

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

QUICKER CONNECTIONS LLC,

Plaintiff,

v.

CISCO SYSTEMS, INC.,

Defendant.

Civil Action No. 2:24-cv-1074-JRG

JURY TRIAL DEMANDED

DEFENDANT’S PRELIMINARY INVALIDITY CONTENTIONS

Pursuant to Local Patent Rule 3-3 and the Court’s April 22, 2025 First Amended Docket Control Order (D.I. 39), Cisco Systems, Inc. (“Cisco”) hereby sets forth its Preliminary Invalidity Contentions concerning U.S. Patents Nos. 6,822,943 (the “’943 Patent”); 6,834,038 (the “’038 Patent”); 7,054,264 (the “’264 Patent”); 7,061,859 (the “’859 Patent”); and 7,483,399 (the “’399 Patent”), (collectively, the “Asserted Patents”). Plaintiff Quicker Connections LLC (“QC”) asserted claim 1 of the ’943 Patent, claims 1–2 and 4–5 of the ’038 Patent, claim 21 of the ’264 Patent, claim 1 of the ’859 Patent, and claims 1–3 of the ’399 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 QC'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, QC 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, QC's March 12, 2025 Disclosure of Asserted Claims and Infringement Contentions Pursuant to P.R. 3-1 And Document Production Pursuant To P.R. 3-2 (QC's "Infringement Disclosures"). Cisco does not concede that any (apparent) claim constructions are correct. Even though Cisco contends that the Asserted Claims are indefinite, Cisco has disclosed which prior art references render those claims invalid based upon QC'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 QC amends its Infringement Disclosures, Cisco reserves the right to amend its Preliminary Invalidity Contentions, and Cisco notes that QC's Infringement Disclosures failed to provide sufficient notice of QC's infringement theories as required by the Local Rules. Indeed, Cisco served QC correspondence explaining how QC's Infringement Disclosures were deficient on April 29, 2025.

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 QC'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 P.R. 3-3, including after the issuance of the Court's claim construction order.

II. QC'S ALLEGED PRIORITY DATES

QC contends that the Asserted Patents each claim priority to their respective non-provisional patent application. Specifically, QC contends that the '943 Patent has a priority date of November 8, 2000; the '038 Patent has a priority date of August 11, 2000; the '264 Patent has a priority date of July 24, 2001; the '859 Patent has a priority date of August 30, 2001; and the

'399 Patent has a priority date of June 5, 2002. *See* the Infringement Disclosures at 8. Cisco notes that pursuant to Local Patent Rule 3-2(b), QC 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” The Infringement Disclosures concede that QC “represents that it has no such documents” corroborating a conception date earlier than the filing dates. *See* Infringement Disclosures at 9.

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-6, B-1 through B-6, and C-1 through C-7, D-1 through D-10, E-1 through E-5, and F-1 through F-5. 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 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 F-5 identify the 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.

¹ Cisco also contends that the Asserted Claims of the Asserted Patents 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.

For example, whenever Exhibits A-1 through F-5 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
Fan	6,643,269	U.S.	Mar. 3, 2000	Nov. 4, 2003	A-1	CISCO-QUICKER-00000479
Banker	6,426,947	U.S.	Oct. 21, 1998	July 30, 2002	A-2	CISCO-QUICKER-00000455

Abbreviated Name	Patent No. or Publication No.	Country of Origin	Filing Date	Issuance or Publication Date	Claim Chart Number	Production Number
Barach	6,470,013	U.S.	Oct. 13, 1998	Oct. 22, 2002	A-3	CISCO-QUICKER-00000513
Christy	6,725,264	U.S.	Feb. 17, 2000	April 20, 2004	A-4	CISCO-QUICKER-00000481
Tounai	5,870,382	U.S.	July 16, 1996	Feb. 9, 1999	B-2	CISCO-QUICKER-00000532
Czerwiec	6,314,102	U.S.	July 10, 1997	Nov. 6, 2001	B-3	CISCO-QUICKER-00000535
Phaltankar	6,714,549	U.S.	Dec. 23, 1998	Mar. 30, 2004	B-4	CISCO-QUICKER-00000488
Kaplan	6,680,904	U.S.	Dec. 27, 1999	Jan. 20, 2004	B-5	CISCO-QUICKER-00000459
Ishibashi	5,663,949	U.S.	Aug. 10, 1995	Sep. 2, 1997	B-6	CISCO-QUICKER-00001077
Chikenji	6,639,893	U.S.	Mar. 29, 1999	Oct. 28, 2003	C-1	CISCO-QUICKER-00000521
De Boer	6,658,013	U.S.	Mar. 23, 1999	Dec. 2, 2003	C-2	CISCO-QUICKER-00000547
Kremer	5,394,389	U.S.	Oct. 22, 1993	Feb. 28, 1995	C-4	CISCO-QUICKER-00000487
Sosnosky	5,218,604	U.S.	Aug. 31, 1990	June 8, 1993	C-6	CISCO-QUICKER-00000458
Batchellor '597	6,731,597	U.S.	June 4, 1998	May 4, 2004	C-7	CISCO-QUICKER-00000493
Batchellor 231	99/03231	WO	June 4, 1998	Jan. 21, 1999	C-7	CISCO-QUICKER-00000549
Cosares	5,546,542	U.S.	Nov. 29, 1993	Aug. 13, 1996	D-1	CISCO-QUICKER-00000518

