

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

PORTSMOUTH NETWORK
CORPORATION,

Plaintiff,

v.

CISCO SYSTEMS, INC.,

Defendant.

Civil Action No. 2:23-cv-441-JRG

JURY TRIAL DEMANDED

DEFENDANT’S PRELIMINARY INVALIDITY CONTENTIONS

Pursuant to Local Patent Rule 3-3 and the Court’s December 19, 2023 Order (D.I. 39), Cisco Systems, Inc. (“Cisco”) hereby sets forth its Preliminary Invalidity Contentions concerning U.S. Patents Nos. 6,917,986 (the “’986 Patent”); 7,035,279 (the “’279 Patent”); and 8,014,394 (the “’394 Patent”), (collectively, the “Asserted Patents”). Plaintiff Portsmouth Corporation (“Portsmouth”) asserted claims 1, 2, 4–7, 9–14, 16–19, and 21–24 of the ’986 Patent, claims 1–18 of the ’279 Patent, and 1, 2, 4–12, and 14–18 of the ’394 Patent (collectively, the “Asserted Claims”). Cisco contends that each of the Asserted Claims is invalid under at least one or more of 35 U.S.C. §§ 101, 102, 103, and 112.

I. SCOPE OF THESE PRELIMINARY INVALIDITY CONTENTIONS

These Preliminary Invalidity Contentions: (i) identify each prior art reference Cisco is currently aware of that either anticipates or renders obvious one or more of the Asserted Claims; (ii) specify whether each such reference anticipates or renders obvious the applicable claims, and in the event a combination with one or more other such references renders obvious the applicable claims, identify each such combination and the motivation to combine such references; (iii) include

charts, for illustrative prior art references, citing exemplary disclosures in those references that anticipate or render obvious each of the elements of the applicable claims; and (iv) identify grounds for invalidating asserted claims based on indefiniteness, enablement, lack of patentable subject matter, improper inventorship, or written description or based on lack of disclosed structure under 35 U.S.C. § 112. These contentions relate only to invalidity, and do not include any contention or position beyond the issue of invalidity (*e.g.*, non-infringement or claim construction).

Cisco's discovery and investigation in this lawsuit is ongoing, and these contentions are based only on the information Cisco has obtained to date. For example, Cisco has not had the opportunity to conduct third-party discovery relating to various third-party prior art and expressly reserves the right to amend these contentions subject to third-party discovery. These third parties may include, without limitation, the authors, inventors, or assignees of the prior art publications identified in these contentions. Cisco also reserves the right to amend the contentions due to Portsmouth's failure to produce prior art known to it, including prior art identified by its own investigations, other accused infringers or third parties as to the Asserted Patents or related patents. To date, Portsmouth has not produced any prior art to Cisco. Cisco reserves its right to supplement and/or amend its Preliminary Invalidity Contentions consistent with the Federal Rules of Civil Procedure, the Local Rules, and any orders from the Court.

These Preliminary Invalidity Contentions are based upon Cisco's present understanding of the Asserted Claims, Portsmouth's December 22, 2023 Disclosure of Asserted Claims and Infringement Contentions Pursuant to P.R. 3-1 (Portsmouth's "Infringement Disclosures"), and Portsmouth's explanation of that document in its February 15, 2024 correspondence. Cisco does not concede that any (apparent) claim constructions are correct. Even though Cisco contends that all of the Asserted Claims are indefinite, Cisco has disclosed which prior art references render

those claims invalid based upon Portsmouth's contention that those claims are definite. Cisco's assertion of prior art is not a concession as to the meaning, definiteness, written description support for, or enablement of any of the Asserted Claims, or that the Asserted Patents properly claim patent eligible subject matter. If Portsmouth amends its Infringement Disclosures, Cisco reserves the right to amend its Preliminary Invalidity Contentions, and Cisco notes that Portsmouth's Infringement Disclosures failed to provide sufficient notice of Portsmouth's infringement theories as required by the Local Rules. Indeed, Cisco served Portsmouth correspondence explaining how Portsmouth's Infringement Disclosures were deficient on January 25, 2024, and Portsmouth's February 15, 2024 response did not address many of the deficiencies identified by Cisco.

Cisco takes no position on any matter of claim construction in its Preliminary Invalidity Contentions. Any statement herein describing or tending to describe any claim element is provided solely for the purpose of understanding the relevant prior art. Cisco expressly reserves the right to propose any claim construction it considers appropriate and/or to contest any claim construction it considers inappropriate. Moreover, Cisco's Preliminary Invalidity Contentions are sometimes made in the alternative based upon Portsmouth's allegations and should be viewed accordingly. Further, by including in these contentions prior art that would be anticipatory or render a claim obvious based on a particular scope or construction of the claims, Cisco's Preliminary Invalidity Contentions herein are not, and should in no way be seen as, adoptions or admissions as to the accuracy of such scope or construction. The Court has not yet construed the Asserted Claims, and Cisco reserves the right to amend these Preliminary Invalidity Contentions in accordance with the local patent rules, including after the issuance of the Court's claim construction order.

II. PORTSMOUTH'S ALLEGED PRIORITY DATES

Portsmouth contends that the Asserted Patents each claim priority to their respective non-provisional patent application. Specifically, Portsmouth contends that the '986 Patent has a

priority date of January 7, 2002, that the '279 Patent has a priority date of January 9, 2001, and that the '394 Patent has a priority date of February 11, 2009. *See* Portsmouth's Infringement Disclosures at 5–6. Cisco notes that pursuant to Local Patent Rule 3-2(b), Portsmouth is required to disclose “[a]ll documents evidencing the conception, reduction to practice, design, and development of each claimed invention, which were created on or before the date of application for the patent in suit” Portsmouth's Infringement Disclosures concede that Portsmouth has not identified any evidence corroborating a conception date earlier than the filing dates. *See* Portsmouth's Infringement Disclosures at 7 (“Plaintiff is not aware of any non-privileged documents in its possession, custody, or control that evidences conception, reduction to practice, design, or development of the claimed inventions that were created on or before the dates of application for the Asserted Patents or the priority dates identified pursuant to P. R. 3-1(e), whichever are earlier.”).

III. INVALIDITY BASED UPON PRIOR ART

Cisco contends that each of the Asserted Claims is invalid under pre-AIA 35 U.S.C. §§ 102(a), 102(b), 102(e), 102(f), and 102(g) and/or § 103(a)¹ and/or is invalid as obvious under 35 U.S.C. § 103 based upon prior art. Cisco's detailed contentions regarding the Asserted Claims in claim chart form are attached as Exhibits A-1 through A-9, B-1 through B-9, and C-1 through C-8, and D-1 through D-3. Those charts disclose how each reference, or combination of references, anticipates and/or renders obvious each of the Asserted Claims.

Cisco's claim charts disclose multiple theories of invalidity in a single chart. For example, each chart directed to an anticipatory publication also discloses how that reference alone or in

¹ Cisco also contends that the Asserted Claims of the '986 Patent, '279 Patent, and '394 Patent are invalid pursuant to 35 U.S.C. § 101, but those contentions are separately outlined in Cisco's concurrently served Preliminary Subject Matter Eligibility Contentions.

combination with one or more other references and/or the knowledge of one of ordinary skill in the art renders one of the Asserted Claims obvious. Exhibits A-1 through D-3 identify exemplary disclosures within the prior art reference(s) that teach the relevant claim elements and limitations. While the claim charts have identified citations in the references for the claim limitations, each and every disclosure of the same limitation in the same reference is not necessarily identified. For example, whenever Exhibits A-1 through D-3 include a figure, diagram, table, or drawing, all of the text associated with that figure, diagram, table, or drawing is incorporated by reference (even if that text is not explicitly cited in the exhibit). Similarly, if an exhibit includes the text associated with a figure, diagram, table, or drawing, the described figure, diagram, or drawing is incorporated by reference (even if that figure, diagram, table, or drawing is not explicitly cited). Further, persons of ordinary skill in the art read a prior art reference as a whole, and in the context of other publications and literature. Thus, Cisco may also rely on uncited portions of the prior art references, any cited documents within any prior art reference, other publications, and the testimony of experts to establish that the limitations of the Asserted Claims are anticipated or rendered obvious and/or that a person of ordinary skill in the art would have been motivated to modify or combine certain of the cited references so as to render the claims obvious.

