco responds by pointing to the anticipation analysis of its expert witness, Dr. Kevin Jeffay, including the element-by-element charts for each asserted prior art reference or system. For example, Dr. Jeffay explains that the Cisco Catalyst System discloses a control node connected to an internal communications network and a plurality of computer processors because it "connects a plurality of computers to one or more Catalyst switches and/or routers." Cisco Ex. 64 (Dkt # 175-1) at 48. 10 Cisco also distinguishes the PTAB's denial of institution of the IPR because the IPR concerned obviousness arguments rather than anticipation, and because it now asserts art that was not before the PTAB. 11

¹⁰ Cisco adds the further clarification that, in the Catalyst System, a switch is a control node connected to computer processor(s) through a communication network of wiring. *See* Cisco Opp'n (Dkt # 325) at 19.

Cisco Opp'n at 19, while the denial of IPR institution was based on only three prior art patents, *see* Egenera Ex. 12 (Dkt # 312-12) at 6. In any case, a decision by the PTAB to deny institution of IPR does not estop a party from raising the same arguments before the district court. *See Shaw Indus. Grp., Inc. v. Automated Creel Sys., Inc.*, 817 F.3d 1293, 1300 (Fed. Cir. 2016).

In reply, Egenera faults Cisco for "conflat[ing]" "two claimed components [] into a single component for purposes of a prior art analysis." Egenera Reply (Dkt # 328) at 5, citing Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP, 616 F.3d 1249, 1254 (Fed. Cir. 2010) ("Where a claim lists elements separately, 'the clear implication of the claim language' is that those elements are 'distinct component[s]' of the patented invention.") (citation omitted). Courts have not, however, followed Becton literally where, as here, the asserted patent concerns a computer implemented system. In Intellectual Ventures I LLC v. Symantec Corp., 2016 WL 948879 (D. Del. Mar. 10, 2016), aff'd, 725 F. App'x 976 (Fed. Cir. 2018), the court rejected an argument based on Becton that the claim element "data transfer unit" (DTU) is necessarily physically separate and distinct from the claim element "network server" in a system directed to the remote mirroring of data. See 2016 WL 948879, at *3. "Becton involved physical components, whereas the DTU in the present invention undisputedly involves both hardware and software. Here, the claims involve digital, rather than physical separation." Id.

Moreover, the '430 patent does not mandate physical separation of the "control node" from other components. The only claimed physical requirement of the "control node" is that it be "connected to the internal

communication network and thereby in communication with the plurality of computer processors." '430 patent claim 1; see also NTP, Inc. v. Research in Motion, Ltd., 418 F.3d 1282, 1310 (Fed. Cir. 2005) ("A 'connection' can occur between these two devices regardless of whether they are housed separately or together."). The remaining requirements are functional: "said at least one control node including logic to receive messages from the plurality of computer processors," and "said at least one control node including logic to modify said received messages to transmit said modified messages to the external communication network and to the external storage network." '430 patent claim 1. Accordingly, the court cannot conclude that Cisco's anticipation contentions — to the extent that they map multiple claim elements to the same physical component — are deficient as a matter of law. Egenera's motion for judgment of no anticipation will be denied. 12

¹² In a single paragraph in its reply, Egenera argues that, in the context of the Catalyst System, the wiring connecting processors to a switch cannot constitute a programmable network as required by the patent. *See* '430 patent claim 1 ("said configuration logic including logic . . . to program said corresponding set of computer processors and the internal communication network to establish the specified virtual local area network topology"). This contention has not been sufficiently briefed, nor is it clear that it is applicable to all of Cisco's asserted anticipatory prior art. The court will therefore not consider it further.

CISCO'S MOTION FOR NO INJUNCTIVE RELIEF

Cisco asserts that Egenera cannot as a matter of law establish entitlement to injunctive relief, should Egenera prove infringement. "The[] familiar principles [of equity] apply with equal force to disputes arising under the Patent Act." *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006). To obtain injunctive relief,

[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.

