

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

NetSocket, Inc.,

Plaintiff,

v.

Cisco Systems, Inc.,

Defendant.

NO. 2:22-CV-00172-JRG

**DEFENDANT CISCO SYSTEMS, INC.'S P.R. 3-3 INVALIDITY CONTENTIONS
AND INELIGIBILITY CONTENTIONS**

TABLE OF CONTENTS

	<u>Page</u>
I. Introductory Statement	1
II. Asserted Patents and Claims	2
III. Claim Construction	5
IV. P.R. 3-3(a) – Identification of Prior Art	6
A. Prior Art for '601 Patent	6
1. Prior Art Patents for '601 Patent.....	6
2. Prior Art Publications for '601 Patent	8
B. Prior Art for '698 Patent	10
1. Prior Art Patents for '698 Patent.....	10
2. Prior Art Publications for '698 Patent	11
C. Prior Art for '885 Patent	13
1. Prior Art Patents for '885 Patent.....	13
2. Prior Art Publications for '885 Patent	14
D. Prior Art for '966 Patent	16
1. Prior Art Patents for '966 Patent.....	16
2. Prior Art Publications for '966 Patent	18
E. Prior Art for '796 Patent	21
1. Prior Art Patents for '796 Patent.....	21
2. Prior Art Publications for '796 Patent	22
F. Prior Art for '284 Patent	25
1. Prior Art Patents for '284 Patent.....	25
2. Prior Art Publications for '284 Patent	26
G. Prior Art for '286 Patent	29
1. Prior Art Patents for '286 Patent.....	29
2. Prior Art Publications for '286 Patent	30
V. State of the Art and Obviousness	30
A. General Motivations for Making Combinations of Prior Art	32
B. Specific Motivations for Making Combinations of Prior Art.....	36
1. '601 Patent	37
2. '698 Patent	59

3.	'966 Patent	67
4.	'796 Patent	73
5.	'885 Patent	76
6.	'286 Patent	81
7.	'284 Patent	85
C.	Secondary Considerations.....	97
VI.	P.R. 3-3(c) – Claim Charts	98
VII.	P.R. 3-3(d) – Invalidity Under 35 U.S.C. § 112.....	99
VIII.	PATENT INELIGIBILITY UNDER 35 U.S.C. § 101	107
A.	Ineligibility of '966 Patent.....	109
B.	Ineligibility of '796 Patent.....	114
C.	Ineligibility of '284 Patent.....	120

EXHIBITS AND ATTACHMENTS

Exhibits A1 – A8	Invalidity Claim Charts for Primary References for '601 Patent
Exhibits B1 – B4	Invalidity Claim Charts for Primary References for '698 Patent
Exhibits C1 – C3	Invalidity Claim Charts for Primary References for '885 Patent
Exhibits D1 – D5	Invalidity Claim Charts for Primary References for '966 Patent
Exhibits E1 – E3	Invalidity Claim Charts for Primary References for '796 Patent
Exhibits F1 – F6	Invalidity Claim Charts for Primary References for '284 Patent
Exhibits G1 – G2	Invalidity Claim Charts for Primary References for '286 Patent
Attachments A1 – A3	Subject-Matter Eligibility Contentions for '966, '796, and '284 Patents

Pursuant to P.R. 3-3, the Court's Amended Docket Control Order (Dkt. 47) and its Standing Order Regarding Subject Matter Eligibility Contentions, Defendant Cisco Systems, Inc. ("Defendant" or "Cisco") hereby provides these P.R. 3-3 Invalidity Contentions ("Invalidity Contentions") and Subject-Matter Ineligibility Contentions ("Ineligibility Contentions") to Plaintiff NetSocket, Inc. ("Plaintiff" or "NetSocket").

I. INTRODUCTORY STATEMENT

These Invalidity and Ineligibility Contentions are based on Defendant's current knowledge and understanding of U.S. Patent Nos. 7,616,601 (the "'601 patent"), 7,190,698 (the "'698 patent"), 7,734,796 (the "'796 patent"), 7,827,284 (the "'284 patent"), 7,720,966 (the "'966 patent"), 7,606,885 (the "'885 patent"), and 7,885,286 (the "'286 patent") (collectively, "the Asserted Patents") and the prior art, along with Defendant's understanding of Plaintiff's infringement allegations and apparent claim interpretations based on those allegations, as set forth in Plaintiff's Disclosure of Asserted Claims and Infringement Contentions and Plaintiff's Supplemental Disclosure of Asserted Claims and Infringement Contentions (collectively, "Infringement Contentions"). These Invalidity and Ineligibility Contentions should not be construed to waive any objections to Plaintiff's Infringement Contentions or as an admission that the Infringement Contentions were adequate or that Plaintiff's apparent claim interpretations are correct, have merit, or should be adopted. Indeed, Plaintiff's Infringement Contentions are deficient and fail to describe the accused functionality and Plaintiff's interpretation of the claim language in a manner that would allow Defendant to fully respond, including in these invalidity contentions. Defendant expressly reserves the right to amend these contentions based on amendments to Plaintiff's Infringement Contentions or when Plaintiff specifies its theories with greater clarity. Additionally, and as further explained below, where these Invalidity Contentions disclose that a prior art reference meets a claim limitation, such position may be based on

Plaintiff's apparent claim interpretations in its Infringement Contentions; Defendant does not necessarily agree that such interpretations are correct, have merit, or should be adopted.

Defendant's investigation of the Asserted Patents, their file histories, and the prior art is ongoing, and Defendant expressly reserves the right to supplement these Invalidity and Ineligibility Contentions based on further discovery and in a manner consistent with the Federal Rules of Civil Procedure, the Local Patent Rules for the Eastern District of Texas, and any Docket Control Order, or otherwise in accordance with any order or direction of this Court or agreement of the parties. Defendant's ongoing investigation includes, but is not limited to, serving subpoenas on prior artists and inventors regarding prior art, seeking additional information related to the references and prior art systems disclosed in these Invalidity and Ineligibility Contentions, seeking additional information regarding Plaintiff's Infringement Contentions and the products and services accused of infringement, seeking information regarding any prior sales and/or uses by the original assignees of the Asserted Patents, and seeking expert testimony. Defendant also reserves the right to rely on any prior art identified or disclosed by non-parties to this action that are involved in a suit or action involving one or more of the Asserted Patents, as well as any prior art produced or disclosed during the course of this litigation. Additionally, Defendant has not yet had the benefit of taking the depositions of the named inventors or those that worked with the named inventors, or of the named inventors, authors, and entities listed on any references or systems identified in these Invalidity Contentions.

II. ASSERTED PATENTS AND CLAIMS

Plaintiff asserts the following claims from the Asserted Patents (collectively, "Asserted Claims"):

Asserted Patent	Asserted Claims
7,616,601	1

Asserted Patent	Asserted Claims
7,190,698	1
7,606,885	1-28
7,720,966	1-17
7,734,796	1-42
7,827,284	1-24
7,885,286	1-12

Not one of the Asserted Patents is related to another Asserted Patent, and Plaintiff appears to allege the following priority dates for the Asserted Patents:

Asserted Patent	Alleged Priority Date
7,616,601	January 16, 2001
7,190,698	April 6, 2001
7,606,885	September 3, 2001
7,720,966	December 2, 2002
7,734,796	September 4, 2001
7,827,284	December 20, 2002
7,885,286	December 23, 2005

Reference to any “alleged priority date” should not be construed to mean that Defendant agrees that the Asserted Patents are in fact entitled to such priority dates, or that Plaintiff has provided proper notice as to its contentions for priority dates.