A. Anticipation

Cisco identifies below prior art references which anticipate one or more Asserted Claims, and/or render obvious one or more of the Asserted Claims, either alone or in combination with one or more other prior art references. The Asserted Claims are identified prior art references each qualify invalid as anticipated prior art under 35 U.S.C. § 102, including subsections pre-AIA 102(a), 102(b), 102 (e), 102(f) and/or 102(g) and AIA 102(a).

1. Patents And Patent Applications

Abbreviated Name	Patent No. or Publication No.	Country of Origin	Filing Date	Issuance or Publication Date	Claim Chart Number	Production Number
'194 Gai	6,032,194	U.S.	Dec. 24, 1997	Feb. 29, 2000	A-1	CISCO-PORTSMOUTH-00170398
Dey	6,801,506	U.S.	Mar. 31, 1999	Oct. 5, 2004	A-2	CISCO-PORTSMOUTH-00170541
Seaman	6,771,610	U.S.	Oct. 12, 1999	Aug. 3, 2004	A-3	CISCO-PORTSMOUTH-00169950
Kaluve	7,177,946	U.S.	Dec. 6, 2001	Feb. 13, 2007	A-4	CISCO-PORTSMOUTH-00186133
'936 Gai	2002/0052936	U.S.	Nov. 29, 1999	May 2, 2002	A-5	CISCO-PORTSMOUTH-00170320
Benedetto	2004/0221087	U.S.	Dec. 22, 2000	Nov. 4, 2004	A-6	CISCO-PORTSMOUTH-00186165
Jain	6,330,229	U.S.	Nov. 9, 1998	Dec. 11, 2001	A-7	CISCO-PORTSMOUTH-00186110
Portolani	7,061,875	U.S.	Dec. 7, 2001	Jun. 13, 2006	A-8	CISCO-PORTSMOUTH-00170021
Chevalier	5,881,050	U.S.	Jan. 22, 1997	Mar. 9, 1999	B-1	CISCO-PORTSMOUTH-00169879
Lovette	6,747,985	U.S.	Aug. 3, 1998	Jun. 8, 2004	B-2	CISCO-PORTSMOUTH-00169798
Kovvali	6,920,113	U.S.	Mar. 28, 2000	Jul 19, 2005	B-3	CISCO-PORTSMOUTH-00170158
Drwiega	6,842,463	U.S.	Jul. 14, 2000	Jan. 11, 2005	B-5	CISCO-PORTSMOUTH-00170140
Cidon	5,446,737	U.S.	Feb. 7, 1994	Aug. 29, 1995	B-6	CISCO-PORTSMOUTH-00169738

Abbreviated Name	Patent No. or Publication No.	Country of Origin	Filing Date	Issuance or Publication Date	Claim Chart Number	Production Number
Bertin	5,940,372	U.S.	Aug. 17, 1999	Jul. 12, 1996	B-7	CISCO-PORTSMOUTH-00170465
Fedyk	7,283,477	U.S.	Aug. 24, 2000	Oct. 16, 2007	B-8	CISCO-PORTSMOUTH-00169776
Peng	6,650,618	U.S.	Jul. 1, 1999	Nov. 18, 2003	B-9	CISCO-PORTSMOUTH-00169963
Weyman	2005/0041665	U.S.	Aug. 20, 2003	Feb. 24, 2005	C-2	CISCO-PORTSMOUTH-00932944
Naik	2006/0146857	U.S.	Dec. 30, 2004	Jul. 6, 2006	C-3	CISCO-PORTSMOUTH-00932385
Zelig	2008/0151890	U.S.	Dec. 21, 2006	Jun. 26, 2008	C-4	CISCO-PORTSMOUTH-00932146
Devi	2003/0147387	U.S.	Apr. 24, 2002	Aug. 7, 2003	C-5	CISCO-PORTSMOUTH-00932128
Kouvelas	2004/0205215	U.S.	Feb. 28, 2003	Oct. 14, 2004	C-6	CISCO-PORTSMOUTH-00932326
DeSanti	7,095,738	U.S.	Dec. 7, 2002	Aug. 22, 2006	C-7	CISCO-PORTSMOUTH-00919572
Gutiérrez	2009/049659	WO.	Dec. 17, 2007	Apr. 23, 2009	C-8	CISCO-PORTSMOUTH-00932777

2. System Art

The following systems render the Asserted Patents invalid through prior public use, prior sale, derivation, and/or prior invention. The systems were publicly known, available, and used in the United States prior to the alleged inventions of the Asserted Patents. The systems disclosed below are described in various cited publications and other materials, which also independently form a basis for invalidity based upon their publication. Multiple versions or implementations of

any of the disclosed systems may exist—Cisco expressly reserves the right to rely upon other versions and implementations of these systems. Cisco expects that discovery will yield more information relating to the disclosed systems and reserves the right to amend or supplement these Preliminary Invalidity Contentions as discovery progresses in this matter. As an example, Cisco expects that discovery may be taken on one or more authors of the invalidating references describing these systems, and Cisco reserves the right to and anticipates that it will amend these Preliminary Invalidity Contentions after receiving such discovery.

System	No.	Exemplary Publications Describing The System	Date Of Publication	Production Number
Cisco Catalyst System	A-9	Catalyst 2900 Series XL and Catalyst 3500 Series XL Software Configuration Guide Cisco IOS Release 12.0(5)WC(1)	Apr. 2001	CISCO-PORTSMOUTH-00171055
		Cisco Catalyst LAN Switching	Aug. 1999	CISCO-PORTSMOUTH-00171751
		Interconnections Second Edition: Bridges, Routers, Switches, and Internetworking Protocols	Sept. 1999	CISCO-PORTSMOUTH-00931565
		Cisco Introduces Next-Generation Stacking with New Catalyst 3500 Series XL	May 1999	CISCO-PORTSMOUTH-00921179
		Cisco Products Quick Reference Guide	Aug. 2000	CISCO-PORTSMOUTH-00919594
		Catalyst 4912G Switch	1999	CISCO-PORTSMOUTH-00918783
		Configuring VLAN Trunks	May 1999	CISCO-PORTSMOUTH-00919121
		A Design Spec for STP Fast Uplink Switchover (UplinkFast)	Sept. 2001	CISCO-PORTSMOUTH-00901814
		Catalyst 3900 Release 4 Command Line Interface Software Unit Functional Specification	July 23, 1998	CISCO-PORTSMOUTH-00903058