In Cisco's view, Egenera's seven-year delay in initiating this lawsuit in 2016, after learning of UCS in 2009, undermines its claim of irreparable harm. Egenera also ceased selling its patent-embodying BladeFrame systems in 2008. As Cisco sees it, because Egenera no longer competes in the server market, it cannot suffer any future harm, at least of an irreparable nature, from Cisco's sales of UCS. Compounding the issue, Egenera has allowed other players in the server market to sell rebranded versions of its products in exchange for pecuniary compensation, and has made a similar licensing offer to Cisco in the past. Egenara's willingness to license its

technology, Cisco fairly argues, reflects the adequacy of money damages. Cisco also points out that Egenera did not seek a preliminary injunction, does not seek lost profits in this case, and has already determined a reasonable royalty in the neighborhood of \$1,000 per unit of UCS. Finally, Cisco maintains that the balance of hardships favors it as an active participant in the market, and that the public has a greater interest in accessing its innovative products, especially given the fact that Egenera is unable to offer customers anything equivalent.

In response, Egenera asserts that it had only come to a firm conviction that Cisco had infringed its patented technology on the eve of filing suit, and that, further, it would be unfair to overemphasize any pre-suit delay in view of the "daunting task" faced by a smaller company like Egenera in enforcing its intellectual property rights against an industry giant like Cisco. Egenera Opp'n (Dkt # 180) at 6. Egenera also disputes Cisco's characterization of its lack of market participation. Although it no longer markets servers, Egenera avers that it actively sells its PAN Manager software in combination with hardware from multiple manufacturing partners. PAN Manager, in Egenera's view, serves the same function as the software on Cisco's UCS. A purchase of UCS therefore displaces the purchase of a product that incorporates PAN Manager, and in that way, Cisco can be said to directly

compete with Egenera.¹³ See Presidio Components, Inc. v. Am. Tech. Ceramics Corp., 702 F.3d 1351, 1363 (Fed. Cir. 2012) ("Even without practicing the claimed invention, the patentee can suffer irreparable injury. Direct competition in the same market is certainly one factor suggesting strongly the potential for irreparable harm without enforcement of the right to exclude.").

Egenera also offers a different calculus of the relative hardships and public interest. Egenera fears that Cisco's continual dominance in the server virtualization market (a position built on the alleged infringement, as Egenera sees it) would obliterate Egenera's software business altogether. Egenera also notes that an injunction would not impact existing Cisco UCS users, and views the inability to purchase new Cisco UCS systems as only a minor irritant when weighed against the stronger public interest in protecting and promoting intellectual property and innovation.

Absent an infringement determination and in light of, *inter alia*, factual issues surrounding Egenera's market participation, the court agrees with Egenera that it is premature to assess the availability of injunctive relief

¹³ Egenera suggests that an injunction can be narrowly tailored to enjoin only Cisco's distribution of the offending software, but not the hardware itself (or with other software).

at this point in the litigation. Accordingly, the court will deny Cisco's motion subject to renewal post-trial on a perfected evidentiary record.

CISCO'S MOTION FOR JUDGMENT OF NO PRE-SUIT DAMAGES, INDIRECT INFRINGEMENT, OR WILLFULNESS

Pre-Suit Damages

Cisco contends that Egenera is not entitled to pre-suit damages for any alleged infringement because Egenera did not mark its patent-embodying products in accordance with 35 U.S.C. § 287(a). "Pursuant to 35 U.S.C. § 287(a), a patentee who makes or sells a patented article must mark his articles or notify infringers of his patent in order to recover damages." *Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1365 (Fed. Cir. 2017). Constructive notice through marking may be effectuated

either by fixing [on a patented article] the word "patent" or the abbreviation "pat.", together with the number of the patent, or by fixing thereon the word "patent" or the abbreviation "pat." together with an address of a posting on the Internet, accessible to the public without charge for accessing the address, that associates the patented article with the number of the patent, or when, from the character of the article, this can not be done, by fixing to it, or to the package wherein one or more of them is contained, a label containing a like notice.