P.R. 3-2(b) requires Plaintiff to produce, contemporaneously with its Disclosure of Asserted Claims and Infringement Contentions,” “[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 or the priority date identified pursuant to P.R. 3-1(e), whichever is earlier.” Plaintiff only produced copies of the ’601 and ’698 patents and their file histories and did not produce any other documents (including, for example, copies of the other Asserted Patents and their file histories) pursuant to P.R. 3-2(b). Defendant thus understands

that Plaintiff is not asserting an invention date, or conception, reduction to practice, design, and/or development of the claimed invention, prior to the alleged priority dates identified above. To the extent Plaintiff later alleges that any such activities occurred prior to the priority dates identified above, Defendant reserves the right to object to such belated changes in position and/or to supplement these Invalidity Contentions to address any such contention, including by identifying and/or charting additional prior art that may become relevant in view of such assertion. Likewise, to the extent Plaintiff successfully establishes an invention date before any of the prior-art references relied on by Defendant, then those references serve as evidence of secondary considerations of obviousness, particularly, contemporaneous invention by others. To the extent Plaintiff alleges that any prior art relied on in these Invalidity Contentions does not actually qualify as prior art to the Asserted Patent, Defendant reserves the right to rebut those allegations (e.g., by demonstrating an earlier critical date for the challenged prior art and/or a later priority date and/or date of invention for a particular Asserted Claim). Defendant also reserves the right to rely on additional documents, information, and evidence to demonstrate public availability or public availability by a certain date of a prior art reference or to rebut any efforts by Plaintiff to allege any reference was not publicly available or publicly available by a certain date or otherwise available as prior art.

For purposes of these contentions, Defendant addresses those claims specifically asserted by Plaintiff. Defendant reserves the right to amend or supplement this disclosure as necessary in view of any changes or amendments made, for any reason, to Plaintiff's infringement theories, Infringement Contentions, or Asserted Claims, including to Plaintiff's asserted priority and/or invention date(s).

III. CLAIM CONSTRUCTION

To the extent these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Defendant is not conceding that any such constructions are proper. For purposes of these Invalidity Contentions, Defendant may adopt alternative claim construction positions. In particular, portions of these Invalidity Contentions, including the claim charts attached as Exhibits and Attachments, may be based on the underlying claim constructions and/or interpretations in Plaintiff's Infringement Contentions, to the extent such constructions and/or interpretations are understood by Defendant. Defendant does not concede that any such constructions or interpretations by Plaintiff are proper or correct, and expressly reserves the right to contest any such constructions.

Throughout the attached Exhibits and Attachments, Defendant provides examples of where references disclose subject matter recited in preambles, without regard to whether the preambles are properly considered to be limitations of the Asserted Claims. Defendant reserves the right to argue, at the appropriate stage of this case, that the preambles are or are not limitations. Further, the fact that Defendant provides examples of any limitation does not mean that Defendant believes that the limitation is defined, is supported by a written description in the specification, is enabled, or otherwise comports with the requirements of the patent statute, including, but not limited to, 35 U.S.C. § 112.

Nothing disclosed herein is an admission or acknowledgement that any of Defendant's products or services infringes any of the Asserted Claims. Defendant reserves the right to supplement, modify, or otherwise amend these Invalidity Contentions, including based on the Court's claim construction rulings or opinions or the parties' positions or arguments taken in connection with the claim construction process. Moreover, Defendant reserves the right to rely on

any disclosures in the accompanying P.R. 3-4(b) production as it believes necessary in view of positions Plaintiff may take with respect to the scope and meaning of the Asserted Claims.

IV. P.R. 3-3(a) – IDENTIFICATION OF PRIOR ART^{1,2}

A. Prior Art for '601 Patent

1. Prior Art Patents for '601 Patent

Patent	Date of Issue/Publication	Filing Date
U.S. Patent No. 6,023,622 ("Plaschke")	Feb. 8, 2000	Mar. 5, 1997
U.S. Patent No. 6,496,505 ("La Porta 505")	December 17, 2000	December 11, 1998
U.S. Patent No. 6,522,628 ("Patel 628")	February 18, 2003	February 25, 2000
U.S. Patent No. 6,529,499 ("Doshi")	March 4, 2003	September 22, 1998
U.S. Patent No. 6,631,122 ("Arunachalam")	October 7, 2003	June 11, 1999
U.S. Patent No. 6,668,175 ("Almgren")	December 23, 2003	July 14, 2000
U.S. Patent No. 6,701,149 ("Sen")	March 2, 2004	July 17, 2000
U.S. Patent No. 6,738,363 ("Best")	May 18, 2004	November 5, 1999
U.S. Patent No. 6,714,515 ("Marchand")	May 16, 2000	March 30, 2004
U.S. Patent No. 6,744,767 ("Chiu")	June 1, 2004	December 30, 1999
U.S. Patent No. 6,798,757 ("Mizutani")	September 28, 2004	January 11, 2001

¹ Defendant also hereby identifies any systems or products that embody the technology described in any patent or publication identified in these Invalidity Contentions. Defendant reserves the right to rely on any documents or other evidence regarding any such systems.

² Additionally, Defendant identifies and incorporates by reference all prior art references identified during the prosecution history of the asserted patents, including any reference cited on the face of the asserted patents, any references disclosed by the applicants during prosecution in information disclosure statements, and any references identified or cited by the examiner as part of any office action relating to the asserted patents or to the applications which ultimately lead to the issuance of the asserted patents.

Patent	Date of Issue/Publication	Filing Date
U.S. Patent No. 6,850,764 ("Patel 764")	September 28, 2004	January 11, 2001
U.S. Patent No. 6,865,185 ("Patel 185")	March 8, 2005	February 25, 2000
U.S. Patent No. 6,958,983 ("Musikka")	October 25, 2005	December 15, 2000
U.S. Patent No. 7,006,472 ("Immonen")	February 28, 2006	August 28, 1998
U.S. Patent No. 7,031,266 ("Patel 266")	April 18, 2006	February 25, 2000
U.S. Patent No. 7,043,225 ("Patel 225")	May 9, 2006	February 25, 2000
U.S. Patent No. 7,054,938 ("Sundqvist")	May 30, 2006	February 7, 2001
U.S. Patent No. 7,068,607 ("Partain")	June 27, 2006	December 5, 2002
U.S. Patent No. 7,068,624 ("Dantu")	June 27, 2006	December 5, 2002
U.S. Patent No. 7,120,453 ("La Porta 453")	October 10, 2006	April 18, 2001
U.S. Patent No. 7,190,698 ("Svanberg")	March 13, 2007	October 25, 2001
U.S. Patent No. 7,292,560 ("Lou")	November 6, 2007	June 29, 2004
U.S. Patent No. 7,295,844 ("Moon")	November 13, 2007	August 16, 2005
U.S. Patent No. 7,302,497 ("Vilander")	November 27, 2007	December 12, 2000
U.S. Patent No. 8,098,605 ("Dougherty")	January 17, 2012	August 27, 2008
U.S. Pub. No. 2002/0064142 ("Antonio")	May 30, 2002	October 13, 1998
U.S. Pub No. 2002/0087699 ("Karagiannis")	July 4, 2002	July 19, 2001
U.S. Pub. No. 2001/0027490 ("Fodor")	October 4, 2001	January 24, 2001
U.S. Reissued Patent No. RE45,757 ("Quayle")	October 13, 2015	August 25, 2006
PCT WO 2000/038468 A1 ("Gustavsson")	June 29, 2000	December 17, 1999

