

TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

ETAS ID: TM449155

SUBMISSION TYPE:	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:	SECURITY INTEREST		
CONVEYING PARTY DATA			
Name	Formerly	Execution Date	Entity Type
EXTREME NETWORKS, INC.		10/27/2017	Corporation: DELAWARE
RECEIVING PARTY DATA			
Name:	SILICON VALLEY BANK		
Street Address:	3003 TASMAN DRIVE		
City:	SANTA CLARA		
State/Country:	CALIFORNIA		
Postal Code:	95054		
Entity Type:	Corporation: CALIFORNIA		
PROPERTY NUMBERS Total: 25			
Property Type	Number	Word Mark	
Registration Number:	4032543	AIRDEFENSE	
Registration Number:	2456966	BAYSTACK	
Registration Number:	2281382	BLACKDIAMOND	
Registration Number:	2301696	CONTIVITY	
Registration Number:	4841944	E	
Registration Number:	4874975	E EXTREME NETWORKS	
Registration Number:	2243238	EXTREME NETWORKS	
Registration Number:	3840628	EXTREME NETWORKS	
Registration Number:	2549958	EXTREMEWORKS	
Registration Number:	3379396	EXTREMEXOS	
Registration Number:	3349489	IDENGINES	
Registration Number:	3349580	IGNITION	
Registration Number:	2388859		
Registration Number:	3910064		
Registration Number:	4073424	R	
Registration Number:	3796814	REACHNXT	
Registration Number:	2365696	SUMMIT	
Registration Number:	4837384	WI-FI COACH	
Registration Number:	2312393	BIGIRON	

CH \$640.00 4032543

Property Type	Number	Word Mark
Registration Number:	3975571	MLX
Registration Number:	2174495	NETIRON
Registration Number:	4960698	STACKSTORM
Registration Number:	4057074	VCS
Registration Number:	4046730	VDX
Registration Number:	4068603	VDX

CORRESPONDENCE DATA

Fax Number: 4152687522
Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.
Phone: 415-268-7000
Email: ksamia@mofo.com
Correspondent Name: Jennifer Lee Taylor
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Address Line 2: c/o Morrison & Foerster LLP
Address Line 4: San Francisco, CALIFORNIA 94105

ATTORNEY DOCKET NUMBER:	272920000109
NAME OF SUBMITTER:	Jennifer Lee Taylor
SIGNATURE:	/JLT2/
DATE SIGNED:	10/30/2017

Total Attachments: 41

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**THIRD AMENDED AND RESTATED PATENT AND TRADEMARK
SECURITY AGREEMENT**

THIS THIRD AMENDED AND RESTATED PATENT AND TRADEMARK SECURITY AGREEMENT (this "*Agreement*"), dated as of July 24, 2015, amended and restated as of October 28, 2016, further amended and restated as of July 14, 2017, and further amended and restated as of October 27, 2017, is made between EXTREME NETWORKS, INC., a Delaware corporation (the "*Grantor*"), and SILICON VALLEY BANK, a California corporation, as administrative agent for the Lenders referred to below and for the benefit of the Secured Parties defined in the Amended and Restated Credit Agreement referred to below (in such capacity, the "*Administrative Agent*").

A. The Grantor, certain financial institutions as lenders (the "*Lenders*") and the Administrative Agent are parties to that certain Amended and Restated Credit Agreement, dated as of October 28, 2016 (as amended, amended and restated, modified, renewed or extended from time to time after the date hereof, the "*Amended and Restated Credit Agreement*").

B. The Grantor, Enterasys Networks, Inc., a Delaware corporation, and the Administrative Agent are parties to that certain Guarantee and Collateral Agreement, dated as of March 20, 2014 (as, amended, amended and restated, modified, renewed or extended from time to time after the date hereof, the "*Guarantee and Collateral Agreement*").

C. Pursuant to the terms of the Guarantee and Collateral Agreement, the Grantor granted to the Administrative Agent (for the benefit of the Secured Parties and to secure the Secured Obligations (as defined in the Guarantee and Collateral Agreement)) a security interest in substantially all of the Grantor's present and future personal property assets (including the Intellectual Property of the Grantor) and, to further evidence such security interest grant in the Intellectual Property of the Grantor, the Grantor and the Administrative Agent entered into that certain Second Amended and Restated Borrower Patent and Trademark Security Agreement dated as of July 24, 2015 and amended and restated as of July 14, 2017 (the "*Existing Borrower Patent and Trademark Security Agreement*").

D. The Grantor has requested that the Administrative Agent and the Lenders agree to amend and restate the Existing Borrower Patent and Trademark Security Agreement in the form of this Agreement and the Administrative Agent and the Lenders have agreed to such request, subject to the terms and conditions hereof.

Accordingly, the parties hereto agree as follows:

SECTION 1 Definitions; Interpretation.

(a) Terms Defined in Amended and Restated Credit Agreement and the Guarantee and Collateral Agreement. All capitalized terms used in this Agreement (including in the recitals hereof) and not otherwise defined herein shall have the respective meanings assigned to such terms in the Amended and Restated Credit Agreement or the Guarantee and Collateral Agreement, as the context may require.

(b) Interpretation. The rules of interpretation set forth in Section 1.2 of the Amended and Restated Credit Agreement shall be applicable to this Agreement and are incorporated herein by this reference.