35 U.S.C. § 287(a). Compliance with the marking statute is a question of fact with the burden of proof assigned to the patentee. *Arctic Cat*, 876 F.3d at 1366.

Egenera does not assert that it gave actual notice of the alleged infringement to Cisco prior to filing suit. At issue is whether Egenera provided sufficient constructive notice to open the door for an award of presuit damages. Cisco notes, and Egenera does not dispute, that Egenera's BladeFrame systems were not marked with the '430 patent number. Egenera instead contends that the constructive notice period began on October 1, 2013, after it had stopped selling physical servers. Egenera explains that, as of that date, it began virtually marking its Pan Manager software by including the following language in four user reference manuals¹⁴ provided with Pan Manager:

This product is protected by U.S. and international copyright and intellectual property laws. Egenera products are covered by one or more patents listed at http://www.egenera.com/patents.

The website, in turn, at substantially¹⁵ all times since August of 2012, listed Egenera's inventory of patents, including the '430 patent. *See Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1111 (Fed. Cir. 1996) ("[O]nce marking has begun,

¹⁴ These include the Configuration and Installation Guide, the API Primer, the Command Reference, and the Administrator's Guide.

¹⁵ Egenera acknowledges that the website may have become unavailable between May and August of 2016 as the result of a website refurbishing.

it must be substantially consistent and continuous in order for the party to avail itself of the constructive notice provisions of the statute.").

Egenera maintains that this virtual notice complied with the marking statute. As a practical matter, because Pan Manager was distributed as a downloadable image, there was no physical product or packaging on which a patent notice could have been inscribed. The reference manuals containing the notice were distributed (in media kits) with the downloadable software image, and users routinely consulted them during the installation and use of Pan Manager.

In the court's view, Egnera's argument misses the mark. Section 287(a) permits marking by label or on a package in lieu of "fixing" a notice on the patented article when "from the character of the article, [physical marking] can not be done." Here, Egenera does not contend that Pan Manager by itself practices the '430 patent. Rather, it is the combination of third-party hardware and the Pan Manager software that is asserted to embody the '430 patent. Egenera does not dispute that a patent notice could have been physically placed on the third-party hardware. Egenera insists that it would have been improper for it to mark third-party hardware as the hardware is often sold without Pan Manager. Egenera, however, does not explain why third-party hardware installed with Pan Manager could not have

been appropriately marked by the hardware manufacturer or the distributor.¹⁶

A licensee, including an implied licensee, "who makes or sells a patented article does so 'for or under' the patentee, thereby limiting the patentee's damage recovery when the patented article is not marked." Amsted Indus. Inc. v. Buckeye Steel Castings Co., 24 F.3d 178, 185 (Fed. Cir. 1994). In Amsted, the patentee sold a component of a patented device to customers "with the expectation that they would use that element to make and sell the patented invention," rather than under an express license. Id. at The Federal Circuit concluded that the patentee "could have sold its [component] with a requirement that its purchaser-licensees mark the patented products 'licensed under U.S. X,XXX,XXX.'," and that without such public notice of the patented article, the patentee could not recover pre-suit Id. at 185. Here, Egenera implicitly authorized third-party damages. manufacturers to sell hardware with Pan Manager installed, and the absence

¹⁶ Cisco notes that, in the case of at least one hardware manufacturer, a separate entity was hired to install Pan Manager on the hardware and distribute the (unmarked) assemblage to end-users. Cisco posits that the installer/distributer could easily have marked the finished product for Egenera's benefit.