Patent	Date of Issue/Publication	Filing Date
PCT WO 2001/058085 A1 ("Westberg")	August 9, 2001	January 23, 2001
PCT WO 2001/058086 A2 ("Rinnback")	August 9, 2001	January 19, 2001
PCT WO 2001/099458 A1 ("Vesterinen")	December 27, 2001	February 6, 2001
PCT WO 01/54357 ("Winter")	July 26, 2001	January 10, 2001
PCT WO 01/59986 ("Sundqvist 986")	August 16, 2001	February 9, 2001
PCT WO 01/89234 ("Marchand")	January 22, 2001	May 16, 2001
PCT WO 03/021888 A1 ("Sundqvist 888")	March 13, 2003	August 22, 2002
DE Patent No. 19634271 A1 ("Fink")	February 26, 1998	August 24, 1996
EP Patent No. 1047226 A2 ("Miyake 226")	October 25, 2000	February 21, 2000
EP Patent No. 0813800 B1 ("Ahmadi")	October 25, 2000	January 16, 1996
EP Patent No. 1056246 B1 ("Ash")	July 26, 2006	March 24, 2000
EP Patent No. 1059792 A2 ("Arunachalam 792")	July 31, 2002	May 30, 2000

2. Prior Art Publications for '601 Patent

Publication	Author	Publication Date
Performance of Qos Agents for Provisioning Network Resources	Olov Schelen	1999
Performance of Qos Agents for Provisioning Network Resources	Olov Schelen	1999
Sharing Resources through Advance Reservation Agents	Schelen et al.	1997

Publication	Author	Publication Date
QoS Provisioning for Broadband Satellite-ATM Multimedia Networks (Mertzanis)	Ioannis Mertzanis	July 1999
Internet QoS: A Big Picture	Xiao et al.	January 1999
An Integrated Resource Negotiation, Pricing, and QoS Adaptation Framework for Multimedia Applications	Xin Wang	December 2000
Designing a Wireless Broadband IP System with QoS Guarantees (Ala-Laurila et al)	Juha Ala-Laurila	June 8, 1998
A Two-bit Differentiated Services Architecture for the Internet	Nichols et al.	February 2000
Quality of Service Agents in the Internet ("Schelen 1998-2")	Olov Schelen	1998
IP QOS: Traveling in First Class on the Internet	Chris Metz	April 1999
A Discussion of Bandwidth Broker Requirements for Internet2 Qbone Deployment	Hares et al.	August 1999
GSM Phase 2+ General Packet Radio Service GPRS: Architecture, Protocols, and Air Interface	Chrisitan Bettstetter	1999
A Two-Tier Resource Management Model for the Internet	Terzis et al.	December 1999
Advance Reservations for Predictive Service in the Internet	Mikael Degermark	May 1997
An Architecture for Advance Reservations in the Internet	Berson et al.	July 16, 1998
End-to-End Quality of Service for High-End Applications	Foster et al.	June 2000
A Quality of Service Architecture	Andrew Campbell	January 1996
A Two-Tier Resource Management Model for	Reichmeyer et al.	November 1998

Publication	Author	Publication Date
Differentiated Services Networks		
Resource Sharing in Advance Reservation Agents (“Schelen 1998”)	Schelen et al.	1998
3rd Generation Partnership Project; Technical Specification Group Services and System Aspects QoS Concept (3G TR 23.907 version 0.5.0)	TSG-SA Working Group 2	May 1999
The 3GPP and 3GPP2 Movements Towards an All IP Mobile Network	Girish Patel & Steven Dennett	August 2000

B. Prior Art for '698 Patent

1. Prior Art Patents for '698 Patent

Patent No.	Date of Issue/Publication	Filing Date
U.S. Patent No. 8,214,533 (“Nishi”)	July 3, 2012	March 29, 2007
U.S. Patent No. 8,958,428 (“Patel 428”)	February 17, 2015	October 20, 2010
U.S. Patent No. 6,341,127 (“Katsube”)	January 22, 2002	July 13, 1998
U.S. Patent No. 6,487,170 (“Chen”)	November 26, 2002	November 18, 1998
U.S. Patent No. 6,535,507 (“Li”)	March 18, 2003	July 6, 1998
U.S. Patent No. 6,538,416 (“Hahne”)	March 25, 2003	October 15, 1999
U.S. Patent No. 6,563,793 (“Golden”)	May 13, 2003	November 25, 1998
U.S. Patent No. 6,665,273 (“Goguen”)	December 16, 2003	January 11, 2000
U.S. Patent No. 6,678,264 (“Gibson”)	January 13, 2004	June 30, 1999
U.S. Patent No. 6,683,874 (“Nagami”)	January 27, 2004	October 29, 1999
U.S. Patent No. 7,054,938 (“Sundqvist”)	May 30, 2006	February 7, 2001

U.S. Patent No. 7,082,140 ("Hass")	July 25, 2006	March 17, 2000
U.S. Patent No. 7,324,552 ("Galand")	January 29, 2008	January 21, 2003
U.S. Patent No. 5,953,338 ("Ma")	September 14, 1999	December 13, 1996
U.S. Patent No. 6,079,020 ("Liu")	June 20, 2000	January 27, 1998
U.S. Patent No. 5,884,297 ("Noven")	March 16, 1999	May 23, 1997
U.S. Patent No. 6,744,767 ("Chiu")	June 1, 2004	December 30, 1999
U.S. Patent No. 6,701,437 ("Hoke")	March 2, 2004	November 9, 1998

2. Prior Art Publications for '698 Patent

Publication	Author	Publication Date
White Paper - QoS protocols & architectures	Stardust.com, Inc.	July 8, 1999
An architecture for managing QoS-enabled VPNs over the Internet	Manuel Gunter	October 1999
A Two-Tier Resource Management Model for the Internet	A. Terzis	1999
Internet QoS the Big Picture - IEEE Network - January 1999 (Xiao)	Xipeng Xiao	March/April 1999
Resource Sharing in Advance Reservation Agents ("Schelen 1998")	Schelen et al.	1998
Multiprotocol Switching Architecture	Eric C. Rosen	August 1999
RFC 1518 An Architecture for IP Address Allocation with CIDR	Y. Rekhter	September 1993
Performance of QoS Agents for Provisioning Network Resources	Olov Schelen	1999
Quality of Service Agents in the Internet ("Schelen 1998-2")	Olov Schelen	August 1998
An Architecture for Differentiated Services	S. Blake	December 1998

Publication	Author	Publication Date
RATES a server for MPLS traffic engineer	P. Aukia	2000
Advance Reservations for Predictive Service in the Internet	Mikael Degermark	May 1997
A Discussion of Bandwidth Broker Requirements for Internet Qbone Deployment v. 0.7	Rob Neilson	August 1999
Definition of the Differentiated Service Field (DS Field) in the IPv4 and IPv6 Headers	K. Nichols	December 1998
Network Element Service Specification Template	S. Shenker	September 1997
Specification of Guaranteed Quality of Service	S. Shenker	September 1997
Two-Tier Resource Management Model for Differentiated Services	Francis Reichmeyer	November 1998
A Quality of Service Architecture	Andrew T. Campbell	January 1996
Current status on quality of service in IP - SPIE Conference on Internet II Quality of Service and Future Directions - 9Nov1999 (003)	Angela Chiu	1999
A Framework for IP Based Virtual Private Networks	B. Gleeson	February 2000
An architecture for advance reservations in the Internet	Steven Berson	July 16, 1998
Sharing Resources through Advance Reservation Agents	Olov Schelen	1997
An Agent-based Architecture for Advance Reservations ("Schelen 1997-2")	Olov Schelen	November 1997
A Two-Bit Differentiated Services Architecture for the Internet	K. Nichols	February 2000
Aggregating Resource Reservations over Multiple Routing Domains	Olov Schelen	1998
A Better Model for Generating Test Networks	Matthew B. Doar	1996
Modeling Internet Topology	Kenneth L. Calvert	June 1997