Abbreviated Name	Patent No. or Publication No.	Country of Origin	Filing Date	Issuance or Publication Date	Claim Chart Number	Production Number
Croslin	98/24245	WO	Nov. 20, 1997	June 4, 1998	D-2	CISCO-QUICKER-00000544
Kalman	6,680,912	U.S.	Mar. 3, 2000	Jan. 20, 2004	D-4	CISCO-QUICKER-00000486
Kalman '149	6,865,149	U.S.	Mar. 3, 2000	Mar. 8, 2005	D-4	CISCO-QUICKER-00000461
Killat	98/58516	WO	June 13, 1998	Dec. 23, 1998	D-5	CISCO-QUICKER-00000465/CISCO-QUICKER-00000492
Kremer	5,394,389	U.S.	Oct. 22, 1993	Feb. 28, 1995	D-6	CISCO-QUICKER-00000487
Marra	5,341,364	U.S.	06-02-1992	08-23-1994	D-7	CISCO-QUICKER-00000557
Omichi	2001-53772	JP	Aug. 11, 1999	Feb. 23, 2001	D-8	CISCO-QUICKER-00000478/ CISCO-QUICKER-00000507
Honda	7,319,663	U.S.	March 20, 2001	January 15, 2008	D-10	CISCO-QUICKER-00001081
Gibson	2003/0137971	U.S.	Jan. 22, 2002	July 24, 2003	E-1	CISCO-QUICKER-00000505
Debuysscher	4,553,233	U.S.	Dec. 16, 1983	Nov. 12, 1985	E-2	CISCO-QUICKER-00000506
Kompella	7,319,700	U.S.	Dec. 29, 2000	Jan. 15, 2008	E-3	CISCO-QUICKER-00000448
Mor	2003/0072259	U.S.	Oct. 16, 2001	April 17, 2003	E-4	CISCO-QUICKER-00000476

2. Non-Patent Literature

Abbreviated Name	Title	Date of Publication	Claim Chart Number	Production Number
draft-ietf-nat-traditional-03	Draft 3 of RFC 3022, Traditional IP Network Address Translator (Traditional NAT)	September 1999	A-5	CISCO-QUICKER-00000578

3. 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.

System	No.	Exemplary Publications Describing The System	Date Of Publication	Production Number
The StarKeeper System	A-6	Daniel C. Becker et al., StarKeeper II NMS — Management of a Cell Relay Network	July/August 1994	CISCO-QUICKER-00000597
		Todd E. Marques, StarKeeper Network Troubleshooter; An Expert System Product	November/December 1988	CISCO-QUICKER-00000605
		Alexander G. Fraser, Towards a Universal Data Transport System	November 1983	CISCO-QUICKER-00000568
Cisco DSL System	B-1	Cisco 5000 Route Switch Module Documentation	May 18, 2000	CISCO-QUICKER-00000621

System	No.	Exemplary Publications Describing The System	Date Of Publication	Production Number
		Cisco 6015 IP DSL Switch Product Datasheet	Jul. 2, 2000	CISCO-QUICKER-00000560
		Cisco 6130 - DSL Access Concentrator Documentation	Nov. 17, 1999	CISCO-QUICKER-00000595
		Cisco 6130 IP DSL Switch Product Datasheet	Aug. 10, 2000	CISCO-QUICKER-00000589
		Cisco 6260 - DSL Access Concentrator Documentation	Nov. 17, 1999	CISCO-QUICKER-00000571
		Cisco 6260 IP DSL Switch Product Datasheet	Aug. 1, 2000	CISCO-QUICKER-00000607
		Cisco 6400 Carrier-Class Broadband Aggregator Product Datasheet	Jun. 30, 2000	CISCO-QUICKER-00000553
		Cisco 6400 Series Quick Look Documentation	1999	CISCO-QUICKER-00000572
		Cisco 6400 Service Connection Manager Product Datasheet	Jun. 3, 1999	CISCO-QUICKER-00000610
		Cisco 6400 Service Selection Gateway Product Datasheet	Jun. 30, 2000	CISCO-QUICKER-00000573
		Cisco Brochure - The Service Provider Opportunity for MDUs MTUs	Jul. 3, 2000	CISCO-QUICKER-00000596
		Cisco Catalyst 5000 MS Documentation	Aug., 2000	CISCO-QUICKER-00000554
		Cisco Catalyst 6000 MS Documentation	May 9, 2000	CISCO-QUICKER-00000559
		Cisco Catalyst 8500 CSR Documentation	Aug., 2000	CISCO-QUICKER-00000614
		Cisco Catalyst 8500 MSR Documentation	Aug., 2000	CISCO-QUICKER-00000558

