UNITED STATES INTERNATIONAL TRADE COMMISSION WASHINGTON, D.C.

In the Matter of

CERTAIN NETWORK DEVICES, RELATED SOFTWARE AND COMPONENTS THEREOF (I) Inv. No. 337-TA-944 (Enforcement Proceeding)

ENFORCEMENT INITIAL DETERMINATION

Administrative Law Judge David P. Shaw

Pursuant to the notice of institution of formal enforcement proceeding, 81 Fed. Reg. 68455 (Oct. 4, 2016), this is the Enforcement Initial Determination in *Certain Network Devices, Related Software and Components Thereof (I)*, United States International Trade Commission Investigation No. 337-TA-944.

It is held that respondent has not violated the June 23, 2016 cease and desist order is sued in the underlying investigation.

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Table of Abbreviations

The following abbreviations may be used in this Initial Determination:

ABBREVIATION	FULL WORD OR PHRASE	
ALJ	Administrative Law Judge	
CDO	Cease and Desist Order	
CDX	Complainant's Demonstrative Exhibit	
Ciscon	Ciscon et al., U.S. Patent No. 5,634,010	
ConnMgr	Connection Manager	
CPX	Complainant's Physical Exhibit	
CX	Complainant's Exhibit	
Dep.	Deposition	
EDIS	Electronic Document Imaging System	
EOS	Extensible Operating System	
Enf.	Enforcement Proceeding	
JPX	Joint Physical Exhibit	
JX	Joint Exhibit	
LEO	Limited Exclusion Order	
ProcMgr	Process Manager	
RDX	Respondent's Demonstrative Exhibit	
RPX	Respondent's Physical Exhibit	
RWS	Rebuttal Witness Statement	
RX .	Respondent's Exhibit	
SMP	Statutory Maximum Penalty	
Sysdb	System Database	
Tr.	Transcript	
WS	Witness Statement	

I. BACKGROUND

A. Underlying Investigation

By publication of a notice in the *Federal Register* on January 27, 2015, pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, the Commission instituted the underlying investigation to determine:

[W]hether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain network devices, related software and components thereof by reason of infringement of one or more of claims 1, 2, 8-11, and 17-19 of the '537 Patent [U.S. Patent No. 7,162,537]; claims 1, 6, and 12 of the '296 patent [U.S. Patent No. 8,356,296]; claims 1, 5, 6, 9, and 18 of the '164 patent [U.S. Patent No. 7,290,164]; claims 1, 14, 15, 29, 39-42, 63, 64, 71-73, and 84-86 of the '597 patent [U.S. Patent No. 7,340,597]; claims 6-10, 17, 18, 20, 21, 23, and 24 of the '592 patent [U.S. Patent No. 6,741,592]; claims 1, 3, 5, 7-11, 13, 15-29, 33-37, and 39-46 of the '145 patent [U.S. Patent No. 7,200,145], and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

80 Fed. Reg. 4134 (Jan. 27, 2015).

The Commission named as complainant Cisco Systems, Inc. of San Jose, California. *Id.*The Commission named as respondent Arista Networks, Inc. of Santa Clara, California. *Id.*The Office of Unfair Import Investigations ("Staff" or "OUII") was also named as a party to the investigation. *Id.*

The administrative law judge held a hearing in September 2015. *See* Order No. 6 (Mar. 9, 2015); Hearing Tr. 1-1494. On February 2, 2016, the administrative law judge issued an initial determination ("ID") finding that a violation of section 337 had occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation, of certain network devices, related software and components thereof with respect to asserted claims 1, 2, 8-11, and 17-19 of U.S. Patent No. 7,162,537; asserted claims 6,

7, 20, and 21 of U.S. Patent No. 6,741,592; and asserted claims 5, 7, 45, and 46 of U.S. Patent No. 7,200,145. *See* Initial Determination (EDIS Doc. ID No. 573475). A public version (EDIS Doc. ID No. 575521) issued on March 2, 2016.

Cisco and Arista filed petitions for review in February 2016. Cisco, Arista, and the Staff filed responses to the petitions in March 2016.

On June 23, 2016, the Commission issued an opinion finding a violation of section 337 had occurred. *See* Comm'n Op. at 60¹; *see also* 81 Fed. Reg. 42375 (June 29, 2016). In particular, the Commission found a violation of section 337 for the '537, '592, and '145 Patents and no violation for the '597 and '164 Patents. *Id.* The Commission also issued a limited exclusion order ("LEO") and cease and desist order ("CDO") on June 23, 2016. *Id.*

The 60-day Presidential review period ended on August 22, 2016. *See* 19 U.S.C. § 1337(j)(2); Ltrs. to the President of the United States; Michael Forman, United States Trade Representative; and Jacob Lew, Secretary of the Treasury (transmitting LEO and CDO (EDIS Doc. ID No. 584917)).

Arista filed an appeal with the U.S. Court of Appeals for the Federal Circuit (the "Federal Circuit") in August 2016 (Case No. 16-2563), and Cisco also filed an appeal in September 2016 (Case No. 16-2539). The Federal Circuit held oral argument on June 7, 2017. The appeal is currently pending.

B. Enforcement Proceeding

On August 26, 2016, Cisco filed an enforcement complaint requesting that the Commission commence an enforcement proceeding pursuant to Commission Rule 210.75(b) and

¹ A public version issued on July 26, 2016, and a revised public version (EDIS Doc. ID No. 609119) issued on April 19, 2017.

section 337. Cisco's enforcement complaint alleges that Arista has violated the LEO and CDO by marketing, distributing, offering for sale, selling, advertising, and/or aiding and abetting "other entities in the sale and/or distribution of, after August 22, 2016, imported products and components that infringe the '537 Patent." Enf. Compl., ¶ 6.5. The enforcement complaint asserts the '537 Patent only. *See generally id*.

By publication of a notice in the *Federal Register* on October 4, 2016, pursuant to section 337 of the Tariff Act of 1930, as amended, and Commission Rule 210.75 (19 C.F.R. § 210.75), the Commission instituted a formal enforcement proceeding to determine "whether Arista is in violation of the June 23, 2016 CDO issued in the original investigation and to determine what, if any, enforcement measures are appropriate." 81 Fed. Reg. 68455.

The Commission directed the administrative law judge "to set the earliest practicable target date for completion of the proceeding within 45-days of institution of the proceeding." Comm'n Enf. Order at 2 (Sep. 28, 2016). The Commission further directed that "the target date should be set at no more than twelve months from the date of institution" and that "such target date is to exceed the date of issuance of the EID by three months." *Id.* On November 2, 2016, the target date was set for September 20, 2017, which is just under the 12-month deadline for completing the proceeding. *See id.*; Order No. 31 (Setting Target Date). The due date for the Enforcement Initial Determination on violation is June 20, 2017. *Id.*

On April 4, 2017, the administrative law judge held a pre-hearing conference for the enforcement proceeding. *See* Order No. 42 (Allocation of Hearing Time); Enf. Pre-Hr'g Tr. 1-14. The evidentiary hearing commenced immediately thereafter and concluded the next day, on April 5, 2017. *See* Order No. 43; Enf. Tr. at 1-439. The parties were requested to file post-hearing briefs not to exceed 125 pages in length, and to file reply briefs not to exceed 30 pages in

length. Enf. Pre-Hr'g Tr. 9. On April 14, 2017, the parties filed a corrected joint outline of the issues to be decided in the Enforcement initial Determination. *See* Corrected Joint Outline of List of Issues to Be Decided ("Joint Outline") (EDIS Doc. ID No. 608656).

C. U.S. Customs and Border Protection Proceedings

The Staff notes:

On July 22, 2016, Arista requested an administrative ruling from U.S. Customs and Border Protection [("CBP")] concerning whether Arista's products with the redesigned EOS software infringe the claims of the '537 Patent. See CX-5060C (July 22, 2016 Reiser to Steuart letter). CBP opened an ex parte proceeding that resulted in a ruling letter from CBP finding that the products with Arista's redesigned EOS do not infringe the claims of the '537 Patent. See CX-5238C (November 18, 2016 Steuart to Reiser letter).

Cisco sent a December 14, 2016 letter to CBP requesting that it stay and revoke its ruling. See CX-5632C (Dec. 14, 2016 Bartkowski to Steuart letter). On January 13, 2017, CBP sent letters to Cisco and Arista informing them that the November 17, 2016 ruling letter was revoked. See CX-5092 (Jan. 13, 2017 Steuart to Bartkowski letter) and CX-5093 (Jan. 13, 2017 Steuart to Reiser letter). The letter to Arista stated that the November 18, 2016 ruling "is not in accord with the current view of Customs." CX-5093 (Jan. 13, 2017 Steuart to Reiser letter).

After revocation of the letter ruling, CBP instituted an *inter partes* proceeding. Cisco and Arista submitted briefs to CBP and participated in a one-day oral argument. See Arista PrHB at 38.

The Staff did not participate in any of the CBP proceedings. CBP issued an April 8, 2017 letter determining that Arista's redesigned products do not infringe the '537 Patent.

Staff Br. at 5-6.

D. The Parties

The parties in the enforcement proceeding have not changed from the underlying investigation.

Complainant Cisco Systems, Inc. is a corporation organized and existing under the laws of California, having its principal place of business at 170 West Tasman Drive, San Jose, California, 95134. Enf. Compl., ¶ 4.1.

Respondent Arista Networks, Inc. is a corporation organized and existing under the laws of Delaware, having its principal place of business at 5453 Great America Parkway, Santa Clara, California, 95134. *See* Enf. Compl., ¶ 5.1; Resp. to Enf. Compl., ¶ 5.1.

The Staff remains as a party in the enforcement proceeding. See 81 Fed. Reg. 68455.

E. The Accused Products

Cisco explains that the "Arista Accused Products at issue in this Enforcement Proceeding are all Arista products, including at least the 7010, 7020, 7048, 7050, 7060, 7150, 7160, 7250, 7260, 7280, 7300, 7320, and 7500 series models, related software and the components thereof." Cisco Br. at 8-9. Arista's Table of Abbreviations, however, identifies the accused products as "Arista's 7010, 7048, 7050, 7050X, 7150, 7250X, 7280E, 7300, 7300X, and 7500E series switches, and components thereof." *Id.* at xi. Arista has noted that "the accused products constitute nearly all of Arista's products[.]" *See* Arista Br. at 83. Arista argues that it has redesigned its Extensible Operating System ("EOS") so that all of its products avoid infringing the '537 Patent. *Id.* at 1. The parties have not raised an issue of whether certain models are representative products. *See generally* Joint Outline; *Spansion, Inc. v. Int'l Trade Comm'n*, 629 F.3d 1331, 1351-52 (Fed. Cir. 2010).

Depending on the context, the briefs and this Enforcement Initial Determination occasionally refer to the accused products as Arista's products, the redesigned products, the redesigned EOS, or simply the "redesign."

II. JURISDICTION AND IMPORTATION

A. Subject Matter Jurisdiction

In the underlying investigation, the Commission found a violation of section 337, and issued a limited exclusion order and cease and desist orders. See 81 Fed. Reg. 42375 (June 29, 2016). The Commission instituted a formal enforcement proceeding to determine if there has been a violation of these orders. See 19 C.F.R. § 210.75(b); 81 Fed. Reg. 68455 (Oct. 4, 2016). The Commission therefore has subject matter jurisdiction over this enforcement proceeding. See 19 U.S.C. § 1337(f)(2); VastFame Camera, Ltd. v. Int'l Trade Comm'n, 386 F.3d 1108, 1111-13 (Fed. Cir. 2004); San Huan New Materials High Tech, Inc. v. Int'l Trade Comm'n, 161 F.3d 1347, 1357 (Fed. Cir. 1998). Moreover, no party has contested subject matter jurisdiction. See Arista Br. at 5 (contesting infringement, not jurisdiction); see generally Joint Outline (jurisdiction is not contested).

B. Personal Jurisdiction

Arista has responded to the enforcement complaint and notice of institution, and has participated in the investigation. The Commission therefore has personal jurisdiction over the Arista. See, e.g., Certain Ink Cartridges and Components Thereof, Inv. No. 337-TA-565, Enf. Initial Determination at 30-31 (April 17, 2009) ("Ink Cartridges"), aff'd, Notice of a Commission Determination Not to Review an Enforcement Initial Determination Finding a Violation of Cease and Desist Orders and a Consent Order (June 19, 2009). Further, Arista does not contest personal jurisdiction in this proceeding. See Arista Br. at 5 (contesting infringement, not jurisdiction); see generally Joint Outline (jurisdiction is not contested).

C. In Rem Jurisdiction

The Commission has in rem jurisdiction when infringing articles are imported, sold for importation, or sold within the United States after importation by the owner, importer, or consignee. 19 U.S.C. § 1337(a)(l)(B). "All that is required for in rem jurisdiction to be established is the presence of the imported property in the United States." Certain Male Prophylactic Devices, Inv. No. 337-TA-546, Initial Determination (June 30, 2006) (citing Certain Steel Rod Treating Apparatus and Components Thereof, Inv. No. 337-TA-97, USITC Pub. No. 1210 (Jan. 1982), Comm'n Op. at 4, 11 for the proposition that presence of res establishes in rem jurisdiction in section 337 actions). As discussed below, there is no dispute that the accused products are manufactured abroad and imported into the United States. See Arista Br. at 5 (contesting infringement, not jurisdiction); see generally Joint Outline (jurisdiction is not contested). Indeed, the evidence shows that the accused products have been imported and sold after importation into the United States. See, e.g., CX-5191C (Arista's Response to Cisco's First Set of Requests for Admission) at 4-5 (Resp. to RFA No. 1); CX-5774C (Ex. D to Arista's 12/14/16 Second Supplemental Response to Cisco's First Set of Interrogatories); CX-5774C (Ex. E to Arista's 12/14/16 Second Supplemental Response to Cisco's First Set of Interrogatories). Accordingly, the administrative law judge has determined that the Commission has in rem jurisdiction over the accused products, which are imported into the United States.

III. VIOLATION

A. Overview of the '537 Patent (JX-0001)

U.S. Patent No. 7,162,537 (the "537 Patent"), entitled "Method and system for externally managing router configuration data in conjunction with a centralized database," issued

on January 9, 2007. The application that would issue as the '537 Patent, Application No. 09/479,607, was filed on January 6, 2000. In general, the '537 Patent is directed to a system and method for managing data in networking devices. Further background for the '537 Patent is provided in the ID from the underlying investigation. *See generally* ID at 6-11.

B. Infringement

The Commission has found a party in violation of a cease and desist order when it sold infringing products after the cease and desist order issued. *See, e.g., Certain Erasable*Programmable Read Only Memories, Components Thereof, Prods. Containing Such Memories, and Processes for Making Such Memories, Inv. No. 337-TA-276, Comm'n Op. at 4 (August 1, 1991) ("the Commission determined that Atmel Corporation had violated the Commission's cease and desist order by selling infringing EPROMs between March 16, 1989, and August 3, 1989."). Accordingly, the administrative law judge has analyzed whether Arista's redesigned products infringe the asserted claims.²

1. Claim Construction

The claim constructions from the underlying investigation govern in this enforcement proceeding. See Certain Personal Data & Mobile Communications Devices & Related Software, Inv. No. 337-TA-710, Order No. 128 at 3 (Nov. 1, 2012) ("It is well-established that parties are bound by the Commission's prior claim constructions; neither Apple nor HTC can seek to broaden (or narrow) the scope of the asserted claims during this enforcement proceeding."). Indeed, the Commission ordered the administrative law judge to "rule on the question of whether

² In the enforcement proceeding, Cisco asserts independent claims 1, 10, and 19 and dependent claims 2, 8, 9, 11, 17, and 18 of the '537 Patent. See Cisco Br. at 8; JX-0001 at 15:22-18:39. The '592 and '145 Patents are not asserted in this enforcement proceeding. See generally Enf. Compl.

the enforcement respondent has violated the June 23, 2016 CDO issued in the above-captioned investigation." Order at 3 (EDIS Doc. ID No. 591516) (September 28, 2016). The CDO, in turn, prohibited Arista from engaging in various commercial activities³ for covered products that infringe one or more of claims 1, 2, 8-11, and 17-19 of the '537 Patent. *See* CDO at 1-3.

For reference, select, previously construed claim terms from the '537 Patent are reproduced below:

CLAIM TERM & CORRESPONDING CLAIM(S)	Administrative Law Judge / Commission Construction	
"externally managing router data" (1 and 10)		
"externally manage router data" (19)		
"external management" (1 and 10)	,	
"management of" (19)	No construction necessary	
"management registration request" (1 and 10) "management request" (19)	"a request to register to provide external management services"	
"router configuration data" (1, 2, 10, 11, and 19)	No construction necessary	
"said database" (1 and 10)	Not indefinite / no construction necessary	
"reducing computational overhead" (1 and 10)		
"reducing computational overhead in a centralized database system" (1 and 10)	"reducing the amount of computation in a centralized database system"	
"said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database" (1, 10, and 19)	Requires the storage of router configuration data in said database	

See ID at 55-59; Comm'n Op. at 8-10.

³ The CDO prohibits "importing, selling, marketing, advertising, distributing, transferring (except for exportation), soliciting United States agents or distributors, and aiding or abetting other entities in the importation, sale for importation, sale after importation, transfer (except for exportation), or distribution of certain network devices, related software and components thereof that infringe one or more of claims 1, 2, 8-11, and 17-19 of U.S. Patent No. 7,162,537 . . . claims 6, 7, 20, and 21 of U.S. Patent No. 6,741,592 . . . and claims 5, 7, 45, and 46 of U.S. Patent No. 7,200,145[.]"

2. Literal Infringement

Literal infringement of a claim occurs when every limitation recited in the claim appears in the accused device, *i.e.*, when the properly construed claim reads on the accused device exactly. *Amhil Enters., Ltd. v. Wawa, Inc.*, 81 F.3d 1554, 1562 (Fed. Cir. 1996); *Southwall Tech. v. Cardinal IG Co.*, 54 F.3d 1570, 1575 (Fed Cir. 1995). Each patent claim element or limitation is considered material and essential. *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991). If an accused device lacks a limitation of an independent claim, the device cannot infringe a dependent claim. *See Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1552 n.9 (Fed. Cir. 1989). The legal standards for the doctrine of equivalents are discussed in Part III(B)(3), *infra*.

Cisco asserts independent claims 1, 10, and 19 and dependent claims 2, 8, 9, 11, 17, and 18 of the '537 Patent. See Cisco Br. at 8; JX-0001 at 15:22-18:39. Cisco argues that Arista products running the redesigned EOS infringe the asserted claims literally and under the doctrine of equivalents. See Cisco Br. at 22 (Section V). Arista contends that it does not infringe any of the asserted claims. See Arista Br. at 11 (Section IV).

As discussed below, the administrative law judge has determined that the accused products, Arista products running the redesigned EOS, do not infringe the asserted claims.

a) Claim 19

Asserted claim 19 is an independent claim, as are asserted claims 1 and 10. Claim 1 is a method claim, claim 10 is directed to machine-executable instructions, and claim 19 is an apparatus claim. Many of the method steps of claim 1 recite limitations similar to those recited in claim 19. The same holds true with the machine-executable instructions recited in claim 10.

Therefore, this initial determination will analyze claim 19 before analyzing claims 1 and 10 (and their associated dependent claims).

Independent claim 19 follows:

- 19. In a router device having a processor and memory, a router operating system executing within said memory comprising:
 - (a) a database subsystem;
 - (b) a plurality of client subsystems, each operatively coupled for communication to said database subsystem, one of said client subsystems configured as a managing subsystem to externally manage router data upon issuing a management request to said database subsystem; and
 - (c) a database operatively coupled to said database subsystem, said database configured to store router configuration data and delegate management of router configuration data to a management subsystem that requests to manage router configuration data, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database.

