

United States District Court
Northern District of California

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

NETFUEL, INC.,
Plaintiff,
v.
CISCO SYSTEMS INC.,
Defendant.

Case No. [5:18-cv-02352-EJD](#)
ORDER DENYING CISCO'S MOTION FOR SUMMARY JUDGMENT
Re: Dkt. No. 114

Defendant Cisco's summary judgment motion is presently before the Court. Cisco filed the motion before the close of fact discovery. The Court has considered the parties' papers and listened to their oral arguments. The Court denies the motion.¹

I. Background

Plaintiff NetFuel has accused 27 families of Cisco routers and switches (the "Accused Products") of infringing two of its patents, which share the title "Managing computer network resources." At Cisco's request and based on its representations to the Court, the Court modified the pretrial schedule so that Cisco could file a motion for summary judgment on noninfringement issues before the close of fact discovery. Dkt. No. 72. NetFuel then moved to amend its infringement contentions. Dkt. No. 79. Cisco filed the instant motion. Dkt. No. 114. Magistrate Judge Cousins partially granted and partially denied NetFuel's motion to amend. Dkt. No. 116.

¹ The Court files this Order under seal because it contains information subject to sealing orders. Within seven days of the date of this Order, the parties shall provide the Court with a stipulated redacted copy of the Order that redacts only information that is subject to sealing orders and that the parties still desire to maintain under seal. The Court will then issue a public redacted version of the Order.

1 After the Court took this motion under submission, the parties stipulated to present supplemental
2 material that is relevant to the motion. Dkt. No. 147. NetFuel later moved to present additional
3 material disclosed during fact discovery (Dkt. No. 233); Cisco opposed the motion (Dkt. No. 236).
4 The Court granted that motion and gave the parties leave to file supplemental briefing. Dkt. No.
5 240. Both parties filed supplemental briefs. Dkt. Nos. 244, 248.

6 The Patents-in-Suit—U.S. Patent Nos. 7,747,730 (the “‘730 Patent”) and 9,663,659 (the
7 “‘659 Patent”)—disclose the use of software programs called “agents” to monitor and manage
8 computer networks and the devices—such as routers and switches—that run those networks. The
9 ‘730 Patent comprises method, computer system, and machine-readable medium claims wherein
10 agents provide information to an entity called a global modeler. The global modeler uses that
11 information to model optimal policy. The optimal policy is dynamically provided to agents for
12 implementation. The ‘659 Patent comprises method, computer system, and machine-readable
13 medium claims directed at determining whether an agent has a corrective policy. If the agent does
14 not, then it requests corrective policy from the global modeler. NetFuel accuses four features in
15 Cisco’s operating systems of infringing the Patents-in-Suit. Those features are the Embedded
16 Event Manager (“EEM”), Control Plane Policing (“CoPP”), Local Packet Transport Services
17 (“LPTS”), and Excessive Punt Flow Trap (“EPFT”). Relevant to Cisco’s motion, the Accused
18 Products combine either EEM with CoPP, or EEM with LPTS. LPTS and CoPP are not present
19 on the same operating systems; EEM is present on every operating system. Cisco’s motion does
20 not address NetFuel’s theory of infringement based on EPFT, so the Court does not consider it
21 now.

22 EEM is a tool that detects events on the network in real time and then acts based on those
23 events. End users, such as network administrators, can use scripts or applets to define the
24 triggering events and to EEM’s responses to those events. Eaton Ex. 6 at 2. Scripts are written in
25 Tool Command Language and applets are written in Command Line Interface (“CLI”). The
26 parties concede that the difference between applets and scripts is immaterial to the motion. Mot.
27 at 4 n.3; Opp’n at 6 n.4. Writing applets does not require “any programming effort or experience.”

1 Siegel Ex. J at 7. Cisco provides sample scripts or applets to customers that they can use, or
2 customers can write their own. Applets are not source code and the execution of an applet will not
3 change the source code of EEM or an Accused Product. Seigel Ex. L at 31; Rubin Decl. ¶ 129. At
4 the hearing, NetFuel presented testimony from a Cisco employee—deposed about a week
5 before—that EEM does not take any actions, other than consuming memory and starting, unless
6 an end user provides it with an applet or script. Pfeifer Dep. at 22:17-23:5.