C. Prior Art for '885 Patent

1. Prior Art Patents for '885 Patent

Patent No.	Date of Issue/Publication	Filing Date
U.S. Pub. No. 2002/0099854 ("Jorgensen")	March 1, 2005	July 9, 1999
U.S. Pub. No. 2002/0191394 ("Partain")	December 19, 2002	June 15, 2001
U.S. Pub. No. 2004/0109413 ("Hierholzer")	June 10, 2004	August 29, 2001
U.S. Patent No. 6,131,117 ("Clark")	October 10, 2000	December 29, 1997
U.S. Patent No. 6,490,275 ("Sengodan")	December 3, 2002	October 13, 1998
U.S. Patent No. 6,600,735 ("Iwama")	July 29, 2003	March 1, 1999
U.S. Patent No. 6,636,596 ("Gallant")	October 21, 2003	September 24, 1999
U.S. Patent No. 6,795,867 ("Ma")	September 21, 2004	December 23, 1998
U.S. Patent No. 6,904,017 ("Meempat")	June 7, 2005	May 8, 2000
U.S. Patent No. 6,977,898 ("Miriya")	December 20, 2005	October 15, 1999
PCT WO 2002/009494 A2 ("Qian")	February 7, 2002	February 14, 2001
EP Patent App. No. 0 942 560 ("Shaffer")	September 15, 1999	February 8, 1999
U.S. Patent No. 5,909,550 ("Shankar")	June 1, 1999	October 16, 1996
U.S. Patent No. 5,915,217 ("Wiedeman")	June 22, 1999	August 4, 1997
U.S. Patent No. 6,052,361 ("Ansari")	April 18, 2000	April 16, 1997
U.S. Patent No. 6,173,324 ("D'Souza")	January 9, 2001	July 15, 1998
U.S. Patent No. 6,295,276 ("Datta")	September 25, 2001	December 31, 1999
U.S. Patent No. 6,370,163 ("Shaffer")	April 9, 2002	March 11, 1998
U.S. Patent No. 6,374,300 ("Masters")	April 16, 2002	July 15, 1999
U.S. Patent No. 6,434,628 ("Bownman-Amuah")	August 13, 2002	August 31, 1999

Patent No.	Date of Issue/Publication	Filing Date
U.S. Patent No. 6,498,791 ("Pickett")	December 24, 2002	May 4, 2001
U.S. Patent No. 6,529,499 ("Doshi")	March 4, 2003	September 22, 1998
U.S. Patent No. 6,563,793 ("Golden")	May 13, 2003	November 25, 1998
U.S. Patent No. 6,591,301 ("Li")	July 8, 2003	June 7, 1999
U.S. Patent No. 6,633,909 ("Barrett")	October 14, 2003	September 23, 1999
U.S. Patent No. 6,731,642 ("Borella")	May 4, 2004	May 3, 1999
U.S. Patent No. 6,754,181 ("Elliott")	June 22, 2004	November 18, 1996
U.S. Pub. No. US2002- 0064136 ("O'Neil")	May 30, 2002	November 2, 2001

2. Prior Art Publications for '885 Patent

Publication	Author	Publication Date
Voice over IP Fundamentals	Jonathan Davidson	2000
SBM protocol	R. Yavatkar	May 2000
Efficiently monitoring bandwidth and latency in IP networks	Yuri Breitbart	April 2001
Introduction to Version 3 of the Internet-standard Network Management Framework	J. Case	April 1999
A distributed mechanism for topology Discovery in Ad Hoc Wireless Networks Using Mobile Agents	R. Choudhury	August 11, 2000
Towards an integrated solution for multimedia over IP	D. Goderis	2001
ITU-T H.323 - Packet-based multimedia communications systems	International Telecommunication Union	February 1998
A primer on internet and TCP/IP tools	G. Kessler	December 1994
RIP Version	G. Malkin	November 1998
OSPF Version 2	J. Moy	April 1998
OSI IS-IS intra-domain routing protocol	D. Oran	February 1990

Publication	Author	Publication Date
Scalable resource management architecture for VOIP	C. Prehofer	2000
Qos in Data Networks: Protocols and Standards	Arindam Paul	1999
Performance of QoS agents for provisioning network resources	Olov Schelen	1999
Discovering Internet Topology	R. Siamwalla	1998
A Resource Management Architecture over Differentiated Services Domains for Guarantee of Bandwidth, Delay and Jitter	Koichi Tajima	May 19, 2000
The ABCs of Cisco IOS Software - Networking the Enterprise - Understanding the Essentials Series	Cisco	2001
New Features and Important Notes	Cisco	August 20, 2001
Release Notes for Cisco IOS Release 12.2T	Cisco	August 20, 2001
Cisco Products Quick Reference Guide	Cisco	August 2001
Cisco Products Quick Reference Guide	Cisco	August 2001
Release Notes for Cisco CallManager Release 3.0	Cisco	June 15, 2000
Release Notes for Cisco IOS Release 12.2 T	Cisco	August 20, 2001
Cisco Products Quick Reference Guide	Cisco	August 2000
Cisco IOS Command Reference Master Index Release 12.1	Cisco	2000
Cisco IOS Command Summary Volume 1 Release 12.1	Cisco	2000
Cisco IOS Command Summary Volume 2 Release 12.1	Cisco	2000
Cisco IOS Command Summary Volume 1 Release 12.2	Cisco	2001

Publication	Author	Publication Date
Cisco Configuration Guide Master Index Release 12.1	Cisco	2000
Cisco IOS Multiservice Applications Command Reference Release 12.1	Cisco	2000
Cisco IOS Multiservice Applications Configuration Guide Release 12.1	Cisco	2000
Cisco IOS Quality of Service Solutions Command Reference Release 12.1	Cisco	2000
Cisco IOS Quality of Service Solutions Command Reference Release 12.2	Cisco	2001
Cisco IOS Quality of Service Solutions Configuration Guide Release 12.1	Cisco	2000
Cisco IOS Quality of Service Solutions Configuration Guide Release 12.1	Cisco	2001
Cisco IOS Switching Services Command Reference Release 12.1	Cisco	2000
Cisco IOS Switching Services Command Reference Release 12.2	Cisco	2001
Packet - Cisco Systems User Magazine (Q1 2002)	Cisco	2002
Packet - Cisco Systems User Magazine (Q2 2000)	Cisco	2000
Packet - Cisco Systems User Magazine (Q4 2001)	Cisco	2001
Cisco IOS Wide-Area Networking Command Reference Release 12.2	Cisco	2001

D. Prior Art for '966 Patent

1. Prior Art Patents for '966 Patent

Patent No.	Date of Issue/Publication	Filing Date
U.S. Patent No. 6,304,549 ("Srinivasan")	October 16, 2001	May 8, 1997
U.S. Patent No. 7,023,860 ("Mauger")	April 4, 2006	July 24, 2000