JX-0001 at 18:21-39 (emphasis added on disputed limitations (*see* Staff Br. at 21-22)). The ID subdivided the claim into eight limitations, which are presented and analyzed below.

(1) In a router device having a processor and memory, a router operating system executing within said memory comprising:

Cisco argues:

Arista does not dispute that its redesigned products continue to infringe the preamble of claim 19 of the '537 Patent as previously found. As noted in the ID, the Accused Products are router devices with a processor, memory, and a router operating system. CX-5719C (944 ID) at 65. This was true for the pre-redesign products and continues to be true for the redesign products. CX-5002C (Almeroth WS) at Q200-202; CX-0166 (Arista Data Sheet). Arista devices are router devices because they perform routing tasks and run routing protocols. See, e.g., CX-5002C (Almeroth WS) at

Q200-201; CX-5183C (Duda Dep.) at 279:9-15, 279:24-25, 281:6-9, 282:1-11.

Cisco Br. at 76-77.

Arista and the Staff do not specifically address the preamble. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products are router devices that satisfy the preamble. For example, the data sheet for the 7010T-48 shows the accused products contain a CPU, include system and flash memory, and run Arista's EOS software. *See* CX-0166 (Arista Data Sheet); CX-5002C (Almeroth WS) at Q/A 200. Further, the accused products are router devices because they perform routing tasks and run routing protocols. *See* CX-5002C (Almeroth WS) at Q/A 201. Accordingly, the administrative law judge has determined that the accused products satisfy the preamble.

(2) (a) a database subsystem;

Cisco argues:

Arista does not dispute that its redesigned products continue to infringe this element of the '537 Patent as previously found. Arista does not allege to have made any changes to its products that would affect this element of the claim. In the underlying investigation, the ALJ found that the claimed "database subsystem" is the portion of Sysdb that handles mounts. CX-5788C (944 ID) at 65-66. As Dr. Almeroth explains, the same is true with the redesigned system. CX-5002C (Almeroth WS) at Q202. In the redesigned system, there is a part of Sysdb that I

] as explained above in §§ VI.A and VI.B. This functionality in Sysdb corresponds to the claimed "database subsystem." CX-5002C (Almeroth WS) at Q202.

Cisco Br. at 77.

Arista and the Staff do not specifically address the database subsystem limitation. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products satisfy the database subsystem limitation. In particular, the database subsystem is the part of Sysdb that handles the "mounting" functionality. Accordingly, the administrative law judge has determined that the accused products satisfy the database subsystem limitation.

(3) (b) a plurality of client subsystems, each operatively coupled for communication to said database subsystem,

Cisco addresses the three limitations of subpart (b) of claim 19 jointly. See Cisco Br. at 77-79 (Section (V)(E)(1)(c)). For the "plurality of client subsystems" limitation, Cisco argues:

Arista's redesigned products continue to meet claim 19(b) of the '537 Patent. Detailed analysis regarding the issues presented by the element is also provided above, in §§ V.A and V.B.2.c.

As explained above, when Arista redesigned its EOS software, it

] See, e.g., §§ V.A

and V.B.2.c. As such, subsystems in Arista's redesigned EOS include the agent in combination with the functionality of As Dr. Almeroth explains, at least one of these managing subsystems, such as the [

] is "configured as a managing subsystem to externally manage router data upon issuing a management request to said database subsystem." CX-5002C (Almeroth WS) at Q203-204. . . .

Cisco Br. at 77-78.

⁴ The '537 Patent teaches that the "database subsystem" is the part of Sysdb that receives the management registration request from an external subsystem and registers the subsystem for external management. JX-0001 ('537 Patent) at 15:37-40, 16:64-67, 18:29. See ID at 65.

Arista and the Staff do not specifically address the plurality-of-client-subsystems limitation. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products satisfy the plurality-of-client-subsystems limitation. In particular, the plurality of client subsystems includes agents in the EOS in combination with the [] functionality. See CX-5002C (Almeroth WS) at Q/A 60-62, 115-118. Accordingly, the administrative law judge has determined that the accused products satisfy the plurality-of-client-subsystems limitation.

(4) one of said client subsystems configured as a managing subsystem to externally manage router data

For the "managing subsystem" limitation of subpart (b) of claim 19, Cisco argues:

] is "configured as a managing subsystem to externally manage router data upon issuing a management request to said database subsystem." CX-5002C (Almeroth WS) at Q203-204. The managing subsystem described above will issue a management request, or "a request to register to provide external management services," to the database subsystem just as the managing subsystem in the prior version of EOS. In the redesigned system, the [

] Specifically, on an [
] function calls
] which [

] See, e.g., CX-5002C (Almeroth WS) at Q116-118; CX-5208C; CX-5043C; CX-

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5042C; CX-5013C (Sweeney Dep.) at 154:8-156:20, 160:17-
              161:23; CX-5015C (Duda Dep.) at 83:9-84:11. This also causes
                                                              I for the agent
              at issue. CX-5002C (Almeroth WS) at Q116-118. [
                                                       ] See, e.g., id. at 116-
                                                   CX-5043C; CX-5042C.
              118,
                     121-123,
                               131:
                                      CX-5208C;
              See, e.g., CX-5002C (Almeroth WS) at Q116-118, 127-131, 168,
                         CX-5208C;
                                      CX-5043C; CX-5042C; CX-5013C
              203-204;
              (Sweeney Dep.) at 46:13-49:2, 145:15-148:1....
Cisco Br. at 78-79 (emphasis added).
       Arista argues that four "indisputable, and indeed, undisputed" facts compel a finding of
no infringement. The four facts are:
              1.
                     It is the [
                                        I process (using a function called
                                   that sends the
                     only thing Cisco contends is a management registration
                    request in the redesign.
              2.
                    It is the [
                                       process that sends the name of the
                    agent to [
              3.
                    Neither I
                                      nor [
                                                         I is a managing
                    subsystem, alone or in combination with each other.
              4.
                    Agents, which were adjudged to be managing subsystems,
                    are [
                                                I and so do not and cannot
Arista Br. at 12-13. In arguing that the redesigned products lack a managing subsystem, Arista
argues that [
                                                                         1 and that
                   ] Id. at 13, 15.
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The Staff argues that "Cisco's interpretation of 'managing subsystem' is not supported by the '537 Patent." Staff Br. at 27. The Staff further argues that the redesigned products avoid infringement because the [

and because the [

1 *Id.* at 33 (emphasis added by the Staff).

The evidence shows that the accused products do not include a managing subsystem that satisfies the "managing subsystem" limitation.

In the ID and Commission Opinion, it was determined that agents in Arista's EOS

perform external management by [] See ID at 66; Comm'n Op. at

11-14. In [] an agent []

Id. (citing CX-0007C (Almeroth WS) at Q/A 88). [

] See RX-5131C (Sweeny RWS) at Q/A 12-14.

In the redesigned products, Arista has removed [

RX-5131C (Sweeny RWS) at Q/A 64-65. In particular, [

1 *Id.* at Q/A

I to Sysdb. See

67; see also id. at Q/A 55-56.

Mr. Sweeny, a Vice President of Software Engineering at Arista, explained that the redesigned products now include [] and that[

] *Id.* at

Q/A 69-71; see also RX-5129C (McKusick RWS) at Q/A 30-35 ("the point of the redesign is

⁵ [

| RX-5131C (Sweeny RWS) at Q/A 12.

⁶ [
| is a new process for the redesign products. RX-5131C (Sweeny RWS) at Q/A 65.

that an agent [1 See RX-5131C (Sweeny RWS) at Q/A 70; see also RX-5129C (McKusick RWS) at Q/A 338 ("The content of the I on its face merely [7 | Sysdb then |] See RX-5131C (Sweeny RWS) at Q/A 69, 91 ([" 1."), 106. [1. See RX-5131C (Sweeny RWS) at Q/A 74; RX-5129C (McKusick RWS) at 39, 61-62, 174. The agent then calls a 1 See RX-5131C (Sweeny) at Q/A 120-22; RX-5129C (McKusick RWS) at 182, 189. Accordingly, the administrative law judge finds that the redesigned products lack a managing subsystem, as [l do not perform external management I upon issuing a management request to said database (5) subsystem; The "management request" limitation is equivalent to the "management registration request" of claims 1 and 10. For the "management request" limitation of subpart (b) of claim 19, Cisco argues:

. . . The managing subsystem described above will issue a management request, or "a request to register to provide external management services," to the database subsystem just as the managing subsystem in the prior version of EOS. In the

⁷ [] are new to the redesign products. RX-5131C (Sweeny RWS) at Q/A 90-94.

redesigned system, the same management request functionality has been transferred from the agent to a different set of software files that performs the same functions. Specifically, [

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1 Id. at Q116-118; See,
                                     1 Summary); CX-5043C;
e.g., CX-5208C (Arista [
CX-5042C; CX-5015C (Duda Dep.) at 130:11-17; CX-5013C
(Sweeney Dep.) at 133:7-135:12.
                                  This message—just as the
                   I in the prior system—includes all of the
information necessary for Sysdb to [
     1 See, e.g., CX-5002C (Almeroth WS) at Q116-118; CX-
5208C; CX-5043C; CX-5042C; CX-5013C (Sweeney Dep.) at
154:8-156:20, 160:17-161:23; CX-5015C (Duda Dep.) at 83:9-
84:11. This also causes [
                             1 CX-5002C (Almeroth WS) at
Q116-118. [
     1 See, e.g., id. at 116-118, 121-123, 131; CX-5208C; CX-
5043C; CX-5042C.
                     | See, e.g., CX-5002C (Almeroth WS) at
Q116-118, 127-131, 168, 203-204; CX-5208C; CX-5043C; CX-
5042C; CX-5013C (Sweeney Dep.) at 46:13-49:2, 145:15-148:1.
Thus, the "managing subsystem" in Arista's products—the agent
and the corresponding [
                                  l—transmits a management
request to Sysdb just as in the previous version of the products.
And after the management request is sent to Sysdb, Sysdb will
                              I just as in the previous version.
CX-5042C at 0331.
This managing subsystem will thus externally manage the router
data in the same way that the ID found in the pre-redesign version,
as explained above in § V.A.1. 944 Initial Determination at 66
("When an EOS agent [
                                 data in Sysdb, [
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not dispute, Arista's redesigned products still perform the external management found to satisfy the claim requirements. See, e.g.,

CX-5002C (Almeroth WS) at Q110, 206.

As Dr. Almeroth explains, and as Arista and its expert do

Further, even if Arista were correct that managing subsystems in the redesigned products do not literally "issu[e] a management request to said database subsystem," that limitation is met under the doctrine of equivalents. See § V.C.

Cisco Br. at 79 (emphasis added).

I command is not a management registration request, Arista argues that the [given its content, purpose, and location in the EOS. See generally Arista Br. at 24-34. The Staff argues that the redesigned products do not satisfy the management request limitation because [I not a management request (i.e., a request to register to provide external management services). See generally Staff Br. at 33-37. The evidence shows that the accused products do not issue a managing request to the database subsystem. In the ID, it was determined that agents in EOS [1 to Sysdb that [1 See ID at 69-70 ("The first step of a [In the redesigned EOS, the components identified as part of the managing subsystem (e.g., inter alia, [I do not send a management request to the database subsystem because the [command is not a In particular, the [command includes only [1 See RX-5129C (McKusick RWS) at Q/A 33, 329, 335-39. Indeed, the command does not include [- Id. at Q/A 338. Further, as Arista

command is to

notes, and as the testimony confirms, the purpose of the [

1. See RX-5129C (McKusick RWS) at Q/A 38, 344,

346, 412. Additionally, the [

command does not originate from the managing

subsystem, as the agent [

] RX-5131C (Sweeny RWS) at Q/A 69-71; see also RX-5129C (McKusick RWS) at Q/A 30-35 ("the point of the redesign is that an agent [

] 355.

Accordingly, for the reasons provided above, the administrative law judge finds that the redesigned products do not issue a management request.

(6) and (c) a database operatively coupled to said database subsystem, said database configured to store router configuration data

Cisco addresses the three limitations of subpart (c) of claim 19 jointly. *See* ID at 70-74 (analyzing subpart (c) in three separate limitations); Cisco Br. at 79-80 (Section (V)(E)(1)(d)). For subpart (c), Cisco argues:

The Accused Products continue to meet claim 19(c) of the '537 Patent as described below. Arista does not allege to have made any changes to its products that would affect this element of the claim, other than their arguments regarding the "request" element, which are the same as discussed in element 1(b) above and in §§ VI.A and VI.B.

As the ALJ found in the underlying investigation, Sysdb stores router configuration data in a database that is coupled to the database subsystem. CX-5788C (944 ID) at 70-74. Sysdb contains the complete state of the system. This database is a storage (location for the system's data and also acts as an intermediary between specialized "agents," which perform the management tasks on the data stored in Sysdb. *See*, *e.g.*, Arista White Paper, EOS: The Next Generation Extensible Operating System (March 2014) CX-0286 (Arista White Paper - EOS: The Next Generation Extensible Operating System) at 0003-04; CX-1098C (EOS Architecture Presentation) at 3-4.

] See, e.g., CX-5002C (Almeroth WS) at Q61; CX-1098C at 15.

As found in the ID and by the Commission, the router configuration data is "managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database," as Arista does not allege to have changed this functionality in its redesign. CX-5002C (Almeroth WS) at Q207; CX-5719C (944 ID) at 70-74.

Cisco Br. at 79-80.

Arista and the Staff do not specifically address the "database operatively coupled to . . ." limitation. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products satisfy the "database operatively coupled to . . ." limitation. In particular, Sysdb contains the complete state of the system. CX-5002C (Almeroth WS) at Q/A 205. Accordingly, the administrative law judge has determined that the accused products satisfy the "database operatively coupled to . . ." limitation.

(7) and delegate management of router configuration data to a management subsystem that requests to manage router configuration data,

Cisco addresses the three limitations of subpart (c) of claim 19 jointly; its argument is copied above. *See* Cisco Br. at 79-80 (Section (V)(E)(1)(d)).

Arista and the Staff do not specifically address the "delegate management of router configuration data . . ." limitation. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products satisfy the "delegate management of router configuration data . . ." limitation. *See* CX-5002C (Almeroth WS) at Q/A 206 (opining this limitation is met). Accordingly, the administrative law judge has determined that the accused products satisfy the "delegate management of router configuration data . . ." limitation.

(8) said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database.

Cisco addresses the three limitations of subpart (c) of claim 19 jointly; its argument is copied above. See Cisco Br. at 79-80 (Section (V)(E)(1)(d)).

Arista and the Staff do not specifically address the "router configuration data managed by . . ." limitation. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products satisfy the "router configuration data managed by . . ." limitation. *See* CX-5002C (Almeroth WS) at Q/A 206-07 (opining this limitation is met). Accordingly, the administrative law judge has determined that the accused products satisfy the "router configuration data managed by . . ." limitation.

b) Claim 1

Independent claim 1, a method claim, follows:

- 1. A method for reducing computational overhead in a centralized database system by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is *a first managing subsystem*, comprising:
 - a) transmitting a management registration request by said first managing subsystem to said database subsystem, said registration request indicating router configuration data for which said first managing subsystem is requesting to provide external management services, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database;
 - b) receiving said management registration request by said database subsystem; and

c) registering said first managing subsystem for external management by said database subsystem.

JX-0001 at 15:22-40 (emphasis added on disputed limitations (*see* Staff Br. at 20-21)). While the ID subdivided claim 1 into seven limitations, Cisco's brief subdivides the claim into four limitations. *Compare* ID at 74-77 *with* Cisco Br. at 80-83 (presenting arguments about the preamble and subparts a), b), and c)). Cisco's arguments are analyzed below.

(1) A method for reducing computational overhead in a centralized database system by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is a first managing subsystem, comprising:

For the preamble, Cisco argues:

The Accused Products continue to meet the preamble of claim 1 of the '537 Patent as described below. Arista products perform a method for reducing computational overhead in a centralized database system by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is a first managing subsystem. Arista does not allege to have made any changes to its products that would affect this element of the claim, other than their arguments regarding the "managing subsystem" element as it relates to the "management registration request" element, which are the same as discussed in element 1(b) below and in §§ VI.A and VI.B. See also CX-5719C (944 ID) at 74-75.

I the processing requirements of Sysdb are reduced, because the application-specific processing is performed by the agents. CX-5002C (Almeroth WS) at Q222-229. The functionality provided by Sysdb, in contrast, primarily consists of a [

] See, e.g., CX-0459C ("EOS Architecture") at 2775; CX-0286 (Arista White Paper) at 0004; CX-0412C (AID 1575 What is tacc?) at 3280; CX-0223C (Basic Concepts of Tacc Mount Infrastructure from the EOS agent's perspective) at 3825;

CX-0035C (AID 42 Hitchhikers Guide to the Arista Galaxy) at 9973; CX-0273 (Arista EOS: An Extensible Operating System) at 0002.

More evidence regarding infringement of this element is found above in §§ V.A and V.B.2.c.

Cisco Br. at 80-83.

Apart from the arguments about the managing subsystem and management request limitations, which were addressed and analyzed in connection with claim 19, Arista and the Staff do not specifically address the preamble. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products do not satisfy the preamble because the accused products do not include a managing subsystem and do not externally manage data.

The administrative law judge previously found that the accused products do not include a managing subsystem and do not issue a management request. *See* Parts III(B)(2)(a)(4) and III(B)(2)(a)(5), *supra*. Accordingly, for the reasons provided above, the administrative law judge finds that the redesigned products do not include a managing subsystem and do not issue a management request that would satisfy the preamble of claim 1.

* *

(2) a) transmitting a management registration request by said first managing subsystem to said database subsystem, said registration request indicating router configuration data for which said first managing subsystem is requesting to provide external management services, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database;

Cisco argues:

The Accused Products continue to meet claim 1(a) of the '537 Patent as described below. Detailed analysis regarding the issues presented by the element is also provided above, in §§ V.A and V.B.2.c.

As explained more fully above in the analysis of the redesigned products and in the limitation-by-limitation analysis of claim 19, Arista's redesigned system continues to "transmit[] a management registration request by said first managing subsystem to said database subsystem, said registration request indicating router configuration data for which said first managing subsystem is requesting to provide external management services." Specifically, on an [

] See, e.g., CX-5208C; CX-5043C; CX-5042C; CX-5013C (Sweeney Dep.) at 154:8-156:20, 160:17-161:23; CX-5015C (Duda Dep.) at 83:9-84:11. Thus, the "managing subsystem" in Arista's products—the agent and the corresponding []—transmits a management registration request to Sysdb indicating the data for which the agent requests to manage.

Further, even if Arista were correct that its redesigned products do not literally "transmit[] a management registration request by said first managing subsystem to said database subsystem," that limitation is met under the doctrine of equivalents. See § V.C.

Cisco Br. at 82.

Apart from the arguments about the managing subsystem and management request limitations, which were addressed and analyzed in connection with claim 19, Arista and the Staff do not specifically address subpart a) of claim 1. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products do not satisfy subpart a) because the accused products do not include a managing subsystem and do not externally manage data.

The administrative law judge previously found that the accused products do not include a managing subsystem and do not issue a management request. *See* Parts III(B)(2)(a)(4) and III(B)(2)(a)(5), *supra*. Accordingly, for the reasons provided above, the administrative law judge finds that the redesigned products do not include a managing subsystem and do not transmit a management request that would satisfy subpart a) of claim 1.

(3) b) receiving said management registration request by said database subsystem; and

Cisco argues:

CX-5042C. Further, even if Arista were correct that its redesigned products do not literally meet this requirement, it is met under the doctrine of equivalents. See § VI.D.

Cisco Br. at 83.