System	No.	Exemplary Publications Describing The System	Date Of Publication	Production Number
		Merlin Functional Specification	Nov. 1999	CISCO-PORTSMOUTH-00902762
		QoS for IP Telephony: Cisco CallManager Release 3.0(5)	2001	CISCO-PORTSMOUTH-00902876
		LOTR Functionality Overview	Jan. 2001	CISCO-PORTSMOUTH-00829569
		Cisco Switched Internetworks by Chris Lewis	1999	CISCO-PORTSMOUTH-00185691
Cisco Switches, Such As The Cisco Catalyst 2900, 3500, 4000, 4900, 5000, and 6000 Series Switches Using The Spatial Reuse Protocol (The “SRP” System)	B-4	Chin 6,314,110	Mar. 1998	CISCO-PORTSMOUTH-00170084
		RFC 2892 titled “The Cisco SRP MAC Layer Protocol,”	Aug. 2000	CISCO-PORTSMOUTH-00169235
		Merlin titled “Project MERLIN Product Requirements Document,”	Jan. 1998	CISCO-PORTSMOUTH-00822426
Cisco Catalyst Series Switches System	C-1	Cisco IOS 12.2(35)SE	Dec. 2006	CISCO-PORTSMOUTH-00180110
		Cisco IOS 12.2(46)SE	Aug. 2008	CISCO-PORTSMOUTH-00917474
		Cisco IOS 12.2(46)EX	Dec. 2008	CISCO-PORTSMOUTH-00909824

Cisco further reserves the right to rely on any prior art system referenced, embodied, or described in any of the prior art references identified herein, or which embodies any of the prior art references identified herein. For example, any physical embodiments of the prior art references

and documents identified above, which physical embodiments were publicly available (*e.g.* made, used, offered for sale, or sold) before the claimed or actual priority dates of the Asserted Patents, constitute prior art. Cisco is not limited to the identified references, but also may rely on material that expressly identifies any physical embodiment of such reference as prior art.

Any citation to one or more of these prior art references/documents, should be construed to constitute not only a citation to the prior art reference/document itself (as a printed publication), but also a reference to the product or system itself. When a reference is a prior public use, offer for sale, or sale, the identified document(s) is being relied upon as exemplary evidence of the prior public use, sale, and/or offer for sale. For the prior art products or systems (*e.g.* prior public uses, offers for sale and/or sales), Cisco may rely on additional documents to demonstrate the products / system, testimony relating to the products / systems, and other information.

Further, Cisco contends that the identified prior art provides evidence of prior invention and making of the invention in the United States by another under 35 U.S.C. § 102(f) and/or 102(g), as evidenced by the named inventor(s), author(s), organization(s), and publisher(s) involved with each such reference, with the circumstances described and reflected in each reference including publications and system implementation references. Cisco therefore reserves the right to contend that one or more of the Asserted Claims is invalid under pre-AIA 35 U.S.C. § 102(f) and/or (g) to the extent that the named inventor did not invent the subject matter in the Asserted Claim(s), and/or the alleged invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it.

Also, to the extent not expressly stated herein, these Preliminary Invalidity Contentions incorporate by reference (1) any and all prior art identified in documents produced by Cisco in this case; (2) any prior art of which a named inventor of the Asserted Claims is aware and/or on which

he, and/or Portsmouth contends the alleged invention(s) of the Asserted Claims builds upon or improves; (3) any and all admissions by Portsmouth and/or a named inventor regarding the Asserted Patents including, but not limited to, admissions in the specification of the Asserted Patents the prosecution of the Asserted Patents and related patents and/or patent applications; and (4) all prior art and/or invalidity contentions that Portsmouth discloses, produces or is aware of in connection with any assertion, transfer of rights or contested proceeding concerning the Asserted Patents and related patents and/or patent applications.

In addition, much of the prior art identified in the Preliminary Invalidity Contentions reflects common knowledge and the state of the art at the time of the earliest filing date of the Asserted Patents. Cisco may rely on additional citations, references, expert testimony, fact testimony and other corroborating evidence, and other material to provide context and background illustrating the knowledge of a person of ordinary skill in the art at the time of the claimed inventions and/or to aid in understanding the cited portions of the references and/or cited features of the systems. Cisco may also rely on fact or expert testimony explaining relevant portions of references, as well as additional documents, hardware or software products or systems, and other discovery regarding these subject matters, to provide context or to aid in understanding the cited portions of the prior art references and interpreting the teachings of the prior art and to establish bases for combinations of certain cited references that render the Asserted Claims obvious.

B. Obviousness Combinations

The Asserted Claims would have been obvious under 35 U.S.C. § 103 in light of one or more of the references disclosed in Sections III.A.1 and/or **Error! Reference source not found.**, alone or in combination with one or more of the disclosed references, with one or more of the references cited in the file history of the Asserted Patents and/or one or more of the references identified below. For example, each claim chart for each of the references identified in Section

III.A explains that each such reference alone or in combination with one or more other references renders every Asserted Claim obvious. The references disclosed below all relate to changing network topologies and updating network addresses (with respect to the '986 Patent), allocating resources in a communications network (with respect to the '279 Patent), and propagating multicast forwarding / access lists (with respect to the '394 Patent). The benefits conferred by the references listed below are explained in detail within each reference. A person having ordinary skill in the art of the Asserted Patents would have been motivated to look to the references listed below in order to incorporate the benefits disclosed in those references into the communication networks described in the prior art. Some examples of these conferred benefits would include faster network recovery from a topology change (with respect to the '986 Patent), better management of resources in a network (with respect to the '279 Patent), and faster enforcement of multicast groups (with respect to the '394 Patent). Additionally, a person having ordinary skill in the art of the Asserted Patents would have had a reasonable expectation of successfully implementing the solutions described in the asserted combinations. Each claim chart provides additional detail regarding the motivation and ability of skilled artisans to combine the prior art references asserted in particular combinations, as well as an exemplary list of combinations.

Exhibits D-1 through D-3 compile exemplary disclosures from some of the references identified below and are referenced in Cisco's other claim charts (*i.e.*, those identified in Section III.A) for purposes of demonstrating the combinations that would have rendered each Asserted Claim obvious. When used in such combinations, Exhibits D-1 through D-3 demonstrate how the references listed below render obvious each Asserted Claim. The References cited and relied upon in Exhibits D-1 through D-3 are listed in the tables below. In addition to the prior art references listed in these contentions and in charts A-1 through D-3, Cisco expressly reserves the right to rely

upon all prior art references cited in the prosecution of the Asserted Patents, and Cisco further expressly reserves the right to rely upon additional reference to demonstrate the state of the relevant art. For example, Cisco may rely upon additional references in its forthcoming technical expert reports that demonstrate what was well known in the art and to provide a background to the jury on the relevant art and/or purported inventions of the Asserted Patents.

1. Patents And Patent Applications

Abbreviated Name	Patent No. or Publication No.	Country of Origin	Filing Date	Issuance or Publication Date	Production Number
Lehtonen	2005/0185663	U.S.	Feb. 23, 2005	Aug. 25, 2005	CISCO-PORTSMOUTH-00932275
Nielsen	8,149,834	U.S.	Jan. 25, 2007	Apr. 3, 2012	CISCO-PORTSMOUTH-00933004
Agmon	7,626,930	U.S.	Jul. 16, 2007	Dec. 1, 2009	CISCO-PORTSMOUTH-00932415
Wu	6,847,638	U.S.	Oct. 16, 2000	Jan. 25, 2005	CISCO-PORTSMOUTH-00919316
Alvarez	8,427,959	U.S.	Jan. 22, 2007	Apr. 23, 2013	CISCO-PORTSMOUTH-00932283
Previdi	2007/0189193	U.S.	Feb. 16, 2006	Aug. 16, 2007	CISCO-PORTSMOUTH-00932517
Scano	7,788,368	U.S.	Dec. 23, 2003	Aug. 31, 2010	CISCO-PORTSMOUTH-00932427
Daniel	2006/027380	W.O.	Sept. 9, 2005	Mar. 16, 2006	CISCO-PORTSMOUTH-00932836
Zadikian	6,631,134	U.S.	Jan. 15, 1999	Oct. 7, 2003	CISCO-PORTSMOUTH-00170757
Parnafes	6,721,272	U.S.	Oct. 8, 1999	Apr. 13, 2004	CISCO-PORTSMOUTH-00169899