SECTION 2 Security Interest.

(a) Grant of Security Interest. As security for the payment and performance of the Secured Obligations, the Grantor hereby grants, assigns, and conveys to the Administrative Agent (for the benefit of the Secured Parties), a security interest in all of the Grantor's right, title and interest in, to and under the following property, in each case whether now or hereafter existing or arising or in which the Grantor now has or hereafter owns, acquires or develops an interest and wherever located (collectively, the "*Collateral*"):

(i) all patents and patent applications, domestic or foreign, all licenses relating to any of the foregoing and all income and royalties with respect to any licenses (including such patents and patent applications as described in Schedule A), all rights to sue for past, present or future infringement thereof, all rights arising therefrom and pertaining thereto and all reissues, divisions, continuations, renewals, extensions and continuations-in-part thereof; provided that the Collateral shall not include any such patent that constitutes an Excluded Patent (as defined in the Guarantee and Collateral Agreement);

(ii) all state (including common law), federal and foreign trademarks, service marks and trade names, and applications for registration of such trademarks, service marks and trade names, all licenses relating to any of the foregoing and all income and royalties with respect to any licenses (including such marks, names and applications as described in Schedule B), whether registered or unregistered and wherever registered, all rights to sue for past, present or future infringement or unconsented use thereof, all rights arising therefrom and pertaining thereto and all reissues, extensions and renewals thereof;

(iii) the entire goodwill of or associated with the businesses now or hereafter conducted by the Grantor connected with and symbolized by any of the aforementioned properties and assets;

(iv) all Commercial Tort Claims associated with or arising out of any of the aforementioned properties and assets;

(v) all accounts, all intangible intellectual or other similar property and other general intangibles associated with or arising out of any of the aforementioned properties and assets and not otherwise described above, including all license payments and payments under insurance (whether or not the Administrative Agent is the loss payee thereof) or any indemnity, warranty or guaranty payable by reason of loss or damage to or otherwise with respect to the foregoing Collateral; and

(vi) all products, proceeds and supporting obligations of or with respect to any and all of the foregoing Collateral.

(b) Continuing Security Interest. The Grantor agrees that this Agreement shall create a continuing security interest in the Collateral which shall remain in effect until terminated in accordance with the Guarantee and Collateral Agreement.

SECTION 3 Supplement to Guarantee and Collateral Agreement. The terms and provisions of this Agreement are intended as a supplement to the terms and provisions of the Guarantee and Collateral Agreement. The rights and remedies of the Administrative Agent with respect to the security interests granted herein are without prejudice to, and are in addition to those set forth in the Guarantee and Collateral Agreement, all terms and provisions of which are incorporated herein by reference.

SECTION 4 Authorization to Supplement. If the Grantor shall obtain rights to any new trademarks, any new patentable inventions or become entitled to the benefit of any patent application or patent for any reissue, division, or continuation, of any patent, the provisions of this Agreement shall automatically apply thereto. To the extent required by the terms and provisions of the Guarantee and Collateral Agreement, the Grantor shall give prompt notice in writing to the Administrative Agent with respect to any such new trademarks or patents, or renewal or extension of any trademark registration. Without limiting the Grantor's obligation under this Section 4, the Grantor authorizes the Administrative Agent to modify this Agreement by amending Schedule A or Schedule B, as applicable, to include any such new patent or trademark rights. No failure to so amend Schedule A or Schedule B, as applicable, shall in any way affect, invalidate or detract from the Administrative Agent's continuing security interest in all Collateral (held for the benefit of the Secured Parties), whether or not listed on Schedule A or Schedule B.

SECTION 5 Further Acts. On a continuing basis, the Grantor shall make, execute, acknowledge and deliver, and file and record in the proper filing and recording places, all such instruments and documents, and take all such action as may be necessary or advisable or as may be requested by the Administrative Agent to carry out the intent and purposes of this Agreement, or for assuring, confirming or protecting the grant or perfection of the security interest granted or purported to be granted hereby, to ensure the Grantor's compliance with this Agreement or to enable the Administrative Agent to exercise and enforce its rights and remedies hereunder with respect to the Collateral, including any documents for filing with the USPTO and/or any applicable state office. The Administrative Agent may record this Agreement, an abstract thereof, or any other document describing the Administrative Agent's interest in the Collateral with the USPTO, including any modification hereof as provided above, at the expense of the Grantor.

SECTION 6 Binding Effect. This Agreement shall be binding upon, inure to the benefit of and be enforceable by the Grantor, the Administrative Agent, the other Secured Parties and their respective successors and assigns and shall bind any Person who becomes bound as a debtor to this Agreement.

SECTION 7 Governing Law. **THIS AGREEMENT AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES UNDER THIS AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAW OF THE STATE OF CALIFORNIA.** This Agreement is subject to the provisions of Section 10.14 of the Amended and Restated Credit Agreement relating to submission to jurisdiction, jury trial waiver and judicial reference, which provisions are by this reference incorporated herein, *mutatis mutandis*, as if set forth herein in full.

SECTION 8 Entire Agreement; Amendment. This Agreement contains the entire agreement of the parties with respect to the subject matter hereof and shall not be amended except by the written agreement of the parties as provided in Section 10.1 of the Amended and Restated Credit Agreement.