Apart from the arguments about the managing subsystem and management request limitations, which were addressed and analyzed in connection with claim 19, Arista and the Staff do not specifically address subpart b) of claim 1. *See generally* Arista Br. at 12-34 (Section IV);

Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products do not satisfy subpart b) because the accused products do not include a managing subsystem and do not externally manage data.

The administrative law judge previously found that the accused products do not include a managing subsystem and do not issue a management request. *See* Parts III(B)(2)(a)(4) and III(B)(2)(a)(5), *supra*. Accordingly, for the reasons provided above, the administrative law judge finds that the redesigned products do not receive a management request that would satisfy subpart b) of claim 1.

(4) c) registering said first managing subsystem for external management by said database subsystem.

Cisco argues:

The Accused Products continue to meet claim 1(c) of the '537 Patent as described above in §§ V.A and V.B.2.c and in the limitation-by-limitation analysis of claim 19. When Sysdb [] it is "registering said first managing subsystem for external management." Further, even if Arista were correct that its redesigned products do not literally meet this requirement, it is met under the doctrine of equivalents. See § VI.D.

Cisco Br. at 83.

Apart from the arguments about the managing subsystem and management request limitations, which were addressed and analyzed in connection with claim 19, Arista and the Staff do not specifically address subpart c) of claim 1. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products do not satisfy subpart c) because the accused products do not include a managing subsystem and do not externally manage data.

The administrative law judge previously found that the accused products do not include a managing subsystem and do not issue a management request. *See* Parts III(B)(2)(a)(4) and III(B)(2)(a)(5), *supra*. Accordingly, for the reasons provided above, the administrative law judge finds that the redesigned products do not register a managing subsystem, for external management, in a manner that would satisfy subpart c) of claim 1.

c) Claim 2

Dependent claim 2 follows:

2. The method of claim 1 further comprising maintaining router configuration data using a tree structure having a plurality of tuples by said database system.

JX-0001 at 15:41-43.

Cisco argues:

The Accused Products continue to infringe claim 2 of the '537 Patent. Arista does not allege that its redesign affected the elements of this claim beyond what is discussed in connection with claim 1 above, and the ID's and Commission's findings thus continue to apply. See, e.g., CX-5719C (944 ID) at 77; see also CX-5002C (Almeroth WS) at Q241.

Cisco Br. at 83.

ľ

Arista and the Staff do not specifically address claim 2. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products satisfy claim 2. In particular, Arista's EOS

| See CX-5002C (Almeroth WS) at Q/A 241.

However, the administrative law judge has determined that claim 2 is not infringed because claim 1 is not infringed. *See Ferring B.V. v. Watson Labs., Inc.-Florida*, 764 F.3d 1401, 1411 (Fed. Cir. 2014) ("Because we hold that the asserted independent claims of Ferring's patents are not infringed, the asserted dependent claims are likewise not infringed.").

d) Claim 8

Dependent claim 8 follows:

- 8. The method of claim 1 further comprising:
 - (a) transmitting a change request for router data by a requesting subsystem to said database subsystem;
 - (b) receiving said change request by said database subsystem;
 - (c) determining whether said router data is externally managed by a second managing subsystem; and
 - (d) requesting a data change for said router data to said second managing subsystem by said database subsystem when said database subsystem determines said router data is externally managed by a second managing subsystem.

JX-0001 at 16:27-39.

Cisco argues:

The Accused Products continue to infringe claim 8 of the '537 Patent. Arista does not allege that its redesign affected the elements of this claim beyond what is discussed above in connection with claim 1, and the ID's and Commission's findings thus continue to apply. See CX-5719C (944 ID) at 77-79; see also CX-5002C (Almeroth WS) at Q242-249.

Cisco Br. at 83.

Arista and the Staff do not specifically address claim 8. See generally Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The administrative law judge finds that Cisco has not shown, by a preponderance of the evidence, that the accused products satisfy claim 8.

Cisco cites Dr. Almeroth's testimony, portions of which follow:

Q242. Dr. Almeroth, do you have an opinion as to whether Arista products infringe claim 8?

A242. Yes, I believe they do, both literally and under the doctrine of equivalents.

Q245. How do Arista's products "receiv[e] said change request by said database subsystem"?

A245. Because, as we've discussed, [

Q246. How do Arista's products "determin[e] whether said router data is externally managed by a second managing subsystem"?

A246. [

]

Q247. How do Arista's products "request[] a data change for said router data to said second managing subsystem by said database subsystem when said database subsystem determines said router data is externally managed by a second managing subsystem"?

A247. This occurs when Sysdb [

1

Q248. Do Arista's products infringe claim 8 in any other ways?

A248. Yes. As I've mentioned, Arista's Sysdb [

] When this happens, when one agent

Q249. Did you find evidence of this in Arista's code? A249. Yes, in fact I found several files that confirmed that this occurs in Arista's code, such as 1 CX-5002C (Almeroth WS) at Q/A 242-249. This questioning and testimony is essentially copied from the corresponding questioning and testimony in the underlying investigation. Compare id. with CX-0007C (Almeroth WS) at Q/A 212-19. Arista has argued that it has removed [I completely and that the redesigned products are now programmed [Arista Br. at 5-10. Dr. McKusick has explained that Arista removed I to Sysdb" and that and that "an agent does not transmit a ["Sysdb does not [I to Sysdb." RX-5129C (McKusick RWS) at Q/A 147-50, 196-99. Given the alterations present in the redesigned products, e.g., changes to the

Given the alterations present in the redesigned products, e.g., changes to the [

] the administrative law judge finds that Cisco has not shown, by a preponderance of the evidence, that [

] are applicable (see CX-5002C (Almeroth WS) at Q/A 246-48) and can support a finding of infringement.

e) Claim 9

Dependent claim 9 follows:

- 9. The method of claim 8 further comprising:
- a) determining whether said router data is locally cached; and
- b) updating the cache value to said router data when said router data is locally cached.

JX-0001 at 16:40-44.

Cisco argues:

The Accused Products continue to infringe claim 9 of the '537 Patent. Arista does not allege that its redesign affected the elements of this claim beyond what is discussed above in connection with claim 1, and the ID's and Commission's findings thus continue to apply. See CX-5719C (944 ID) at 79-80; see also CX-5002C (Almeroth WS) at Q250.

Cisco Br. at 84.

Arista and the Staff do not specifically address claim 9. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The administrative law judge finds that Cisco has not shown, by a preponderance of the evidence, that the accused products satisfy claim 9.

Cisco cites Dr. Almeroth's testimony, which follows:

Q250. Dr. Almeroth, do you have an opinion as to whether Arista products infringe claim 9?

A250. Yes, both literally and under the doctrine of equivalent. As I've discussed previously, Sysdb can [

| which, of course it would know if it had done. And when a [

l as I've

previously discussed.

CX-5002C (Almeroth WS) at Q/A 250. This question and testimony is largely the same as the corresponding question and testimony in the underlying investigation. *Compare id. with* CX-0007C Almeroth WS) at Q/A 220.

Arista has argued that it has removed [] completely and that the redesigned products are now programmed [

] Arista Br. at 5-10. Dr. McKusick has explained that Arista removed [
] and that "an agent does not transmit a [
] to Sysdb" and that
"Sysdb does not [

RX-5129C at Q/A 147-50, 196-99.

Given the alterations present in the redesigned products, e.g., changes to the [

] the administrative law judge finds that Cisco has not shown, by a preponderance of the evidence, that [] are applicable (see CX-5002C (Almeroth WS) at Q/A 250) and can support a finding of infringement.

f) Claim 10

Independent claim 10 follows:

- 10. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for reducing computational overhead in a centralized database system by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is *a first managing subsystem*, said method comprising:
 - (a) transmitting a management registration request by said first managing subsystem to said database subsystem, said registration request indicating router configuration data for which said first managing subsystem is requesting to provide external management services, said router configuration data

managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database;

- (b) receiving said management registration request by said database subsystem; and
- (c) registering said first managing subsystem for external management by said managing subsystem.

JX-0001 at 16:45-67 (emphasis added on disputed limitations (see Staff Br. at 21)).

Cisco argues:

The Accused Products continue to infringe claim 10 of the '537 Patent. Arista does not allege that its redesign affected the elements of this claim beyond what is discussed above in connection with claim 1, and the ID's and Commission's findings thus continue to apply. See, e.g., CX-5719C (944 ID) at 80.

Cisco Br. at 84.

Apart from the arguments about the managing subsystem and management request limitations, which were addressed and analyzed in connection with claim 19, Arista and the Staff do not specifically address claim 10. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products do not satisfy claim 10 because the accused products do not include a managing subsystem and do not externally manage data.

The administrative law judge previously found that the accused products do not include a managing subsystem and do not issue a management request. *See* Parts III(B)(2)(a)(4) and III(B)(2)(a)(5), *supra*. Accordingly, for the reasons provided above, the administrative law judge finds that the redesigned products do not include a managing subsystem and do not issue a management request that would satisfy the preamble of claim 1.

g) Claim 11

Dependent claim 11 follows:

11. The program storage device of claim 10, said method further comprising maintaining router configuration data using a tree structure having a plurality of tuples by said database system.

JX-0001 at 17:1-4.

Cisco argues:

The Accused Products continue to infringe claim 11 of the '537 Patent. The Accused Products infringe claim 10, upon which claim 11 is based. The Accused Products further meet the remainder of claim 11, which is the same as claim 2, for the reasons discussed for claim 2.

Cisco Br. at 84.

Arista and the Staff do not specifically address claim 11 (or claim 2). *See generally*Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The administrative law judge previously found that the accused products satisfy claim 2, but do not infringe claim 2 due to its dependency on claim 1. See Part III(B)(2)(c), supra.

Accordingly, the administrative law judge has determined that claim 11 is not infringed because claims 1 and 2 are not infringed. See Ferring, 764 F.3d at 1411.

h) Claim 17

Dependent claim 17 follows:

- 17. The program storage device of claim 10, said method further comprising:
 - (a) transmitting a change request for router data by a requesting subsystem to said database subsystem;
 - (b) receiving said change request by said database subsystem;

- (c) determining whether said router data is externally managed by a second managing subsystem; and
- (d) requesting a data change for said router data to said second managing subsystem by said database subsystem when said database subsystem determines said router data is externally managed by a second managing subsystem.

JX-0001 at 18:1-13.

Cisco argues:

The Accused Products continue to infringe claim 17 of the '537 Patent. The Accused Products infringe claim 10, upon which claim 17 is based. The Accused Products further meet the limitations in claim 17, which are the same as claim 8.

Cisco Br. at 84.

Arista and the Staff do not specifically address claim 17 (or claim 8). *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The administrative law judge previously found that Cisco had not shown, by a preponderance of the evidence, that the accused products satisfy claim 8. *See* Part III(B)(2)(d), *supra*. Accordingly, for the reasons provided above, the administrative law judge has determined that claim 17 is not infringed.

i) Claim 18

Dependent claim 18 follows:

- 18. The program storage device of claim 17, said method further comprising:
 - (a) determining whether said router data is locally cached; and
 - (b) updating the cache value to said router data when said router data is locally cached.

JX-0001 at 18:14-19.

Cisco argues:

The Accused Products continue to infringe claim 18 of the '537 Patent. The Accused Products infringe claim 17, upon which claim 18 is based. The Accused Products further meet the limitations in claim 18, which are the same as in claim 9.

Cisco Br. at 84.

Arista and the Staff do not specifically address claim 18 (or claims 8, 9, and 17). *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The administrative law judge previously found that Cisco had not shown, by a preponderance of the evidence, that the accused products satisfy claims 17 (or claim 8) and 9. See Parts III(B)(2)(d), III(B)(2)(e) and III(B)(2)(h), supra. Accordingly, for the reasons provided above, the administrative law judge has determined that claim 18 is not infringed.

3. Doctrine of Equivalents

If the accused product does not literally infringe the patent claim, infringement might be found under the doctrine of equivalents. "Under this doctrine, a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co., 520 U.S. 17, 21 (1997) (citing Graver Tank & Mfg. Co. v. Linde Air Products Co., 339 U.S. 605, 609 (1950)). "The determination of equivalence should be applied as an objective inquiry on an element-by-element basis." Id. at 40.

"An element in the accused product is equivalent to a claim limitation if the differences between the two are insubstantial. The analysis focuses on whether the element in the accused

device 'performs substantially the same function in substantially the same way to obtain the same result' as the claim limitation." *AquaTex Indus. v. Techniche Solutions*, 419 F.3d 1374, 1382 (Fed. Cir. 2005) (quoting *Graver Tank*, 339 U.S. at 608); *accord Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1139-40 (Fed. Cir. 2011).

Cisco argues that the redesigned products also infringe under the doctrine of equivalents. See Cisco Br. at 60-75 (Section V(C)). Cisco's brief presents a general comparison of overall attributes of the redesigned products to the claimed router. Cisco focuses its arguments in a footnote, as follows:

In an attempt to create artificial gaps between the redesigned products and the claims, Arista argues that three separate limitations need to be analyzed under the doctrine of equivalents. RX-5129C (McKusick RWS) at Q402. But *there is, in actuality, only one claim limitation at issue:* "transmitting a management registration request by said first managing subsystem to said database subsystem," and Arista's attempt to argue otherwise is legally improper. *See Brilliant Instruments, Inc. v. GuideTech, LLC*, 707 F.3d 1342, 1347 (Fed. Cir. 2013). Moreover, as discussed above, Arista's redesign is equivalent whether the claim is treated as having one or three requirements.

Cisco Br. at 62, n.16 (emphasis added). The language for the "only one claim limitation at issue" appears in claims 1 and 10 only. See JX-0001 at 15:22-40; 16:45-67. Cisco's brief

⁸ "The known interchangeability of substitutes for an element of a patent is one of the express objective factors noted by *Graver Tank* as bearing upon whether the accused device is substantially the same as the patented invention. Independent experimentation by the alleged infringer would not always reflect upon the objective question whether a person skilled in the art would have known of the interchangeability between two elements, but in many cases it would likely be probative of such knowledge." *Warner Jenkinson*, 520 U.S. at 36.

⁹ For example, Cisco has argued: "As demonstrated below, Arista's redesigned EOS infringes because it perform the same function, in the same way, to achieve the same result as each of the claim limitations." Cisco Br. at 60-61.

¹⁰ To the extent Cisco is asserting the doctrine of equivalents for other limitations (*see*, *e.g.*, Cisco Br. at 61, arguing that "[t]he 'result' of the claim limitations in the '537 patent is also identical as between the claimed system and Arista's redesign"), the administrative law judge

contends that the redesigned products are insubstantially different, an argument it presents "by application of the function-way-result test." *Id.* at 61. Cisco's brief also includes disintegrated discussions about [] (at 62-63), the [] command (at 63-64), Arista's argument about [] (at 64), vitiation (at 64-65), Arista's expert's testimony (at 65-66), the [] aspects of the redesign (at 66), and Arista documents describing changes between the redesigned EOS and its predecessor (at 66-67).

Arista argues that prosecution history estoppel and vitiation bar Cisco's equivalence argument. Arista Br. at 38-44, 48-49. Arista further argues that the redesigned products are not insubstantially different from the claimed router. *Id.* at 44-48.

The Staff focuses on prosecution history estoppel and concludes that the redesigned products do not infringe under the doctrine of equivalents. Staff Br. at 37-48.

a) Prosecution History Estoppel

Prosecution history estoppel can prevent a patentee from relying on the doctrine of equivalents when the patentee relinquished subject matter during the prosecution of the patent, either by amendment or argument. *AquaTex*, 419 F.3d at 1382. In particular, "[t]he doctrine of prosecution history estoppel limits the doctrine of equivalents when an applicant makes a narrowing amendment for purposes of patentability, or clearly and unmistakably surrenders subject matter by arguments made to an examiner." *Id.* (quoting *Salazar v. Procter & Gamble Co.*, 414 F.3d 1342, 1344 (Fed. Cir. 2005)).

For amendment-based estoppel, Arista argues:

finds that those limitations are an improper general comparison between the redesigned EOS and non-specific claim limitations. *See DeMarini Sports, Inc. v. Worth, Inc.*, 239 F.3d 1314, 1332 (Fed. Cir. 2001) ("in this case, the district court properly avoided such a general comparison and instead compared the limitations of the claims with the specific elements of the accused device. In making this proper comparison, the district court did not accept DeMarini's argument of insubstantial differences.").

First, after the Patent Office rejected its claims in view of the prior art, Cisco amended and narrowed claim 19. Cisco's amendment [submitted on September 6, 2005], with newly added limitations indicated with underscoring in the original (and to which we have added highlighting), is shown below:

- 19. (Currently Amended) In a router device having a processor and memory, a router operating system executing within said memory comprising:
 - (a) a database subsystem;
- (b) a plurality of client subsystems, each operatively coupled for communication to said database subsystem, one of said client subsystems configured as a managing subsystem to externally manage router data upon issuing a management request to said database subsystem; and
- (c) a database operatively coupled to said database subsystem, said database structured and configured to store router configuration data and delegate management of router configuration data to a management subsystem that requests to manage router configuration data, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database.

JX-0007 ('537 Patent file history) at CSI-ANI-00098149.000471; see also RX-5129C (McKusick RWS) at Q/A 367-75.

Second, Cisco amended claim 19 for substantial reasons relating to patentability. Amendments "added to overcome a previous rejection" of the claim by the Patent Office are a substantial reason relating to patentability. EMD Millipore, 768 F.3d at 1204. Cisco amended claim 19 after the examiner rejected it as obvious in view of a prior art patent issued to an earlier inventor named Ciscon. JX-0007 ('537 Patent file history) at CSI-ANI-00098149.000462. According to the examiner, Ciscon discloses a "subsystem" that sends "registration requests" or "interest objects" that tell the "receiving router" about "objects" that the subsystem is interested in receiving, so that it can receive such objects. Id. at CSI-ANI-00098149.000150-158. After Cisco added the "managing subsystem" issuing a "management request" and "managing subsystem that requests to manage" limitations to claim 19, and

argued that similar limitations in claims 1 and 10 distinguish the claimed invention from the Ciscon prior art, the examiner allowed claim 19 without further amendment. *Id.* at CSI-ANI-00098149.000534-35.

Not only did Cisco narrow its claims for reasons directly related to patentability, it did so to distinguish its invention and disclaim the kind of technology that Arista uses in the redesigned EOS. The Ciscon prior art reference, which Cisco amended its claims to avoid, described a subsystem that sends a request and then receives an object. *See, e.g., id.* at CSI-ANI-00098149.000155 ("the managing subsystem receives the 'interest change object'"). And in the redesigned EOS, [

Cisco's expert Dr. Almeroth agrees that this is how the redesigned EOS works:

Hrg. Tr. (Almeroth) at 113:3-

6. Having amended its claims to disavow [

Cisco cannot now exploit the doctrine of equivalents to recapture this surrendered territory. See Festo II, 344 F.3d at 1367....

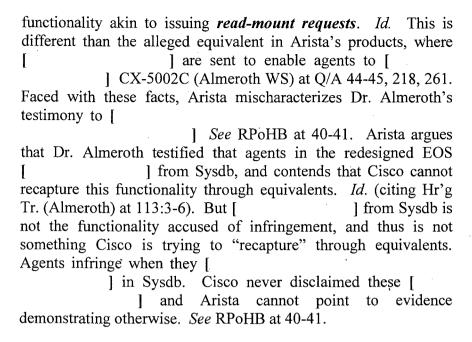
Arista Br. at 39-41 (emphasis added by Arista). Arista then critiques Cisco's arguments. *Id.* at 41-44.