System	No.	Exemplary Publications Describing The System	Date Of Publication	Production Number
		Cisco DSL Brochure	May 25, 2000	CISCO-QUICKER-00000601
		Cisco DSL Manager Product Datasheet	Jul. 1, 2000	CISCO-QUICKER-00000562
		Cisco Whitepaper - 6400 Service Connection Manager	1999	CISCO-QUICKER-00000623
		Cisco Whitepaper - ADSL Services Architecture	1999	CISCO-QUICKER-00000580
		Cisco Whitepaper - Delivering Multicast Video Over ADSL	1999	CISCO-QUICKER-00000599
		Cisco Whitepaper - G.shdsl	Jul. 2, 2000	CISCO-QUICKER-00000582
		Press Release - Cisco Introduces IP DSL Switching across Cisco 6000 DSL Family	April 18, 2000	CISCO-QUICKER-00000622
		Press Release - Cisco Launches Breakthrough 6015 IP DSL Switch for MTUs and Remote Offices	April 18, 2000	CISCO-QUICKER-00000603
		Press Release - Cisco Unveils GlobalDSL Strategy to Help Service Providers Worldwide	April 18, 2000	CISCO-QUICKER-00000584
		Press Release - Top Industry Analysts Say Cisco Leads in Worldwide Broadband Market	Jun. 5, 2000	CISCO-QUICKER-00000604
GR-1230 System	C-3; D-3	Bellcore, GR-1230-CORE, SONET Bidirectional Line-Switched Ring Equipment Generic Criteria	Dec. 1998	CISCO-QUICKER-00000433
		Bellcore, GR-1230-ILR, SONET Bidirectional Line-Switched Ring Equipment Issues List Report	Feb. 1999	CISCO-QUICKER-00000434
		Cisco ONS 15454 Multiservice Transport Platform	1992	CISCO-QUICKER-00000566
		Bidirectional Line Switched Ring (GR-1230-CORE), Cisco Systems, Inc.	Jan. 2000	CISCO-QUICKER-00000624

System	No.	Exemplary Publications Describing The System	Date Of Publication	Production Number
		BLSR DRI in Maverick/5.0, Greg Wohlenberg, Cisco Systems, Inc.	Oct. 2004	CISCO-QUICKER-00000680
		BLSR Simulator, Product Requirements Document, Cisco Systems, Inc.	Feb. 2002	CISCO-QUICKER-00000629
		Product Requirement Document Release Monet, Cisco Systems, Inc., R1.3	Feb. 2001	CISCO-QUICKER-00000625
		Product Requirement Document Release Monet, Cisco Systems, Inc., R1.4	Feb. 2001	CISCO-QUICKER-00000626
		Telcordia Roadmap to Fiber and Optical Technologies Documents, Telcordia Technologies	June 2002	CISCO-QUICKER-00000650
Lucent 2000 Product Family	C-5; D-9	Alcatel-Lucent DDM-2000 Datasheet	1999	CISCO-QUICKER-00000485
		Lucent Technologies DDM-2000 OC-3 and OC-12 Multiplexers, Applications, Planning, and Ordering Guide	April 2002	CISCO-QUICKER-00000435
		Lucent Technologies DDM-2000 OC-3 Multiplexer Software Release Description, Release 11.1.3	July 2000	CISCO-QUICKER-00000499
		Lucent Technologies DDM-2000 OC-3 Multiplexer Software Release Description, TARP Release 15.0.4	Aug. 2001	CISCO-QUICKER-00000472
		Lucent Technologies DDM-2000 Oc-3 Multiplexer Releases 8.0 through 11.1, User/Service Manual – Vol. 1	April 1998	CISCO-QUICKER-00000468
		Lucent Technologies DDM-2000 Oc-3 Multiplexer TARP Release 13 and Later, User/Service Manual (TOP) Vol. II	June 2001	CISCO-QUICKER-00000515
		Lucent Technologies DDM-2000 Oc-3/OC-12 Multiplexer Circuit Pack Options, Quick Reference Guide	Feb. 2000	CISCO-QUICKER-00000528
		Lucent Technologies DDM-2000 FiberReach Multiplexer Wideband/Narrowband Shelf Release 2.2, User/Service Manual	April 1998	CISCO-QUICKER-00000514
		Lucent Technologies SONET, Synchronous Optical Networking Technical Overview, White Paper	Jan. 1999	CISCO-QUICKER-00000475