Abbreviated Name	Patent No. or Publication No.	Country of Origin	Filing Date	Issuance or Publication Date	Production Number
Masters	5,920,697	U.S.	Jul. 11, 1996	Jul. 6, 1999	CISCO-PORTSMOUTH-00170417
Kalman	6,680,912	U.S.	Mar. 3, 2000	Jan. 20, 2004	CISCO-PORTSMOUTH-00170035
Cidon	5,367,517	U.S.	Dec. 16, 1992	Nov. 22, 1994	CISCO-PORTSMOUTH-00170050
Cosares	5,546,542	U.S.	Nov. 29, 1993	Aug 13, 1996	CISCO-PORTSMOUTH-00170008
Ramfelt	6,108,338	U.S.	Apr. 17, 1998	Aug. 22, 2000	CISCO-PORTSMOUTH-00169811
Chevalier	6,262,974	U.S.	Dec. 17, 1998	Jul. 17, 2001	CISCO-PORTSMOUTH-00170178
Galand	6,647,008	U.S.	Jun. 12, 1998	Nov. 11, 2003	CISCO-PORTSMOUTH-00170437
Skirmont	7,058,009	U.S.	Sept. 15, 2000	Jun. 6, 2006	CISCO-PORTSMOUTH-00169728
Portolani	7,061,875	U.S.	Dec. 7, 2001	Jun. 13, 2006	CISCO-PORTSMOUTH-00170021
Flanagan	5,159,595	U.S.	Dec. 20, 1988	Oct. 27, 1992	CISCO-PORTSMOUTH-00170282
Yamashita	5,307,353	U.S.	May 7, 1991	Apr. 26, 1994	CISCO-PORTSMOUTH-00170257
Okanoue	5,925,137	U.S.	Mar. 27, 1997	Jul. 20, 1999	CISCO-PORTSMOUTH-00169721
Ballantine	6,246,667	U.S.	Sept. 2, 1998	Jun. 12, 2001	CISCO-PORTSMOUTH-00169913
Nguyen	6,680,906	U.S.	Mar. 31, 1999	Jan. 20, 2004	CISCO-PORTSMOUTH-00170360

Abbreviated Name	Patent No. or Publication No.	Country of Origin	Filing Date	Issuance or Publication Date	Production Number
Nosella	7,881,208	U.S.	Jun. 18, 2001	Feb. 1, 2011	CISCO-PORTSMOUTH-00170824
Goldman	6,628,661	U.S.	Jul. 22, 1999	Sept. 30, 2003	CISCO-PORTSMOUTH-00169766
Ishii	2001/0021177	U.S.	Mar. 5, 2001	Sept. 13, 2001	CISCO-PORTSMOUTH-00170379
Seaman	2002/0023170	U.S.	Mar. 1, 2001	Feb. 21, 2002	CISCO-PORTSMOUTH-00170067
Davies	6,839,767	U.S.	Nov. 1, 2000	Jan. 4, 2005	CISCO-PORTSMOUTH-00888686
Galand	6,424,624	U.S.	Oct. 7, 1998	Jul. 23, 2002	CISCO-PORTSMOUTH-00888655
Li	6,738,819	U.S.	Dec. 27, 1999	May 18, 2004	CISCO-PORTSMOUTH-00888673
Bohm	5,982,780	U.S.	Dec. 26, 1996	Nov. 9, 1999	CISCO-PORTSMOUTH-00170786
Cunningham	6,941,380	U.S.	Dec. 28, 2000	Sep. 6, 2005	CISCO-PORTSMOUTH-00169755
'264 Gai	7,848,264	U.S.	Apr. 25, 2005	Dec. 7, 2010	CISCO-PORTSMOUTH-00888703
Burns	7,200,110	U.S.	Mar. 24, 1999	Apr. 3, 2007	CISCO-PORTSMOUTH-00920422
Detampel	5,995,608	U.S.	Mar. 28, 1997	Nov. 30, 1999	CISCO-PORTSMOUTH-00919300
Kashyap	2003/0021223	U.S.	Jul. 27, 2001	Jan. 30, 2003	CISCO-PORTSMOUTH-00932469

2. Non-Patent Literature

Abbreviated Name	Title	Date of Publication	Production Number
RFC 2892	The Cisco SRP MAC Layer Protocol	August 2000	CISCO-PORTSMOUTH-00169235
RFC 2236	Internet Group Management Protocol, Version 2	Nov. 1997	CISCO-PORTSMOUTH-00175372
RFC 2710	Multicast Listener Discovery (MLD) for IPv6	Oct. 1999	CISCO-PORTSMOUTH-00174097
RFC 3376	Internet Group Management Protocol, Version 3	Oct. 2002	CISCO-PORTSMOUTH-00185576
RFC 3810	Multicast Listener Discovery Version 2 (MLDv2) for IPv6	Jun. 2004	CISCO-PORTSMOUTH-00185629
RFC 4541	Considerations for Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) Snooping Switches	May 2006	CISCO-PORTSMOUTH-00177140
RFC 4604	Using Internet Group Management Protocol Version 3 (IGMPv3) and Multicast Listener Discovery Protocol Version 2 (MLDv2) for Source-Specific Multicast	Aug. 2006	CISCO-PORTSMOUTH-00174086
RFC 4605	Internet Group Management Protocol (IGMP) / Multicast Listener Discovery (MLD) – Based Multicast Forwarding	Aug. 2006	CISCO-PORTSMOUTH-00174119
RFC 4607	Source-Specific Multicast for IP	Aug. 2006	CISCO-PORTSMOUTH-00173466
RFC 2205	Resource Reservation Protocol (RSVP)	Sep. 1997	CISCO-PORTSMOUTH-00169287
RFC 2328	OSPF Version 2	April 1998	CISCO-PORTSMOUTH-00169420

Abbreviated Name	Title	Date of Publication	Production Number
RFC 2814	SBM (Subnet Bandwidth Manager)	May 2000	CISCO-PORTSMOUTH-00169175
RFC 2362	Protocol Independent Multicast-Sparse Mode (PIM-SM): Protocol Specification	Jun. 1998	CISCO-PORTSMOUTH-00919012
IEEE 802.1d	IEEE Standard for Local Area Network MAC (Media Access Control) Bridges	1998	CISCO-PORTSMOUTH-00920049
IEEE 802.1w	IEEE Standard for Information Technology - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Common Specifications - Part 3: Media Access Control (MAC) Bridges: Amendment 2 - Rapid Reconfiguration	2001	CISCO-PORTSMOUTH-00919340
IEEE 802.1Q	IEEE Standards for Local and Metropolitan Area Networks: Virtual Bridged Local Area Networks	1998	CISCO-PORTSMOUTH-00919838
Frei	Bandwidth Allocation Planning in Communication Networks	1999	CISCO-PORTSMOUTH-00169702
Ash	Dynamic Routing in Telecommunications Networks	1997	CISCO-PORTSMOUTH-00923391
Gibney QMW	Dynamic Resource Allocation by Market-Based Routing in Telecommunications Network	1998	CISCO-PORTSMOUTH-00169159
Cidon IEEE	Improved Fairness Algorithms for Rings with Spatial Reuse	April 1997	CISCO-PORTSMOUTH-00170222
Burgin	Broadband ISDN Resource Management: The Role of Virtual Paths	September 1991	CISCO-PORTSMOUTH-00169747

Abbreviated Name	Title	Date of Publication	Production Number
DARPA	Architecture and Concept of Operations for a Warfighter's Internet Volume 2: Appendices	January 1998	CISCO-PORTSMOUTH-00173128
HP ProCurve	HP ProCurve Switch 5400zl, 3500yl, and 6200yl Series	December 2008	CISCO-PORTSMOUTH-00921220
3Com	3Com® Stackable Switch Family Advanced Configuration Examples	February 2008	CISCO-PORTSMOUTH-00904468

Cisco further incorporates the references cited in Section III.A here.