The Staff notes that Examiner allowed claim 19 after the September 6, 2005 amendment. *See id.* at 40 (citing JX-0007 ('537 file history) at CSI-ANI-00098149.000471-72). The Staff then argues that the amendment "was made for a substantial reason relating to patentability" and that Cisco has not rebutted the *Warner-Jenkinson* presumption. *Id.* at 42. The Staff concludes that estoppel bars Cisco's equivalency argument. *See id.* at 43.¹¹

For argument-based estoppel, Cisco replies that:

Arista's argument-based estoppel argument also fails, because Cisco never disclaimed the proposed equivalent here in any of its arguments during prosecution. Nor did it need to: in Ciscon, subsystems would register to be informed about certain data,

¹¹ Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 740 (2002) explained that "[w]hen the patentee is unable to explain the reason for amendment, estoppel not only applies but also 'bar[s] the application of the doctrine of equivalents as to that element."



Cisco Reply at 28-29 (emphasis added by Cisco).

The Staff notes that:

Throughout the underlying investigation and this enforcement, the parties have agreed that the terms "management request" and "management registration request" mean the same thing. . . . Nevertheless, Cisco now argues that "the language in claims 1 and 10 is not identical to the amendment added to claim 19, so there is no risk of interpreting the limitations differently in different claims." Cisco IPHB at 68. . . . Cisco's new argument that interpreting the language of claim 19 differently from claims 1 and 10 would not result in inconsistent interpretation of the claim terms is flatly contradicted by the patent and the positions taken by Cisco up to this point.

Staff Reply at 14.

(1) Amendment-Based Estoppel

The administrative law judge finds that amendment-based estoppel bars Cisco's doctrine of equivalents arguments.

"A patentee's decision to narrow his claims through amendment may be presumed to be a general disclaimer of the territory between the original claim and the amended claim." Festo

Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 740 (2002) ("Festo"). A complainant can rebut the presumption by showing the equivalent would "have been unforeseeable at the time of the application[,]" "the rationale underlying the amendment [bore] no more than a tangential relation to the equivalent in question[,]" or that there was "some other reason" why "the patentee could not reasonably be expected to have described the insubstantial substitute in question." See id. at 740-41. The complainant bears "the burden of showing that the amendment does not surrender the particular equivalent in question." Id. at 740.

The Examiner issued six Office Actions and three Advisory Actions during prosecution. ¹² In general, all of the rejections relied upon Ciscon et al., U.S. Patent No. 5,634,010 ("Ciscon"). In response, the applicant argued against Ciscon and essentially amended the claims once, on September 6, 2005. Additional details follow:

- In the July 22, 2003 Office Action, the Examiner rejected all of the claims based on Ciscon. *See* JX-0007 at CSI-ANI-00098149.000149. The applicant replied on October 22, 2003. *Id.* at .000201. The reply argued against Ciscon without presenting any meaningful amendments. *Id.* at .000202-18 (generally not amending the claims; the "database subsystem" limitation was introduced); *id.* at .000219-29 (arguing that Ciscon does not teach various limitations of the pending claims).
- In the December 12, 2003 Office Action, the Examiner found that the applicant's arguments were "not persuasive" and again rejected all of the pending claims based on Ciscon. *See* JX-0007 at CSI-ANI-00098149.000233-34. The applicant replied on February 12, 2004. *Id.* at .000244, .000260. The reply submitted "that Ciscon does not teach, suggest, nor otherwise suggest the limitations of claim of the present application for reasons stated previously." *Id.* at .000234. No new claim amendments were presented. *Id.* at .000245-58.
- The Examiner issued an Advisory Action on March 1, 2004 that maintained the rejection. *Id.* at 000262. The applicant filed a request for continued examination

¹² See JX-0007 at CSI-ANI-00098149.000146 (July 22, 2003 Office Action); at .000231 (December 12, 2003 Office Action); at .000261 (March 1, 2004 Advisory Action); at .000307 (May 7, 2004 Office Action); at .00354 (October 21, 2004 Office Action); at .000394 (February 24, 2005 Advisory Action); at .00420 (May 6, 2005 Office Action); at .000458 (August 5, 2005 Advisory Action); at .00478 (November 30, 2005 Office Action).

("RCE"). See id. at .000280 (March 17, 2004), .000302 (March 31). The RCEs did not present any new claim amendments. Id. at .000266-79 (March 17, 2004), .000287-300 (March 31).

- In the May 7, 2004 Office Action, the Examiner maintained the rejection of all claims as unpatentable over Ciscon. *See* JX-0007 at CSI-ANI-00098149.000311. The applicant filed a reply on August 9, 2004 that argued against Ciscon. *Id.* at .000337, .000339-43 (presenting emphatic argument against Ciscon). The reply did not present any claim amendments. *Id.* at .000320-36.
- In the October 21, 2004 Office Action, the Examiner again maintained the rejection of all claims as unpatentable over Ciscon. *See* JX-0007 at CSI-ANI-00098149.000360. The applicant replied on December 22, 2004, again emphatically arguing against Ciscon. *Id.* at .000372, .000387-90. The reply did not present any claim amendments. *Id.* at .000373-86.
- The Examiner issued an Advisory Action on February 24, 2005 that maintained the rejection. *Id.* at .000394-95. The applicant filed an RCE on March 29, 2005. *Id.* at .000396. The RCE did not amend any claims. *Id.* at .000399-412. The RCE presented additional emphatic argument against Ciscon. *Id.* at .000413-16.
- On May 6, 2005, the Examiner issued an Office Action. See JX-0007 at CSI-ANI-00098149.000420. The Examiner again maintained the rejection of all claims as unpatentable over Ciscon. *Id.* at .000424. The applicant replied on July 6, 2005. *Id.* at .000437-56, .000461.
- The Examiner issued an Advisory Action on August 5, 2005. *Id.* at .000458-59. The applicant filed an RCE on September 6, 2005. *Id.* at .000473-74. The RCE amended claims 1, 10, and 19. *Id.* at .000465-72. It also presented argument against Ciscon. *Id.* at .000462-64.
- In the November 30, 2005 Office Action, the Examiner rejected all of the pending claims as unpatentable over Ciscon. See JX-0007 at CSI-ANI-00098149.000482. The applicant replied on February 28, 2006. Id. at .000505. The applicant presented argument against Ciscon but did not further amend the claims. Id. at .00495-504 (presenting original and previously amended claims), .000518-.000525 (same), .000506-08 (arguing against Ciscon), .000515-17 (same).
- The Examiner entered a Notice of Allowance on August 30, 2006. *See* JX-0007 at CSI-ANI-00098149.000537.

As noted above, in response to the May 6, 2005 rejection, Cisco amended the claims on September 6, 2005. Cisco amended claim 19 as follows:

- 19. (Currently Amended) In a router device having a processor and memory, a router operating system executing within said memory comprising:
 - (a) a database subsystem;
- (b) a plurality of client subsystems, each operatively coupled for communication to said database subsystem, one of said client subsystems configured as a managing subsystem to externally manage router data upon issuing a management request to said database subsystem; and
- (c) a database operatively coupled to said database subsystem, said database structured and configured to store router configuration data and delegate management of router configuration data to a management subsystem that requests to manage router configuration data, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database.

JX-0007 at CSI-ANI-00098149.000471-72.

The administrative law judge finds that this amendment narrowed the scope of claim 19 because it added several express limitations. Thus, the amendment creates a rebuttable presumption that estoppel applies. *See Warner-Jenkinson*, 520 U.S. at 33-34.

The prosecution history further shows that the reason for the amendment was substantially related to patentability. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359, 1366 (Fed. Cir. 2003) ("the second question is whether the reason for that amendment was a substantial one relating to patentability") ("*Festo II*"). Before the September 6, 2005, amendment, the Examiner had issued five office actions and three advisory actions. *See generally* JX-0007 (bulleted summary above). After the amendment, the Examiner issued another rejection, to which the applicant replied:

Independent claims 1, 10, and 19 (all pending independent claims) were previously amended to include the claim limitation of

transmitting a management registration request by said first managing subsystem to said database subsystem, said registration request indicating router configuration data for which said first managing subsystem is requesting to provide external management services, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database

. .

Finally, there is no disclosure, teaching, or suggestion in Ciscon that execution of user-supplied configuration commands results in configuration data that is stored in a database. As the present invention performs this claim limitation to manage router configuration data in conjunction with a centralized database, the novelty here is that this claim limitation provides a way to incorporate a database into managing user-supplied configuration commands, not properties of data structures, to more effectively configure routers deployed in a network.

JX-0007 at CSI-ANI-00098149.000506-07 (bold emphasis added by applicant). The applicant's comments that "the present invention performs this claim limitation to manage router configuration data in conjunction with a centralized database" relates to the amendment, and thus relates to patentability. Further, the applicant's many unsuccessful attempts to argue over Ciscon also confirm that the amendment was critical to obtaining allowance. Accordingly, the administrative law judge finds that the amendment was substantially related to patentability.

The prosecution history shows that the patentee surrendered subject matter pertaining to management requests and databases that are configured to store router configuration data and

¹³ The Notice of Allowance stated that: "Claims 1-22 are allowed in view of the Applicant's arguments and the cited prior art of record. The independent claims recite registering a managing subsystem with a centralized database to externally manage router configuration data derived from configuration commands supplied by a user which, in addition to the rest of the claim limitations, are distinguished from the prior art." JX-0007 at CSI-ANI-00098149.000535.

"delegate management of router configuration data to a management subsystem that requests to manage router configuration data said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database." See JX-0007 at CSI-ANI-00098149.000471-72 (emphasis added); Festo II, 344 F.3d at 1367 ("the third question in a prosecution history estoppel analysis addresses the scope of the subject matter surrendered by the narrowing amendment"); Honeywell Int'l Inc. v. Hamilton Sundstrand Corp., 370 F.3d 1131, 1141 (Fed. Cir. 2004) (finding an amendment adding a new limitation giving rise to estoppel). In other words, the surrendered scope relates to equivalents of databases that delegate management to a managing subsystem that uses management requests. See Festo II, 344 F.3d at 1372 (finding disclaimer of "devices that include other than two sealing rings"). This surrender applies not only to claim 19, but also to claims 1 and 10. See id. at 1370 n.4 ("the Festo presumption of surrender and its rebuttal apply to all granted patents and to all pending litigation that has not been concluded with a final judgment, including appeals."); Builders Concrete, Inc. v. Bremerton Concrete Prods., 757 F.2d 255, 260 (Fed. Cir. 1985).

(2) Rebuttal to the *Festo* Presumption

The Federal Circuit explained that the Supreme Court articulated three ways in which prosecution history estoppel may not apply to a given case:

As indicated above, the Court identified the three ways in which the patentee may overcome the presumption. Specifically, the patentee must demonstrate that [(1)] the alleged equivalent would have been unforeseeable at the time of the narrowing amendment, that [(2)] the rationale underlying the narrowing amendment bore no more than a tangential relation to the equivalent in question, or

¹⁴ To the extent it is later determined that the scope of the estoppel is different, this initial determination has analyzed Cisco's doctrine of equivalents arguments independent of the scope of the estoppel.

that [(3)] there was "some other reason" suggesting that the patentee could not reasonably have been expected to have described the alleged equivalent.

Festo II, 344 F.3d at 1368. Cisco argues that these exceptions "prevent estoppel from applying[.]" Cisco Br. at 72.

(a) The First Festo Criterion

The Federal Circuit has explained:

The first criterion requires a patentee to show that an alleged equivalent would have been "unforeseeable at the time of the amendment and thus beyond a fair interpretation of what was surrendered." *Id.* at 738, 122 S.Ct. 1831. This criterion presents an objective inquiry, asking whether the alleged equivalent would have been unforeseeable to one of ordinary skill in the art at the time of the amendment. . . . By its very nature, objective unforeseeability depends on underlying factual issues relating to, for example, the state of the art and the understanding of a hypothetical person of ordinary skill in the art at the time of the amendment. Therefore, in determining whether an alleged equivalent would have been unforeseeable, a district court may hear expert testimony and consider other extrinsic evidence relating to the relevant factual inquiries.

Festo II, 344 F.3d at 1369.

Cisco argues that Arista has conceded the redesign was unforeseeable by arguing that the redesign employs a "very different [] approach to establishing [] and never described or claimed it in the '537 Patent.'" Cisco Br. at 73 (quoting Arista Pre-Hr'g Br. at 67). Cisco then adds:

Arista's superficial change embodied in the redesign was insignificant, see, e.g., CX-5002C (Almeroth WS) at Q215, and a patentee would not have foreseen the particular implementation details Arista now alleges are so significant that the redesign does not infringe literally or under the doctrine of equivalents. This also explains why the third Festo exception would apply: a patentee could not have been expected to describe every permutation containing insignificant implementation nuances. Festo, 344 F.3d at 1370.

Id. at 73-74. This is the testimony that Cisco relies upon:

CX-5002C (Almeroth WS) at Q/A 215.

The evidence does not show that the alleged equivalent would have been "unforeseeable at the time of the amendment and thus beyond a fair interpretation of what was surrendered," as *Festo* requires. Rather, the evidence cited pertains to the differences between the redesigned EOS and its predecessor. Further, evidence cited by Arista indicates that the redesigned products were foreseeable. *See* Arista Br. at 42; RX-5129C (McKusick RWS) at Q/A 156, 175, 178, 225, 389. Accordingly, the administrative law judge has determined that Cisco has fallen short of its burden of showing that equivalent was unforeseeable at the time of the amendment.

(b) The Second Festo Criterion

The Federal Circuit has explained:

The second criterion requires a patentee to demonstrate that "the rationale underlying the narrowing amendment [bore] no more than a tangential relation to the equivalent in question." [Festo], 535 U.S. at 740, 122 S.Ct. 1831. In other words, this criterion asks whether the reason for the narrowing amendment was peripheral, or not directly relevant, to the alleged equivalent. . . . Although we cannot anticipate the instances of mere tangentialness that may

arise, we can say that an amendment made to avoid prior art that contains the equivalent in question is not tangential; it is central to allowance of the claim. . . . whether the patentee has established a merely tangential reason for a narrowing amendment is for the court to determine from the prosecution history record without the introduction of additional evidence, except, when necessary, testimony from those skilled in the art as to the interpretation of that record.

Festo II, 344 F.3d at 1369-70.

Cisco's entire opening argument is:

Starting with the second Festo exception, the rationale underlying the amendment adding the "management request" language to claim 19 bore no more than a tangential relation to the equivalent in question. As explained more fully below, the patentee argued for claims 1 and 10, and subsequently claim 19, that the request pointed to by the examiner in the Ciscon reference was a "request to be served," whereas the claims contained a request to serve, i.e., a request to manage. See, e.g., JX-0007 ('537 Patent File History) at 0413; CX-5713 (Ciscon) at 2:53-66. Thus, if anything, the patentee disclaimed requests to "be served" by local router - the opposite of a request to serve or manage. See, e.g., CX-5713 (Ciscon) at Abstract ("Each router process includes a connection table listing its connections with all other router and application processes, as well as an interest table listing the type of objects that each of the other processes are interested in receiving."), 2:53-66 ("Each application process registers its interest in receiving certain types of objects with its local router."), 8:57-59 ("If an application or router process desires to receive data of a particular type, it registers an interest by invoking a routine ") This distinction bears no relationship to the equivalent at hand. The question here is whether it is equivalent to [

and whether the [] at all, due to its contents allegedly not indicating to an outside observer that it is a [] and what [] None of the issues in the equivalents question here have anything to do with what was being distinguished in the prosecution history, which is a "request to be served," as opposed to a request to serve.

Cisco Br. at 72-73 (emphasis omitted).

Arista's entire opening argument is:

] Hrg. Tr. (Almeroth) at 113:3-6.

Arista Br. at 42-43 (emphasis omitted).

The evidence, along with Cisco's argument, does not show that the rationale underlying the narrowing amendment bore no more than a tangential relation to the equivalent in question. Cisco cites to JX-0007 at CSI-ANI-00098149.000413, which is the "REMARKS" section from the response accompanying the March 24, 2005 RCE. The amendment was submitted on September 6, 2005. *See id.* at .000464, .000473 (showing a Sept. 6, 2005 submission that responds to the August 5, 2005 Advisory Action). Cisco's argument about the March 24, 2005 remarks does not sufficiently explain how the September 6, 2005 amendment bore no more than a tangential relation to the equivalent in question. Accordingly, the administrative law judge has determined that Cisco has fallen short of its burden of showing that the narrowing amendment bore no more than a tangential relation to the equivalent in question.

¹⁵ The response begins at CSI-ANI-00098149.000398.

¹⁶ The applicant argued that, with regard to the amended claim, "the novelty here is that this claim limitation provides a way to incorporate a database into managing user-supplied configuration commands, not properties of data structures, to more effectively configure routers deployed in a network." JX-0007 at CSI-ANI-00098149.000516; *see also id.* at .000515 (arguing that "Ciscon fails to disclose, teach or otherwise suggest executing configuration commands before storing them in a database.").

(c) The Third Festo Criterion

The Federal Circuit has explained:

The third criterion requires a patentee to establish "some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question." [Festo], 535 U.S. at 741, 122 S.Ct. 1831. This category, while vague, must be a narrow one; it is available in order not to totally foreclose a patentee from relying on reasons, other than unforeseeability and tangentialness, to show that it did not surrender the alleged equivalent. Thus, the third criterion may be satisfied when there was some reason, such as the shortcomings of language, why the patentee was prevented from describing the alleged equivalent when it narrowed the claim. When at all possible, determination of the third rebuttal criterion should also be limited to the prosecution history record.

Festo II, 344 F.3d at 1370.

Cisco's argument for the "other reason" criterion is presented along with its unforeseeable-at-the-time-of-the-amendment argument. See Cisco Br. at 73-74. Cisco adds a single sentence that is unique to the third criterion, which is "[t]his also explains why the third Festo exception would apply: a patentee could not have been expected to describe every permutation containing insignificant implementation nuances." Id. The evidence, along with Cisco's argument, does not provide "some other reason" why the applicant could not reasonably be expected to have described the insubstantial substitute in question. Cisco has not shown why the patentee could not have described "every permutation"—indeed, it has not even offered how many permutations (which are presumably akin to different or alternative embodiments) might exist. Further, to the extent Cisco's argument relies on its unforeseeable-at-the-time-of-the-amendment argument, that argument is not an independent "other reason" that would warrant wading into the "narrow" confines of this criterion. See Festo II, 344 F.3d at 1370. Finally, Cisco has not directly argued that a shortcoming of language prevented it from describing the

equivalent in question. *Id.* Accordingly, the administrative law judge has determined that Cisco has fallen short of its burden of showing that some other reason prevents the *Festo* presumption from extinguishing Cisco's equivalency argument.

(3) Argument-Based Estoppel

For argument-based estoppel, Cisco argues:

Arista's argument-based estoppel argument also fails, because Cisco never disclaimed the proposed equivalent here in any of its arguments during prosecution. Nor did it need to: in Ciscon, subsystems would register to be informed about certain data, functionality akin to issuing read-mount requests. Id. This is different than the alleged equivalent in Arista's products, where I are sent to enable agents to I CX-5002C (Almeroth WS) at Q/A 44-45, 218, 261. Faced with these facts, Arista mischaracterizes Dr. Almeroth's testimony to make it appear as though its system operates in a similar fashion to Ciscon. See RPoHB at 40-41. Arista argues that Dr. Almeroth testified that agents in the redesigned EOS [I from Sysdb, and contends that Cisco cannot recapture this functionality through equivalents. Id. (citing Hr'g Tr. (Almeroth) at 113:3-6). But [I from Sysdb is not the functionality accused of infringement, and thus is not something Cisco is trying to "recapture" through equivalents. Agents infringe when they [I in Sysdb. Cisco never disclaimed these [l and Arista cannot point to evidence demonstrating otherwise. See RPoHB at 40-41.