System	No.	Exemplary Publications Describing The System	Date Of Publication	Production Number
		Alcatel-Lucent 1665 Applications and Planning Guide	Nov. 2011	CISCO-QUICKER-00000438
		Lucent Technologies DDM-2000 OC-3 Multiplexer, Software Release Description, Release 15.3.2	March 2005	CISCO-QUICKER-00000469
Ixia Products Implementing RSVP-TE	E-5	RFC 3209, "RSVP-TE: Extensions to RSVP for LSP Tunnels"	December 2001	CISCO-QUICKER-00000522
		NetworkWorld Magazine, Vol. 19 No. 9, https://books.google.li/books?hl=de&id=xRgEAAAAMBAJ&q=rsvp#v=snippet&q=rsvp&f=false	March 4, 2002	CISCO-QUICKER-00000594

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. Upon information and belief, one or more of the Asserted Claims is invalid because the Asserted Patent fails to list the true inventor(s) who contributed to the conception of the alleged invention recited in the Asserted Claim(s), and/or the claimed invention was made in this country by another who had not abandoned, suppressed, or concealed the alleged invention. 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 QC contends the alleged invention(s) of the Asserted Claims builds upon or improves; (3) any and all admissions by QC 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 QC 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, **Error! Reference source not found.**, and/or III.A.3, 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 proxying an external address into internal addresses (*e.g.*, with respect to the '943 Patent), protecting against failures in network switches (*e.g.*, with respect to the '038 Patent), interconnecting heterogeneous ring networks (*e.g.*, with respect to the '264 Patent), failure protection in ring networks (*e.g.*, with respect to the '859 Patent), and overlaying services over ring networks (*e.g.*, with respect to the '399 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 sharing a single external address with more devices (with respect to the '943 Patent), better resilience to network node failures (with respect to the '038 and '264 Patents), better resilience to network links failures (with respect to the '859 Patent), and directional tunnelling of services (with respect to the '399 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 F-1 through F-5 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 F-1 through F-5 demonstrate how the references listed below render obvious each Asserted Claim. The References cited and relied upon in Exhibits F-1 through F-5 are listed in the tables below. In addition to the prior art references listed in these contentions and in charts A-1 through F-5, 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
Godbold	4,733,391	U.S.	Oct. 22, 1984	Mar. 22, 1988	CISCO-QUICKER-00000457
Sato	5,491,686	U.S.	Nov. 18, 1994	Feb. 13, 1996	CISCO-QUICKER-00000489
Baek	5,544,151	U.S.	Feb. 2, 1995	Aug. 6, 1996	CISCO-QUICKER-00000460
Boggs	5,703,872	U.S.	Feb. 8, 1996	Dec. 30, 1997	CISCO-QUICKER-00000542
Fukushima	6,038,678	U.S.	Sept. 15, 1997	Mar. 14, 2000	CISCO-QUICKER-00000462
Mitchell	6,442,134	U.S.	Jan. 27, 1999	Aug. 27, 2002	CISCO-QUICKER-00000491
Suetsugu	7,095,714	U.S.	Nov. 27, 2001	Aug. 22, 2006	CISCO-QUICKER-00000496
Dupont	6,594,232	U.S.	June 2, 1999	July 5, 2003	CISCO-QUICKER-00000545
Shiragaki	6,657,952	U.S.	Nov. 27, 1998	Dec. 2, 2003	CISCO-QUICKER-00000548
Mitchell	2244073	CA	Jan. 27, 1997	Apr. 27, 2004	CISCO-QUICKER-00000482
Dupont	2375818	CA	May 23, 2000	Feb. 24, 2004	CISCO-QUICKER-00000516
Batchellor	1004185	EP	June 4, 1998	Sept. 21, 2005	CISCO-QUICKER-00000536