3. Exemplary '986 Patent Obviousness Combinations

Below is a list of examples of certain combinations of prior art references that a person of ordinary skill in the art would have been motivated to combine around the time of the alleged invention of the '986 Patent. The combinations listed below are meant to provide additional clarity on motivations to combine some of the references, but is not meant to list every possible combination and is not an admission that unlisted combinations would not have been obvious to a person of ordinary skill in the art. Additional exemplary obviousness combinations are outlined in Cisco's invalidity charts. Cisco reserves the right to amend or add exemplary obviousness combinations as discovery continues and after any change in Portsmouth's positions.

For example, skilled artisans would have been motivated to combine Seaman (or Dey or Kaluve or Jain or Benedetto or Cisco Switch Internetworks) with Gai (or RFC 2362 or UplinkFast Design Spec or DARPA) because Seaman (or Dey or Kaluve or Jain or Benedetto or Cisco Switch Internetworks) discloses building databases for forwarding traffic, and Gai (or RFC 2362 or UplinkFast Design Spec or DARPA) discloses sending dummy traffic over the second link to modify the databases in response to changes in network topology. Skilled artisans would have understood that Seaman (or Dey or Kaluve or Jain or Benedetto or Cisco Switch Internetworks)

and Gai (or RFC 2362 or UplinkFast Design Spec or DARPA) could be readily combined because both relate to reconfiguring network topologies for forwarding traffic in response to link failure. Gai (or RFC 2362 or UplinkFast Design Spec or DARPA) discloses the benefits of sending dummy traffic to modify network device forwarding databases in order to allow a skilled artisan to more quickly update forwarding information. Thus, a skilled artisan would have been motivated to use the dummy traffic disclosed in Gai (or RFC 2362 or UplinkFast Design Spec or DARPA) to update the forwarding databases disclosed in Seaman (or Dey or Kaluve or Jain or Benedetto or Cisco Switch Internetworks) and would have recognized that the results of this combination were predictable.

As another example, skilled artisans would have been motivated to combine Seaman (or Kaluve or Jain or Benedetto) with Gai (or Dey or Portolani or Cisco Switch Internetworks) because Seaman (or Kaluve or Jain or Benedetto) discloses connecting network devices through a plurality of links to exchange communication traffic, and Gai (or Dey or Portolani or Cisco Switch Internetworks) discloses network devices with ports that are able to be coupled to a core switch over a network trunk link. Skilled artisans would have understood that Seaman (or Kaluve or Jain or Benedetto) and Gai (or Dey or Portolani or Cisco Switch Internetworks) could be readily combined because both relate to connecting network devices by coupling network device ports. Gai (or Dey or Portolani or Cisco Switch Internetworks) discloses the benefits of aggregating links connecting network devices into a trunk link in order to allow more bandwidth for certain types of network traffic. Thus, a skilled artisan would have been motivated to use the network trunk link disclosed in Gai (or Dey or Portolani or Cisco Switch Internetworks) to couple a network port to a core switch disclosed in Seaman (or Kaluve or Jain or Benedetto) and would have recognized that the results of this combination were predictable.

As another example, skilled artisans would have been motivated to combine Seaman (or Jain or Benedetto or Portolani) with Gai (or Kaluve or Higashiyama or IEEE 802.1D) because Seaman (or Jain or Benedetto or Portolani) discloses configuring LANs and VLANs and sending network traffic in local area networks, and Gai (or Kaluve or Higashiyama or IEEE 802.1D) discloses sending data packets and frames with header fields including a VLAN tag. Skilled artisans would have understood that Seaman (or Jain or Benedetto or Portolani) and Gai (or Kaluve or Higashiyama or IEEE 802.1D) could be readily combined because both relate to exchanging network traffic through a network and configuring network topologies, including LANs and VLANs. Gai (or Kaluve or Higashiyama or IEEE 802.1D) discloses the benefits of including a VLAN tag in the header of data packets in order to direct packets efficiently through a network. Thus, a skilled artisan would have been motivated to use the VLAN-tagged data packets in Gai (or Kaluve or Higashiyama or IEEE 802.1D) to send data packets for network configuration disclosed in Seaman (or Jain or Benedetto or Portolani) and would have recognized that the results of this combination were predictable.

4. Exemplary '279 Patent Obviousness Combinations

Below is a list of examples of certain combinations of prior art references that a person of ordinary skill in the art would have been motivated to combine around the time of the alleged invention of the '279 Patent. The combinations listed below are meant to provide additional clarity on motivations to combine some of the references, but is not meant to list every possible combination and is not an admission that unlisted combinations would not have been obvious to a person of ordinary skill in the art. Additional exemplary obviousness combinations are outlined in Cisco's invalidity charts. Cisco reserves the right to amend or add exemplary obviousness combinations as discovery continues and after any change in Portsmouth's positions.

For example, skilled artisans would have been motivated to combine Lovette (or Chevalier or Drwiega or Bertin or Fedyk) with SRP as described in Chin (Kovvali or Kalman or Peng or RFC 2892) because Lovette (or Chevalier or Drwiega or Bertin or Fedyk) discloses a communication network comprising a plurality of nodes and links, and SRP as described in Chin (Kovvali or Kalman or Peng or RFC 2892) discloses a bi-directional ring communication network consisting of an inner and outer ring with a plurality of nodes and links. Skilled artisans would have understood that Lovette (or Chevalier or Drwiega or Bertin or Fedyk) and SRP as described in Chin (Kovvali or Kalman or Peng or RFC 2892) could be readily combined because both relate to routing data flow across communication networks composed of a plurality of nodes and links. SRP as described in Chin (Kovvali or Kalman or Peng or RFC 2892) discloses the benefits of using a standard protocol that can efficiently select network paths and interoperate with other networks. Thus, a skilled artisan would have been motivated to implement a bidirectional ring network topology with an inner and outer ring in Lovette (or Chevalier or Drwiega or Bertin or Fedyk) with SRP as described in Chin (Kovvali or Kalman or Peng or RFC 2892) to allow for data routing across a plurality of paths composed of a plurality of nodes and links and would have recognized that the results of this combination were predictable.

As another example, skilled artisans would have been motivated to combine Chevalier (or or Peng or Bertin or Fedyk or Chin or Drwiega) with Lovette (or Kovvali or Cidon) because Chevalier (or or Peng or Bertin or Fedyk) discloses allocating resources to satisfy data routing requests over a communications network, and Lovette (or Kovvali or Cidon) discloses allocating resources in quantized amounts to satisfy data routing over a communications network. Skilled artisans would have understood that Chevalier (or Peng or Bertin or Fedyk or Chin or Drwiega) and Lovette (or Kovvali or Cidon) could be readily combined because both relate to methods of

routing data and allocating resources between interconnected nodes in a communication network. Lovette (or Kovvali or Cidon) discloses the benefits of using a preset quantized resource amount when allocating resources across a communication network in order to more quickly deploy those resources. Thus, a skilled artisan would have been motivated to implement the method of allocating resources in quantized amounts in Chevalier (or Peng or Bertin or Fedyk or Chin or Drwiega) when allocating requested resources across a communication network and would have recognized that the results of this combination were predictable.