7 CoPP manages packets on a network’s control plane. Eaton Ex. 2 at 1-2. Packets are
8 small bits of information that are transported between, or within, computers on a network. Packets
9 on the control plane move through a network device carrying information used to control
10 functions and features of the device. *Id.* These packets are directed to the device’s Central
11 Processing Unit (“CPU”). *Id.* CoPP protects the control plane and the CPU from unnecessary or
12 dangerous packets and gives priority to important packets. Eaton Ex. 4 at 74-3. This process is
13 called “rate limiting.” *See id.* If too many unnecessary packets are sent to a device’s CPU, the
14 CPU will waste resources on analyzing the packets instead of performing its proper functions,
15 which harms network or device performance. Eaton Ex. 5 at 3-4. This is known as Denial of
16 Service. *Id.* An end user can execute software commands to implement a “service policy” on
17 CoPP. Eaton Ex. 2 at 3-4. The service policy provides CoPP with parameters and direction for
18 rate limiting packets. *Id.*

19 LPTS is similar to CoPP but runs on a different operating system. LPTS automatically
20 applies rate limiting to all packets handled by the route processors on the network device—not just
21 packets bound for the CPU. Eaton Ex. 3 at 2.

22 **II. Legal Standard**

23 Summary judgement is appropriate where the moving party “shows that there is no
24 genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.”
25 Fed. R. Civ. P. 56(a). “Determination of infringement . . . is a question of fact.” *Forest Labs.,*
26 *Inc. v. Abbott Labs.*, 239 F.3d 1305, 1310 (Fed. Cir. 2001). An alleged infringer is entitled to
27 summary judgment “where the patentee’s proof is deficient in meeting an essential part of the

1 legal standard for infringement.” *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1577 (Fed. Cir. 1989)
2 (citations omitted). “A patentee claiming infringement must present proof that the accused
3 product meets each and every claim limitation.” *Forest Labs.*, 239 F.3d at 1310. Infringement
4 may be established with circumstantial evidence. *Mirror Worlds, LLC v. Apple Inc.*, 692 F.3d
5 1351, 1359 (Fed. Cir. 2012). “The evidence of the nonmovant is to be believed, and all justifiable
6 inferences are to be drawn in his favor.” *Fantasy Sports Props., Inc. v. Sportsline.com, Inc.*, 287
7 F.3d 1108, 1113 (Fed. Cir. 2002). “[S]ummary judgment of non-infringement can only be granted
8 if, after viewing the alleged facts in the light most favorable to the non-movant, there is no
9 genuine issue whether the accused device is encompassed by the claims.” *Radware, Ltd. v. F5*
10 *Networks, Inc.*, 147 F. Supp. 3d 974, 1001 (N.D. Cal. 2015) (citing *Pitney Bowes, Inc. v. Hewlett-*
11 *Packard Co.*, 182 F.3d 1298, 1304 (Fed. Cir. 1999)).

12 **III. Discussion**

13 **a. The Claims**

14 The Patents-in-Suit comprise system claims, computer-readable medium claims, and
15 method claims. The infringement analysis for the system claims—Claims 13-15 and 18 of the
16 ‘659 Patent and Claims 1, 10-13, 16-19, 21-22, 24, 26, and 29 of the ‘730 Patent—looks at
17 whether the accused products are capable of infringing the patent. The patentee must show that
18 the accused product is “reasonably capable of satisfying the claim limitations, even though it may
19 also be capable of noninfringing modes of operation.” *Finjan, Inc. v. Secure Computing Corp.*,
20 626 F.3d 1197, 1204 (Fed. Cir. 2010). Claims 1-3 and 6 of the ‘659 Patent and Claims 1-4 and 6
21 of the ‘730 Patent comprise the method claims. A patentee must show that each step of the
22 method has been “performed for infringement to occur. It is not enough that a claimed step be
23 ‘capable’ of being performed.” *Cybersettle, Inc. v. Nat’l Arbitration Forum, Inc.*, 243 F. App’x
24 603, 606 (Fed. Cir. 2007). But the patentee need only show “one instance of the claimed method
25 being performed.” *Mirror Worlds*, 692 F.3d at 1359.