SECTION 9 Severability. Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under all applicable laws and regulations. If, however, any provision of this Agreement shall be prohibited by or invalid under any such law or regulation in any jurisdiction, it shall, as to such jurisdiction, be deemed modified to conform to the minimum requirements of such law or regulation, or, if for any reason it is not deemed so modified, it shall be ineffective and invalid only to the extent of such prohibition or invalidity without affecting the remaining provisions of this Agreement, or the validity or effectiveness of such provision in any other jurisdiction.

SECTION 10 Counterparts. This Agreement may be executed in any number of counterparts and by different parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute but one and the same agreement. Delivery of an executed counterpart of a signature page of this Agreement by facsimile or in electronic (*i.e.*, “pdf” or “tif”) format shall be effective as delivery of a manually executed counterpart of this Agreement.

SECTION 11 Amendment and Restatement. This Agreement is intended to amend, restate and supersede the Existing Borrower Patent and Trademark Security Agreement, without novation. The Grantor hereby ratifies, affirms and acknowledges all of its Secured Obligations in respect of the Existing Borrower Patent and Trademark Security Agreement, as amended and restated hereby, and the related documents and agreements delivered by it hereunder. All references in the other Loan Documents to the Existing Borrower Patent and Trademark Security Agreement shall mean and be references to this Agreement (unless the context requires otherwise). The Grantor hereby acknowledges that neither the execution nor the delivery by the Administrative Agent of this Agreement shall (i) be deemed to create a course of dealing or otherwise obligate the Administrative Agent or any Lender to amend or amend and restate this agreement under the same or similar circumstances in the future or (ii) be deemed to create any implied waiver of any right or remedy of the Administrative Agent with respect to any term or provision of any Loan Document (including any term or provision relating to the occurrence of a Material Adverse Effect).

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement, as of the date first above written.

GRANTOR:

EXTREME NETWORKS, INC.

By: K. Motley

Name: Katy Motley

Title: FVP Civil Administrative Officer - HR
General Counsel and Corporate Secretary

ADMINISTRATIVE AGENT:

SILICON VALLEY BANK

By: _____

Name: _____

Title: _____

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement, as of the date first above written.

GRANTOR:

EXTREME NETWORKS, INC.

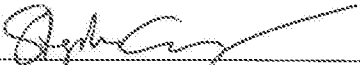
By: _____

Name: _____

Title: _____

ADMINISTRATIVE AGENT:

SILICON VALLEY BANK

By:  _____

Name: STEPHEN CHANG

Title: VICE PRESIDENT

SCHEDULE A
to the Amended and Restated Patent and Trademark Security Agreement

EXTREME NETWORKS, INC.

Issued U.S. Patents of the Grantor

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	6,198,751	3/6/2001	MULTI-PROTOCOL PACKET TRANSLATOR
USA	5,987,522	11/16/1999	PRIVILEGED VIRTUAL LOCAL AREA NETWORKS
USA	6,112,251	8/29/2000	VIRTUAL LOCAL NETWORK FOR SENDING MULTICAST TRANSMISSIONS TO TRUNK STATIONS
USA	6,418,480	7/9/2002	COMMUNICATION PACKET INCLUDING A MULTICAST ADDRESS AND A DESTINATION ADDRESS DIFFERENT THAN AN EQUIVALENT TO THE MULTICAST ADDRESS
USA	6,301,224	10/9/2001	NETWORK SWITCH WITH PANIC MODE
USA	6,469,987	10/22/2002	VIRTUAL LOCAL AREA NETWORKS WITH TRUNK STATIONS
USA	6,295,299	9/25/2001	DATA PATH ARCHITECTURE FOR A LAN SWITCH
USA	7,130,308	10/31/2006	DATA PATH ARCHITECTURE FOR A LAN SWITCH
USA	6,104,700	8/15/2000	POLICY BASED QUALITY OF SERVICE
USA	6,859,438	2/22/2005	POLICY BASED QUALITY OF SERVICE
USA	6,563,837	5/13/2003	METHOD AND APPARATUS FOR PROVIDING WORK-CONSERVING PROPERTIES IN A NON-BLOCKING SWITCH WITH LIMITED SPEEDUP INDEPENDENT OF SWITCH SIZE
USA	6,865,154	3/8/2005	METHOD AND APPARATUS FOR PROVIDING BANDWIDTH AND DELAY GUARANTEES IN COMBINED INPUT-OUTPUT BUFFERED CROSSBAR SWITCHES THAT IMPLEMENT WORK-CONSERVING ARBITRATION ALGORITHMS
USA	6,072,772	6/6/2000	METHOD FOR PROVIDING BANDWIDTH AND DELAY GUARANTEES IN A CROSSBAR SWITCH WITH SPEEDUP
USA	6,034,957	3/7/2000	SLICED COMPARISON ENGINE ARCHITECTURE AND METHOD FOR A LAN SWITCH
USA	5,974,467	10/26/1999	PROTOCOL FOR COMMUNICATING DATA BETWEEN PACKET FORWARDING DEVICES VIA AN INTERMEDIATE NETWORK INTERCONNECT DEVICE
USA	6,023,471	2/8/2000	NETWORK INTERCONNECT DEVICE AND PROTOCOL FOR COMMUNICATING DATA AMONG PACKET FORWARDING DEVICES
USA	6,067,300	5/23/2000	METHOD AND APPARATUS FOR OPTIMIZING THE TRANSFER OF DATA PACKETS BETWEEN LOCAL AREA NETWORKS
USA	6,654,374	11/25/2003	METHOD AND APPARATUS TO REDUCE JITTER IN PACKET SWITCHED NETWORKS