Patent No.	Date of Issue/Publication	Filing Date
U.S. Patent No. 7,106,756 ("Donovan")	September 12, 2006	October 12, 1999
U.S. Patent No. 7,243,161 ("Tappan")	July 10, 2007	December 7, 2001
U.S. Pub. No. 2002/0114326 ("Mahalingaiah")	August 22, 2002	February 16, 2001
U.S. Pub. No. 2004/0054766 ("Vicente")	March 18, 2004	September 16, 2002
U.S. Patent No. 5,856,974 ("Gervais")	January 5, 1999	February 13, 1996
U.S. Patent No. 6,330,239 ("Suzuki")	December 11, 2001	July 15, 1998
U.S. Patent No. 6,631,122 ("Arunachalam")	October 7, 2003	June 11, 1999
U.S. Patent No. 7,043,225 ("Patel 225")	May 9, 2006	February 25, 2000
U.S. Patent No. 7,116,679 ("Ghahremani")	October 3, 2006	February 23, 2000
U.S. Patent No. 7,269,185 ("Kirkby")	September 11, 2007	May 22, 2001
U.S. Pub. No. 2001/0027484 ("Nishi")	October 4, 2001	March 27, 2001
U.S. Pub. No. 2001/0028653 ("Endo")	October 11, 2001	June 14, 2001
U.S. Pub. No. 2001/0040895 ("Templin")	November 15, 2001	December 1, 2000
U.S. Patent No. 6,188,691 ("Barkai")	February 13, 2001	March 16, 1998
U.S. Patent No. 6,654,363 ("Li")	November 25, 2003	December 28, 1999
EP Patent App. No. 1113628 A2 ("Li")	July 4, 2001	November 16, 2000
EP Patent App. No. 1089506 ("Cao")	April 4, 2001	September 25, 2000
JP Patent No. 11122290 ("Yuasa")	April 30, 1999	October 17, 1997
U.S. Pub. No. 2001/0033646 ("Porter")	October 25, 2001	June 20, 2001
U.S. Pub. No. 2003/0118019 ("Mark")	June 26, 2003	December 26, 2001
U.S. Pub. No. 2005/0027843 ("Bozak")	February 3, 2005	November 12, 2003
EP Patent App. No. 1047226 ("Miyake")	October 25, 2000	February 21, 2000

Patent No.	Date of Issue/Publication	Filing Date
U.S. Patent No. 6,584,093 ("Salama")	June 5, 1999	June 24, 2003
U.S. Patent No. 6,708,209 ("Ebata")	March 16, 2004	March 8, 2000
U.S. Pub. No. 2002/0165966 ("Widegren")	November 7, 2002	January 8, 2002

2. Prior Art Publications for '966 Patent

Publication	Author	Publication Date
Traffic Engineering for Quality of Service in the Internet, at Large Scale	Danny Goderis	September 11, 2000
Multicast Routing and Its QoS Extension: Problems, Algorithms, and Protocols	Bin Wang	January/February 2000
Internet QoS: A Big Picture	Xipeng Xiao	March/April 1999
Traffic Engineering with MPLS in the Internet	Xipeng Xiao	2000
Decoupling QoS control from core routers: a novel bandwidth broker architecture for Scalable Support of Guaranteed Services	Zhi-Li Zhang	2000
On Scalable Design of Bandwidth Brokers	Zhi-Li Zhang	August 2001
An architecture for advance reservations in the internet	Steven Berson	July 16, 1998
Resilient Overlay Networks	David G. Andersen	May 2001
Design and Implementation of an RSVP based Quality of Service Architecture for Integrated Services Internet	Tsipora Barzilai	November 18, 1996
End-to-End Provision of Policy Information for Network Qos	Volker Sander	2001
GMPLS-Based Photonic Multilayer Router (Hikari Router) Architecture: An Overview of Traffic Engineering and Signaling Technology	Ken-ichi Sato	March 2002
Issues of Reserving Resources in Advance	Lars C. Wolf	July 1997

Publication	Author	Publication Date
From SLA to SLS up to QoS Control: The CADENUS framework	Olivier Dugeon	2002
Communication Networks: Fundamental Concepts and Key Architectures	Alberto Leon-Garcia	2001
The Genesis Kernel: A Programming System for Spawning Network Architectures	Michael E. Kounavis	March 2001
A Framework for Providing Integrated Services Over Shared and Switched IEEE 802 LAN Technologies	Anoop Ghanwani	May 1999
Overview of Constraint-Based Path Selection Algorithms for QoS Routing	F.A. Kuipers	September 2, 2002
A Review of Constraint-Based Routing Algorithms	F.A. Kuipers	June 14, 2002
Design of a Multi-layer Bandwidth Broker Architecture	George A. Politis	2000
Quality of Service Agents in the Internet ("Schelen 1998-2")	Olov Schelen	August 1998
Tag Switching Architecture Overview	Yakov Rekhter	1997
PPP in HDLC-like Framing	W. Simpson	July 1994
Resource ReSerVation Protocol (RSVP) -- Version 1 Functional Specification	R. Braden	September 1997
Cisco Layer Two Forwarding (Protocol) "L2F"	A. Valencia	May 1998
BGP/MPLS VPNs	E. Rosen	March 1999
A Framework for IP Based Virtual Private Networks	B. Gleeson	February 2000
A Core MPLS IP VPN Architecture	K. Muthukrishnan	September 2000
RFC 3209 - RSVP-TE: Extensions to RSVP for LSP Tunnels	D. Awduche	December 2001
SBM (Subnet Bandwidth Manager)	R. Yavatkar	May 2000

Publication	Author	Publication Date
Scalable resource management architecture for VoIP	Christian Prehofer	2000
Quality of Service Agents in the Internet (“Schelen 1998-2”)	Olov Schelen	August 1998
RSVP Signaling Extensions for MPLS TE	Chuck Semeria	2000
QoS/Policy/Constraint Based Routing	Wei Sun	February 7, 2000
The Tenet Real-Time Protocol Suite: Design, Implementation, and Experiences	Anindo Banerjea	February 1996
The design and implementation of an IPv6/IPv4 Network Address and Protocol Translator	Marc E. Fiuczynski	June 1998
Distributed advance reservation of real-time connections	Ferrari et al.	March 1995
TCP/IP Illustrated, Volume 1 The Protocols	W. Richards Stevens	January 1999
RFC 2430 – A Provider Architecture for Differentiated Services and Traffic Engineering	Li et al.	October 1998
RFC 3032 – MPLS Label Stack Encoding	Rosen et al.	January 2001
Differentiated Services and Integrated Services use of MPLS	Rouhana et al.	2000
Cisco Products Quick Reference Guide	Cisco	August 2000
Cisco Product Catalog 1999	Cisco	February 1999
Cisco 3600 Series – Release Notes for Release 12.1(5)T Feature Packs	Cisco	November 27, 2000
Inter-Autonomous Systems for MPLS VPNs	Cisco	November 27, 2000
Positioning and Developing a Migration Strategy to Offer Advanced IP Services Based on MPLS	Wortham et al.	2000

Publication	Author	Publication Date
Cisco 7200 Series – Release Notes Cisco IOS Release 12.1(5) T Feature Packs	Cisco	June 18, 2001