26 The parties dispute whether infringement of the computer-readable medium claims—
27 Claims 30-34 and 36 of the ‘730 Patent and Claims 7-9 of the ‘659 Patent—should be analyzed

1 through the framework for method claims or for system claims. Cisco argues for method claims,
2 while NetFuel argues that infringement should turn on capability. “[I]n every infringement
3 analysis, the language of the claims, as well as the nature of the accused product, dictates whether
4 an infringement has occurred.” *Finjan*, 626 F.3d at 1204 (quotation and citation omitted). “[T]o
5 infringe a claim that recites capability and not actual operation, an accused device need only be
6 capable of operating in the described mode.” *Id.* (quotation and citation omitted). In *Finjan*, the
7 Federal Circuit considered a claim that recited a “computer-readable storage medium storing
8 program code for causing a server that serves as a gateway to a client to perform” certain steps.
9 *Id.* (patent citation omitted). The Federal Circuit found that claim should **not** be analyzed as
10 method claims because the claim “language does not require that the program code be ‘active,’
11 only that it be written ‘for causing’ a server or a computer” to take certain actions. *Id.* at 1205
12 (patent citations omitted). This reasoning applies to the computer-readable medium claims here.
13 They recite “[a] machine-readable storage medium that provides instructions which **when**
14 **executed** by a processor causes the processor to perform a method” (‘730 Patent, cl. 30
15 (emphasis added)), and “[a] non-transitory computer-readable medium comprising a sequence of
16 instructions which **when executed** by a system causes the system to perform a method” (‘659
17 Patent, cl. 7 (emphasis added)). These claims require only that the instructions be capable of
18 causing a method to be performed. In contrast, the claims in Cisco’s case *Lucent Technologies,*
19 *Inc. v. Gateway, Inc.*, 543 F.3d 710 (Fed. Cir. 2008), were product-by-process claims that recited
20 “[a] storage medium manufactured in accordance with a process comprising” certain steps. U.S.
21 Patent No. 5,341,457, cl. 10. That claim required a set process for manufacturing the storage
22 medium, so infringement required practicing all of the claimed steps. *Lucent Techs.*, 543. F.3d at
23 716. That claim did not turn on capability. The computer-readable medium claims here have no
24 such required process. The infringement analysis for the computer-readable medium claims will
25 turn on capability as with the system claims.

26 **b. Evidence**

27 NetFuel contends that Cisco’s products infringe the Patents-in-Suit as follows: EEM is a

1 global modeler, and CoPP and LPTS are the agents. Because EEM can or does provide optimal
2 policy (‘730 Patent) or corrective policy (‘659 Patent) to CoPP or LPTS, the theory goes, the
3 Accused Products infringe. Cisco counters that summary judgment is appropriate because its
4 products do not perform the following limitations of the Patents-in-Suit:

- 5 • The ‘730 Patent: “dynamically modifying the assigned goal of the software agent by
6 replacing the assigned goal based on the optimal policy.”
- 7 • The ‘659 Patent: “performing the corrective action is based on the corrective policy
8 applied by the agent.”

9 According to Cisco, NetFuel’s infringement contentions require, for every claim, that EEM
10 communicate a policy change to LPTS or CoPP. However, Cisco argues that “[t]here is no
11 dispute that Cisco’s Accused Products do not contain the code necessary” for “EEM [to]
12 communicate[] a policy change to LPTS or CoPP.” Mot. at 8. The Court finds that NetFuel has
13 presented sufficient evidence to raise genuine disputes as to whether EEM has, or is capable of,
14 applying policy changes to CoPP or LPTS. Below, the Court considers four such pieces of
15 evidence; because the Court finds these to be sufficient to deny the motion, the Court does not
16 consider the other evidence presented by NetFuel.