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	6,714,517	3/30/2004	METHOD AND APPARATUS FOR INTERCONNECTION OF PACKET SWITCHES WITH GUARANTEED BANDWIDTH
USA	6,970,424	11/29/2005	METHOD AND APPARATUS TO MINIMIZE CONGESTION IN A PACKET SWITCHED NETWORK
USA	6,526,052	2/25/2003	VIRTUAL LOCAL AREA NETWORKS HAVING RULES OF PRECEDENCE
USA	6,822,966	11/23/2004	ALLOCATING BUFFERS FOR DATA TRANSMISSION IN A NETWORK COMMUNICATION DEVICE
USA	6,647,413	11/11/2003	METHOD AND APPARATUS FOR MEASURING PERFORMANCE IN PACKET-SWITCHED NETWORKS
USA	6,711,125	3/23/2004	PROVISIONING NETWORKS FOR RELIABLE QUALITY OF SERVICE
USA	6,674,760	1/6/2004	METHOD AND SYSTEM FOR IMPLEMENTING END-TO-END QOS IN PACKET-SWITCHED NETWORKS
USA	6,754,171	6/22/2004	METHOD AND SYSTEM FOR DISTRIBUTED CLOCK FAILURE PROTECTION IN A PACKET SWITCHED NETWORK
USA	6,850,490	2/1/2005	HIERARCHICAL OUTPUT-QUEUED PACKET-BUFFERING SYSTEM AND METHOD
USA	6,930,985	8/16/2005	METHOD AND APPARATUS FOR MANAGEMENT OF CONFIGURATION IN A NETWORK
USA	6,597,584	7/22/2003	EJECTOR ASSEMBLY
USA	6,980,550	12/27/2005	METHOD AND APPARATUS FOR SERVER LOAD BALANCING
USA	6,956,816	10/18/2005	FAULT TOLERANT AUTOMATIC PROTECTION SWITCHING FOR DISTRIBUTED ROUTERS
USA	6,954,436	10/11/2005	METHOD AND APPARATUS FOR SELECTING REDUNDANT ROUTERS USING TRACKING
USA	6,977,891	12/20/2005	METHOD AND SYSTEM FOR MULTICAST TRAFFIC REDUCTION
USA	7,581,024	8/25/2009	METHOD AND SYSTEM FOR INCREASING PARTICIPATION IN A STANDBY ROUTER PROTOCOL
USA	8,751,647	6/10/2014	METHOD AND APPARATUS FOR NETWORK LOGIN AUTHORIZATION
USA	7,149,217	12/12/2006	LOAD-SHARING TECHNIQUE FOR DISTRIBUTING MULTI-PROTOCOL LABEL SWITCHING PROTOCOL ENCAPSULATED FLOWS ACROSS MULTIPLE PHYSICAL LINKS
USA	7,222,268	5/22/2007	SYSTEM RESOURCE AVAILABILITY MANAGER
USA	6,766,482	7/20/2004	ETHERNET AUTOMATIC PROTECTION SWITCHING
USA	7,003,705	2/21/2006	ETHERNET AUTOMATIC PROTECTION SWITCHING
USA	6,907,466	6/14/2005	METHODS AND SYSTEMS FOR EFFICIENTLY DELIVERING DATA TO A PLURALITY OF DESTINATIONS IN A COMPUTER NETWORK
USA	7,111,017	9/19/2006	DYNAMIC DEVICE MANAGEMENT AND DEPLOYMENT