of marking on the patented combination precludes Egenera's pre-suit recovery.¹⁷

Even if, for argument's sake, off-product marking would suffice in this case, the substance of Egenera's constructive notice is nonetheless defective. Virtual marking, like physical marking, must provide public notice of the patented article. See Nike, Inc. v. Wal-Mart Stores, Inc., 138 F.3d 1437, 1443 (Fed. Cir. 1998) ("The marking statute serves three related purposes: 1) helping to avoid innocent infringement, 2) encouraging patentees to give notice to the public that the article is patented, and 3) aiding the public to identify whether an article is patented.") (internal citations omitted). In McKesson Automation, Inc. v. Swisslog Italia S.P.A., 712 F. Supp. 2d 283 (D. Del. 2010), a list of patents appeared on the login-screen of the software (Connect-Rx) that controlled the patented hardware system (Robot-Rx). *Id.* at 296. The court rejected the patentee's assertion that this passed muster. "[A] user has no way of knowing which patents listed on the log-in screen cover which of the multiple products controlled by the Connect-Rx software,

¹⁷ There is an exception that applies in the following circumstance: "[w]hen the failure to mark is caused by someone other than the patentee, the court may consider whether the patentee made reasonable efforts to ensure compliance with the marking requirements." *Maxwell*, 86 F.3d at 1111-1112. Egenera has not claimed any efforts to ensure the marking of the combination of third-party hardware and the Pan Manager software.

or whether the patents cover the Connect-Rx software itself." *Id.* at 297. Because there was no clear association of the displayed patent numbers with any given patented article, "[t]he court conclude[d] that the marking displayed by the Connect-Rx software does not sufficiently apprise the public that the Robot-Rx is covered by the patents-in-suit." *Id.* Here, a user would similarly not divine from the generic notice in a reference manual directed to "Egenera's products" that the marriage of third-party hardware with Egenera's Pan Manager comprised the patented article.

Virtual marking must also "provide such notice in a manner commensurate with the notice provided by physical marking," *Mfg. Res. Int'l, Inc. v. Civiq Smartscapes, LLC*, 397 F. Supp. 3d 560, 577 (D. Del. 2019), that is, notice sufficient to "associate[] the patented article with the number of the patent," *id.*, quoting 35 U.S.C. § 287(a). In *Manufacturing Resources*, the court found wanting a patentee's marking website that listed the category of products covered by each patent but not the specific patents associated with each covered product. *Id.* at 577-578. "Mere direction to a general website listing patents for all the patentee's products does not create this same association." *Id.* at 577. Nor does "[s]imply listing all patents that could possibly apply to a product or all patents owned by the patentee on the

patentee's marking website[.] It merely creates a research project for the public." *Id*.

Egenera attempts to distinguish *Manufacturing Resources* by pointing to what it perceives as differences between the two websites at issue. 18 Egenera notes that its website listed only 14 patents, all of which pertain to the server virtualization technology practiced by three of its four products (with the fourth product being unrelated), rather than the approximately 100 patents covering 46 products in *Manufacturing Resources*. The court does not find these distinctions any more meaningful than debating the number of possible states of a Rubik's cube. Egenera's webpage displays only a table of patent numbers and titles, and does not include the product information that it now seeks to rely on. 19 Further, that a smaller number of patents entails a less time-consuming research project does not alter the fact that the

¹⁸ Egenera also cites to *National Prods., Inc v. Arkon Res., Inc*, 2019 WL 1034321 (C.D. Cal. Jan. 9, 2019) as authority supporting its position. In *National Products*, the court denied summary judgment of non-compliance with the marking statute where the patentee's website listed over 100 patents and did not identify the specific products associated with the asserted patents. In so holding, the court declined to engage in a substantive analysis based on a "limited record" for what appeared to be a question of first impression. *Id.*, at *16. That rationale is not applicable here.