Cisco Br. at 28-29 (emphasis added by Cisco).

Arista argues:

command [] CX-5002C (Almeroth WS) at Q/A 123; see also Staff P.H. Br. at 23 (citing RX-5129C (McKusick RWS) at Q/A 31-32; RX-5131C (Sweeney RWS) at Q/A 70). Cisco is wrong to suggest there is "no relationship" between the prior art and the [] command, and argument-based estoppel applies.

Id. at 44 (emphasis added by Arista).

Cisco replies:

Arista's argument-based estoppel argument also fails, because Cisco never disclaimed the proposed equivalent here in any of its arguments during prosecution. Nor did it need to: in Ciscon, subsystems would register to be informed about certain data, functionality akin to issuing read-mount requests. Id. This is different than the alleged equivalent in Arista's products, where are sent to enable agents to [CX-5002C (Almeroth WS) at Q/A 44-45, 218, 261. Faced with these facts, Arista mischaracterizes Dr. Almeroth's testimony to make it appear as though its system operates in a similar fashion to Ciscon. See RPoHB at 40-41. Arista argues that Dr. Almeroth testified that agents in the redesigned EOS Ifrom Sysdb, and contends that Cisco cannot recapture this functionality through equivalents. Id. (citing Hr'g Tr. (Almeroth) at 113:3-6). But [I from Sysdb is not the functionality accused of infringement, and thus is not something Cisco is trying to "recapture" through equivalents. Agents infringe when they [in Sysdb. Cisco never disclaimed these [1 and Arista cannot point to evidence demonstrating otherwise. See RPoHB at 40-41.

Cisco Reply at 28-29 (emphasis added by Cisco).

Arista replies:

] *Id.*; see also JX-0007 ('537 Patent file history) at CSI-ANI-00098149.000339; RX-5129C (McKusick RWS) at Q/A 383-86; Resp. Br. at 44. But Cisco's own expert testified that

"[t]he [

]—*i.e.*, a [] CX-5002C (Almeroth) at Q/A

123. The attorney arguments Cisco makes in its brief war with its own expert's testimony and should be disregarded. *See* Resp. Br. at 44; *see also* Staff Br. at 37-43.

Arista Reply at 22-23 (emphasis added by Arista).

The Federal Circuit has explained that to invoke argument-based estoppel, "the prosecution history must evince a clear and unmistakable surrender of subject matter." *Conoco, Inc. v. Energy & Envtl. Int'l, L.C.*, 460 F.3d 1349, 1364 (Fed. Cir. 2006) (quoting *Deering Precision Instruments, LLC v. Vector Distrib. Sys., Inc.*, 347 F.3d 1314, 1324 (Fed. Cir. 2003)). Arista and the Staff have not pointed to any language from the prosecution history that constitutes a clear and unmistakable surrender of subject matter. *See, e.g., PODS, Inc. v. Porta Stor, Inc.*, 484 F.3d 1359, 1368 (Fed. Cir. 2007) (finding arguments distinguishing the invention based upon a rectangular-shaped frame "surrendered any claim to a frame that was not rectangular or four-sided"). Accordingly, the administrative law judge finds that argument-based estoppel is not applicable.

b) Vitiation

For vitiation and the all-elements rule, the Federal Circuit has explained that:

... in certain instances, the "all elements" rule forecloses resort to the doctrine of equivalents because, on the facts or theories presented in a case, a limitation would be read completely out of the claim—i.e., the limitation would be effectively removed or "vitiated." . . . We have also concluded that in some cases, the patentee's theory of equivalence was legally insufficient because, rather than demonstrate an insubstantial difference between a limitation and an element in the accused device, the theory effectively eliminated a limitation in its entirety. . . Thus, the "all elements" rule generally is not met—and therefore a claim limitation can be said to be vitiated—if the theory or evidence of equivalence is legally incapable of establishing that the differences between the limitation in the claim and the accused device are

insubstantial; *i.e.*, if the theory or evidence is so legally insufficient as to warrant a holding of non-infringement as a matter of law.

DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc., 469 F.3d 1005, 1017 (Fed. Cir. 2006) (citations omitted); see also Deere & Co. v. Bush Hog, LLC, 703 F.3d 1349, 1356 (Fed. Cir. 2012) ("'Vitiation' is not an exception to the doctrine of equivalents, but instead a legal determination that 'the evidence is such that no reasonable jury could determine two elements to be equivalent.'").

Arista argues:

... In its prehearing brief, Arista explained that Cisco's attempt to equate the redesigned EOS's transmission of a [I with the '537 Patent claims' command by the entity [requirement that a "management registration request" be sent by a "managing subsystem" would vitiate—that is, render entirely inconsequential—the claims' requirement that the thing that transmits the request be the external data manager. Resp. P.H. Br. at 108. Similarly, equating [I to the claimed "managing subsystem" would vitiate the requirement of having a managing subsystem that does "managing." Id. And equating the [command (which I with the claimed "management does not [request" would vitiate the requirement that the request actually be one to manage data and indicate the data to be managed. Id.

Arista's redesigned EOS, in which [I have been removed, in which agents cannot [and in which [l—issues a [I command, is the very "antithesis" of the claimed invention: a request-based approach to external management, in which a "managing subsystem" requests to manage data. In the redesigned EOS, agents, which before were found to be the "managing subsystem" of the claims, no longer I which were found to be "management registration requests." And the only command that could arguably be accused to be such a request in the redesigned EOS, the I command, does not request registration or emanate from anything resembling a "managing subsystem." Supra at Sections IV.A, IV.B; see also RX-5131C (Sweeney RWS) at Q/A

83-86; RX-5129C (McKusick RWS) at Q/A 156-57. These are not mere "small variations" as Cisco suggests. Compl. P.H. Br. at 136. These are major changes that turned Arista's legacy EOS from a [] system that was found to infringe to a [] system that avoids fundamental limitations of the claims. Vitiation does not apply simply because Arista does not literally infringe; it applies because the equivalents Cisco accused of infringing are the opposite of what it claimed to have invented.

Arista Br. at 49 (emphasis added by Arista).

Cisco argues:

Second, and most tellingly, Arista improperly asserts, without support, that transmitting the management registration request from anything other than the managing subsystem "cannot be equivalent" to transmitting it from the managing subsystem due to the claim vitiation doctrine. See, e.g., RX-5129C (McKusick RWS) at Q362 ("Having something other than the managing subsystem send the accused message is not and cannot be equivalent."). Here, application of the doctrine of equivalents hardly "vitiates" the limitation. There is a [] sent on behalf of the agent, by a process that is logically, functionally, architecturally, and in all other meaningful respects, connected to the agent, using functionality already found to meet the claim limitations. See supra § V.B.2.c.

Cisco Br. at 64-65 (emphasis omitted). Cisco adds that Arista's application of vitiation would render "the doctrine of equivalents meaningless." *Id.* at 65.

Arista's reply does not address vitiation. See generally Arista Reply.

The administrative law judge has addressed Arista's vitiation-related arguments within the context of the function-way-result analysis, which follows. *See* Part III(B)(3)(c), *infra*. As reflected in that analysis, the requirement that a "management registration request" be sent by a "managing subsystem" has not lost significance or been rendered entirely inconsequential. *Id*.

c) Function-Way-Result Analysis

"An element in the accused product is equivalent to a claim limitation if the differences between the two are insubstantial. The analysis focuses on whether the element in the accused

device 'performs substantially the same function in substantially the same way to obtain the same result' as the claim limitation." *AquaTex Indus. v. Techniche Solutions*, 419 F.3d 1374, 1382 (Fed. Cir. 2005) (quoting *Graver Tank*, 339 U.S. at 608); *accord Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1139-40 (Fed. Cir. 2011). "The determination of equivalence should be applied as an objective inquiry on an element-by-element basis." *Warner-Jenkinson*, 520 U.S. at 40.

(1) The Function

Cisco argues:

Those insubstantial changes [between the redesigned EOS and its predecessor, which was found to infringe the '537 Patent,] are highlighted by application of the function-way-result test. First, the "function" of the "transmitting a management registration request by said first managing subsystem to said database subsystem" and "issuing a management request to said database subsystem" claim limitations in the '537 Patent is to register a subsystem for management. JX-0001 ('537 Patent) at 15:28-29, 18:28-29. This identical function is present in Arista's redesigned products. As explained above, the function of [

] Hr'g Tr. (McKusick) at 261:25-262:4. This is not an ancillary effect but rather the exact role the [] command plays in the system Arista redesigned. *Id.* at 261:15-24.

Cisco Br. at 61 (emphasis added). This is the testimony Cisco cites:

Q Okay. I'm going to show you your deposition, it's on page 119, starting at line 24, to 120, line 5. And it's going to cut over two pages, but I'll show it to you here on the screen. And you were asked -- there's a little bit of preliminary colloquy that we then started over. But starting at line 24, page 119 you were asked, "other than [

] are

there any other functions for the [command?

¹⁷ "Infringement, whether literal or under the doctrine of equivalents, is a question of fact." *Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1130 (Fed. Cir. 2011).

"Answer: That's the role of the [] in command." Was that your testimony?	the [
A Yes.	
Q Okay. Now, when Sysdb is provided the [causes Sysdb to]] that
] correct?

A That is correct.

McKusick Tr. at 261-62.

Arista's brief analyzes the ". . . Differences Between the Redesigned EOS and the Claims of the '537 Patent[.]" Arista Br. at 44 (this is the heading for Section IV(D)(2)). Arista argues that "[t]he function of 'transmitting a management registration request by said first managing subsystem to said database subsystem' is, as the functional claim language itself makes plain, that the managing subsystem sends a request to the database subsystem." *Id.* at 45 (citing RX-5129C (McKusick RWS) at Q/A 421).

Cisco replies:

First, the "function" of the limitation is to transmit a registration request to Sysdb to register a subsystem for external management, which is exactly the function [I performs when it sends the [command to Sysdb in Arista's redesigned Hr'g Tr. (McKusick) at 261:25-262:4; CX-5002C system. (Almeroth WS) at Q/A 208-210. Arista contends that the "function" is not the same because "an entity that is not a managing subsystem RPoHB at 45 (emphasis in original). As noted above, however, this is simply a reapplication of Arista's literal infringement analysis. Moreover, Arista's analysis conflates the way in which the claims transmit the request—via the agent or via a process on behalf of the agent—with the function of Even if the "way" the requested is transmitted is considered to be part of the claimed function, however, it is insubstantially different from the claims for the reasons explained below.

Cisco Reply at 23 (emphasis added by Cisco).

Arista replies that Cisco has confused the relevant function with another claim limitation:

Cisco first claims that the function of "transmitting a management registration request by said first managing subsystem to said database subsystem' and 'issuing a management request to said database subsystem' claim limitations in the '537 Patent is to register a subsystem for management." Compl. Br. at 60. This confuses the function of one limitation with another separate limitation of the claims: registration. "Registering" a managing subsystem is its own discrete limitation of claims 1 and 10 (step c), and is similarly addressed in the separate limitation of "delegat[ing] management" to a management subsystem in claim 19 (element c). JX-0001 ('537 Patent). The true function of "transmitting a management registration request by said first managing subsystem to said database subsystem" is, as the claim language makes plain, that the managing subsystem sends a request to the database subsystem. Id. at cls. 1, 10, 19; RX-5129C (McKusick RWS) at Q/A 421. No such function exists in the redesigned EOS. Supra at Section II.A.1; Hrg. Tr. (McKusick) at 313:4-314:6, 315:10-316:24; RX-5129C (McKusick RWS) at Q/A 421: RX-5131C (Sweeney RWS) at O/A 85-86.

Arista Reply at 23.

The evidence, along with Cisco's argument, does not support a finding that the

[] command is equivalent to the "only one claim limitation at issue"—"transmitting a management registration request by said first managing subsystem to said database subsystem."

See Cisco Br. at 62, n.16.

The function of the "transmitting a management registration request by said first managing subsystem to said database subsystem" is to transmit a management request from a managing subsystem to the database subsystem. Cisco's proposed function, which is crafted to make its equivalency argument palatable, improperly drops the managing subsystem and managing request aspects of the limitation. Further, Cisco's proposed function imposes on the "registering" limitations that appear later in claims 1 and 10. Arista's argument that the function

¹⁸ Cisco argued: "the 'function' of the limitation is to transmit a registration request to Sysdb to register a subsystem for external management[.]" Cisco Reply at 23.

corresponds to the functional claim language itself neither unduly enlarges or narrows the scope of the functional equivalency.

Further, the evidence, along with Cisco's argument, does not support a finding that the

[] command is equal to transmitting a management request, much less transmitting a management request from a managing subsystem to the database subsystem. Instead, in the redesigned EOS, the [] RX-5129C (McKusick RWS) at Q/A 421. Indeed, the redesigned EOS does not use managing agents as disclosed and claimed in the '537 Patent. See Part III(B)(2)(a)(4), supra. Further, the

[] of the redesigned EOS is probative evidence that the redesigned EOS is not equivalent and not insubstantially different from the claimed scheme that uses management registration requests. See RX-5131C (Sweeny RWS) at Q/A 58 (testifying that [

] Sweeny Tr. at 249-253; RX-5129C (McKusick RWS) at Q/A 417-19. Accordingly, the administrative law judge finds that the redesigned EOS does not perform the substantially the same function as the relevant limitation and that the difference between the redesigned EOS and the relevant limitation is substantial.

(2) The Way

Cisco argues:

Regarding the "way," even if the ALJ or Commission were to find that the management registration request comes from outside of the managing subsystem in Arista's redesign, there are no substantial differences between the "way" requests are issued and the claims. Even if that argument is accepted,

by a [

l is an insubstantial

change.

Cisco Br. at 62.

Arista argues:

Cisco's arguments about the "way" are largely a repackaging of its arguments for literal infringement, and fail for the same reasons. See supra at Sections IV.A, IV.B. Cisco also makes the puzzling argument that the redesigned EOS is equivalent because [

| j is substantially the same as | essentially equating the word "after" with the word "before." Compl. P.H. Br. at 131. The law does not permit this. See Moore USA, Inc. v. Standard Register Co., 229 F.3d 1091, 1106 (Fed. Cir. 2000) ("If a minority could be equivalent to a majority, this [majority] limitation would hardly be necessary").

Third, the "way" of the claim limitations in the '537 Patent is

Arista Br. at 46-47.

Cisco replies:

transmitting the request by the managing subsystem, which is at least insubstantially different from transmission of the I command by [Arista argues that the [1 RPoHB at 46. But Arista command is I does not—and cannot—explain why this is a substantial difference from the claims. See id. Not only are the claims not limited to "agents" as managing subsystems, having an [I is undistinguishable from the claims from a technical perspective. See CX-5002C (Almeroth WS) at Q/A 212-213. Arista also points to the fact that the I when the [I command is sent as another difference between the claims and the redesign. RPoHB at 47. But there is no material difference between starting the agent [I because the agent cannot manage data in Sysdb anyway until I I. Id. What is more, the agent is [I, and as part of the same [that transmits the process, management 1, registration request, meaning the distinction Arista is trying to draw is one of milliseconds. See Hr'g Tr. (Almeroth) at 181:18-

Cisco Reply at 24-25.

The evidence, along with Cisco's argument, does not support a finding that the redesigned EOS operates in substantially the same way as the claim limitation at issue: "transmitting a management registration request by said first managing subsystem to said database subsystem[.]" *See* Cisco Br. at 62, n.16 (emphasis added).

Cisco does not directly state and argue the "way" in which the disputed limitation operates. *See generally* Cisco Br. at 62; Cisco Reply at 24-25. Pather, Cisco argues that the redesigned EOS is insubstantially different from "the claims" and "the claim limitations in the '537 Patent." *See id.*; *see also* CX-5002C (Almeroth WS) at Q/A 208, 219 ("As I've stated here today and in my expert report, I compared the redesigned products to the claims."). This analysis does not address the relevant limitation on an element-by-element basis. *See Warner-Jenkinson*, 520 U.S. at 40 ("equivalence should be applied as an objective inquiry on an element-by-element basis"); *Eastcott v. Hasselblad USA, Inc.*, 564 Fed. App'x 590, 595-96 (Fed. Cir. 2014) ("Equivalence must be established on a limitation-by-limitation basis, not based on an assessment of the accused product as a whole."); *DeMarini Sports*, 239 F.3d at 1332. This is an independent reason for finding that Cisco has fallen short of showing that the redesigned EOS operates in substantially the same "way" as the limitation in dispute.

In addition, Cisco's arguments about the [] command and [] and the corresponding [], see Cisco Reply at 24-25, do not support a finding that the redesigned EOS operates in substantially the same way as the claim limitation at issue. The evidence shows that the way in which the function is performed differs from the limitation at issue:

¹⁹ Cisco's opening argument was similarly obfuscated with regard to the "way" of the analysis. *See, e.g.*, Pre-Hr'g Tr. at 36 ("So we have got function and result that are the same. And I'll say I'm not sure that I've seen a case that when the function and the result are identical to the claims, that the way has been different enough to take you out of the scope of DOE.").

422. Q: Are the ways in which the functions are performed substantially the same under the function-way-result test?

A: No. The function of the claim limitation is performed by the managing subsystem sending the request to the database subsystem. In contrast, [

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RX-5129C (McKusick RWS) at Q/A 422. While Cisco's expert, Dr. Almeroth, addressed the "way" aspect of the function-way-result analysis, the analysis presumes the way is substantially the same as long as the result of the message is the same. *See, e.g.*, CX-5002C (Almeroth WS) at Q/A 212 ("The form of the message does not matter in the context of the '537 Patent as long as the message serves its role[.]"). Accordingly, the administrative law judge finds that the redesigned EOS does not perform the substantially the same function as the relevant limitation, in substantially the same way as the relevant limitation. The administrative law judge also finds that the difference between the redesigned EOS and the relevant limitation, with respect to the way in which the redesigned EOS and the relevant limitation operate, is substantial.

(3) The Result

Cisco argues:

The "result" of the claim limitations in the '537 Patent is also identical as between the claimed system and Arista's redesign. In the claims, the result is that the subsystem is registered for external management. Likewise, in Arista's redesign, the result of the command is *exactly* the same:

1 Id. at 275:23-276:10

Cisco Br. at 62.

Arista argues:

Cisco next claims that the "result" of this claim limitation is that "the subsystem is registered for external management." Compl. P.H. Br. at 130. This is precisely the same thing—registration of the managing subsystem—that Cisco argues is the "function" of

the claim limitation, and is wrong for similar reasons. "Registration" is an entirely discrete claim limitation and is not the result of this single limitation. Rather, the "result" of "transmitting a management registration request by said first managing subsystem to said database subsystem" is that the database subsystem receives a request from the managing subsystem, and the claim continues in other limitations to show that the database subsystem then registers the managing subsystem to manage data. RX-5129C (McKusick RWS) at Q/A 423. Such "results" do not exist in the redesigned EOS. In the redesigned EOS, the result of

] and [] *Id*. When [

I from a

"managing subsystem," as the agent, [

J See Hrg. Tr. (Duda) at 359:12-20; RX-5131C (Sweeney RWS) at Q/A 55-57, 72, 75, 85, 104-05; RX-5129C (McKusick RWS) at Q/A 49, 53-67, 148, 151, 158, 224-27; Hrg. Tr. (McKusick) at 299:2-7.

Arista Br. at 45-46.