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	6,892,309	5/10/2005	CONTROLLING USAGE OF NETWORK RESOURCES BY A USER AT THE USER'S ENTRY POINT TO A COMMUNICATIONS NETWORK BASED ON AN IDENTITY OF THE USER
USA	6,990,592	1/24/2006	CONTROLLING CONCURRENT USAGE OF NETWORK RESOURCES BY MULTIPLE USERS AT AN ENTRY POINT TO A COMMUNICATIONS NETWORK BASE
USA	7,855,972	12/21/2010	CREATING, MODIFYING AND STORING SERVICE ABSTRACTIONS AND ROLE ABSTRACTIONS REPRESENTING ONE OR MORE PACKET RULES
USA	6,781,990	8/24/2004	METHOD AND SYSTEM FOR MANAGING TRAFFIC IN A PACKET NETWORK ENVIRONMENT
USA	7,152,124	12/19/2006	METHOD AND SYSTEM FOR MAINTAINING TEMPORAL CONSISTENCY OF RESOURCES AND DATA IN A MULTIPLE-PROCESSOR PACKET SWITCH
USA	7,447,777	11/4/2008	SWITCHING SYSTEM
USA	7,814,204	10/12/2010	METHOD OF AND SYSTEM FOR ANALYZING THE CONTENT OF RESOURCE REQUESTS
USA	7,298,746	11/20/2007	METHOD AND SYSTEM FOR REASSEMBLING AND PARSING PACKETS IN A NETWORK ENVIRONMENT
USA	7,584,262	9/11/2009	METHOD OF AND SYSTEM FOR ALLOCATING RESOURCES TO RESOURCE REQUESTS BASED ON APPLICATION OF PERSISTENCE POLICIES
USA	8,560,693	10/15/2013	METHOD OF AND SYSTEM FOR ALLOCATING RESOURCES TO RESOURCE REQUESTS BASED ON APPLICATION OF PERSISTENCE POLICIES
USA	8,412,838	4/2/2013	METHOD OF AND SYSTEM FOR ANALYZING THE CONTENT OF RESOURCE REQUESTS
USA	7,411,901	8/12/2008	METHOD AND APPARATUS FOR DYNAMICALLY SELECTING TIMER DURATIONS
USA	7,269,135	9/11/2007	METHODS AND SYSTEMS FOR PROVIDING REDUNDANT CONNECTIVITY ACROSS A NETWORK USING A TUNNELING PROTOCOL
USA	7,689,678	3/30/2010	METHOD AND APPARATUS FOR RESTORING THE CONFIGURATION OF A NETWORK DEVICE
USA	7,783,733	8/24/2010	METHOD AND APPARATUS FOR DYNAMIC CONFIGURATION MANAGEMENT
USA	7,448,045	11/4/2008	METHOD AND APPARATUS TO EXTEND A PROGRAM
USA	7,245,619	7/17/2007	METHOD AND APPARATUS FOR MANAGING ROUTES
USA	7,154,861	12/26/2006	METHOD AND SYSTEM FOR A VIRTUAL LOCAL AREA NETWORK TO SPAN MULTIPLE LOOP FREE NETWORK TOPOLOGY DOMAINS.
USA	7,334,048	2/19/2008	METHOD AND APPARATUS FOR FAST ROUTE TABLE UPDATE
USA	7,017,082	3/21/2006	METHOD AND SYSTEM FOR A PROCESS MANAGER
USA	7,126,923	10/24/2006	METHOD AND SYSTEM FOR INTER-DOMAIN LOOP PROTECTION USING A HIERARCHY OF LOOP RESOLVING PROTOCOLS
USA	7,408,876	8/5/2008	METHOD AND APPARATUS FOR PROVIDING QUALITY OF SERVICE ACROSS A SWITCHED BACKPLANE BETWEEN EGRESS QUEUE MANAGERS

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	6,981,174	12/27/2005	METHOD AND APPARATUS FOR A REDUNDANT PORT
USA	7,286,552	10/23/2007	METHOD AND APPARATUS FOR PROVIDING QUALITY OF SERVICE ACROSS A SWITCHED BACKPLANE FOR MULTICAST PACKETS
USA	8,274,974	9/25/2012	METHOD AND APPARATUS FOR PROVIDING QUALITY OF SERVICE ACROSS A SWITCHED BACKPLANE FOR MULTICAST PACKETS
USA	7,599,292	10/6/2009	METHOD AND APPARATUS FOR PROVIDING QUALITY OF SERVICE ACROSS A SWITCHED BACKPLANE BETWEEN EGRESS AND INGRESS QUEUE MAN
USA	7,376,951	5/20/2008	METHOD AND APPARATUS FOR CONTROLLING PROCESS DEPENDENCIES
USA	7,152,242	12/19/2006	MODULAR SYSTEM FOR DETECTING, FILTERING AND PROVIDING NOTICE ABOUT ATTACK EVENTS ASSOCIATED WITH NETWORK SECURITY
USA	6,685,498	2/3/2004	LOGIC ANALYZER TESTING METHOD AND CONFIGURATION AND INTERFACE ASSEMBLY FOR USE THEREWITH
USA	7,245,629	7/17/2007	METHOD AND APPARATUS FOR A CONTROL COMMUNICATION CHANNEL IN A PACKET-FORWARDING DEVICE
USA	7,386,605	6/10/2008	METHODS AND APPARATUS FOR AUTOMATED EDGE DEVICE CONFIGURATION IN A HETEROGENEOUS NETWORK
USA	7,386,309	6/10/2008	METHOD AND SYSTEM FOR DISTRIBUTED WIRELESS ACCESS
USA	7,401,086	7/15/2008	TRANSLATING CONFIGURATION FILES AMONG NETWORK DEVICES
USA	7,372,813	5/13/2008	VIRTUAL LOAD BALANCING ACROSS A NETWORK LINK
USA	7,343,597	3/11/2008	METHODS AND APPARATUS FOR COMMUNICATION BETWEEN AN APPLICATION AND A DEVICE
USA	7,290,263	10/30/2007	METHOD AND SYSTEM FOR A SCRIPTABLE COMMAND LINE INTERFACE
USA	7,685,295	3/23/2010	WIRELESS LOCAL AREA COMMUNICATION NETWORK SYSTEM AND METHOD
USA	7,400,647	7/15/2008	LOOK UP TABLE (LUT) FOR POINT-TO-POINT PROTOCOL IDENTIFICATION (PPP ID)
USA	7,944,942	5/17/2011	LOOK UP TABLE (LUT) FOR POINT-TO-POINT PROTOCOL IDENTIFICATION (PPP ID)
USA	7,093,072	8/15/2006	METHODS FOR IMPROVED DATA CACHING
USA	7,672,228	3/2/2010	SYSTEM AND METHOD FOR NETWORK LOOP DETECTION AND RECOVERY
USA	7,272,672	9/18/2007	HIGH SPEED BUS WITH FLOW CONTROL AND EXTENDED BURST ENHANCEMENTS
USA	7,724,669	5/25/2010	HIGH SPEED BUS WITH FLOW CONTROL AND EXTENDED BURST ENHANCEMENTS
USA	7,366,935	4/29/2008	HIGH SPEED BUS WITH ALIGNMENT, RE-TIMING AND BUFFER UNDERFLOW/OVERFLOW DETECTION ENHANCEMENTS
USA	7,546,480	6/9/2009	HIGH SPEED BUS WITH ALIGNMENT, RE-TIMING AND BUFFER UNDERFLOW/OVERFLOW DETECTION ENHANCEMENTS