¹⁹ Egenera does not assert that the three relevant products each practice all 14 patents.

webpage does not provide the statutorily required association between a patented product and the applicable patents. Finally, as the court in *Manufacturing Resources* noted, "permitting such a practice would likely create issues under the false marking statute if association could be inferred solely from marking the product with the website address." 397 F. Supp. 3d at 577. Nothing on Egenera's webpage informs a visitor which of its products practice the listed patents (or a subset thereof), and which do not. In sum, Egenera's virtual marking does not sufficiently apprise the public that the combination of third-party hardware and Pan Manager is covered by the '430 patent. *See Nike*, 138 F.3d at 1446 (The focus of the marking inquiry is "whether the patentee's actions were sufficient, in the circumstances, to provide notice *in rem*.").

Post-Suit²⁰ Indirect and Willful Infringement

Cisco asserts that Egenera cannot prove liability for post-suit indirect and willful infringement because of Cisco's reasonable belief of noninfringement. "[I]nduced infringement under § 271(b) requires [inter alia] knowledge that the induced acts constitute patent infringement." Commil USA, LLC v. Cisco Sys., Inc., 575 U.S. 632, 641 (2015), quoting

²⁰ Cisco also sought summary judgment of no pre-suit indirect and willful infringement. This contention is moot considering the court's ruling that Egenera is not entitled to recover pre-suit damages.

Glob.-Tech Appliances, Inc. v. SEB S.A., 563 U.S. 754, 766 (2011). "[I]f the defendant reads the patent's claims differently from the plaintiff, and that reading is reasonable," then the defendant is not liable for indirect infringement. *Id.* at 642. "This knowledge requirement[, however,] may be satisfied under the doctrine of willful blindness. . . . [T]he doctrine of willful blindness requires the patentee to show not only that the accused subjectively believed that there was a high risk of infringement, but also that the accused took deliberate actions to avoid confirming infringement." Unwired Planet, LLC v. Apple Inc., 829 F.3d 1353, 1364 (Fed. Cir. 2016). Similarly, culpability for willful infringement "is generally measured against the knowledge of the actor at the time of the challenged conduct." Halo Elecs., Inc. v. Pulse Elecs., Inc., 136 S. Ct. 1923, 1933 (2016). "[A] person is reckless if he acts 'knowing or having reason to know of facts which would lead a reasonable man to realize' his actions are unreasonably risky." Id. (citation omitted).

In support of its asserted reasonable belief of noninfringement, Cisco relies on the testimony of several of its employees who profess having technical knowledge of the accused UCS system. Each of these witnesses reviewed the claims of the '430 patent and formed a personal opinion that UCS did not infringe.

Egenera disputes Cisco's reasonableness theory, pointing out that it had explained in detail the basis of its accusations in its infringement contentions, yet none of Cisco's witnesses had considered them before forming their opinions.²¹ The witnesses also did not profess familiarity with the art of performing a patent infringement analysis, and several mistakenly compared UCS to Egenera's BladeFrame product rather than the claims themselves.²² Egenera also argues that the witnesses either did not reference the court's claim construction, or incorrectly applied it. Because intent and willfulness are questions of fact to be determined on consideration of the totality of the circumstances, the court cannot, on this record, find as a matter of law that Cisco held a reasonable belief of noninfringement.

CISCO'S MOTION TO EXCLUDE THE REASONABLE ROYALTY OPINIONS OF DR. SULLIVAN

Cisco seeks to strike the reasonable royalty opinions of Egenera's damages expert, Dr. Ryan Sullivan, on several grounds. Cisco first contends that Dr. Sullivan's royalty calculations were built on a base that is unreliable

²¹ Egenera also contends that Cisco could not have formed a reasonable belief of invalidity because the PTAB had refused to institute Cisco's petition for *inter partes* review of the '430 patent under a lower evidentiary standard on a broader claim construction.