E. Prior Art for '796 Patent

1. Prior Art Patents for '796 Patent

Patent No.	Date of Issue/Publication	Filing Date
U.S. Patent No. 6,631,122 ("Arunachalam")	October 7, 2003	June 11, 1999
U.S. Patent No. 6,674,760 ("Walrand")	January 6, 2004	September 28, 1999
U.S. Patent No. 6,721,272 ("Parnafes")	April 13, 2004	October 8, 1999
U.S. Pub. No. 2001/0032262 ("Sundqvist")	October 18, 2001	February 7, 2001
U.S. Patent No. 6,538,416 ("Hahne")	March 25, 2003	October 15, 1999
U.S. Patent No. 6,584,093 ("Salama")	June 24, 2003	January 5, 1999
U.S. Patent No. 6,678,264 ("Gibson")	January 13, 2004	June 30, 1999
U.S. Patent No. 6,708,209 ("Ebata")	March 16, 2004	March 8, 2000
U.S. Patent No. 6,714,515 ("Marchand")	March 30, 2004	May 16, 2000
U.S. Patent No. 6,765,868 ("Dunn")	July 20, 2004	September 22, 1998
U.S. Patent No. 7,151,772 ("Kalmanek")	December 19, 2006	December 22, 1999
U.S. Patent No. 7,269,185 ("Kirkby")	September 11, 2007	May 22, 2001
U.S. Pub. No. 2001/0048682 ("Fichou")	December 6, 2001	May 8, 2001
U.S. Pub. No. 2002/0062190 ("Hameleers")	May 23, 2002	November 21, 2001
U.S. Pub. No. 2002/0065599 ("Hameleers")	May 30, 2002	November 21, 2001
U.S. Pub. No. 2002/0165966 ("Widegren")	November 7, 2002	January 8, 2002
U.S. Pub. No. 2002/0181462 ("Surdila")	December 5, 2002	April 24, 2001

Patent No.	Date of Issue/Publication	Filing Date
U.S. Pub. No. 2003/0163572 ("Hierholzer")	August 28, 2003	July 27, 2001
U.S. Patent No. 6,714,515 ("Marchand")	March 30, 2004	May 16, 2000
U.S. Patent No. 6,538,416 ("Hahne")	March 25, 2003	October 15, 1999
U.S. Pub. No. 2003/0204618 ("Foster")	October 30, 2003	October 26, 2001
U.S. Pub. No. 2001/0027484 ("Nishi")	October 4, 2001	March 27, 2001
U.S. Pub. No. 2002/0087699 ("Karagiannis")	July 4, 2002	July 19, 2001
EP Patent App. No. 1047226 ("Hitachi")	October 25, 2000	February 21, 2000

2. Prior Art Publications for '796 Patent

Publication	Author	Publication Date
Vendor-Independent Bandwidth Broker Architecture for Networks	Octavia Pop	June 2001
Multicast Routing and Its QoS Extension: Problems, Algorithms, and Protocols	Bin Wang	January/February 2000
Internet QoS: A Big Picture	Xipeng Xiao	March/April 1999
Traffic Engineering with MPLS in the Internet	Xipeng Xiao	2000
Decoupling QoS control from core routers: a novel bandwidth broker architecture for Scalable Support of Guaranteed Services	Zhi-Li Zhang	2000
On Scalable Design of Bandwidth Brokers	Zhi-Li Zhang	August 2001
An agent-based architecture for advance reservations ("Schelen 1997-2")	Olov Schelen	November 1997
Resilient Overlay Networks	David G. Andersen	May 2001
Efficient multi-field packet classification for QoS purposes	Niklas Borg	June 1999
End-to- end provision of policy inf ormation for network QoS	Volker Sander	2001

Publication	Author	Publication Date
Functional Architecture Definition and Top Level Design	Danny Goderis	September 11, 2000
Implementation of a Bandwidth Broker for Dynamic End-to-End Capacity Reservation over Multiple Diffserv Domains	Ibrahim Khalil	October 2001
Inter-Domain LSP Setup Using Bandwidth Management Points	Ibrahim Taner Okumus	2001
Next Steps for the IP QoS Architecture	G. Huston	November 2000
Performance of QoS agents for provisioning network resources	Olov Schelen	1999
Design of a Multi-layer Bandwidth Broer Architecture	George A. Politis	2000
QBone Bandwidth Broker Architecture	Teitelbaum et al.	January 2000
Tag switching architecture overview	Yakov Rekhter	December 1997
Resource sharing in advance reservation agents ("Schelen 1998")	Olov Schelen	1998
A review of quality of service mechanisms in IP-based networks - integrated and differentiated services, multi-layer switching, MPLS and traffic engineering	Ray Hunt	March 23, 2001
Resource ReSerVation Protocol (RSVP) -- Version 1 Functional Specification	R. Braden	September 1997
Cisco Layer Two Forwarding (Protocol) -L2F-	A. Valencia	May 1998
RFC 2547 - BGP/MPLS VPNs--1999	E. Rosen	March 1999
RFC 2764 - A Framework for IP Based Virtual Private Networks	B. Gleeson	February 2000
RFC 2917 - A Core MPLS IP VPN Architecture	K. Muthukrishnan	September 2000

Publication	Author	Publication Date
Quality of Service Agents in the Internet (“Schelen 1998-2”)	Olov Schelen	August 1998
RSVP Signaling Extensions for MPLS TE	Chuck Semeria	2000
QoS/Policy/Constraint Based Routing	Wei Sun	February 7, 2000
Traffic Engineering for Quality of Service in the Internet, at Large Scale	Danny Goderis	September 11, 2000
RFC3209v7 - RSVP-TE: Extensions to RSVP for LSP Tunnels	Daniel O. Awduche	August 2000
RFC 3209 - RSVP-TE: Extensions to RSVP for LSP Tunnels	D. Awduche	December 2001
MPLS and VPN Architectures	Jim Guichard	2001
TCP/IP Illustrated, Volume 1 The Protocols	W. Richards Stevens	January 1999
Distributed advance reservation of real-time connections	Ferrari et al.	March 1995
RFC 2430 – A Provider Architecture for Differentiated Services and Traffic Engineering	Li et al.	October 1998
RFC 3032 – MPLS Label Stack Encoding	Rosen et al.	January 2001
Differentiated Services and Integrated Services use of MPLS	Rouhana et al.	2000
Cisco Products Quick Reference Guide	Cisco	August 2000
Cisco Product Catalog 1999	Cisco	February 1999
Cisco 3600 Series – Release Notes for Release 12.1(5)T Feature Packs	Cisco	November 27, 2000
Inter-Autonomous Systems for MPLS VPNs	Cisco	November 27, 2000
Positioning and Developing a Migration Strategy to Offer Advanced IP Services Based on MPLS	Wortham et al.	2000

Publication	Author	Publication Date
Cisco 7200 Series – Release Notes Cisco IOS Release 12.1(5) T Feature Packs	Cisco	June 18, 2001