Abbreviated Name	Patent No. or Publication No.	Country of Origin	Filing Date	Issuance or Publication Date	Production Number
Godbold	85/01850	WO	Oct. 22, 1984	April 25, 1985	CISCO-QUICKER-00000466
Elliot	4,447,673	U.S.	July 24, 1981	May 8, 1984	CISCO-QUICKER-00000464
Kremer	5,440,540	U.S.	Mar. 26, 1992	Aug. 8, 1995	CISCO-QUICKER-00000517
Ballintine	6,366,556	U.S.	June 22, 1998	April 2, 2002	CISCO-QUICKER-00000538
Simmons	6,597,658	U.S.	Mar. 22, 1999	July 22, 2003	CISCO-QUICKER-00000519
Czerwiec	6,687,231	U.S.	Nov. 30, 1999	Feb. 3, 2004	CISCO-QUICKER-00000520
Farhan	6,822,972	U.S.	Sept. 12, 2000	Nov. 23, 2004	CISCO-QUICKER-00000541
DeBoer	6,934,248	U.S.	July 20, 2000	Aug. 23, 2005	CISCO-QUICKER-00000543
Yamashita	0456206	EP	May 8, 1991	Dec. 7, 1994	CISCO-QUICKER-00000439
Shiragaki	0920153	EP	Nov. 30, 1998	July 12, 2006	CISCO-QUICKER-00000497
Ohara	2282301	GB	Mar. 21, 1994	Feb. 4, 1998	CISCO-QUICKER-00000440
Matsuo	2000216801	JP	Jan. 26, 1999	Aug. 4, 2000	CISCO-QUICKER-00000474
Masahiro	8-97841	JP	Sept. 29, 1994	April 12, 1996	CISCO-QUICKER-00000480
Ono	01/61937	WO	Feb. 18, 2000	Aug. 23, 2001	CISCO-QUICKER-00000494

Abbreviated Name	Patent No. or Publication No.	Country of Origin	Filing Date	Issuance or Publication Date	Production Number
Chiou	93/14459	WO	Jan. 19, 1993	July 22, 1993	CISCO-QUICKER-00000467
Mahalingaiah	00/74305	WO	May 15, 2000	Dec. 7, 2000	CISCO-QUICKER-00000495
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Caves	2171880 A	GB	03-01-1985	09-03-1986	CISCO-QUICKER-00000613
Flanagan	5159595 A	US	12-20-1988	10-27-1992	CISCO-QUICKER-00000552
Kremer	5278824 A	US	06-02-1992	01-11-1994	CISCO-QUICKER-00000620
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Takano	5600630 A	US	08-25-1994	02-04-1997	CISCO-QUICKER-00000615
Lee	5663950 A	US	04-27-1995	09-02-1997	CISCO-QUICKER-00000616
Alexander, Jr.	6091732 A	US	11-20-1997	07-18-2000	CISCO-QUICKER-00000551
Ervin	6438133 B1	US	09-09-1998	08-20-2002	CISCO-QUICKER-00000617
Xiao	6721509 B2	US	12-05-2000	04-13-2004	CISCO-QUICKER-00000567
Behzadi	6728220 B2	US	05-24-2001	04-27-2004	CISCO-QUICKER-00000561
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Abbreviated Name	Patent No. or Publication No.	Country of Origin	Filing Date	Issuance or Publication Date	Production Number
Mitchel	1997027718 A1	WO	01-27-1997	07-31-1997	CISCO-QUICKER-00000565
Mayes '763	5,793,763	U.S.	Nov. 3, 1995	Aug. 11, 1998	CISCO-QUICKER-00000593
Gervais '974	5,856,974	U.S.	Feb. 13, 1996	Jan. 5, 1999	CISCO-QUICKER-00000608
Tsuruoka '189	6,101,189	U.S.	Sept. 18, 1997	Aug. 8, 2000	CISCO-QUICKER-00000447
Harbin '029	2001/0052029 A1	U.S.	May 4, 2001	Dec. 13, 2001	CISCO-QUICKER-00000592
Kaplan '904	6,680,904	U.S.	Dec. 27, 1999	Jan. 20, 2004	CISCO-QUICKER-00000459
Martinez '782	5,790,782	U.S.	Nov. 15, 1996	Aug. 4, 1998	CISCO-QUICKER-00000444
Czerwiec '102	6,314,102	U.S.	July 10, 1997	Nov. 6, 2001	CISCO-QUICKER-00000535
Shida '583	11-261583	JP	Mar. 13, 1998	Sept. 24, 1999	CISCO-QUICKER-00000441/CISCO-QUICKER-00000442
Hann '233	6,751,233 B1	U.S.	Jan. 12, 1999	Jun. 15, 2004	CISCO-QUICKER-00000581
Miyake '948	3609948	JP	Dec. 11, 1998	Oct. 22, 2004	CISCO-QUICKER-00000436/CISCO-QUICKER-00000437
Rao '511	6,535,511	U.S.	Jan. 7, 1999	Mar. 18, 2003	CISCO-QUICKER-00000453
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Abbreviated Name	Patent No. or Publication No.	Country of Origin	Filing Date	Issuance or Publication Date	Production Number
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Short	7,197,556	U.S.	Oct. 20, 2000	Mar. 27, 2007	CISCO-QUICKER-00000484
Grabelsky	00/56034	WO	Mar. 15, 2000	Sept. 21, 2000	CISCO-QUICKER-00000540
Ozaki	5,345,438	U.S.	Aug. 21, 1992	Sept. 6, 1994	CISCO-QUICKER-00000530
Ishibashi	5,568,300	U.S.	July 21, 1995	Oct. 22, 1996	CISCO-QUICKER-00000531
Hata	5,712,847	U.S.	Dec. 14, 1995	Jan. 27, 1998	CISCO-QUICKER-00000509
Demiray	5,740,157	U.S.	May 21, 1992	Apr. 14, 1998	CISCO-QUICKER-00000449
Shinbashi	5,796,717	U.S.	Dec. 3, 1990	Aug. 18, 1998	CISCO-QUICKER-00000533
Stein	5,946,294	U.S.	Mar. 18, 1996	Aug. 31, 1999	CISCO-QUICKER-00000534
Lund	5,949,763	U.S.	July 17, 1997	Sept. 7, 1999	CISCO-QUICKER-00000454
Koenig	5,991,312	U.S.	Nov. 3, 1997	Nov. 23, 1999	CISCO-QUICKER-00000456
Kobayasi	6,333,932	U.S.	Aug. 21, 1995	Dec. 25, 2001	CISCO-QUICKER-00000490
Smith	6,359,858	U.S.	June 3, 1999	Mar. 19, 2002	CISCO-QUICKER-00000537
Lemieux	6,452,942	U.S.	May 20, 1999	Sept. 17, 2002	CISCO-QUICKER-00000539