²² Egenera further notes that none of the noninfringement theories provided by the witnesses are advanced by Cisco in support of summary judgment.

because it includes UCS configurations that Egenera does not accuse of infringement. According to Cisco, Dr. Sullivan also failed to discount from the sales of UCS B- and C-series those configurations that do not include fabric extenders or I/O modules. This dispute ultimately is one over fact and not methodology - Egenera does not challenge Cisco's premise that the royalty base should be limited to the accused products, nor does it accuse UCS configurations that do not include fabric extenders or I/O modules. Relying on the declaration of its expert, Dr. Jones, Egenera maintains that all UCS B-series servers²³ include the I/O module as a required component of the chassis, and that all UCS C-series servers used with UCS Manager incorporate a fabric extender or an I/O module. See Jones Decl. (Dkt # 166-4) ¶ 3. In its brief and reply, Cisco does not point the court to any definitive evidence that B- and C-series servers were sold and/or used in the nonaccused configurations.²⁴ On this record, the court cannot conclude that Dr. Sullivan's royalty base stands on a fatally fictive foundation.

²³ Dr. Sullivan's analysis does exclude an unaccused variation (Mini) that is not at issue here.

²⁴ Cisco characterizes Dr. Jones's declaration as an excludable latedisclosed expert opinion. However, whether B- and C-series servers were sold in certain configurations is a matter of fact, and not one of expert interpretation.

Cisco also challenges the acquisition and cost-saving methodologies that Dr. Sullivan used in computing a reasonable royalty. In applying the acquisition approach, Dr. Sullivan looked to what Cisco had paid to acquire Nuova Systems (the original developer of the UCS technology) as a benchmark for what Cisco would be willing to pay to license Egenera's patented technology. Dr. Sullivan first divided the effective acquisition price of Nuova by its revenue to determine the "effective payment share." He then multiplied the "effective payment share" by the UCS per-server revenue to estimate the amount that Cisco would have been willing to pay per-server in exchange for the UCS revenue stream. Finally, Dr. Sullivan applied a "technological apportionment factor" to determine the percentage of the benefit attributable to the patented technology.

Cisco maintains that Dr. Sullivan's calculus is flawed at the multiplication step — in determining the UCS per-server revenue, Dr. Sullivan included the sales of memory and other non-accused items, thereby inflating the per-server revenue figure. Cisco notes that of the ten highest revenue categories that figured in Dr. Sullivan's computation, eight (amounting to 85% of the top ten total) were memory components that Egenera admits do not infringe. Dr. Sullivan's total also included revenue for categories such as replacement batteries, packaging, cable access bars,

plastic panels, cable management rings and straps, rack doors, mounting screws, cage nuts, and sundry other non-accused staple articles.

Egenera counters, and the court agrees for purposes of this motion, that Dr. Sullivan's approach is permitted because the patent is directed to the system as a whole, and not simply a component thereof. See, e.g., '430 patent claim 3 (directed to "[a] platform for automatically deploying at least one virtual processing area network") (emphasis added). As the Federal Circuit explained in AstraZeneca AB v. Apotex Corp., 782 F.3d 1324 (Fed. Cir. 2015), "it has long been recognized that a patent that combines 'old elements' may 'give[] the entire value to the combination' if the combination itself constitutes a completely new and marketable article." Id. at 1338-1339. (citation omitted).

It is not the case that the value of all conventional elements must be subtracted from the value of the patented invention as a whole when assessing damages. For a patent that combines "old elements," removing the value of all of those elements would

²⁵ Contrary to Cisco's suggestion, Dr. Sullivan's analysis is not an application of the so-called "entire market rule." The "entire market rule" provides that when small components of multi-element products are accused of infringement, the patentee may "assess damages based on the entire market value of the accused product only where the patented feature creates the 'basis for customer demand" or "substantially create[s] the value of the component parts." *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1318 (Fed. Cir. 2011) (citation omitted). Because the claims here are directed to a multi-element system, there is no requirement to demonstrate that any particular component of the system drives customer demand.

mean that nothing would remain. In such cases, the question is how much new value is created by the novel combination, beyond the value conferred by the conventional elements alone.