As another example, skilled artisans would have been motivated to combine Chin (or Lambrecht or Lovette or Peng) with Kovvali (or Chevalier) because Chin (or Lambrecht or Lovette or Peng) and Kovvali (or Chevalier) disclose prioritizing packets and/or resources to improve the management of data flow transfers. Kovvali (or Chevalier) disclose the benefits of prioritizing packets in order to better achieve quality of service requirements. Thus, a skilled artisan would have been motivated to use these disclosed methods of prioritizing packets in the networks disclosed in Chin (or Lambrecht or Lovette or Peng). Skilled artisans would have understood that Chin (or Lambrecht or Lovette or Peng) and Kovvali (or Chevalier) could be readily combined because both relate to methods of path selection and allocating resources between interconnected nodes in a communication network. Thus, a skilled artisan would have been motivated to implement the method of prioritizing packets and/or resources in Chin (or Lambrecht or Lovette or Peng) when selecting a path for a packet in a network and would have recognized that the results of this combination were predictable.

5. Exemplary '394 Patent Obviousness Combinations

Below is a list of examples of certain combinations of prior art references that a person of ordinary skill in the art would have been motivated to combine around the time of the alleged invention of the '394 Patent. The combinations listed below are meant to provide additional clarity

on motivations to combine some of the references, but is not meant to list every possible combination and is not an admission that unlisted combinations would not have been obvious to a person of ordinary skill in the art. Additional exemplary obviousness combinations are outlined in Cisco's invalidity charts. Cisco reserves the right to amend or add exemplary obviousness combinations as discovery continues and after any change in Portsmouth's positions.

For example, skilled artisans would have been motivated to combine references describing the Cisco Catalyst Switches (or Kouvelas or DeSanti or Gutiérrez) with Weyman (or Zelig or Naik or Devi) because the references describing the Cisco Catalyst Switches (or Kouvelas or DeSanti or Gutiérrez) discloses receiving multicast content requests and delivering the multicast content via multiple processing units in a network device in response to the request , and Weyman (or Zelig or Naik or Devi) discloses distributing a multicast content request to multiple processing units in a network device and updating a list in each processing unit in response to the request. Skilled artisans would have understood that the references describing the Cisco Catalyst Switches (or Kouvelas or DeSanti or Gutiérrez) and Weyman (or Zelig or Naik or Devi) could be readily combined because both relate to delivering multicast content to a client using a network device and in response to a multicast content request. Weyman (or Zelig or Naik or Devi) discloses the benefits of distributing a multicast content request to multiple processing units in a network device and updating a list in each processing unit in response to the request in order to allow a skilled artisan to control the delivery of the multicast content within the network. Thus, a skilled artisan would have been motivated to distribute multicast content request to processing units in a network device and update a list in each processing unit disclosed in Weyman (or Zelig or Naik or Devi) into the network device disclosed in the references describing the Cisco Catalyst Switches (or

Kouvelas or DeSanti or Gutiérrez) and would have recognized that the results of this combination were predictable.

As another example, skilled artisans would have been motivated to combine Weyman (Devi or Kouvelas or DeSanti or Gutiérrez) with the references describing the Cisco Catalyst Switches (or Zelig or Naik) because the Weyman (Devi or Kouvelas or DeSanti or Gutiérrez) discloses a network device for delivering multicast content that are permitted to be forwarded to a client via a specific port, and the Cisco Catalyst Switches (or Zelig or Naik) discloses setting an upper limit on a number of multicast streams that are allowed to be forwarded over a specific port. Skilled artisans would have understood that Weyman (Devi or Kouvelas or DeSanti or Gutiérrez) and the references describing the Cisco Catalyst Switches (or Zelig or Naik) could be readily combined because both relate to forwarding multicast packets based on permissions associated with a client request. The references describing the Cisco Catalyst Switches (or Zelig or Naik) discloses the benefits of setting an upper limit of multicast streams that are allowed to be forwarded over a given port in order to facilitate faster changes between multicast content while reducing a likelihood of denial of service attacks. Thus, a skilled artisan would have been motivated to include the upper limit disclosed in the references describing the Cisco Catalyst Switches (or Zelig or Naik) into the multicast streaming network disclosed in Weyman (Devi or Kouvelas or DeSanti or Gutiérrez) and would have recognized that the results of this combination were predictable.

As another example, skilled artisans would have been motivated to combine Naik (or Kouvelas or DeSanti or Gutiérrez) with the references describing the Cisco Catalyst Switches (or Weyman or Zelig or Devi) because Naik (or Kouvelas or DeSanti or Gutiérrez) discloses a network device that aggregates two or more ports to form a high-capacity port and receives a request that indicates multicast packets are to be delivered over the high-capacity port, and the references

describing the Cisco Catalyst Switches (or Weyman or Zelig or Devi) discloses receives a request for content that indicates that multicast packets are to be delivered over a specific port. Skilled artisans would have understood that Naik (or Kouvelas or DeSanti or Gutiérrez) and the references describing the Cisco Catalyst Switches (or Weyman or Zelig or Devi) could be readily combined because both relate to network devices that are used for multicast content delivery in response to a client request. The references describing the Cisco Catalyst Switches (or Weyman or Zelig or Devi) discloses the benefits of using a high-capacity, aggregated port in order to increase the amount of and quality of multicast content that is delivered to the requesting client. Thus, a skilled artisan would have been motivated to include the high-capacity port disclosed in the references describing the Cisco Catalyst Switches (or Weyman or Zelig or Devi) into the network device disclosed in Naik (or Kouvelas or DeSanti or Gutiérrez) and would have recognized that the results of this combination were predictable.

IV. INVALIDITY BASED UPON INDEFINITENESS, LACK OF SUFFICIENT WRITTEN DESCRIPTION, LACK OF ENABLEMENT, AND LACK OF PATENT SUBJECT MATTER ELIGIBILITY

The Asserted Claims are invalid based on indefiniteness under 35 U.S.C. § 112 ¶ 2 and/or based on failure to meet the enablement and written description requirements under 35 U.S.C. § 112 ¶ 1. Cisco's theories are based upon the positions and apparent claim constructions taken by Portsmouth in its Infringement Disclosures—none of Cisco's indefiniteness, lack of enablement, lack of written description, lack of patent eligible subject matter, or improper inventorship positions concede that any of Portsmouth's positions or apparent constructions are correct. Cisco reserves the right to amend these Preliminary Invalidity Contentions as discovery continues and after any change in Portsmouth's positions.

1. Indefiniteness

Title 35 U.S.C. § 112 ¶ 2 requires that a patent claim “particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention.” Claim terms that fail to inform those skilled in the art “with reasonable certainty . . . about the scope of the invention” fail the definiteness requirement of § 112 ¶ 2. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014).

Every Asserted Claim of the '986 Patent is invalid as indefinite because, at a minimum, the following limitations, read in light of the intrinsic evidence, fail to inform those skilled in the art with reasonable certainty about the scope of the claimed inventions:

- “wherein the protocol processor is adapted to update the entries in the database to point to the second access port before receiving the communication traffic from the one or more access switches on the second port”;
- “one or more access switches via at least first and second redundant links, respectively connected to first and second ports of the edge switch”;
- “thereby causing each of the switches to build a respective database for use in forwarding the traffic”;
- “sending dummy traffic from the edge switch over the second link to the one or more access switches”;
- “so as to cause each of the one or more access switches to modify its respective database responsive to the second port being in the active state”;
- “wherein playing the second port in the blocking state comprises configuring the first and second ports so that no loop is created in the network between the edge switch and the one or more access switches”;

- “responsive to placing the second port in the active state, updating the database of the edge switch so that entries in the database point to the second port instead of the first port”;
- “changing the entries in the database to point to the second port before receiving the communication traffic from the one or more access switches on the second port”;
- “sending the dummy traffic”;
- “wherein sending the data frames comprises copying the source addresses for the data frames from the database of the edge switch”;
- “comprises incorporating a Virtual Local Area Network (VLAN) tag in a header of the data frames”;
- “sending the dummy traffic comprises sending data frames downstream from the edge switch toward the access switches”;
- “coupling a first bridge in a network to a second bridge located downstream of the first bridge”;
- “by connecting at least first and second redundant links to respective first and second ports of the first bridge so as to communicate with the second bridge”;
- “thereby causing the bridges to build respective databases for use in forwarding the traffic”;
- “sending dummy traffic from the first bridge over the second link downstream to the second bridge, so as to cause the second bridge to modify its database responsive to the second port being in the active state”;
- “a network port”;
- “a core switch”;