Abbreviated Name	Patent No. or Publication No.	Country of Origin	Filing Date	Issuance or Publication Date	Production Number
Chiu	6,597,689	U.S.	Dec. 30, 1998	July 22, 2003	CISCO-QUICKER-00000463
D'Onofrio	2002/0009099	U.S.	June 29, 2001	Jan. 24, 2002	CISCO-QUICKER-00000504
Ferguson	2002/0041604	U.S.	Feb. 25, 1997	Apr. 11, 2002	CISCO-QUICKER-00000443
Hiscock	2,259,091	CA	Jan. 15, 1999	July 28, 1999	CISCO-QUICKER-00000524
Onishi	0667915	JP	Aug. 19, 1992	Mar. 11, 1994	CISCO-QUICKER-00000523
Lee	10-237398	KR	June 10, 1997	Jan. 15, 2000	CISCO-QUICKER-00000500
Ho-Chae	1999-0031948	KR	Oct. 15, 1997	July 1, 2000	CISCO-QUICKER-00000502
Joseph	7,068,654 B1	U.S.	Apr. 18, 2001	Jun. 27, 2006	CISCO-QUICKER-00000586
Meyer	7,088,675 B1	U.S.	Mar. 8, 2002	Aug. 8, 2006	CISCO-QUICKER-00000575
Mohaban	7,423,971 B1	U.S.	May, 31, 2000	Sep. 9, 2008	CISCO-QUICKER-00000564
Dunlap	5,913,923	U.S.	Dec. 6, 1996	Jun. 22, 1999	CISCO-QUICKER-00000563
Matsumoto	6,795,446	U.S.	Nov. 17, 1998	Sept. 21, 2004	CISCO-QUICKER-00000508
Sasagawa	7,336,648	U.S.	Oct. 25, 2000	Feb. 26, 2008	CISCO-QUICKER-00000511
Yamada	2002/0114031	U.S.	Feb. 8, 2002	Aug. 22, 2002	CISCO-QUICKER-00000525

Abbreviated Name	Patent No. or Publication No.	Country of Origin	Filing Date	Issuance or Publication Date	Production Number
Yuki	2002/0118414	U.S.	Feb. 22, 2002	Aug. 29, 2002	CISCO-QUICKER-00000529
Cheon	2003/0225916	U.S.	May 30, 2002	Dec. 4, 2003	CISCO-QUICKER-00000446
O'Connell	2317972	CA	Sept. 8, 2000	March 10, 2001	CISCO-QUICKER-00000503
Toivanen	01/06743	WO	June 6, 2000	Jan. 25, 2001	CISCO-QUICKER-00000477

2. Non-Patent Literature

Abbreviated Name	Title	Date of Publication	Production Number
Implementation of VLANs	Implementation of Virtual LANs over ATM WANs	September 1998	CISCO-QUICKER-00000585
Netplexor	EE 552 Final Report Netplexor	April 2001	CISCO-QUICKER-00000602
Managing Internetworks with SNMP	Mark A. Miller, Managing Internetworks with SNMP, 2 nd ed., ISBN 1-55851-561-5	1997	CISCO-QUICKER-00000583
Interconnections	Radia Perlman, Interconnections: Bridges, Routers, Switches, and Internetworking Protocols, 2 nd ed., ISBN 0-201-63448-1	January 2000	CISCO-QUICKER-00000606
OS/390 UNIX Security Overview	OS/390 UNIX Security Overview, IBM Global Services	April 1999	CISCO-QUICKER-00000576
RFC 2663	RFC 2663, IP Network Address Translator (NAT) Terminology and Considerations	August 1999	CISCO-QUICKER-00000609
IBM Redbook	Martin W. Murhammer et al., TCP/IP Tutorial and Technical Overview, IBM	October 1998	CISCO-QUICKER-00000587