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	7,047,515	5/16/2006	METHOD FOR SELECTING AND PLACING BYPASS CAPACITORS ON MULTI-LAYER PRINTED CIRCUIT BOARDS
USA	7,660,894	2/9/2010	CONNECTION PACER AND METHOD FOR PERFORMING CONNECTION PACING IN A NETWORK OF SERVERS AND CLIENTS USING FIFO BUFFERS
USA	6,970,426	11/29/2005	RATE COLOR MARKER
USA	7,529,243	5/5/2009	APPARATUS AND METHOD FOR A VIRTUAL HIERARCHICAL LOCAL AREA NETWORK
USA	8,040,890	10/18/2011	APPARATUS AND METHOD FOR A VIRTUAL HIERARCHICAL LOCAL AREA NETWORK
USA	7,480,917	1/20/2009	USER INTERFACE FOR EDITING OBJECTS OF A NETWORK OBJECT DATABASE
USA	9,154,372	10/6/2015	EDITING A PORTABLE, DYNAMIC AND ABSTRACT VIEW DEFINITION OF A NETWORK OBJECT DATABASE
USA	7,526,541	4/28/2009	SYSTEM AND METHOD FOR DYNAMIC NETWORK POLICY MANAGEMENT
USA	7,739,372	6/15/2010	SYSTEM AND METHOD FOR DYNAMIC NETWORK POLICY MANAGEMENT
USA	8,191,107	5/29/2012	SYSTEM AND METHOD FOR LOST CONTACT RESPONSE
USA	7,568,107	7/28/2009	METHOD AND SYSTEM FOR AUTO DISCOVERY OF AUTHENTICATOR FOR NETWORK LOGIN
USA	7,185,216	2/27/2007	A SYSTEM FOR SYNCHRONIZING FIRST AND SECOND SECTIONS OF DATA TO OPPOSING POLARITY EDGES OF A CLOCK
USA	7,580,409	8/25/2009	SYSTEM FOR AND METHOD OF COMMUNICATING CONTROL INFORMATION BETWEEN ENTITIES INTERCONNECTED BY BACKPLANE CONNECTIONS
USA	7,581,249	8/25/2009	DISTRIBUTED INTRUSION RESPONSE SYSTEM
USA	9,632,995	4/25/2017	METHOD AND APPARATUS FOR NAVIGATING THROUGH A TASK ON A COMPUTER SYSTEM AND METHOD FOR CABLE MANAGEMENT ON RACK MOUNTED INSTALLATIONS
USA	7,119,280	10/10/2006	SYSTEM AND METHOD FOR CABLE MANAGEMENT ON RACK MOUNTED INSTALLATIONS
USA	7,349,228	3/25/2008	EJECTOR ASSEMBLY FOR RACK-MOUNTED COMPUTING DEVICES
USA	7,483,370	1/27/2009	METHODS AND SYSTEMS FOR HITLESS SWITCH MANAGEMENT MODULE FAILOVER AND UPGRADE
USA	7,602,721	10/13/2009	METHODS AND SYSTEMS FOR FINE GRAIN BANDWIDTH ALLOCATION IN A SWITCHED NETWORK ELEMENT
USA	7,693,158	4/6/2010	METHODS AND SYSTEMS FOR SELECTIVELY PROCESSING VIRTUAL LOCAL AREA NETWORK (VLAN) TRAFFIC FROM DIFFERENT NETWORKS WHILE ALLOWING FLEXIBLE VLAN IDENTIFIER ASSIGNMENT
USA	8,724,638	5/13/2014	METHODS AND SYSTEMS FOR SELECTIVELY PROCESSING VIRTUAL LOCAL AREA NETWORK (VLAN) TRAFFIC FROM DIFFERENT NETWORKS WHILE ALLOWING FLEXIBLE VLAN IDENTIFIER ASSIGNMENT