17 Specifically, NetFuel’s theory of infringement is that end users can employ, and have
18 employed, applets to cause EEM to modify CoPP policy. NetFuel presents a blogpost entitled
19 “Embedded Event Manager: Not Just for Breakfast,” which was published by a third party to a
20 third-party website in 2009—before the patents issued. Seigel Ex. P. The blogpost provides
21 instructions to “create a service policy which we will apply to the control plane” using EEM. *Id.*
22 at 1. NetFuel’s retained litigation expert Dr. Rubin represented that he carried out the instructions
23 in the blogpost with minor changes to account for differences in software and the network device
24 he used. Rubin Decl. ¶ 121. He maintains that those changes are neither important nor relevant.
25 *Id.* ¶¶ 121-125. He stated that in both the blogpost and his test EEM communicated a traffic
26 policing policy change to CoPP by detecting a certain rate of traffic and then dynamically
27 modifying CoPP’s traffic policing rules. *Id.* Between its publication in 2009 and late September

1 2019, the blogpost received over 1,000 unique pageviews, including 350 unique pageviews from
2 April 28, 2018, the date NetFuel filed the complaint, to late September 2019. McLain Exs. 2, 3.

3 Cisco argues that the Court should disregard the blogpost because it is inadmissible
4 hearsay. However, Dr. Rubin could appropriately rely on the blogpost to perform its instructions
5 as a basis for his opinion and analysis. Fed. R. Evid. 703. Accordingly, the steps outlined in the
6 blogpost would be admissible through his testimony as to his testing. “At the summary judgment
7 stage, we do not focus on the admissibility of the evidence’s form. We instead focus on the
8 admissibility of its contents.” *Fraser v. Goodale*, 342 F.3d 1032, 1036 (9th Cir. 2003). “Because
9 the [blogpost’s] contents could be presented in an admissible form at trial, we may consider the
10 [blogpost’s] contents” at summary judgment. *Id.*; see also *Calderon-Silva v. Evans*, 2014 WL
11 813122, at *5 (E.D. Cal. Feb. 28, 2014) (“As long as the information contained within what is
12 otherwise a hearsay document could be presented in an admissible form at trial, it is properly
13 considered on Rule 56 motion in determining whether triable issues of fact preclude summary
14 judgment.”), *report and recommendation adopted*, 2014 WL 1270604 (E.D. Cal. Mar. 26, 2014).
15 The Court will properly consider the blogpost in connection with the motion.

16 NetFuel also cites to documents originating in Cisco’s Technical Assistance Center
17 (“TAC”), which provides support to Cisco’s customers. One customer contacted TAC about “link
18 flapping,” where a physical interface rapidly switches between different states. Rubin Rep. (Dkt.
19 No. 233-1) ¶ 225. A Cisco employee advised the customer how to use a pre-existing EEM script
20 to remedy the issue. Rubin Rep. ¶ 225; Burningham Ex. A at 714. This EEM script would “affect
21 all the interfaces and not just one.” Burningham Ex. A at 714. The Cisco employee also indicated
22 that they had previously tested this process. *Id.* NetFuel’s expert Dr. Aviel Rubin states that
23 because this EEM script changes policy on “all” interfaces, it affects the control plane interface,
24 where CoPP is applied, as well. Rubin Rep. ¶ 225. Cisco, and its expert Dr. Kevin Almeroth
25 argue that link flapping only occurs at the physical port interface, which is fundamentally different
26 from the control plane interface. Almeroth Decl. (Dkt. No. 248-1) ¶¶ 3-4.

27 NetFuel also raises a second TAC document concerning an EEM applet that Cisco

1 provided to a customer in December 2018 to address an issue with a Cisco operating system.
2 Burningham Ex. B. Dr. Rubin opines that this applet would dynamically modify CoPP’s assigned
3 goal for rate limiting certain DHCP messages. Suppl. Rubin Rep. (Dkt. No. 233-2) ¶ 4. Cisco
4 contends that this applet applies to the physical port interface, not the control plane interface. Dr.
5 Almeroth states that he “disagree[s]” with Dr. Rubin as to the connection between CoPP and
6 DHCP. Almeroth Decl. ¶ 5.