- “coupled via first and second redundant network access links to one or more access switches serving network users”;
- “a protocol processor”;
- “thereby causing each of the access switches to build a respective access switch database for use in forwarding the traffic”;
- “to send dummy traffic through the second access port over the second link to the one or more access switches, so as to cause each of the one or more access switches to modify its respective access switch database responsive to the second access port being in the active state”;
- “wherein the protocol processor is adapted to configure the first and second access ports so that no loop is created in the network between the edge switch and the one or more access switches”;
- “wherein the protocol processor is adapted to build an edge switch database in the memory responsive to the communication traffic prior to the failure associated with the first link and, responsive to placing the second access port in the active state, to update the edge switch database so that entries in the edge switch database point to the second access port instead of the first access port”;
- “the dummy traffic comprises data frames originating at the edge switch while having source addresses corresponding to network addresses of other entities in the network that are accessible ss to the access switches pia the edge switch”;
- “wherein the protocol processor is adapted to incorporates a Virtual Local Area Network (VLAN) tag in a header of the data frames”;

- “the dummy traffic comprises data frames sent downstream from the edge switch toward the access switches”;
- “a designated port”;
- “first and second downstream ports., adapted to be coupled pia first and second redundant links to a further bridge device located downstream in the network relative to the spanning tree root”;

Every Asserted Claim of the '279 Patent is invalid as indefinite because, at a minimum, the following limitations, read in light of the intrinsic evidence, fail to inform those skilled in the art with reasonable certainty about the scope of the claimed inventions:

- “each such path comprising a respective sequence of the links”;
- “the links comprised by each of the paths”;
- “for the links comprised in each of the paths”;
- “maximum level of use of at least one of the requested resources, taken over all of the links comprised in the paths”;
- “the nodes including at least first and second nodes,”
- “sufficient”;
- “insufficient”;
- “allocating a respective number of quanta of one or more resources in the network to each of the nodes;”;
- “increasing the allocation of the resources to the first node on the selected path by a predetermined quantum”;
- “deallocating the predetermined quantum from the first node”;

- “which is adapted to allocate a respective so number of quanta of one or more resources in the network to each of the nodes”;
- “levels of use”;
- “respective levels of use of the requested resources due to communications in progress over the network and to select which of the paths is to carry the data flow responsive to the determined levels of use of the requested resources on the links comprised in each of the paths, and to increase the allocation of the resources to the first node on the selected path by a predetermined quantum”;
- “use a portion of the resources so as to carry the data flow between the first and second nodes over one of a plurality of paths therebetween”;
- “respective levels of use of the requested resources due to communications in progress over the network”;
- “wherein the plurality of paths comprises a first path traversing the ring in one direction and a second path traversing the ring in the opposite direction, and wherein selecting which of the paths is to carry the data flow comprises selecting the first or the second path”;
- “over an inner or outer data link ring”;
- “processing power associated with each of the links”;
- “selecting which of the paths is to carry the data flow comprises selecting the one of the paths having the lowest level of a predetermined measure of use of the requested resources”;
- “dispatcher”;

- “comparing an amount of the resources that have been released to a predetermined threshold”;
- “the lowest level of a predetermined measure of use of the requested resources”; and
- “to compare an amount of the resources that have been released to a predetermined threshold, and if the amount is greater than the predetermined threshold, to deallocate the predetermined quantum from the first node.”

Every Asserted Claim of the '394 Patent is invalid as indefinite because, at a minimum, the following limitations, read in light of the intrinsic evidence, fail to inform those skilled in the art with reasonable certainty about the scope of the claimed inventions:

- “network element, comprising . . . wherein a new processing unit added to the network element is configured to initialize by”
- “network element”;
- “processing units”;
- “processor for processing packets communicated over the different subset of the multiple ports to which the processing unit is assigned”;
- “over the different subset of the multiple ports to which the processing unit is assigned”;
- “each processing unit is assigned to a different subset of the multiple ports of the network element”;
- “the request specifies a requested action selected from a group of actions consisting of receiving the given multicast packet stream and stopping to receive the given multicast packet stream”;

- “storing in each processing unit a respective list, each list indicating all of one or more multicast packet streams that are permitted for forwarding by the network element, and further indicating which of the one or more ports each multicast packet stream is permitted to be forwarded to”;
- “receiving from a client a request relating to reception of a given multicast packet stream”;
- “wherein the request indicates that the given multicast packet stream is to be forwarded over the high-capacity port”;
- “distributing the request among the multiple processing units within the network element, and updating the respective list in each processing unit responsively to the request”;
- “the ports forming the high-capacity port are assigned to at least two of so the processing units, and wherein updating the list comprises holding respective local copies of the number of the multicast packet streams that are permitted for forwarding over the high-capacity port, updating the local copies based on the distributed request, and selectively updating the list in each of the at least two processing units based on the respective local copies”;
- “operating the network element comprises aggregating two or more of the ports to form a high-capacity port”;
- “aggregating the ports comprises setting an upper limit on a number of the multicast packet streams that are permitted for forwarding over the high-capacity port”;
- “wherein in updating the list comprises modifying the list to indicate that the given multicast packet stream is permitted for forwarding over the high-capacity port only

when the number of the multicast packet streams that are permitted for forwarding over the high-capacity port, including the given multicast packet stream, does not exceed the upper limit”;

- “wherein operating the network element comprises initializing a new processing unit added to the network element”; and
- “multicast status request.”

2. Lack of Written Description and Enablement

The specifications of the Asserted Patents do not provide adequate written description to support the claim scope asserted by Portsmouth in furtherance of its infringement theories. 35 U.S.C. § 112 ¶ 1 requires a patent specification to contain “a written description of the invention.” To fulfill the written description requirement, the patent “must clearly allow persons of ordinary skill in the art to recognize that the inventor invented what is claimed.” *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (citation and internal quotation marks omitted). To satisfy the written description requirement, “the applicant must ‘convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention,’ and demonstrate that by disclosure in the specification of the patent.” *Carnegie Mellon Univ. v. Hoffmann-La Roche Inc.*, 541 F.3d 1115, 1122 (Fed. Cir. 2008) (quoting *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563–64 (Fed. Cir. 1991)). The Asserted Patents do not meet that requirement.

Additionally, the Asserted Patents do not enable the claim scope contended in Portsmouth’s Infringement Disclosure. 35 U.S.C. § 112 ¶ 1 requires the specification to describe “the manner and process of making and using [the invention], in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains ... to make and use the” invention. The

enablement requirement is separate from and in addition to the written description requirement. *Ariad*, 598 F.3d at 1344–45. This “requirement is satisfied when one skilled in the art, after reading the specification, could practice the claimed invention without undue experimentation.” *AK Steel Corp. v. Sollac & Ugine*, 344 F.3d 1234, 1244 (Fed. Cir. 2003) (citation omitted).