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	9,742,588	8/22/2017	METHODS AND SYSTEMS FOR SELECTIVELY PROCESSING VIRTUAL LOCAL AREA NETWORK (VLAN) TRAFFIC FROM DIFFERENT NETWORKS WHILE ALLOWING FLEXIBLE VLAN IDENTIFIER ASSIGNMENT
USA	8,166,151	4/24/2012	METHOD AND APPARATUS FOR DETERMINING A SPANNING TREE
USA	7,558,273	7/7/2009	METHODS AND SYSTEMS FOR ASSOCIATING AND TRANSLATING VIRTUAL LOCAL AREA NETWORK (VLAN) TAGS
USA	6,963,311	11/8/2005	APPARATUS AND METHOD FOR LOCKING AN ANTENNA INTO POSITION
USA	7,577,996	8/18/2009	APPARATUS, METHOD AND SYSTEM FOR IMPROVING NETWORK SECURITY
USA	7,310,664	12/18/2007	UNIFIED ADAPTIVE NETWORK ARCHITECTURE
USA	7,823,199	10/26/2010	METHOD AND SYSTEM FOR DETECTING AND PREVENTING ACCESS INTRUSION IN A NETWORK
USA	8,707,432	4/22/2014	METHOD AND SYSTEM FOR DETECTING AND PREVENTING ACCESS INTRUSION IN A NETWORK
USA	8,520,507	8/27/2013	ETHERNET AUTOMATIC PROTECTION SWITCHING.
USA	7,606,240	10/20/2009	ETHERNET AUTOMATIC PROTECTION SWITCHING
USA	7,292,591	11/6/2007	PACKET PROCESSING SYSTEM ARCHITECTURE AND METHOD
USA	7,675,915	3/9/2010	PACKET PROCESSING SYSTEM ARCHITECTURE AND METHOD
USA	7,304,996	12/4/2007	SYSTEM AND METHOD FOR ASSEMBLING A DATA PACKET
USA	7,821,931	10/26/2010	SYSTEM AND METHOD FOR ASSEMBLING A DATA PACKET
USA	7,453,874	11/18/2008	METHOD AND SYSTEM FOR INCREMENTALLY UPDATING A CHECKSUM IN A NETWORK DATA PACKET
USA	7,463,628	12/9/2008	PACKET DATA MODIFICATION PROCESSOR COMMAND INSTRUCTION SET
USA	7,539,750	5/26/2009	SYSTEM AND METHOD FOR PACKET PROCESSOR STATUS MONITORING
USA	7,613,209	11/3/2009	SYSTEM AND METHOD FOR EGRESS PACKET MARKING
USA	7,822,032	10/26/2010	DATA STRUCTURES FOR SUPPORTING PACKET DATA MODIFICATION OPERATIONS
USA	8,161,270	4/17/2012	PACKET DATA MODIFICATION PROCESSOR
USA	8,924,694	12/30/2014	PACKET DATA MODIFICATION PROCESSOR
USA	7,450,940	11/11/2008	WIRELESS NETWORK SYSTEM AND METHOD
USA	7,580,350	8/25/2009	SYSTEM FOR DERIVING PACKET QUALITY OF SERVICE INDICATOR
USA	7,502,374	3/10/2009	SYSTEM FOR DERIVING HASH VALUES FOR PACKETS IN A PACKET PROCESSING SYSTEM
USA	7,522,516	4/21/2009	EXCEPTION HANDLING SYSTEM FOR PACKET PROCESSING SYSTEM

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	7,936,687	5/3/2011	SYSTEMS FOR STATISTICS GATHERING AND SAMPLING IN A PACKET PROCESSING SYSTEM
USA	7,646,770	1/12/2010	SYSTEMS FOR SUPPORTING PACKET PROCESSING OPERATIONS
USA	8,085,779	12/27/2011	SYSTEMS FOR SUPPORTING PACKET PROCESSING OPERATIONS
USA	7,606,263	10/20/2009	PACKET PARSER
USA	7,554,978	6/30/2009	SYSTEM FOR ACCESSING CONTENT-ADDRESSABLE MEMORY IN PACKET PROCESSOR
USA	7,649,879	1/19/2010	PIPELINED PACKET PROCESSOR
USA	7,889,750	2/15/2011	METHOD OF EXTENDING DEFAULT FIXED NUMBER OF PROCESSING CYCLES IN PIPELINED PACKET PROCESSOR ARCHITECTURE
USA	7,389,505	6/17/2008	METHOD AND APPARATUS FOR MODIFYING SOFTWARE
USA	7,657,635	2/2/2010	METHOD AND APPARATUS FOR CONVERTING NETWORK MANAGEMENT PROTOCOL TO MARKUP LANGUAGE.
USA	7,646,773	1/12/2010	FORWARDING DATABASE IN A NETWORK SWITCH DEVICE
USA	8,464,093	6/11/2013	MEMORY ARRAY ERROR CORRECTION
USA	8,347,375	1/1/2013	SYSTEM AND METHOD FOR DYNAMIC DISTRIBUTION OF INTRUSION SIGNATURES
USA	7,660,259	2/9/2010	METHODS AND SYSTEMS FOR HYBRID HARDWARE- AND SOFTWARE-BASED MEDIA ACCESS CONTROL (MAC) ADDRESS LEARNING
USA	7,813,348	10/12/2010	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR KILLING PRIORITIZED PACKETS USING TIME-TO-LIVE VALUES TO PREVENT HEAD-OF-LINE BLOCKING
USA	7,606,249	10/20/2009	METHODS AND SYSTEMS FOR CACHING PACKETS TO BE WRITTEN TO OR READ FROM PACKET MEMORY
USA	8,072,887	12/6/2011	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR CONTROLLING ENQUEUING OF PACKETS IN AN AGGREGATED QUEUE INCLUDING A PLURALITY OF VIRTUAL QUEUES USING BACKPRESSURE MESSAGES FROM DOWNSTREAM QUEUES
USA	7,580,403	8/25/2009	STATUS TRANSMISSION SYSTEM AND METHOD
USA	7,690,040	3/30/2010	METHOD FOR NETWORK TRAFFIC MIRRORING WITH DATA PRIVACY
USA	8,239,960	8/7/2012	METHOD FOR NETWORK TRAFFIC MIRRORING WITH DATA PRIVACY
USA	7,404,091	7/22/2008	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR MANAGING POWER ALLOCATION TO A DEVICE POWERED OVER A NETWORK COMMUNICATIONS CABLE BASED ON A CABLE CHARACTERISTIC
USA	7,889,658	2/15/2011	METHOD OF AND SYSTEM FOR TRANSFERRING OVERHEAD DATA OVER A SERIAL INTERFACE
USA	7,668,969	2/23/2010	RULE STRUCTURE FOR PERFORMING NETWORK SWITCH FUNCTIONS
USA	7,860,006	12/28/2010	INTEGRATED METHODS OF PERFORMING NETWORK SWITCH FUNCTIONS