Abbreviated Name	Title	Date of Publication	Production Number
RFC 3209	RFC 3209, RSVP-TE: Extensions to RSVP for LSP Tunnels	Dec. 2001	CISCO-QUICKER-00000522
RFC 2205	RFC 2205, Resource Reservation Protocol	September 1997	CISCO-QUICKER-00001079
RFC 3212	RFC 3212, Constraint-Based LSP Setup using LDP	January 2002	CISCO-QUICKER-00000570
draft-ietf-mpls-crldp-unnum-02.txt	Draft 2 to RFC 3480, Signalling Unnumbered Links in CR-LDP	March 2002	CISCO-QUICKER-00001078
G.8032	G.8032 Ethernet Ring Protection Multiple Ring Topology		CISCO-QUICKER-00000471
Linux System	Olaf Kirch & Terry Dawson, Linux Network Administrator's Guide, 2 nd ed., Chapter 11: IP Masquerade and Network Address Translation, ISBN 1-56592-400-2	June 2000	CISCO-QUICKER-00001080

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 QC 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 QC'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 QC'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 '943 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:

- “a master shelf, comprising a master Switching unit”;
- “a plurality of Slave shelves”;
- “slave shelves comprising ports configured to serve network subscribers, and further comprising a slave switching unit”;
- to multiplex among the ports so as to provide the subscribers with access to the high speed network”;
- “management messages”;
- “an internal network-layer address that is determined uniquely for each of the slave shelves based on the topology”;
- “a management station”;
- “over a management network”;

- “a common external network-layer address by mapping the internal network-layer address of each of the shelves to a respective transport-layer address”; and
- “to perform configuration and maintenance functions”.

Every Asserted Claim of the '038 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:

- “a multiplicity of slave units, each comprising a plurality of subscriber ports adapted to be linked to respective subscriber lines”;
- “a master sub-system, for connection to at least one trunk line”;
- “a first public network”;
- “in a location remote from the slave units”;
- “a first Subscriber link interface, which is adapted to communicate with the slave units via assigned links”;
- “a second public network”;
- “so as to provide users of the subscriber lines with access to the first public network through the at least one trunk line”;
- “a second subscriber link interface, which is coupled through the first subscriber link interface to communicate with the slave units via the assigned links”;
- “so as to provide the users with access to the first public network through the at least one trunk line in the event of a failure associated with the first master unit”;
- “the second public network comprises a plesisynchronous digital hierarchy (PDH) network”; and
- “the links comprise at least one point-to-point interface”.

Every Asserted Claim of the '264 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:

- “between first and second networks”;
- “a ring network over which traffic is transmitted in both clockwise and counterclockwise directions”;
- “predetermined maximum data rate in each of the clockwise and counterclockwise directions”;
- “first and second interconnect modules”;
- “assigning respective Media Access Control (MAC) addresses to the first and second modules and configuring each of the first and second modules with the MAC addresses of both of the modules”;
- “each of the modules receives outgoing data traffic on the first network destined to its own MAC address at a data rate not substantially greater than the predetermined maximum”; and
- “setting the other module to receive the outgoing traffic destined to both of the MAC addresses and to convey the outgoing data traffic to the second network”.

Every Asserted Claim of the '859 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:

- “bidirectional ring network in which nodes are mutually connected by network segments”;
- “a general mask indicating which of the segments are reachable in the event of a fault”;

- “by assigning a respective general mask bit to each segment, indicating whether the segment is reach able following occurrence of the fault”;
- “constructing a specific mask Indicating the segments on a desired path of the flow”
- “assigning a respective specific mask bit to each of the segments”
- “indicating whether the flow was to be conveyed over the segment had occurrence of the segment been operational before the fault”; and
- “superimposing the general and specific masks in order to determine a disposition of the flow”.