Id. at 1339. Here, the physical components of the claimed platform are not claimed as novel. Rather, the invention resides in the overall arrangement and configuration of the components that are designed to enable the stated function of "deploy[ing a] virtual processing area network." Accordingly, the court rejects Cisco's deconstructionist approach in its valuation of the accused UCS system.²⁶

Dr. Sullivan's cost-saving approach, on the other hand, uses the total-cost-of-ownership (TCO) savings of UCS over competing server deployments as the revenue base. Dr. Sullivan notes that Cisco touts TCO savings as a major benefit of migrating to the UCS system and advertises the amount of savings attributable to the patented technology as "economically equivalent to producer profits in this case." Egenera Opp'n (Dkt # 165) at 5. To determine the savings attributable to the patented technology, Dr. Sullivan used Cisco's own online tool to estimate the reduction in customer data center capital and operating expense to be gained by switching to UCS. He then multiplied the per-server savings by both a technical and a

²⁶ Cisco has not presented evidence to suggest that the components whose revenue figured into Dr. Sullivan's computation were sold separately from UCS.

commercialization apportionment factor to account for the benefit of UCS derived from non-patented technology, and to credit Cisco for its efforts in bringing UCS to market. The resulting value is the per-server royalty rate that informs his model.

The court agrees with Cisco that Dr. Sullivan's cost-saving methodology rests on a jerry-built foundation. The general principle that a lower TCO enables a vendor to charge a customer a premium in the acquisition price is sound. For example, a customer may be willing to pay \$10 for an energy-efficient LED lightbulb instead of \$2 for an incandescent bulb in order to save \$20 in annual electrical costs. It does not follow, however, that the vendor's revenue is equivalent to the customer's TCO.²⁷ The lightbulb maker does not receive the \$20 that the customer saves in electric costs nor does it necessarily earn an equivalent amount on the sale of the LED bulb. So it is the case here. Any premium Cisco charges for the lower TCO feature is already built into the sales price for UCS.²⁸ Dr. Sullivan

²⁷ Egenera cites to Hal Varian's *Intermediate Microeconomics*, 6th ed. (2003), at 388, as evidence of the general acceptance of Dr. Sullivan's methodology. Egenera Opp'n (Dkt # 165) at 13. The textbook explains that a producer's surplus is equal to its revenue less its variable costs (this is the basis of the uncontroversial apportionment steps of Dr. Sullivan's analysis), but the treatise does not equate a customer's TCO savings to a producer's surplus.

²⁸ In the abstract, a customer may be willing to pay up to the TCO savings to achieve a benefit from a bargain. For example, in the game of

offers no evidence or analysis to tie Cisco's revenue to TCO savings other than his *ipse dixit*. Because TCO savings is not a reliable approximation of revenue, the court will exclude Dr. Sullivan's cost-savings analysis.

EGENERA'S MOTION TO EXCLUDE THE REASONABLE ROYALTY OPINIONS OF DR. BECKER

In its turn, Egenera seeks to exclude the reasonable royalty opinions of Cisco's damages expert, Dr. Stephen Becker. Dr. Becker used the valuation of Egenera as a going concern at the time the alleged infringement began as the base for his royalty computation. He excluded portions of the valuation he considered not attributable to the '430 patent (such as servicing of the installed base and foreign sales), then applied a factor equal to Cisco's market share (to reflect the non-exclusive nature of the hypothetical license) and apportioned the value between the patented and non-patented aspects of

Monopoly, a player could elect to pay the bank \$50 to get out of jail or purchase a "get out jail free" card from another player. A rational player would theoretically be willing to pay any amount under \$50 to another player to obtain a savings above and beyond paying the bank to get out of jail. In the reality of the marketplace, however, there are acquisition costs, transaction costs, and other factors at play. (Egenera relies on Cisco's marketing material to suggest that acquisition costs are "almost 'irrelevant." See Egenera Opp'n (Dkt # 165) at 12, citing Egenera Ex. 11 (Dkt # 166-11). What Cisco actually said was that "[t]he acquisition cost difference between server vendors is irrelevant" because the costs of servers from different vendors do not vary significantly in the competitive marketplace. See Egenera Ex. 11.) Cisco's sales volume (and thus what Egenera claims as the reasonable royalty base) reflects the marketplace demand for UCS supplied at Cisco's actual (and not some theoretically possible) pricing model.