7 Additionally, Dr. Rubin, as part of his work on this case, performed three tests on one of
8 the Accused Products—the Cisco Cloud Services Router 1000V. Dr. Rubin used applets to
9 configure the EEM to take certain actions when certain events occur in the router. In one test, an
10 EEM applet removed a CoPP traffic-policing policy. Rubin Decl. (Dkt. No. 124-26) ¶¶ 91-95. In
11 another, the EEM applet removed or applied a CoPP traffic-policing policy. *Id.* ¶¶ 101-07. And
12 the third demonstrated EEM adjusting a CoPP traffic-policing policy by changing the rate at
13 which that policy filtered certain types of traffic. *Id.* ¶¶ 113-19. Based on these tests, Dr. Rubin
14 concludes that EEM can communicate or provide policies to CoPP. *Id.* ¶¶ 86, 97, 108. He opines
15 that the tests demonstrate that the Router infringes the claim limitations raised in the motion.
16 *Id.* ¶¶ 85.

17 **c. Infringement of the Machine-Readable Medium Claims and the System**
18 **Claims**

19 For the computer-readable medium claims and the system claims, “an accused device may
20 be found to infringe if it is reasonably capable of satisfying the claim limitations, even though it
21 may also be capable of noninfringing modes of operation.” *Finjan*, 626 F.3d at 1204. Cisco
22 argues that the evidence presented by NetFuel is insufficient to raise triable issues as to capability
23 because the evidence involves end users applying “after-market” code, in the form of applets, to
24 EEM. Cisco Suppl. Brief at 2. Entering those applets into EEM “modifies” the Accused Products
25 such that they do not infringe the patents. NetFuel counters that those end users are using the
26 Accused Products exactly as they are intended to be used; *i.e.*, end users applying applets to direct
27 EEM so that the Accused Products operate as the end users intend. So, NetFuel argues, the

1 execution of EEM applets does not modify the Accused Products and the Accused Products are
2 capable of infringement.

3 The cases that have addressed similar circumstances have reasoned that where a
4 “modification” to the accused products is necessary in order for them to purportedly infringe, then
5 there is no liability. *Nazomi Commc’ns, Inc. v. Nokia Corp.*, 739 F.3d 1339, 1346 (Fed. Cir. 2014)
6 (affirming grant of summary judgment of non-infringement). But, where an end user can make an
7 accused product operate in an purportedly infringing way by “activating means that are already
8 present in the underlying software,” then summary judgment of non-infringement is not
9 appropriate. *Fantasy Sports*, 287 F.3d at 1118. “The critical inquiry [is] whether the accused
10 functionality was already contained in the underlying software such that it only had to be
11 ‘activated,’ or whether the user needed to alter the code to enable the computer to use the accused
12 functionality.” *M2M Sols. LLC v. Motorola Sols., Inc.*, 2016 WL 70814, at *7 (D. Del. Jan. 6,
13 2016).

14 Based on the evidence presented by the parties, the Court finds that triable questions exist
15 as to whether applets modify the Accused Products such that they do not infringe. First, EEM
16 requires a user to input applets in order for it to operate in any meaningful sense. Pfeifer Dep. at
17 22:17-23:5 (“EEM will do nothing until [a] user programs . . . what they would like to happen
18 when an event occurs,”). The applets provide if/then direction to the EEM, so that EEM will take
19 a certain action when a monitored event occurs or a threshold is reached. *See* Ex. 6 at 1, 6. Thus,
20 Dr. Rubin opines that “applets are an example of using EEM’s functionality, not modifying it.”
21 Rubin Decl. ¶ 129. Cisco confirmed that applets are “just a configuration mechanism A way
22 to provision the device to do something.” Siegel Ex. I at 49:3-13. Second, applets are not source
23 code and they do not modify the source code of EEM or the Accused Products. Siegel Ex. L;
24 Siegel Ex. M at 44:20-24, 57:17-25; Rubin Decl. ¶ 129. To the contrary, creating applets uses
25 CLI, a simple language that does not require programming expertise to use. Siegel Ex. J at 7.
26 NetFuel has presented evidence that EEM is designed so that end users can provide it with if/then
27 directions in the form of applets and that applets do not alter the underlying code or functionality