Cisco replies:

Second, the "result" of the claim limitations in the '537 Patent is registering the subsystem for external management, which is exactly the result of sending the [I command to Sysdb for a particular agent. Hr'g Tr. (McKusick) at 275:23-276:10. Although Arista disputes that the "result" is met, the only way it can do so is by defining the "result" as "the database subsystem receives a request from the managing subsystem." RPoHB at 46. Not only is this argument another attempt at limiting the doctrine of equivalents to the literal scope of the claims, it incorporates another claim element—element (b) of claims 1 and 10—and cannot be the "result" of limitation in element (a). See JX-0001 ('537 Patent) at 15:37-38 ("b) receiving said management registration request by said database subsystem"). But in any case, there is no question that Sysdb, the database subsystem, receives the [from the [I command, and uses that l in place. See, e.g., CX-5015C l to put [(Duda) at 150:18-151:1, 195:1-20; CX-5002C (Almeroth WS) at Q/A 116-118, 121.

Cisco Reply at 24.

Cisco does not directly state and argue the "result" of the disputed limitation. See generally Cisco Br. at 62; Cisco Reply at 24-25. Rather, Cisco argues that the result "of the claim limitations in the '537 Patent" is identical to the redesigned EOS. See id.; see also CX-5002C (Almeroth WS) at Q/A 208, 219 ("As I've stated here today and in my expert report, I compared the redesigned products to the claims."). Cisco's arguments about the result do not address the disputed limitation on an element-by-element basis. See Warner-Jenkinson, Eastcott, and DeMarini Sports, supra. This is an independent reason for finding that Cisco has fallen short of showing that the redesigned EOS achieves substantially the same "result" as the disputed limitation.

Moreover, the result of the "transmitting a management registration request by said first managing subsystem to said database subsystem" is that a management request is sent to a database subsystem. Cisco's proposed result imposes on the "registering" limitations that appear later in claims 1 and 10:

CISCO'S PROPOSED RESULT	CLAIM 1, SUBPART (C)	CLAIM 10, SUBPART (C)
"In the claims, the result is	c) registering said first	(c) registering said first
that the subsystem is	managing subsystem for	managing subsystem for
registered for external	external management by said	external management by said
management."	database subsystem.	managing subsystem.

See Cisco Br. at 62; JX-0001 at 15:39-40; 16:66-67. Arista's argument that the result is that "the database subsystem receives a request from the managing subsystem" corresponds to the functional claim language itself neither unduly enlarges or narrows the scope of the functional equivalency. See Arista Br. at 46.

²⁰ Cisco's arguments include, for example, Cisco Br. at 62, Cisco Reply at 24, and CX-5002C (Almeroth WS) at Q/A 208, 211.

Further, the evidence shows that the redesigned EOS realizes a different result than the result of the disputed limitation. Dr. McKusick explained the difference between the result of the disputed limitation and the result of the redesigned EOS as follows:

423. Q: Are the results of the functions substantially the same under the function-way-result test?

A: No. The result is the request is received from the managing subsystem by the database subsystem, which registers the subsystem to manage data, whereas in the redesigned EOS, the [] command is [

1

1

RX-5129C (McKusick RWS) at Q/A 423. Dr. Almeroth's testimony, on the other hand, contends that establishing a [] is sufficient for finding equivalency. See CX-5002C (Almeroth WS) at Q/A 211. However, the redesigned EOS has removed [] and [] and the [] command, amongst others, do not contain equivalent functionality. See RX-5131C (Sweeny RWS) at Q/A 55-56, 64-71; see also RX-5129C (McKusick RWS) at Q/A 30-35 ("the point of the redesign is that an [] 423. Accordingly, the administrative law judge finds that the redesigned EOS does not perform the substantially the same function as the relevant limitation,

in substantially the same way as the relevant limitation, to achieve substantially the same result.

The administrative law judge also finds that the difference between the redesigned EOS and the relevant limitation, with respect to the result of the redesigned EOS and the relevant limitation, is substantial.

d) Insubstantial Differences Analysis

Cisco's brief and reply has relied on the function-way-result test and the insubstantial differences test. For example, Cisco has argued:

- "Arista's Products Are the Same or Insubstantially Different from the Asserted Claims" (Cisco Br. at 61);
- "Those insubstantial changes [between the redesigned EOS and its predecessor] are highlighted by application of the function-way-result test." (Cisco Br. at 61);
- [] further demonstrate the insubstantial differences between the redesigned system and the claimed invention, and further support the application of the doctrine of equivalents in the event literal infringement is not found." (Cisco Br. at 67);
- "... Arista's redesign is, at best, an insubstantial change that falls within the claims of the '537 Patent." (Cisco Reply at 22);
- "Under the proper analysis, which Arista never conducts, and Staff and CBP never reach, the function, way, and result are identical or insubstantially different." (Cisco Reply at 23); and
- "Even if the 'way' the requested is transmitted is considered to be part of the claimed function, however, it is insubstantially different from the claims for the reasons explained below." (Cisco Reply at 24).

For the avoidance of doubt, the administrative law judge notes that Cisco's function-way-result and insubstantial-differences arguments have been considered above, *see* Part III(B)(3)(c), *supra*, and the redesigned products have been determined to be substantially different from the asserted claims.

4. Indirect Infringement

Cisco argues that Arista is liable for contributory and induced infringement. Cisco Br. at 86-90.

Arista argues that there is no direct infringement upon which to find indirect infringement, but even if there is, "Cisco has failed to present any evidence that Arista had the requisite knowledge of patent infringement with respect to the redesigned EOS to support a finding of either contributory or induced infringement." Arista Br. at 35 (emphasis omitted).

The Staff argues that the redesigned EOS does not directly infringe and that:

The evidence also shows that Arista lacked the requisite intent to infringe the asserted claims of the '537 Patent. As discussed above, Arista undertook a redesign effort to avoid infringing the patent. This effort included obtaining an opinion of counsel that concluded that the redesigned EOS did not infringe any of the asserted claims of the '537 Patent. See RX-5066C (Opinion Letter). The evidence shows that these efforts mean that Arista had a good faith belief that the redesigned EOS did not infringe and so they did not have the requisite intent to induce infringement or contribute to infringement.

Staff Br. at 45.

As an initial matter, the administrative law judge has determined that the redesigned EOS does not infringe the asserted claims. See Part III(B)(2) and III(B)(3), supra. Thus, there is no direct infringement upon which to find indirect infringement. See Limelight Networks, Inc. v. Akamai Techs., Inc., 134 S.Ct. 2111, 2118 (2014) ("Because liability for inducing infringement requires an underlying act of direct infringement, the evidence consequently does not show that Arista induced infringement.").

The evidence also shows that Arista lacked the requisite intent to infringe the asserted claims indirectly. In particular, Arista undertook an extensive redesign effort and obtained an

opinion of counsel in connection with its efforts to avoid further infringing the '537 Patent.²¹ See RX-5133C (Duda RWS) at Q/A 17 (describing steps taken to ensure non-infringement). Accordingly, the administrative law judge has determined that Arista lacked the requisite intent to indirectly infringe the '537 Patent.

C. The Colorable Differences Test

Arista argues that the administrative law judge should use the "colorable differences standard" in determining whether Arista violated the CDO. *See* Arista Br. at 49-53 (Section IV(E)). In particular Arista argues:

As the [non-infringement] discussion above demonstrates, the redesigned EOS does not infringe and thus Cisco cannot prevail. Faithfulness to Federal Circuit authority and Commission precedent, however, requires that the ALJ determine not whether the redesigned EOS infringes but rather whether the redesigned EOS is more than colorably different from the legacy EOS. And the foregoing also establishes that Arista plainly meets that standard; the differences between the legacy EOS that was found to infringe the '537 Patent and the redesigned EOS are numerous, clear, and significant. *Supra* at Sections III, IV.A, IV.B. Cisco tries to escape this conclusion by arguing that the colorable differences standard does not apply. However, its efforts to distinguish the relevant Federal Circuit precedent are unavailing, and it makes no meaningful effort to distinguish the Commission's own interpretations of that precedent.

Id. at 49-50. Arista points to three decisions in support of its argument that the colorable differences test applies:

While Arista also sought a ruling from Customs on the issue of whether its products infringe, it began selling the redesigned products before Customs issued its ruling. See CX-5238C (November 18, 2016 Steuart to Reiser letter). Further, Custom's initial ruling did not resolve the uncertainty about the redesigned products, as Customs held subsequent proceedings on the issue. See CX-5632C (Dec. 14, 2016 Bartkowski to Steuart letter); CX-5092 (Jan. 13, 2017 Steuart to Bartkowski letter); CX-5093 (Jan. 13, 2017 Steuart to Reiser letter). Customs issued a final ruling on April 7, 2017, after the hearing had concluded. See RX-5206C (April 7, 2017 Steuart to Reiser letter). Accordingly, the administrative law judge finds that Arista's efforts before customs are entitled to little weight for purposes of analyzing indirect infringement.

- Yingbin-Nature (Guangdong) Wood Industry Co., Ltd. v. Int'l Trade Comm'n, 535 F.3d 1322 (Fed. Cir. 2008) ("Yingbin");
- Certain Ground Fault Circuit Interrupters and Products Containing Same, Inv. No. 337-TA-615, Comm'n Op. at 27 (Mar. 9, 2009) ("Ground Fault Circuit Interrupters"); and
- Certain GPS Devices and Products Containing Same, Inv. No. 337-TA-602, Advisory Op. at 4 (April 20, 2010) ("GPS Devices").

See Arista Br. at 49-51. Arista then critiques Cisco's arguments about the colorable differences test. *Id.* at 51-53.

Cisco argues:

As noted above in Section IV.B. the colorable difference test is not the appropriate test for determining violations of the CDO and Arista is precluded from raising the test now in any event. Nonetheless, even if the test is applied, the only differences between Arista's redesign products and the products already found to infringe are colorable, as made clear in the above analysis. At best, Arista made minor modifications to its infringing products that moved functionality from one place to another and re-labeled it. See § V.C.1. Courts have confirmed that similar attempts at redesigns are not colorably different. See, e.g., Proveris Scientific Corp. v. Innovasystems, Inc., 739 F.3d 1367, 1371 (Fed. Cir. 2014) ("[E]ven if Innova did make some small changes to the product's software, a comparison of the User Manuals demonstrates that the two products are functionally identical. Thus, we agree with the district court that the ADSA product is not more than colorably different from the infringing OSA product."). Arista's redesign here, too, is "functionally identical." See § V.C.1

Indeed, as described above, Arista does not dispute that its products [] See §§ V.A and V.B. And even with respect to the element of the claims that Arista contends its redesign affected—the "management registration request" sent from a "managing subsystem"—Arista's redesign is functionally identical to the pre-redesign system: [

] in the system. See id. Moreover, agents only needed minimal changes to operate in Arista's redesigned system. See CX-5002C (Almeroth WS) at Q215-216. Because of all these similarities between the redesign and pre-redesign systems, Arista told its engineers that [

CX-5042C at 10. Similarly, although Arista identifies several source code files as being "relevant" to the redesign, much of the cited code either [

CX-5002C (Almeroth WS) at Q216.

Cisco Br. at 75-76 (emphasis on "functionally identical" omitted).

The Staff addresses *Yingbin*, *Ground Fault Circuit Interrupters*, *GPS Devices*, and *TiVo Inc. v. EchoStar Corp.*, 646 F.3d 869, 882 (Fed. Cir. 2011) (*en banc*), and then analyzes Cisco's allegations "under the colorable differences test and under the traditional two-step infringement analysis." Staff Br. at 13. The Staff concludes that the redesigned EOS is "more than colorably different" from its predecessor. *Id.* at 13-18.

Arista's entire reply is:

The differences between the legacy and redesigned EOS are significant. As the Staff correctly observed, Cisco had to devise an entirely new theory of infringement just for these enforcement proceedings, belying its contention now that the changes are merely "minor" or "cosmetic." Staff Br. at 15-17 (citations omitted).

Cisco's argument that the colorable differences standard should not apply is premised on its erroneous reading of *Yingbin-Nature* (Guangdong) Wood Industry Company, Ltd. v. International Trade Commission, 555 F.3d 1322 (Fed. Cir. 2008). The Commission has made clear that, following Yingbin, its orders excluding articles "that infringe" apply to products found to infringe "and articles that are 'essentially the same,' meaning that the differences between them are merely 'colorable." Certain GPS Devices, Inv. 337-TA-602 Advisory Op. at 4 (Apr. 20, 2010) (citing Yingbin, 535 F.3d at 1322-23); see also Certain Ground Fault Circuit Interrupters, Inv. No. 337-TA-615, Comm'n Op. at 27 (Mar. 9, 2009); Resp. Br. at 49-53.

Contrary to Cisco's suggestion, Compl. P.H. Br. at 15 n.1, the Commission's decision in *GPS Devices* never mentions collateral estoppel. Rather, the Commission concluded that an existing order did not cover a new product because the new product was not essentially the same as the adjudicated product. *GPS Devices, supra* at 4-5. *Ground Fault Circuit Interrupters* likewise establishes that, if a product is not essentially the same as the

adjudicated product, it is not covered by an existing order *unless* and *until* it too is found to infringe. Inv. 337-TA-615, Comm'n Op. at 27-28; Resp. Br. at 51-52; see also Staff Br. at 12.

Arista Reply at 24-25 (emphasis added by Arista).

Cisco's entire reply is:

Arista's argument that the Commission's CDO is limited to products not more than colorably different, RPoHB at 49, contradicts the language of the CDO and Commission and Federal Circuit precedent. See CPoHB at 13-16. In its brief, although Staff never takes a position as to the proper test that should apply, Staff focuses its discussion on TiVo Inc. v. EchoStar Corp., 646 F.3d 869, 882 (Fed. Cir. 2011) (en banc). TiVo is irrelevant here, however, as it relates to the standard for contempt under a district court injunction. See, e.g., SPoHB at 13 n.5. Unlike injunctions, which are limited to the products accused of infringement, Commission orders typically contain broad language aimed at preventing future violations of Section 337, i.e., by defining the prohibited activities in terms of "articles that infringe" the relevant claims: "The Commission has always issued its orders in terms of 'infringing' products, and has always intended them, as in this case, to prohibit to [sic] future importation or sale of products which were not specifically adjudged infringing in the violation proceeding, but do in fact infringe." Certain Erasable Programmable Read Only Memories, Components Thereof, Prods. Containing Such Memories, & Processes for Making Such Memories, Inv. No. 337-TA-276 (Enforcement), Comm'n Op. at 10-11 (Aug. 1, 1991). Likewise, the Commission's CDO here applies to products "that infringe" the specified claims of the '537 Patent. CDO § I(G). Thus, no reason exists to depart from the traditional two-step infringement analysis that has always been used to assess violations of Commission orders in the past.

Even under the colorable difference test, a violation exists. Although Arista argued at length that its redesigned products were more than colorably different from its legacy products in its prehearing brief, Arista essentially abandoned the argument after the hearing, providing **no** substantiated explanation for this contention. See, e.g., RPoHB at 52, 86. Nonetheless, Staff does analyze both tests. See SPoHB at 13. Staff, however, cites no expert testimony in support of its conclusion. Staff's argument boils down to its statement that "Cisco now points to a different functionality for management registration requests than it did," SPoHB at 17, but that is not the proper analysis. The proper question is whether the

differences are significant. Id. at 16. As both experts testified.

agents in the legacy system used functionality in separate modules—[]—to [] CX-5002C (Almeroth WS) at Q/A 68-78; Hr'g Tr. (McKusick) at 290:23-292:1. Likewise, here, functionality in another module outside the agent—the [] module in [

 $\,$] CX-5002C (Almeroth WS) at Q/A 178-179. After that [

Id. The insignificance of this difference is demonstrated by the fact that agents in Arista's system work the same as they did before, with no loss in functionality. CX-5018C (Sadana) at 110:22-119:7,128:6-9, 131:3-6, 139:16-140:10; CX-5013C (Sweeney) at 219:23-228:11, 246:12-251:17. Arista has provided no evidence to the contrary.

Cisco Reply at 29-30 (emphasis added by Cisco; footnote omitted).

1. Whether the Commission Should Utilize the Colorable Differences Test

The Federal Circuit addressed the colorable differences test in *TiVo Inc. v. EchoStar*Corp., 646 F.3d 869, 881-83 (Fed. Cir. 2011) (en banc). As Cisco and the Staff note, *TiVo* arises from contempt proceedings held to determine whether an injunction was violated. See id. at 881-82. The Federal Circuit explained:

We have stated the test for colorable differences as one that requires determining whether "substantial open issues with respect to infringement to be tried" exist. . . . In some cases, that has misled district courts to focus solely on infringement by the newly accused devices in deciding contempt. That is the case here. Today, we reject that infringement-based understanding of the colorably different test. Instead of focusing solely on infringement, the contempt analysis must focus initially on the differences between the features relied upon to establish infringement and the modified features of the newly accused products.

The primary question on contempt should be whether the newly accused product is so different from the product previously found to infringe that it raises "a fair ground of doubt as to the

wrongfulness of the defendant's conduct." . . . The analysis must focus not on differences between randomly chosen features of the product found to infringe in the earlier infringement trial and the newly accused product . . . but on those aspects of the accused product that were previously alleged to be, and were a basis for, the prior finding of infringement, and the modified features of the newly accused product. Specifically, one should focus on those elements of the adjudged infringing products that the patentee previously contended, and proved, satisfy specific limitations of the asserted claims. Where one or more of those elements previously found to infringe has been modified, or removed, the court must make an inquiry into whether that modification is significant. If those differences between the old and new elements are significant, the newly accused product as a whole shall be deemed more than colorably different from the adjudged infringing one, and the inquiry into whether the newly accused product actually infringes is irrelevant. Contempt is then inappropriate.

Id. at 882 (citations omitted). The Federal Circuit noted that the Supreme Court "has cautioned that contempt 'is a severe remedy, and should not be resorted to where there is a fair ground of doubt as to the wrongfulness of the defendant's conduct." *Id.* at 881-82.

In the portion of *Yingbin* that Arista relies upon, the Federal Circuit discussed collateral estoppel, as follows:

First, we note that proof of infringement by collateral estoppel is only appropriate in limited circumstances, where it is shown that a close identity exists between the relevant features of the accused device and the device previously determined to be infringing. See Acumed LLC v. Stryker Corp., 525 F.3d 1319, 1324 (Fed. Cir. 2008) (noting that claim preclusion does not apply with respect to infringement unless the accused device and the device previously held infringing are "essentially the same," meaning that the differences between them are merely "colorable" or "unrelated to the limitations in the claim of the patent" (citations omitted))[.]

Yingbin, 535 F.3d at 1333 (emphasis added).

In the portion of *Certain Ground Fault Circuit Interrupters* that Arista relies upon, the Commission declined a request to include particular model numbers in an exclusion order:

Certain respondents argue that the exclusion order should specify the particular model numbers of products found to infringe. P&S counters that, if the exclusion order is limited to specific model numbers, merely changing the adjudicated products' model numbers would allow respondents to circumvent the order. In order to prevent such circumvention, we reject Trimone's invitation to deviate from the long-standing Commission practice of declining to limit exclusion orders to specific model numbers. The Commission's practice is consistent with Federal Circuit law, which provides that the Commission's infringement determinations with respect to the adjudicated products are effective for the purposes of the exclusion order against different models presented for importation at a future date if there is a "close identity between the relevant features of an accused device and the device determined to be infringing."⁷⁰ Correspondingly, the exclusion order would not apply to products not adjudicated to be infringing, and not having such a "close identity," thus alleviating respondents' concerns, 71 unless infringement is established by other means. We also note that the exclusion order contains a certification provision that gives U.S. Customs & Border Protection the authority to accept a certification from the parties that goods being imported are not covered by the exclusion order. This certification provision also addresses the respondents' concerns.

Certain Ground Fault Circuit Interrupters and Products Containing Same, Inv. No. 337-TA-615, Comm'n Op. at 27 (Mar. 9, 2009) (emphasis added; the text of footnotes 70 and 71, which are only citations to *Yingbin*, is omitted).