F. Prior Art for '284 Patent

1. Prior Art Patents for '284 Patent

Patent No.	Date of Issue/Publication	Filing Date
U.S. Pub. No. 2004/0153545 ("Pandya")	August 21, 2007	February 18, 2003
U.S. Patent No. 6,324,184 ("Hou")	November 27, 2001	September 4, 1998
U.S. Patent No. 6,842,463 ("Drwiega")	January 11, 2005	July 14, 2000
U.S. Pub. No. 2003/0179767 ("Kloth")	October 23, 2007	March 23, 2002
U.S. Pub. No. 2004/0010585 ("Jones, Jr.")	January 30, 2007	July 12, 2002
U.S. Patent No. 6,791,941 ("Dziong")	September 14, 2004	September 28, 1999
U.S. Patent No. 6,034,945 ("Hughes")	March 7, 2000	May 15, 1996
U.S. Patent No. 6,442,138 ("Yin")	August 27, 2002	July 30, 1999
U.S. Patent No. 6,453,351 ("Endo")	September 17, 2002	September 13, 1994
U.S. Patent No. 6,665,273 ("Goguen")	December 16, 2003	January 11, 2000
U.S. Patent No. 6,765,873 ("Fichou")	July 20, 2004	June 29, 2000
U.S. Patent No. 6,233,456 ("Schiff")	May 15, 2001	September 27, 1996
U.S. Patent No. 6,310,857 ("Duffield")	October 30, 2001	June 16, 1998
U.S. Patent No. 6,366,559 ("Krishnan")	April 2, 2002	June 5, 1998
U.S. Patent No. 6,442,138 ("Yin")	August 27, 2002	July 30, 1999
U.S. Patent No. 6,487,170 ("Chen")	November 26, 2002	November 18, 1998
U.S. Patent No. 6,496,480 ("Ash")	December 17, 2002	March 17, 1999
U.S. Patent No. 6,721,568 ("Gustavsson")	April 13, 2004	November 10, 1999

Patent No.	Date of Issue/Publication	Filing Date
U.S. Patent No. 6,839,767 ("Davies")	January 4, 2005	November 1, 2000
U.S. Patent No. 6,888,842 ("Kirkby")	May 3, 2005	April 11, 2000
U.S. Patent No. 6,459,681 ("Oliva")	October 1, 2002	November 13, 1998
U.S. Patent No. 7,149,185 ("Sun")	December 12, 2006	June 18, 1999
U.S. Pub. No. 2002/0036981 ("Park")	June 4, 2018	April 8, 1998
U.S. Pub. No. 2004/0071086 ("Haumont")	March 30, 2010	November 20, 2001
U.S. Pub. No. 2005/0003824 ("Siris")	May 17, 2011	November 20, 2002
U.S. Pub. No. 2007/0058659 ("Ayyagari")	March 15, 2007	May 25, 2006

2. Prior Art Publications for '284 Patent

Publication	Author	Publication Date
Edge-to-Edge Resource Provisioning and Admission Control in Diffserv Networks	Haci A. Mantar	October 2002
Traffic engineering label switched paths	Bigomokero Antoine Bagula	March 2002
Dynamic buffer allocation in an ATM switch	Ece Yaprak	1999
Adaptive Admission Control for Next Generation Networks	Tom Walingo	2002
An adaptive algorithm for call admission control in wireless networks	Yi Zhang	2001
Dynamic Sizing of Label Switching Paths in MPLS Networks	Gustavo B. Figueiredo	November 2002
On scalable design of bandwidth brokers	Zhi-Li Zhang	August 2001
Performance analysis of resource reservation strategies in broadband networks	Elsa S. Valeroso	1999
Quality of Service Agents in the Internet ("Schelen 1998-2")	Olov Schelen	1998

Publication	Author	Publication Date
Efficiency comparisons between different model-based and measurement-based connection admission control under heavy traffic	Teck Kiong Lee	December 1999
Cisco Cable Manager User Guide	Cisco	May 2001
Cisco Product Catalog 1996	Cisco	July 1996
Cisco Product Catalog 1997	Cisco	February 1997
Cisco Products Quick Reference Guide	Cisco	August 2000
Cisco IOS Command Reference Master Index Release 12.1	Cisco	2000
Cisco IOS Command Summary Volume 1 Release 12.1	Cisco	2000
Cisco IOS Command Summary Volume 2 Release 12.1	Cisco	2000
Cisco IOS Command Summary Volume 1 Release 12.2	Cisco	2001
Cisco Configuration Guide Master Index Release 12.1	Cisco	2000
Cisco LightStream 1010 ATM Switch Command Reference	Cisco	1996
Cisco IOS Multiservice Applications Command Reference Release 12.1	Cisco	2000
Cisco IOS Multiservice Applications Configuration Guide Release 12.1	Cisco	2000
Cisco Product and Marketing Update 1995	Bruce Pinsky	January 1995
Cisco IOS Quality of Service Solutions Command Reference Release 12.1	Cisco	2000
Cisco IOS Quality of Service Solutions Command Reference Release 12.2	Cisco	2001

Publication	Author	Publication Date
Cisco IOS Quality of Service Solutions Configuration Guide Release 12.0	Cisco	1998
Cisco IOS Quality of Service Solutions Configuration Guide Release 12.1	Cisco	2000
Cisco IOS Quality of Service Solutions Configuration Guide Release 12.1	Cisco	2001
Cisco IOS Switching Services Command Reference Release 12.1	Cisco	2000
Cisco IOS Switching Services Command Reference Release 12.2	Cisco	2001
Packet - Cisco Systems User Magazine (Q1 2002)	Cisco	2002
Packet - Cisco Systems User Magazine (Q1 1995)	Cisco	1995
Packet - Cisco Systems User Magazine (Q2 1995)	Cisco	1995
Packet - Cisco Systems User Magazine (Q4 1995)	Cisco	1995
Packet - Cisco Systems User Magazine (Q2 2000)	Cisco	2000
Packet - Cisco Systems User Magazine (Q3 & Q4 1997)	Cisco	1997
Packet - Cisco Systems User Magazine (Q4 1998)	Cisco	1998
Packet - Cisco Systems User Magazine (Q4 1999)	Cisco	1999
Packet - Cisco Systems User Magazine (Q4 2001)	Cisco	2001
Cisco IOS Voice, Video, and Home Applications Configuration Guide Release 12.0	Cisco	1998
Cisco IOS Wide-Area Networking Command Reference Release 12.2	Cisco	2001

G. Prior Art for '286 Patent

1. Prior Art Patents for '286 Patent

Patent No.	Date of Issue/Publication	Filing Date
U.S. Pub. No. 2007/0107026 ("Sherer")	May 10, 2007	February 23, 2006
U.S. Pub. No. 2008/0205435 A1 ("Nahumi")	August 28, 2008	December 1, 2005
U.S. Pub. No. 2010/0226301 A1 ("Lohmar")	September 9, 2010	November 17, 2005
U.S. Patent No. 5,963,547 ("O'Neil")	October 5, 1999	September 18, 1996
U.S. Patent No. 6,973,081 ("Patel 081")	December 6, 2005	October 12, 2000
U.S. Pub. No. 2006/0020995 A1 ("Opie")	January 26, 2006	July 20, 2004
U.S. Pub. No. 2006/0047845 A1 ("Whited")	May 3, 2011	May 13, 2005
U.S. Pub. No. 2006/0075443 A1 ("Eckert")	April 6, 2006	September 27, 2004
U.S. Pub. No. 2006/0094440 A1 ("Meier")	April 22, 2008	November 1, 2004
U.S. Pub. No. 2006/0222323 A1 ("Sharpe")	April 22, 2008	November 1, 2004
PCT WO 02/056564 ("Norrgard")	July 18, 2002	December 20, 2001
PCT WO 2003/052993A2 ("Richardson")	June 26, 2003	December 11, 2002
EP Patent App. No. 1 523 190 ("Green")	April 13, 2005	September 10, 2004
U.S. Patent No. 6,714,515 ("Marchand")	March 30, 2004	May 16, 2000
U.S. Pub. No. 2002/0040404 A1 ("Lahr")	April 4, 2002	January 29, 2001
U.S. Pub. No. 2002/0114331 ("Cheung")	August 22, 2002	November 27, 2001
U.S. Pub. No. 2002/0124098A1 ("Shaw")	June 15, 2004	January 3, 2001
U.S. Pub. No. 2002/0143852 ("Guo")	April 28, 2009	March 4, 2002
U.S. Pub. No. 2002/0187986 ("Sundqvist")	February 4, 2003	June 7, 2002
U.S. Pub. No. US2003- 0046396 A1 ("Richter")	March 6, 2003	April 5, 2002