Egenera's Pan Manager. Finally, Dr. Becker applied the remainder of the Georgia-Pacific factors. See Exmark Mfg. Co. Inc. v. Briggs & Stratton Power Prod. Grp., LLC, 879 F.3d 1332, 1348-1349 (Fed. Cir. 2018), citing Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116 (S.D.N.Y. 1970).

Egenera asserts that Dr. Becker's methodology is questionable because it does not account for Cisco's use of the '430 patent. *See Aqua Shield v. Inter Pool Cover Team*, 774 F.3d 766, 770 (Fed. Cir. 2014) ("The 'value of what was taken' – the value of the use of the patented technology – measures the royalty.") (citation omitted). Egenera notes that, although Dr. Becker agreed that a patent could be worth more than the company that owns it, he improperly capped the damages at Egenera's market valuation, which did not include the value of Cisco's use of the '430 patent. Further, Egenera characterizes Dr. Becker's application of Cisco's market share to Egenera's market value as "meaningless," Egenera Mot. (Dkt # 144) at 4, because Egenera did not own 100% of the available market, *see* Egenera Reply (Dkt # 191) at 1.

Cisco responds, and the court agrees, that Dr. Becker's approach is sufficiently plausible. Cisco explains that a patent can be worth more than the company that owns it in a "Rembrandt in the attic" situation in which the

company is not actively practicing the patent. Cisco Opp'n (Dkt # 169) at 5. Here, because Egenera made and sold products embodying the patent, the patent's value, as Dr. Becker saw it, was subsumed in the valuation of Egenera as a company. Dr. Becker's premise, in other words, is not dissimilar from Dr. Sullivan's cost of acquisition approach. Dr. Sullivan looked to what Cisco paid for a company that owned the UCS technology. Dr. Becker treated Egenera's valuation as the amount of money that someone purchasing Egenera, including the '430 patent, would have paid at the time of the infringement. Both approaches begin with the value of the company before making exclusions not attributed to the patented technology. It is for the jury, with the benefit of rigorous cross-examination, to decide the outcome of a reasonable hypothetical negotiation.

ORDER

For the foregoing reasons, Cisco's Motion for Summary Judgment of Unclean Hands is <u>DENIED</u>. Egenera's Motion for Summary Judgment of No Unclean Hands is <u>ALLOWED</u>. Cisco's Motion for Summary Judgment of Noninfringement is <u>ALLOWED-IN-PART</u> as to claims 1 and 5, and otherwise <u>DENIED</u>. Cisco's Motion to Exclude the Infringement Opinions of Dr. Jones is <u>DENIED</u> subject to the caveat to clarify labels. Egenera's Motion for Judgment of No Anticipation is <u>DENIED</u>. Cisco's Motion for

Summary Judgment of No Injunctive Relief is <u>DENIED</u>. Cisco's Motion for Summary Judgment of No Pre-Suit Damages, Indirect Infringement, or Willfulness is <u>ALLOWED-IN-PART</u> as to pre-suit damages, and otherwise <u>DENIED</u>. Cisco's Motion to Exclude the Reasonable Royalty Opinions of Dr. Sullivan is <u>ALLOWED-IN-PART</u> as to the cost-saving analysis, and otherwise <u>DENIED</u>. Egenera's Motion to Exclude the Reasonable Royalty Opinions of Dr. Becker is <u>DENIED</u>. The Clerk will set the remaining claims for trial.

SO ORDERED.

/s/ Richard G. Stearns
UNITED STATES DISTRICT JUDGE