In the *GPS Devices* advisory opinion that Arista relies upon, the Commission decided whether GPS chips made by Atheros, a manufacturer who was not a respondent in the underlying investigation, would violate a limited exclusion order. *See Certain GPS Devices and Products Containing Same*, Inv. No. 337-TA-602, Advisory Op. at 1 (April 20, 2010). The Commission

concluded that the limited exclusion order was not directed toward Atheros. *Id.* at 5.²² In reaching this conclusion, the Commission commented that:

Exclusion orders must be read in the context of the investigation in which they were issued and the Commission's findings in that investigation. The language in Commission limited exclusion orders directed to articles of named respondents "that infringe" or articles "covered by" generally refers to articles found by the Commission to infringe and articles that are "essentially the same,' meaning that the differences between them are merely 'colorable' or 'unrelated to the limitations in the claim of the patent." See [Yingbin].

Certain GPS Devices and Products Containing Same, Inv. No. 337-TA-602, Advisory Op. at 4 (April 20, 2010).

The Commission's order instituting this enforcement proceeding instructs the administrative law judge to "rule on the question of whether the enforcement respondent has violated the June 23, 2016 CDO issued in the above-captioned investigation." Order at 3 (EDIS Doc. ID No. 591516) (September 28, 2016). The CDO, in turn, prohibited Arista from engaging in various commercial activities for covered products that infringe one or more of claims 1, 2, 8-11, and 17-19 of the '537 Patent. *See* CDO at 1-3. The order does not explicitly instruct the administrative law judge to determine if Arista is in contempt of the CDO. *Id*.

Based on the arguments presented, the administrative law judge is not persuaded that the colorable differences test is the appropriate test for determining whether Arista's redesigned products violate the CDO. In particular, the legal authority Arista relies upon does not squarely invoke the colorable differences test, as explained above. Accordingly, based on the arguments

²² The limited exclusion order was "directed only to SiRF's infringing GPS chips and products of respondents MiTAC, Mio, E-TEN, and/or Pharos that incorporate SiRF's infringing chips." Advisory Op. at 5.

presented in the parties' post-hearing briefs and replies, the administrative law judge has decided the Commission should not utilize the colorable differences test.

2. The Redesigned EOS Is More Than Colorably Different from Its Predecessor

IV. UNCLEAN HANDS

Arista argues:

The Commission's enforcement authority "can never be exerted on behalf of one who has acted fraudulently, or who by deceit or any unfair means has gained an advantage." . . . Cisco has done exactly that, and comes to the ITC with unclean hands.

After missing the important transition to cloud networking, Cisco commenced a "Cisco-wide effort to stop Arista's growth." . . . Cisco's efforts to compete legitimately were not fruitful, as Arista "outperformed Cisco on price, product, roadmap and vision." . . . Lacking a viable competitive strategy, Cisco turned to the courts, deploying a string of lawsuits against Arista in order to recapture its market share.

This enforcement proceeding is emblematic of Cisco's pervasive pattern of misconduct. In particular, Cisco's hastily-filed

complaint, exorbitant civil penalty request, and relentless publicity campaign confirm its ulterior motive: to use the Commission's authority to cripple Arista and remove it as a competitor. The unclean hands doctrine bars precisely this misconduct.

Arista Br. at 119-20 (citations omitted).²³

Arista further argues that "Cisco brought this enforcement action in bad faith and for the improper purpose of leveraging the Commission's authority to regain its dominant market share." *Id.* at 121. Arista contends that Cisco filed its complaint without an adequate pre-suit investigation, that Cisco's "exorbitant" civil penalty demands shows that Cisco wants to punish Arista rather than seek redress for any harm suffered, and that Cisco has used the enforcement proceeding "in an attempt to create fear, uncertainty, and disruption amongst Arista's investors, customers, and partners." *Id.* at 121-22. Arista cites to Cisco blog posts and Cisco's communications with Arista's customers and business partners as evidence of Cisco's acts creating "fear, uncertainty, and disruption." *Id.* at 122-24.

Cisco argues that it performed an adequate pre-suit investigation, that seeking a penalty expressly allowed by the statute does not support an unclean hands defense, and that "disseminating information about a litigation dispute" is not improper. Cisco Br. at 122-23. Cisco further argues that no precedent supports Arista's theory and that "multiple courts have analyzed supposed 'unclean hands' allegations premised on allegations such as those made by

Arista relies upon Certain Probe Card Assemblies, Components Thereof and Certain Tested DRAM and NAND Flash Memory Devices and Products Containing Same, Inv. No. 337-TA-621, Initial Determination at 30 (June 29, 2009) ('Probe Card Assemblies'') and Certain Microprocessors, Components Thereof, and Products Containing Same, Inv. No. 337-TA-781, Initial Determination, 2012 WL 6883205, at *162 (Dec. 14, 2012) ("Microprocessors") in support of its argument. The page from Probe Card Assemblies that Arista cites (ID at 30) is from the general law section. The administrative law judge later found that there was no patent misuse, unclean hands, or abuse of process in light of certain claim construction arguments. See Probe Card Assemblies, Initial Determination at 193. In Microprocessors, the administrative law judge addressed unclean hands within the context of equitable estoppel and spoliation. See Microprocessors, 2012 WL 6883205, at *162.

Arista—*i.e.*, that a competitor's lawsuit was brought in bad faith and made attendant statements about the litigation—and have uniformly rejected the argument that such allegations can constitute a legally viable 'unclean hands' defense." *Id.* at 124.

The Staff argues that the "evidence does not show that the doctrine of unclean hands bars Cisco from pursuing this enforcement proceeding." Staff Br. at 45. The Staff argues that Arista's reliance upon Cisco blog posts are "overly-literal" and that Cisco's statements to Arista's customers and business partners were not shown to be false. *Id.* at 46-47.

Arista addresses Cisco's arguments in its reply. *See* Arista Reply at 34-35. For additional legal authority, Arista cites to a Delaware district court decision, *Honeywell Intern.*, *Inc. v. Universal Avionics Sys. Corp.*, 398 F. Supp. 2d 305, 311 (D. Del. 2005) (declining to find unclean hands in light of defendant's arguments about "market uncertainty" related to a followon lawsuit and the adequacy of plaintiff's pre-suit investigation). *Id.* at 35.

Based on the arguments presented, the administrative law judge is not persuaded that unclean hands provides an appropriate basis for resolving this case. In particular, the legal authority Arista relies upon either did not find unclean hands or does not clearly apply the doctrine, as explained above. ²⁴

Additionally, the administrative law judge finds that Cisco did not engage in unconscionable conduct pertaining to the enforcement proceeding that would warrant precluding Cisco's enforcement complaint. *See Keystone Driller Co. v. Gen. Excavator Co.*, 290 U.S. 240,

Further, Arista has not explicitly addressed why a complainant's unclean hands should extinguish the Commission's authority in an enforcement proceeding. *See* Commission Rule 210.75(b) (providing that the Commission institutes enforcement proceedings); *cf. Certain Neodymium-Iron-Boron Magnets, Magnet Alloys, and Articles Containing Same*, Inv. No. 337-TA-372 (Enforcement), Comm'n Op. at 33, USITC Pub. 3073 (Nov. 1997) ("[T]he Commission generally has an interest in vindicating its authority where one of its orders is violated.").

245 (1933) (unclean hands requires "some unconscionable act of one coming for relief"). ²⁵ Cisco's pre-filing investigation was adequate, as Cisco studied the redesign and prepared a claim chart mapping the elements of the claims to Arista's products. *See* RX-5038C (Lang Dep.) at 39-41, 173-74; Enf. Compl., Ex. 21. Further, Cisco's blog posts and communications to Arista's customers and partners may not be routine, but were not sufficiently shown to be false or misleading or otherwise unconscionable. Lastly, Cisco's request for the statutory maximum penalty is wholly proper, as the statute proscribes that amount. *See* 19 U.S.C. § 1337(f)(2); *see also* 19 C.F.R. § 210.75(b) (allowing a complainant to file an enforcement complaint). Thus, the administrative law judge has determined that the unclean hands doctrine does not bar Cisco's enforcement complaint.

V. CIVIL PENALTY

"Civil penalties are mandatory for violations of the Commission's cease and desist orders ... issued under section 337." *Certain Two-way Global Satellite Communication Devices*, System and Components Thereof, Inv. No. 337-TA-854 (Enforcement), Comm'n Op. at 26 (July 1, 2014) ("*Global Satellite Devices*") (EDIS Doc. ID No. 537131). "[F]or each day on which an importation of articles, or their sale, occurs in violation of [a cease and desist] order," the Commission shall impose a civil penalty "of not more than the greater of \$100,000 or twice the domestic value of the articles entered or sold on such day in violation of the order." 19 U.S.C. § 1337(f)(2). "The Commission has the discretion to impose a civil penalty that is appropriate to the circumstances." *Global Satellite Devices*, Comm'n Op. at 27 (citing *Certain Erasable*

Arista also has not met the clear and convincing standard of showing that unclean hands should apply. See Gilead Scis., Inc. v. Merck & Co, Inc., No. 13-CV-04057-BLF, 2016 WL 3143943, at *39 (N.D. Cal. June 6, 2016) ("the Court concludes that Gilead has proven its defense of unclean hands by clear and convincing evidence."); Probe Card Assemblies, Initial Determination at 30 (citing In re Omeprazole Patent Litigation, 483 F.3d 1364, 1374 (Fed. Cir. 2007) for the clear and convincing standard).

Programmable Read Only Memories, Components Thereof, Products Containing Such Memories, and Processes for Making Such Memories, Inv. No. 337-TA-276 (Enforcement), Comm'n Op. at 29 (July 19, 1991) (hereinafter, "EPROMs")).

The administrative law judge previously determined that Arista has not violated the CDO. Thus, no civil penalty is appropriate. *See* 19 U.S.C. § 1337(f)(2). In the event that it is later determined that Arista has violated the CDO, the administrative law judge has determined an appropriate civil penalty, as follows.

A. Statutory Maximum Penalty

Solely in order to streamline the issues and to ensure that the statutory maximum penalty calculation is as conservative as possible, Cisco does not seek a civil penalty to accrue for Arista's

sales made during the Presidential Review Period, from June 23, 2016 to August 22, 2016, nor does Cisco seek a civil penalty for cables and optics. Cisco continues to seek a civil penalty for Arista's sales made after August 22, 2016 of switches, power supplies and fans. Cisco reserves all rights to present evidence from before expiration of the PRP, and of any sales of cables and optics, for any other issues.

Cisco Br. at 97 n.23 (emphasis added).

Arista argues that "the appropriate civil penalty in this case, if any, is \$10,000 per day of violation, but no greater than \$100,000 per day of violation." Arista Br. at 118. Arista argues that "at worst" the administrative law judge should recommend "a civil penalty of 10% of the statutory maximum penalty, or [] Id. at 119 (citing Certain DC-DC Controllers and Products Containing Same, Inv. No. 337-TA-698, Enf. ID at 120 (Nov. 30, 2012); see also Arista Reply at 32-33. Thus, Arista has tacitly acknowledged that the SMP is [] See id.

The Staff has proposed a civil penalty of [] which is based on Arista's gross revenue from sales of Arista switches, power supplies, and fans, from sales made between August 23, 2016 and December 12, 2016.²⁷ Staff Br. at 56-57 (citing CX-5003C (Arnold DWS) at Q/A 38, 41, 238-39); *see also* CX-5644C (providing the financial calculation).²⁸

The administrative law judge has determined that the SMP is [] which is based on Arista's sales of switches, power supplies, and fans. *See* CX-5003C (Arnold WS) at Q/A 78; *see also* CX-5642C (providing the financial calculation); Cisco Br. at 97; Arista Br. at 119. As discussed below, however, the administrative law judge has determined that assessing the SMP would not be appropriate in this proceeding.

²⁷ The [proposed in Cisco's pre-hearing brief.

²⁸ The Staff has not argued what the maximum allowable penalty would be. *See generally id.*; Staff Reply at 15-16.

B. Amount of Penalty

When calculating an appropriate civil penalty as a result of a cease and desist order violation, the Commission may consider a number of factors: "(1) the good or bad faith of the respondent; (2) any injury due to the violation; (3) the respondent's ability to pay the assessed penalty; (4) the extent to which the respondent benefitted from its violations; (5) the need to vindicate the authority of the Commission; and (6) the public interest" (hereafter, "the penalty factors"). See Ninestar Tech. Co. Ltd. v. Int'l Trade Comm'n, 667 F.3d 1373, 1379 (Fed. Cir. 2012) (citation omitted); see also Global Satellite Devices, Comm'n Op. at 27 (citing EPROMs, Comm'n Op. at 23-24, 26).²⁹

This six-factor test takes into account "the three overarching considerations enumerated by Congress in the legislative history [of section 337(f)(2)], *viz.*, the desire to deter violations, the intentional or unintentional nature of any violations, and the public interest." *San Huan New Material High Tech, Inc. v. Int'l Trade Comm'n*, 161 F.3d 1347, 1362 (affirming *Certain Neodymium-Iron-Boron Magnets, Magnet Alloys, and Articles Containing the Same*, Inv. No. 337-TA-372, Comm'n Op. on Violation of Consent Order (May 6, 1997)).

Each of the six penalty factors is discussed below.

²⁹ For additional authority, see Certain DC-DC Controllers and Products Containing the Same (Enforcement), Inv. No. 337-TA-698, Comm'n Op. at 38 (December 12, 2012) ("DC Controllers"); Certain Ink Cartridges and Components Thereof (Enforcement), Inv. No. 337-TA-565, Comm'n Op. at 17-18 (Sept. 24, 2009) ("Ink Cartridges"); Certain Lens-Fitted Film Packages, Inv. No. 337-TA-406 (Enforcement II), Op. on Enforcement Measures at 12 (April 4, 2005) ("Cameras II"); Certain Lens-Fitted Film Packages, Inv. No. 337-TA-406 (Consolidated Enforcement and Advisory Opinion Proceedings), Comm'n Op. at 17 (June 23, 2003) ("Cameras I"); Certain Agricultural Tractors Under 50 Power Take-Off Horsepower, Inv. No. 337-TA-380 (Enforcement), Comm'n Op. at 31, USITC Pub. 3227 (Aug. 1999) ("Tractors"); Certain Neodymium-Iron-Boron Magnets, Magnet Alloys, and Articles Containing Same, Inv. No. 337-TA-372 (Enforcement), Comm'n Op. at 22-33, USITC Pub. 3073 (Nov. 1997) ("Magnets").

1. Arista's Good or Bad Faith

The first penalty factor is an evaluation of the good or bad faith of the respondents. To make that determination, the Commission examines whether the respondent "(1) had a reasonable basis to believe that the violating product was not within the scope of the Commission's order, (2) requested an advisory opinion or clarification from the Commission, (3) provided any opinion of counsel indicating that it obtained legal advice before engaging in the acts underlying the charge of violation, (4) decided which products were subject to the order based on the decisions of management and technical personnel, without legal advice, and (5) satisfied its reporting requirements under the relevant Commission order." *Ink Cartridges*, Comm'n Op. at 14; *see also EPROMs*, Comm'n Op. at 28-29. Respondents have "an affirmative duty to take energetic steps to do everything in their power to assure compliance, and . . . this duty not only means not to cross the line of infringement, but to stay several healthy steps away." *Cameras II*, Comm'n Op. at 16 (internal quotations omitted); *Tractors*, Comm'n Op. at 32; *Magnets*, Comm'n Op. at 24.

a) Basis for Believing That the Redesign Did Not Violate the CDO

Cisco argues:

Cisco Br. at 101. Cisco then critiques Arista's reliance on Global Satellite Devices and adds:

the evidence leaves no doubt that Arista played a significant role in the importation of its components by third parties after expiration of the Presidential Review Period, while simultaneously claiming

it was only sourcing components domestically, as discussed in §§ III, V.G and VI.B. *See also* RX-5130 (Cox RWS) at Q87-88 (not disputing Arista's control over [

Id. at 101-02.

Arista argues:

Arista invested heavily in the redesign of its accused products directly in response to and out of respect for the Commission's remedial orders. RX-5133C (Duda RWS) at O/A 16-29; Hrg. Tr. (Duda) at 339:2-340:3; RX-5130C (Cox RWS) at Q/A 57-73; RX-5132C (Sadana RWS) at Q/A 66-109. Because the accused products constitute nearly all of Arista's products, and Arista was well aware that Cisco would be challenging the redesign immediately following the completion of the underlying investigation, Arista had an overwhelming business reason to invest in a redesign to bring its products outside the scope of any of the patents found to be infringed in the underlying investigation. After a significant redesign effort, Arista's senior management, overseeing a team of more than [] engineers, confirmed the removal of the functionality identified by the Commission to be infringing Cisco's patents, which marked a fundamental change from the legacy products previously found to infringe. RX-5133C (Duda RWS) at Q/A 16-29; RX-5144C (Arista Redesign Spreadsheet). In further support of its reasonable basis to believe that its redesigned products do not infringe the '537 Patent, Arista also: engaged in an extensive evaluation of redesign alternatives as soon as the initial determination in the underlying investigation was issued; obtained an opinion of counsel; sought and obtained two rulings from CBP that its products were outside the scope of the Commission's orders; and required its customers to I

] RX-5133C (Duda RWS) at Q/A 16, 31-37, 53-55; RX-5132C (Sadana RWS) at Q/A 104-09.

All of these facts, in combination, make plain that Arista had a reasonable basis to believe in the fruits of its extensive redesign efforts.

Arista Br. at 83-84.

The Staff argues that Arista had a reasonable basis to believe that the allegedly violating products, which run the redesigned EOS, were not within the scope of the CDO. Staff Br. at 50-51.

The evidence shows that Arista had a reasonable basis to believe that its redesigned products did not infringe the '537, '145 and '592 Patents or otherwise violate the CDO. Indeed, Arista launched an extensive redesign effort involving many engineers and patent attorneys. Arista further obtained an opinion of counsel and two rulings from U.S. Customs and Border Protection ("CBP") that its products were outside the scope of the CDO. *See* RX-5133C (Duda RWS) at Q/A 16-29. Accordingly, this factor supports a finding that Arista acted in good faith.

b) Seeking Clarification from the Commission

Cisco argues that Arista "bypassed the Commission" because it "did not seek an advisory opinion or modification of the CDO from the Commission. Cisco Br. at 108.

Arista argues that "seeking a ruling from CBP is standard practice and expressly permitted by the Commission and the Code of Federal Regulations." Arista Br. at 89. Arista contends "it would be contrary to Commission policy to determine that Arista's election of seeking a ruling letter from CBP is somehow an indication of bad faith where the Commission expressly permitted such action." *Id*.

The Staff argues that "Arista's decision to go to CBP is not a substitute for seeking an advisory opinion from the Commission." Arista Br. at 51.

Arista did not seek clarification from the Commission of whether the redesigned products would violate the CDO. See Certain Agricultural Tractors Under 50 Power Take-Off

Horsepower, 337-TA-380 (Enforcement), Comm'n Op. at 10 (Aug. 5, 1999) ("The Gamut respondents' argument fails to recognize the difference between exclusion orders, which are

interpreted and enforced by Customs pursuant to 19 U.S.C. § 1337(d), and cease and desist orders, which are interpreted and enforced by the Commission pursuant to 19 U.S.C. § 1337(f)."). The evidence does not show, however, that Arista believed there was a question as to the scope of the CDO, or that it did not fully understand the terms of the exclusion order. *See Ink Cartridges*, Enf. ID, 2009 WL 2122014 at *39-40 (April 17, 2009). Accordingly, this factor does not support a finding that Arista acted in good or bad faith.

c) Opinion of Counsel

Cisco argues:

Cisco Br. at 108. In § VI.D.1.a.ii, Cisco argues that Arista did not have a sufficiently reasonable basis to rely on its opinion of counsel. *Id.* at 103. For example, Cisco argues the opinion did not address certain arguments Cisco about [] and [] that the opinion was provided without sufficient technical information, and that the "reasoning on the doctrine of equivalents also is incorrect." *Id.* at 104-06.