Patent No.	Date of Issue/Publication	Filing Date
U.S. Pub. No. 2004/0122975 ("Lennestäl")	June 24, 2004	February 21, 2002
U.S. Pub. No. 2004/0158858 A1 ("Paxton")	August 12, 2004	August 13, 2003
U.S. Pub. No. US2004/0172464 A1 ("Nag")	August 12, 2004	August 13, 2003
U.S. Pub. No. 2004/0249965 A1 ("Huggins")	December 9, 2004	May 5, 2003
U.S. Pub. No. 2005/0005025A1 ("Harville")	January 6, 2005	July 4, 2003
U.S. Pub. No. 2005/0081244 ("Barrett")	July 14, 2009	October 10, 2003
U.S. Pub. No. 2005/0094643 ("Wang")	September 29, 2009	November 5, 2003
U.S. Pub. No. 2005/0157742 ("Chen")	January 13, 2009	February 15, 2005
U.S. Pub. No. 2005/0190771 A1 ("Tan")	December 2, 2008	September 5, 2003
U.S. Pub. No. 2005/0190781 ("Green")	September 30, 2008	February 27, 2004
U.S. Pub. No. 2006/0242240 A1 ("Parker")	October 26, 2006	March 28, 2005
U.S. Pub. No. 2007/0081459 ("Segel")	April 12, 2007	October 11, 2005

2. Prior Art Publications for '286 Patent

Publication	Author	Publication Date
Ueno - Special Feature - Multicast Technology for Broadcast-type Data Delivery Services	Hidetoshi Ueno	November 2005
The Multimedia Internet	Stephen Weinstein	March 30, 2005

V. STATE OF THE ART AND OBVIOUSNESS

The references identified above, as further described in the Exhibits, each disclose, either expressly or inherently, every element of the Asserted Claims of the identified Asserted Patent, thereby anticipating those claims and/or rendering obvious such Asserted Claims (including in combination with the knowledge of a person of ordinary skill in the art). To the extent Plaintiff contends that any reference does not anticipate or render obvious the Asserted Claims as set forth

Claim Limitation	Grounds for Invalidity under 35 U.S.C. § 112
“handling radio resources” (’601 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“controlling IP network resources” (’601 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“resource map” (’601 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“pre-allocating resources” (’601 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“scheduling resources over time” (’601 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“communicating resource information between the NRM and the radio resource manager” (’601 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“reserving the IP network resources” (’601 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“the source” (’698 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“the destination” (’698 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“source network” (’698 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“destination network” (’698 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“the bandwidth broker” (’698 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“network level” (’966 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“addressing scheme” (’966 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.

Claim Limitation	Grounds for Invalidity under 35 U.S.C. § 112
“network domain” (’966 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“controlling resources of [first / second] network level” (’966 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“Network Resource Managers” (’966 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“means for communicating on a common network level” (’966 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“exchanging resource requests ... using the first addressing scheme” (’966 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“admitting new resource requests” (’966 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“amount of available resources” (’966 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“amount of resources currently reserved” (’966 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“amount of resources requested” (’966 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“performing an address mapping” (’966 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“a set of resources that is used by a reservation in the second group, controlled and known by the second group” (’966 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“aggregated into a single resource in the first group of NRMs” (’966 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“Network Resource Manager” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“domain” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.

Claim Limitation	Grounds for Invalidity under 35 U.S.C. § 112
“means for sending IP packets” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“predetermined QoS” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“means for requesting” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“a resource sufficient for the transmission of the IP packets to be able to fulfill said QoS” or “a resource required for fulfilling said QoS” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“means for announcing a domain property label” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“domain property label characterizing said destination domain” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“means for performing an appropriate action and for transmitting” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“transmitting the IP packets with said QoS” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“according to the announced domain property label” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“additional action is required to reserve resources” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“means for using an NRM path vector” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“means for receiving a resource request” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“means for performing an appropriate action” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“provide a QoS end-to-end” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.

Claim Limitation	Grounds for Invalidity under 35 U.S.C. § 112
“announcing” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“performing one of several actions ... according to the announced domain property label” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“at least one of the several actions causing the first NRM to perform additional communications” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“using an NRM path vector” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“end-terminal” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“domain property label is provisioned” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“domain property label is catered” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“domain property label is requested” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“domain property label is signaled” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“appropriate action” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“calling the [] NRM” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“ensure QoS” (’796 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“the first server” (’885 patent)	lacks written description and indefinite under § 112 ¶ 2 (e.g., “the first server” lacks antecedent basis and it is unclear to a POSITA what is meant by “the” first server).
“the second connection” (’885 patent)	claim 14 of the ’885 patent lacks written description and is

Claim Limitation	Grounds for Invalidity under 35 U.S.C. § 112
	indefinite under § 112 ¶ 2 (e.g., the claim recites “the second connection” but does not recite a “first connection”).
“performing path-sensitive resource management issues” (’885 patent)	lacks enablement and written description under § 112 ¶ 1 (e.g., this term is not one known to a POSITA and is not defined or described in the specification) and is indefinite under § 112 ¶ 2 (e.g., a POSITA would not know what this term means and the specification does not clarify what it means).
“routing collection means” (’885 patent)	lacks enablement and written description under § 112 ¶ 6 (e.g., no corresponding structure is disclosed for this term); indefinite under § 112 ¶ 2.
“being initiating” (’885 patent)	lacks enablement and written description under § 112 ¶ 1; indefinite under § 112 ¶ 2.
“means for receiving a request for a media distribution” (’286 patent)	lacks written description under § 112 ¶ 6; indefinite under § 112 ¶ 2.
“means for requesting network resources” (’286 patent)	lacks written description under § 112 ¶ 6; indefinite under § 112 ¶ 2.
“means for receiving feedback information” (’286 patent)	lacks written description under § 112 ¶ 6; indefinite under § 112 ¶ 2.
“means for allowing the Media Quick start” (’286 patent)	lacks written description under § 112 ¶ 6; indefinite under § 112 ¶ 2.
“another behavior” (’286 patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“forwarding quality” (’284 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“resources requested threshold” (’284 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.

Claim Limitation	Grounds for Invalidity under 35 U.S.C. § 112
“link” (’284 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“forwarding resources” (’284 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“measurement level threshold” (’284 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“reservation level” (’284 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“multiplexing properties” (’284 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“dynamically adapting” (’284 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“an initial threshold” (’284 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“allocated resources” (’284 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“reserved resources” (’284 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“measurement threshold” (’284 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.
“forwarding capacity reservations” (’284 Patent)	lacks enablement and written description under § 112 ¶ 1; and is indefinite under § 112 ¶ 2.

Defendant will provide additional analysis regarding its contentions regarding 35 U.S.C. § 112 in accordance with the schedule in this case and the Court’s Patent Rules.

VIII. PATENT INELIGIBILITY UNDER 35 U.S.C. § 101

The ’966, ’796, and ’284 Patents fail to meet the requirements of 35 U.S.C. § 101—namely the ’966, ’796, and ’284 Patents are directed to an abstract idea and are, therefore, not patentable

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CERTIFICATE OF SERVICE

I hereby certify that on March 22, 2023, the foregoing was served upon all counsel of record who have consented to electronic service.

/s/ Janice L. Ta
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