The '986 Patent fails to (1) demonstrate the inventors' possession of the claimed invention; or (2) enable a person of ordinary skill in the art to make and use the claimed invention without undue experimentation, based upon the claim scope alleged by Portsmouth, for example:

- “one or more access switches via at least first and second redundant links, respectively connected to first and second ports of the edge switch”;
- “sending dummy traffic from the edge switch over the second link to the one or more access switches”;
- “wherein playing the second port in the blocking state comprises configuring the first and second ports so that no loop is created in the network between the edge switch and the one or more access switches”;
- “sending the dummy traffic”;
- “comprises incorporating a Virtual Local Area Network (VLAN) tag in a header of the data frames”;
- “sending the dummy traffic comprises sending data frames downstream from the edge switch toward the access switches”;
- “by connecting at least first and second redundant links to respective first and second ports of the first bridge so as to communicate with the second bridge”;

- “sending dummy traffic from the first bridge over the second link downstream to the second bridge, so as to cause the second bridge to modify its database responsive to the second port being in the active state”;
- “a network port”;
- “a core switch”;
- “coupled via first and second redundant network access links to one or more access switches serving network users”;
- “a protocol processor”;
- “to send dummy traffic through the second access port over the second link to the one or more access switches, so as to cause each of the one or more access switches to modify its respective access switch database responsive to the second access port being in the active state”;
- “wherein the protocol processor is adapted to configure the first and second access ports so that no loop is created in the network between the edge switch and the one or more access switches”;
- “wherein the protocol processor is adapted to build an edge switch database in the memory responsive to the communication traffic prior to the failure associated with the first link and, responsive to placing the second access port in the active state, to update the edge switch database so that entries in the edge switch database point to the second access port instead of the first access port”;
- “the dummy traffic comprises data frames originating at the edge switch while having source addresses corresponding to network addresses of other entities in the network that are accessible ss to the access switches pia the edge switch”;

- “wherein the protocol processor is adapted to incorporate a Virtual Local Area Network (VLAN) tag in a header of the data frames”;
- “the dummy traffic comprises data frames sent downstream from the edge switch toward the access switches”;
- “a designated port”.

The '279 Patent fails to (1) demonstrate the inventors' possession of the claimed invention; and (2) enable a person of ordinary skill in the art to make and use the claimed invention without undue experimentation, for example:

- “wherein choosing the dispatcher comprises choosing one of the nodes to act as the dispatcher”;
- “each such path comprising a respective sequence of the links”;
- “the links comprised by each of the paths”;
- “for the links comprised in each of the paths”;
- “maximum level of use of at least one of the requested resources, taken over all of the links comprised in the paths”;
- “the nodes including at least first and second nodes,”
- “sufficient”;
- “insufficient”;
- “allocating a respective number of quanta of one or more resources in the network to each of the nodes;”;
- “increasing the allocation of the resources to the first node on the selected path by a predetermined quantum”;
- “deallocating the predetermined quantum from the first node”;

- “which is adapted to allocate a respective so number of quanta of one or more resources in the network to each of the nodes”;
- “respective levels of use of the requested resources due to communications in progress over the network and to select which of the paths is to carry the data flow responsive to the determined levels of use of the requested resources on the links comprised in each of the paths, and to increase the allocation of the resources to the first node on the selected path by a predetermined quantum”I
- “use a portion of the resources so as to carry the data flow between the first and second nodes over one of a plurality of paths therebetween”;
- “respective levels of use of the requested resources due to communications in progress over the network”;
- “wherein the plurality of paths comprises a first path traversing the ring in one direction and a second path traversing the ring in the opposite direction, and wherein selecting which of the paths is to carry the data flow comprises selecting the first or the second path”;
- “over an inner or outer data link ring”;
- “processing power associated with each of the links”;
- “selecting which of the paths is to carry the data flow comprises selecting the one of the paths having the lowest level of a predetermined measure of use of the requested resources”;
- “dispatcher”;
- “comparing an amount of the resources that have been released to a predetermined threshold”;

- “the lowest level of a predetermined measure of use of the requested resources”; and
- “to compare an amount of the resources that have been released to a predetermined threshold, and if the amount is greater than the predetermined threshold, to deallocate the predetermined quantum from the first node.”

The '394 Patent fails to (1) demonstrate the inventors' possession of the claimed invention; and (2) enable a person of ordinary skill in the art to make and use the claimed invention without undue experimentation, for example:

- “network element”;
- “processing units”;
- “processor for processing packets communicated over the different subset of the multiple ports to which the processing unit is assigned”;
- “over the different subset of the multiple ports to which the processing unit is assigned”;
- “each processing unit is assigned to a different subset of the multiple ports of the network element”;
- “the request specifies a requested action selected from a group of actions consisting of receiving the given multicast packet stream and stopping to receive the given multicast packet stream”;
- “storing in each processing unit a respective list, each list indicating all of one or more multicast packet streams that are permitted for forwarding by the network element, and further indicating which of the one or more ports each multicast packet stream is permitted to be forwarded to”;

- “receiving from a client a request relating to reception of a given multicast packet stream”;
- “wherein the request indicates that the given multicast packet stream is to be forwarded over the high-capacity port”;
- “distributing the request among the multiple processing units within the network element, and updating the respective list in each processing unit responsively to the request”;
- “the ports forming the high-capacity port are assigned to at least two of so the processing units, and wherein updating the list comprises holding respective local copies of the number of the multicast packet streams that are permitted for forwarding over the high-capacity port, updating the local copies based on the distributed request, and selectively updating the list in each of the at least two processing units based on the respective local copies”;
- “operating the network element comprises aggregating two or more of the ports to form a high-capacity port”;
- “aggregating the ports comprises setting an upper limit on a number of the multicast packet streams that are permitted for forwarding over the high-capacity port”;
- “wherein in updating the list comprises modifying the list to indicate that the given multicast packet stream is permitted for forwarding over the high-capacity port only when the number of the multicast packet streams that are permitted for forwarding over the high-capacity port, including the given multicast packet stream, does not exceed the upper limit”;

- “wherein operating the network element comprises initializing a new processing unit added to the network element”; and
- “multicast status request.”

3. Lack of Patentable Subject Matter

Cisco contends that the '986 and '279 Patents are invalid for claiming unpatentable subject matter. Pursuant to the Court's Standing Order Regarding Subject Matter Eligibility Contentions Applicable to All Patent Infringement Cases Assigned to Chief District Judge Rodney Gilstrap, the detailed factual and legal bases for Cisco's contentions are set forth in Cisco's Preliminary Subject Matter Eligibility Contentions served concurrently. Cisco reserves the right to later amend its Subject Matter Eligibility Contentions.

V. INVALIDITY BASED UPON IMPROPER INVENTORSHIP

To date, Portsmouth has not produced any notes or other documents from any of the inventors of the Asserted Patents, and Cisco has not yet deposed the inventors of the Asserted Patents. Cisco plans on conducting discovery regarding the inventorship of the Asserted Patents consistent with the Court's Scheduling order, and Cisco reserves its right to supplement its contention that the Asserted Patents are invalid under 35 U.S.C. § 102 (f) for improper inventorship as discovery progresses.

VI. ACCOMPANYING DOCUMENT PRODUCTION

Subject to the terms of the Court's Protective Order, Cisco has produced—or will be producing—the technical documents required by Local Patent Rule 3-4(a). Concurrent with these contentions, Cisco has served a technical document production.

Pursuant to Local Patent Rule 3-4(b), and subject to the Court's Orders, Cisco has produced—or will be producing—a copy of each item of prior art identified pursuant to Local Patent Rule 3-3(a) which does not appear in the file history of the patents at issue.

VII. ACCOMPANYING SOURCE CODE PRODUCTION

Subject to the terms of the Court's Protective Order, Cisco has made available for inspection—or will be making available for inspection—source code sufficient to show the operation of the accused features disclosed in Portsmouth's Infringement Disclosures, as required by Local Patent Rule 3-4(a). Concurrent with these contentions, Cisco has made available for inspection source code covering the features that Cisco believes Portsmouth accuses of infringement.

Dated: February 20, 2024

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via email on February 20, 2024.

Dated: February 20, 2024

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