Arista notes the opinion relied upon discussions with Arista's technical and legal staff. See Arista Br. at 89-90. Arista further notes that it obtained the opinion before releasing its redesign products. *Id.*

The Staff argues that Arista's decision to obtain an opinion of counsel indicates Arista acted in good faith. *See* Staff Br. at 52.

The evidence shows that Arista obtained an opinion of counsel and that Arista obtained the opinion before launching its redesigned products. While Cisco has provided a detailed critique of the opinion, that critique does not wholly negate the larger point that Arista affirmatively obtained an opinion of counsel. Accordingly, this factor supports finding that Arista acted in good faith.

d) Determining Which Products Are Covered Without Seeking Legal Advice

Cisco argues that various Arista employees gave Arista's suppliers and customers incorrect legal guidance. Cisco Br. at 108-12.

Arista argues its "engineers worked closely with inside and outside counsel to determine which products were subject to the Commission's remedial orders given the opinion of counsel sought and obtained by Arista and the initial ruling from CBP." Arista Br. at 97.

The evidence shows that Arista's managers and technical employees did not take it upon themselves to decide which products were subject to the CDO without seeking legal advice. *See Ink Cartridges*, Enf. ID, 2009 WL 2122014 at *40 (April 17, 2009) (finding that Ninestar's management decided which products were subject to the cease and desist order without consulting their attorneys). Indeed, the evidence shows that Arista obtained an opinion of counsel that analyzed whether the redesigned products were subject to the CDO. *See* Part (V)(B)(1)(c), *supra*. Accordingly, this factor supports finding that Arista acted in good faith.

e) Reporting Requirement

Cisco argues:

As explained in § VI.C.4 [("Arista's Unfounded Criticisms of Cisco's SMP Calculations")], Arista has suggested it would be difficult to identify the value of Covered Products sold in order to calculate the SMP using Arista's own sales data. *E.g.*, Arista PrHB at 167-70. But Arista used this same sales data to create its

Compliance Report to the Commission dated January 31, 2017. CX-5131 (2017-01-31 Arista Response to CDO). To the extent Arista challenges Cisco's calculations of the SMP based on the alleged inadequacy of the very same sales data that Arista used to produce its Compliance Report, Arista would not have satisfied its reporting requirements under the CDO. See CX-5020 (CDO) §§ V–VI.

Cisco Br. at 112.

Arista argues, in pertinent part:

Arista filed its response to the CDO's reporting requirement on January 31, 2017, further demonstrating its good faith efforts to comply with the Commission's orders. Arista's satisfaction of this factor therefore also weighs in favor of a finding of good faith.

Arista Br. at 97.

The evidence shows that Arista filed a compliance report on January 31, 2017. *See, e.g.*, Report of Respondent Arista Networks, Inc. Pursuant to Section V of the Cease and Desist Order (EDIS Doc. ID No. 602306). Accordingly, this factor supports finding that Arista acted in good faith.

On balance, the above factors support a finding that Arista acted in good faith in attempting to comply with the CDO. While Arista did not obtain clarification from the Commission through an advisory opinion, it undertook a significant redesign effort, obtained an opinion of counsel pertaining to its redesigned products, and complied with the Commission's reporting requirement.

2. Injury Due to Infringement

In general, "[t]he focus of this factor is injury to the domestic industry and protection of intellectual property rights." *Ink Cartridges*, Comm'n Op. at 27. The Commission has explained that "[t]he harm to the domestic industry can be measured in terms of respondents' unlicensed sales." *Magnets*, Comm'n Op. at 25. Moreover, injury to the public need not be precisely

quantified because a patent owner has the right to exclude all infringing products. *See Tractors*, Comm'n Op. at 38 (citing *EPROMs*, Comm'n Op. at 25 ("[A]ny lack of evidence of harm to the domestic industry resulting from the sales in violation of the Commission's order is not controlling on the question of whether the violations were harmful. . . . Atmel's violations harmed Intel by the loss of unlicensed sales to which it was entitled by virtue of its patent rights")).

Cisco argues "Arista injured the public, Cisco, and the domestic industry, through its systematic violation of the CDO." Cisco Br. at 112. Cisco further argues it has lost sales to Arista. *Id.* at 113.

Arista argues that Cisco's claims "are entirely speculative and unsupported by any record evidence." Arista Br. at 98. Arista adds:

- There is only one specific instance in where Cisco might have lost a sale during the relevant time period, and that [] (Arista Br. at 98);
- The existence of overlapping customers "does not indicate that any specific sales by Arista during the relevant period displaced any sales by Cisco" (Arista Br. at 99);
- There are more than 15 other competitors in the network switching market (Arista Br. at 100);
- There is no evidence the alleged harm was due to Arista infringing the '537 Patent and "customers choose Arista's products over Cisco's products for reasons other than the technology claimed in the '537 Patent' (Arista Br. at 100-02).

The Staff argues:

Cisco also alleges that Arista has caused competitive harm to Cisco. Cisco PrHB at 256. Arista argues that Cisco does not prove that any sales Arista made would have otherwise gone to Cisco. Arista PrHB at 147-48. The Commission does not require absolute proof that Cisco would have made the sales absent Arista's alleged infringement. *Neodymium Magnets*, 337-TA-372, Comm'n Op. at 25. The Commission has found it "reasonable to

assume" a Complainant "would have captured a significant portion" of the sales. *Id.* at 25 n.70. Cisco and Arista sell to overlapping customers. CX-5003 (Arnold DWS) at Q/A 224-25. Although there are other competitors in the market, Commission precedent allows the presumption that Cisco would have made sales but for Arista's sales.

This factor favors imposition of a penalty if the redesigned EOS is found to have violated the CDO.

Staff Br. at 54-55.

The evidence shows that Arista made [] sales [] between August 23, 2016 and December 12, 2016. See CX-5003C (Arnold DWS) at Q/A 38, 41, 238-39; see also CX-5644C (providing the financial calculation). Assuming the redesigned products violate the CDO, it is reasonable to presume that Cisco would have captured additional sales and that it was injured due to Arista's infringement. See Magnets, Comm'n Op. at 25. Accordingly, this factor weighs in favor of imposing a significant penalty.

3. Arista's Ability to Pay the Assessed Penalty

The Commission has looked to a party's income and revenue as an appropriate measure of its ability to pay a penalty. *Certain Ink Cartridges and Components Thereof*, Inv. No. 337-TA-565 (Enforcement Proceeding), Comm'n Op. at 30 n.12 (Sept. 25, 2009).

Cisco argues that Arista is able to pay the SMP [] Cisco Br. at 114-16.

Cisco argues Arista's recent SEC filing shows that Arista holds \$567 million in cash and cash equivalents. *Id.* at 115 (citing CX-5818 (2016 Form 10-K) at 67). Cisco further notes Arista has a market capitalization of \$8.2 billion. *Id.*

available on hand to pay a proposed remedy." *Id.* Arista argues annual net income (\$121.5 or \$125 million) would be a more reliable metric for determining Arista's ability to pay. *Id.* at 105. Arista also suggests the Commission should consider how the penalty "would impact Arista's employees or Arista as an ongoing concern." *Id.*

The Staff argues:

Arista's revenue for fiscal year 2015 was \$634.4 million in the United States and \$837.6 million worldwide. Arista PrHB at 154; CX-5526 (Arista Networks, Inc., Dec. 31, 2015 Form 10-K). Arista's net income as of December 31, 2015 was \$121.5 million and \$125 million from January 1, 2016 through September 30, 2016. RX-5130C (Cox RWS) at Q/A 135.

The evidence is shows that Arista's income and revenue show that it can pay a substantial penalty if the redesigned EOS is found to have violated the CDO.

Staff Br. at 55.

4. The Extent to Which Arista Benefitted from its Violations

The fourth penalty factor is the extent to which the respondent benefitted from any violations of the cease and desist orders. The Commission has explained that "the benefit to a violating party can be measured in a number of ways, including revenues received from infringing sales, profits from those sales, or even revenues from sales of related products where

those sales would not have occurred but for the sales of the infringing goods." *Tractors*, Comm'n Op. at 42. The benefits to a respondent may also include intangible benefits, such as customer retention. *See Ink Cartridges*, Comm'n Op. at 32. Moreover, the Commission has explained that "[w]e do not believe that this factor requires the Commission to establish with precision the amount of benefit derived by respondents. Rather, we have considered this factor with a view to determine the general order of magnitude of the infringing conduct." *Magnets*, Comm'n Op. at 28.

Cisco Br. at 116-18. Cisco points to Arista's [] in revenue and [] in gross profit (for sales of switches, power supplies, and fans) over the [] timeframe following the Presidential review period. *Id.* at 117. Cisco contends Arista's expert "admitted" that Arista benefitted from sales of the redesigned products. *Id.* at 116 (citing RX-5130 (Cox RWS) at Q/A 136).

Arista argues that Cisco has overstated "the benefit to Arista from the sales of the redesigned products." Arista Br. at 105. Arista points to its 2016 net income, which was "was \$125 million on the entire company's revenues." *Id.* (RX-5130C (Cox RWS) at Q/A 136-37). Arista argues that Dr. Arnold did not "deduct the costs of designing around the '537 Patent" and then also presents a nexus and apportionment arguments. *Id.* at 106-07 ("Cisco made no effort to evaluate what portion of those benefits was due to Arista's own innovations, and which portion was due to any alleged use of the '537 Patent.").

The Staff argues:

The evidence shows that, if Arista violated the CDO, it benefitted from sales of the accused products with redesigned EOS. The evidence shows that the value of sales made in violation of the CDO is an appropriate measure of the benefit derived from a

violation. *Neodymium Magnets*, Inv. No. 337-TA-372, Comm'n Op. at 28. This revenue from Arista's sales [far exceeds] the alternative maximum penalty of \$100,000 per day.

If Arista is found to have violated the CDO, this factor supports imposition of a civil penalty.

Staff Br. at 55-56 (footnotes omitted).

Assuming a violation is found, the evidence shows that Arista enjoyed a significant benefit from sales of its redesigned products. In particular, the value of sales made in violation of the CDO between August 23, 2016 and December 12, 2016 alone is [] See CX-5003C (Arnold DWS) at Q/A 38, 41, 238-39); see also CX-5644C (providing the financial calculation). Further, Arista's arguments about Cisco "overstating" the value of the '537 Patent are undercut by the "extensive redesign efforts" Cisco undertook following entry of the CDO. Accordingly, this factor weighs in favor of imposing a significant penalty.

5. Vindicating the Commission's Authority

"[T]he Commission generally has an interest in vindicating its authority where one of its orders is violated." *Magnets*, Comm'n Op. at 33. The need to vindicate the Commission's authority is an aggravating factor in cases where a respondent has acted in bad faith or has deliberately evaded the Commission's orders. *See Ink Cartridges*, Comm'n Op. at 35 (bad faith and deliberate evasion of orders); *Cameras II*, Comm'n Op. at 27 (knowingly making infringing – sales, or making them with reckless or willful indifference); *Tractors*, Comm'n Op. at 43

(finding a pattern of activity intended to circumvent the orders); *Magnets*, Comm'n Op. at 32-33 (finding bad faith in the fact that the respondents proposed a consent order and then violated it).

Cisco argues that Arista made "an 'all-in' bet to continue selling its products based on its own unilateral determination of non-infringement," that Arista did not inform its agents of the CDO, and that Arista [

Cisco Br. at

118. Cisco further argues it has induced others, through an unusual financial arrangement, to stockpile products "in clear defiance of the Commission's authority." *Id.* at 119.

Arista argues that, assuming a violation, Arista's violation was not intentional and that it "never acted with malice." Arista Br. at 107. Arista then argues a large civil penalty is not appropriate because "vast majority of civil penalties imposed by the Treasury Department" are far lower than the SMP. *Id*.

The Staff argues that "if a violation is found, the evidence does not show that Arista acted in bad faith or deliberately evaded the Commission's orders." Staff Br. at 56.

The Commission previously found that Arista was willfully blind to Cisco's patents and that "Arista's behavior evinces a corporate culture of copying." Comm'n Op. at 20. Since that finding, Arista began selling redesigned products, seeking only CBP's ruling on whether the redesigned products infringe the '537 Patent. *See, e.g.*, CX-5060C (July 22, 2016 Reiser to Steuart letter). Subsequent interactions with Customs were contested. *See, e.g.*, CX-5632C; CX-5092; CX-5093. Arista did not seek an advisory opinion about its redesigned products. The Commission's prior findings on copying and willful blindness, coupled with Arista's decision to litigate the redesign at Customs, indicate a need to vindicate the Commission's Authority.

Accordingly, if a violation is found, this factor weighs in favor of imposing a significant penalty.

6. The Public Interest

In previous proceedings, the Commission analyzed the public interest as follows:

We adopt the ALJ's analysis of the public interest factor and find that the public interest weighs in favor of substantial penalties. The public interest at issue in this case, as in most section 337 investigations, is the protection of intellectual property rights. The public interest is not served if intellectual property rights are not respected, and the imposition of a penalty that is substantial enough to deter future violations is in the public interest. While the purpose of the penalty is not to destroy the businesses, as the ALJ points out, the Ninestar Respondents should not complain if their business suffers if a severe penalty is imposed in response to their misconduct.

Ink Cartridges, Comm'n Op. at 38; *see also Magnets*, Comm'n Op. at 33 ("the public interest favors the protection of U.S. intellectual property rights and therefore militates in favor of a substantial penalty").

Cisco argues that imposing a civil penalty would protect intellectual property rights and the corresponding "investments in innovation (and associated domestic industries)[.]" Cisco Br. at 120. Cisco adds that "this is not a case where the Covered Products directly affect public health or welfare." *Id*.

Arista argues that imposing the SMP "is not appropriate in this instance." Arista Br. at 108. Arista argues that overprotection of intellectual property rights harms society and that Cisco has not "demonstrate[d] the value of the invention claimed in the '537 Patent." *Id.* at 109, 111. Arista further argues that its redesign efforts avoided "interruption in many key sectors of the U.S. economy." *Id.* at 109.

The Staff argues that if "Arista is found to have taken deliberate steps to violate the CDO, the public interest would not be harmed by imposing a civil penalty." Staff Br. at 57.

Assuming a violation is found, the evidence supports imposing a penalty. In the underlying investigation, the Commission found Arista was willfully blind to Cisco's patents and that "Arista's behavior evinces a corporate culture of copying." Comm'n Op. at 20. The public interest would not be served if Arista, which was previously found to be a copyist, and did not seek an advisory opinion concerning the redesigned products, were afforded leniency for its second violation of U.S. intellectual property rights. Accordingly, if a violation is found, this factor weighs in favor of imposing a significant penalty.

7. Recommended Penalty

If a violation is found, the administrative law judge recommends a civil penalty of

[] which is based on Arista's gross revenue from sales of products with or related to the redesigned EOS between August and December 2016. The recommended penalty disgorges benefit that Arista received from its infringement, vindicates the Commission's authority, and upholds the public's interest in protecting intellectual property rights. The penalty is substantial enough to deter future violations of the CDO and the Commission's orders in general. Lastly, the penalty is within the statutory limits imposed by Congress, and well below "twice the domestic value of the articles entered or sold on such day in violation of the order."

See 19 U.S.C. § 1337(f)(2).

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VII. CONCLUSIONS OF FACT AND LAW

- 1) The Commission has personal jurisdiction in this investigation.
- 2) The Commission has subject matter jurisdiction in this investigation.
- 3) The Commission has *in rem* jurisdiction in this investigation.
- 4) Since at least August 23, 2016 (the day after the Presidential review period ended), Arista has sold the accused products in the United States.
- The accused products include all of Arista's products that run Arista's redesigned EOS, including at least the 7010, 7020, 7048, 7050, 7050X 7060, 7150, 7160, 7250, 7250X, 7260, 7280, 7280E, 7300, 7300X, 7320, and 7500 series models, related software and the components thereof.
- 6) The accused products do not literally infringe claims 1, 2, 8-11, or 17-19 of U.S. Patent No. 7,162,537.
- 7) The accused products do not infringe claims 1, 2, 8-11, or 17-19 of U.S. Patent No. 7,162,537 under the doctrine of equivalents.
- 8) Amendment-based estoppel applies to Cisco's doctrine of equivalents arguments.
- 9) Arista does not indirectly infringe the asserted claims because there is no direct infringement upon which to find indirect infringement.
- 10) Arista lacks the requisite intent to infringe the asserted claims indirectly.
- Based on the arguments presented, the administrative law judge is not persuaded that the colorable differences test is the appropriate test for determining whether Arista has violated the CDO.
- In the event that it is later the colorable differences test should be utilized,
 Arista's redesigned EOS is more than colorably different from its predecessor.
- 13) Cisco has not engaged in unconscionable conduct pertaining to the enforcement proceeding that would warrant precluding Cisco's enforcement complaint under the unclean hands doctrine.
- 14) The statutory maximum penalty is [
- In the event that a violation is found, the recommended civil penalty is

VIII. ORDER

On April 11, 2017, Arista filed an unopposed motion seeking to reopen the record for the limited purpose of admitting RX-5206C into evidence. *See* Motion Docket No. 944-083. RX-5206C is a letter ruling from Customs that issued on April 7, 2017, after the hearing concluded. The administrative law judge grants Motion No. 944-083. Any remaining motions not previously ruled upon are denied as moot.

IX. ENFORCEMENT INITIAL DETERMINATION

It is the administrative law judge's ENFORCEMENT INITIAL DETERMINATION (EID) that Arista, the enforcement respondent, has not violated the cease and desist order issued on June 23, 2016.

Further, this EID, together with the record of the hearing in this investigation consisting of (1) the transcript of the hearing, with appropriate corrections as may hereafter be ordered, and (2) the exhibits received into evidence in this investigation, is CERTIFIED to the Commission.

In accordance with 19 C.F.R. § 210.39(c), all material found to be confidential by the undersigned under 19 C.F.R. § 210.5 is to be given *in camera* treatment.

The Secretary shall serve a public version of this EID upon all parties of record and the confidential version upon counsel who are signatories to the Protective Order, as amended, issued in this investigation.

To expedite service of the public version, no later than June 28, 2017, the parties shall file a joint copy of this enforcement initial determination with the Commission Secretary, with bold, red brackets to show any portion considered by the parties (or their suppliers of information) to be confidential, accompanied by a list indicating each page on which such a bracket is to be found. At least one copy of such a filing shall be served upon the office of the

undersigned, and the brackets shall be provided in bold, red text. If a party (and its suppliers of information) considers nothing in the initial determination to be confidential, and thus makes no request that any portion be redacted from the public version, then a statement to that effect shall be filed.³⁰

David P. Shaw

Administrative Law Judge

Issued: June 20, 2017

³⁰ Confidential business information ("CBI") is defined in accordance with 19 C.F.R. § 201.6(a) and § 210.5(a). When redacting CBI or bracketing portions of documents to indicate CBI, a high level of care must be exercised in order to ensure that non-CBI portions are not redacted or indicated. Other than in extremely rare circumstances, block-redaction and block-bracketing are prohibited. In most cases, redaction or bracketing of only discrete CBI words and phrases will be permitted.

CERTAIN NETWORK DEVICES, RELATED SOFTWARD AND COMPONENTS THEREOF (I):

INV. NO. 337-TA-944 (Enforcement Proceeding)

PUBLIC CERTIFICATE OF SERVICE

Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street SW, Room 112A
Washington, DC 20436

FOR COMPLAINANT CISCO SYSTEMS, INC.:	
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