“Every Asserted Claim of the ’399 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:

- “a data-link service”;
- “a plurality of ringlets”;
- “nodes having a plurality of interfaces for ingress and egress of said network traffic along said ringlets”;
- “respective interface identifiers”;
- “said interface identifiers comprising a RPR internet protocol (IP) address comprising a common IP address and a common Subnet for each of said nodes”;
- “an unnumbered explicit route object”;
- “said RPR IP address of said first node and a direction indicator of a specified traffic direction for said network traffic through a tunnel to be established via one of said ringlets between said first node and said second node”;

- “said second RSVP signaling message comprising said direction indicator of said explicit route object”;
- “establishing said tunnel on said one of said ringlets”;
- “through said tunnel in said specified traffic direction”;
- “performing a logical test in said second node to verify compatibility between said RPR IP address in said explicit route object and said RPRIP address of one of said message receiving interfaces of said second node”; and
- “verifying that said first RSVP signaling message was received at said second node in said specified traffic direction”.

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 QC 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 the 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 '943 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 QC, for example:

- “a master shelf, comprising a master Switching unit”;
- “a plurality of Slave shelves”;
- “slave shelves comprising ports configured to serve network subscribers, and further comprising a slave switching unit”;
- to multiplex among the ports so as to provide the subscribers with access to the high speed network”;
- “management messages”;
- “an internal network-layer address that is determined uniquely for each of the slave shelves based on the topology”;
- “a management station”;
- “over a management network”;

- “a common external network-layer address by mapping the internal network-layer address of each of the shelves to a respective transport-layer address”; and
- “to perform configuration and maintenance functions”.

The '038 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 QC, for example:

- “a multiplicity of slave units, each comprising a plurality of subscriber ports adapted to be linked to respective subscriber lines”;
- “a master sub-system, for connection to at least one trunk line”;
- “a first public network”;
- “in a location remote from the slave units”;
- “a first Subscriber link interface, which is adapted to communicate with the slave units via assigned links”;
- “a second public network”;
- “so as to provide users of the subscriber lines with access to the first public network through the at least one trunk line”;
- “a second subscriber link interface, which is coupled through the first subscriber link interface to communicate with the slave units via the assigned links”;
- “so as to provide the users with access to the first public network through the at least one trunk line in the event of a failure associated with the first master unit”;
- “the second public network comprises a plesisynchronous digital hierarchy (PDH) network”; and
- “the links comprise at least one point-to-point interface”.

The '264 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 QC, for example:

- “between first and second networks”;
- “a ring network over which traffic is transmitted in both clockwise and counterclockwise directions”;
- “predetermined maximum data rate in each of the clockwise and counterclockwise directions”;
- “first and second interconnect modules”;
- “assigning respective Media Access Control (MAC) addresses to the first and second modules and configuring each of the first and second modules with the MAC addresses of both of the modules”;
- “each of the modules receives outgoing data traffic on the first network destined to its own MAC address at a data rate not substantially greater than the predetermined maximum”; and
- “setting the other module to receive the outgoing traffic destined to both of the MAC addresses and to convey the outgoing data traffic to the second network”.

The '859 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 QC, for example:

- “bidirectional ring network in which nodes are mutually connected by network segments”;
- “a general mask indicating which of the segments are reachable in the event of a fault”;

- “by assigning a respective general mask bit to each segment, indicating whether the segment is reach able following occurrence of the fault”;
- “constructing a specific mask Indicating the segments on a desired path of the flow”
- “assigning a respective specific mask bit to each of the segments”
- “indicating whether the flow was to be conveyed over the segment had occurrence of the segment been operational before the fault”; and
- “superimposing the general and specific masks in order to determine a disposition of the flow”.

The '399 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 QC, for example:

- “a data-link service”;
- “a plurality of ringlets”;
- “nodes having a plurality of interfaces for ingress and egress of said network traffic along said ringlets”;
- “respective interface identifiers”;
- “said interface identifiers comprising a RPR internet protocol (IP) address comprising a common IP address and a common Subnet for each of said nodes”;
- “an unnumbered explicit route object”;
- “said RPR IP address of said first node and a direction indicator of a specified traffic direction for said network traffic through a tunnel to be established via one of said ringlets between said first node and said second node”;

- “said second RSVP signaling message comprising said direction indicator of said explicit route object”;
- “establishing said tunnel on said one of said ringlets”;
- “through said tunnel in said specified traffic direction”;
- “performing a logical test in said second node to verify compatibility between said RPR IP address in said explicit route object and said RPRIP address of one of said message receiving interfaces of said second node”; and
- “verifying that said first RSVP signaling message was received at said second node in said specified traffic direction”.

3. Lack of Patentable Subject Matter

Cisco contends that the Asserted 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, QC has not produced any notes or other documents from any of the inventors of the Asserted Patents, and Cisco has not yet taken any depositions in this case. 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 documents required by Local Patent Rule 3-4(a).

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—the source code in its possession, custody, and control sufficient to show the operation of the accused features disclosed in QC's Infringement Disclosures, as required by Local Patent Rule 3-4(a).

Dated: May 7, 2025

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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 May 7, 2025.

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