1 of the Accused Products. NetFuel’s evidence suggests that directing EEM to modify CoPP policy
 2 does not create new functionality on the Accused Devices. These facts distinguish this case from
 3 *Nazomi*, where the accused products would not infringe without the purchase and installation of
 4 third-party software. 739 F.3d at 1346. Instead, NetFuel has presented evidence that using
 5 applets is closer to activating functionality that is already present on the accused devices. *See*
 6 *Fantasy Sports*, 287 F.3d at 1118. Triable facts exist as to whether entering applets into EEM
 7 “modifies” the accused products. *See Raytheon Co. v. Cray, Inc.*, 330 F.R.D. 525, 541 (W.D. Wis.
 8 2019) (denying summary judgment where “there appears a genuine factual dispute as to . . .
 9 whether a ‘modification’ is required.”).

10 Summary judgment is therefore inappropriate as to the computer-readable medium claims
 11 and the system claims. Dr. Rubin’s opinion that his tests show that the Accused Products will
 12 infringe when certain applets are used indicates that summary judgment should be denied as to
 13 these claims. Further, while Cisco and Dr. Almeroth contend that the blogpost and the two TAC
 14 documents discussed above do not show infringement because they do not show policy changes to
 15 CoPP (Almeroth Decl. ¶¶ 3-7, 9-12), Dr. Rubin opines that they do (Rubin Decl. ¶¶ 86, 97, 108;
 16 Rubin Rep. ¶ 225; Suppl. Rubin Rep. ¶ 4). Both experts have explained their analyses. Their
 17 disputes amount to a “battle of the experts” over material facts, precluding summary judgment.
 18 *See Edwards Sys. Tech., Inc. v. Dig. Control Sys., Inc.*, 99 F. App’x 911, 921 (Fed. Cir. 2004).
 19 Thus, the blogpost and the TAC documents provide separate grounds for denying summary
 20 judgment as to the computer-readable medium and system claims.

21 **d. Infringement of the Method Claims**

22 For method claims, “each of [the steps] must be performed for infringement to occur.”
 23 *Cybersettle*, 243 Fed. App’x at 606. This can be established by “even one instance of the claimed
 24 method being performed.” *Mirror Worlds*, 692 F.3d at 1359. A patentee may establish
 25 infringement by circumstantial evidence. *Id.* The evidence discussed above is sufficient
 26 circumstantial evidence to defeat summary judgment as to the method claims. The two TAC
 27 documents raise triable questions as to whether Cisco provided customers with instructions to

1 implement applets that would cause its products to infringe after the complaint was filed. The
2 blogpost similarly raises questions as to whether a third-party developed their own applets that
3 cause the Accused Products to infringe, it should be noted that the blogpost has over 450 unique
4 pageviews since the litigation began. And, Dr. Rubin’s test raises factual questions as to whether
5 the products are technically capable of infringing. The Court finds that NetFuel has presented
6 sufficient circumstantial evidence of infringement of the method claims to defeat summary
7 judgment. *See Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1318 (Fed. Cir. 2009)
8 (affirming denial of defendant’s motion for judgment as a matter of law, in part, because “[t]he
9 circumstantial documentary evidence, supplementing the experts’ testimony, was . . . sufficient to
10 permit the jury to find direct infringement by a preponderance of the evidence”).

11 **IV. Conclusion**

12 For the reasons set forth above, Cisco’s motion for summary judgment is denied.

13 **IT IS SO ORDERED.**

14 Dated: January 31, 2020

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17 EDWARD J. DAVILA
18 United States District Judge