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	8,767,549	7/1/2014	INTEGRATED METHODS OF PERFORMING NETWORK SWITCH FUNCTIONS
USA	7,619,971	11/17/2009	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR ALLOCATING EXCESS BANDWIDTH OF AN OUTPUT AMONG NETWORK USERS
USA	8,775,571	7/8/2014	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR DYNAMIC NETWORK ACCESS DEVICE PORT AND USER DEVICE CONFIGURATION FOR IMPLEMENTING DEVICE-BASED AND USER-BASED POLICIES
USA	8,751,649	6/10/2014	PORT MANAGEMENT SYSTEM
USA	8,279,874	10/2/2012	SELF-CONFIGURING NETWORK
USA	7,945,945	5/17/2011	SYSTEM AND METHOD FOR ADDRESS BLOCK ENHANCED DYNAMIC NETWORK POLICY MANAGEMENT
USA	8,819,213	8/26/2014	SYSTEM, METHOD AND APPARATUS FOR TRAFFIC MIRROR SETUP, SERVICE AND SECURITY IN COMMUNICATION NETWORKS
USA	7,499,679	3/3/2009	WIRELESS NETWORK ACCESS POINT SENSOR
USA	8,000,344	8/16/2011	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR TRANSMITTING AND RECEIVING LAYER 2 FRAMES ASSOCIATED WITH DIFFERENT VIRTUAL LOCAL AREA NETWORKS (VLANS) OVER A SECURE LAYER 2 BROADCAST TRANSPORT NETWORK
USA	7,724,734	5/25/2010	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR CONTROLLING UPDATING OF A LAYER 3 HOST TABLE BASED ON PACKET FORWARDING LOOKUP MISS COUNTS
USA	7,843,927	11/30/2010	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR ROUTING PACKETS AT A MULTI-MODE LAYER 3 PACKET FORWARDING DEVICE
USA	7,835,348	11/16/2010	METHOD AND APPARATUS FOR DYNAMIC ANOMALY-BASED UPDATES TO TRAFFIC SELECTION POLICIES IN A SWITCH
USA	8,059,658	11/15/2011	METHOD AND SYSTEM FOR AUTOMATIC EXPANSION AND CONTRACTION OF IP HOST FORWARDING DATABASE
USA	7,719,968	5/18/2010	MULTI-PRIORITY MULTI-COLOR MARKERS FOR TRAFFIC METERING
USA	7,817,633	10/19/2010	METHOD OF PROVIDING VIRTUAL ROUTER FUNCTIONALITY THROUGH ABSTRACTED VIRTUAL IDENTIFIERS
USA	7,822,033	10/26/2010	MAC ADDRESS DETECTION DEVICE FOR VIRTUAL ROUTERS
USA	7,894,451	2/22/2011	METHOD OF PROVIDING VIRTUAL ROUTER FUNCTIONALITY
USA	8,605,732	12/10/2013	METHOD OF PROVIDING VIRTUAL ROUTER FUNCTIONALITY
USA	8,255,996	8/28/2012	NETWORK THREAT DETECTION AND MITIGATION
USA	8,615,785	12/24/2013	NETWORK THREAT DETECTION AND MITIGATION
USA	7,756,544	7/13/2010	POWER CONTROLLED NETWORK DEVICES FOR SECURITY AND POWER CONSERVATION

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USA	9,749,959	8/29/2017	POWER CONTROLLED NETWORK DEVICES FOR SECURITY AND POWER CONSERVATION
USA	8,705,532	4/22/2014	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR SELECTIVE LAYER 2 PORT BLOCKING USING LAYER 2 SOURCE ADDRESSES
USA	7,936,770	5/3/2011	METHOD AND APPARATUS OF VIRTUAL CLASS OF SERVICE AND LOGICAL QUEUE REPRESENTATION THROUGH NETWORK TRAFFIC DISTRIBUTION OVER MULTIPLE PORT INTERFACES
USA	7,552,275	6/23/2009	METHOD OF PERFORMING TABLE LOOKUP OPERATION WITH TABLE INDEX THAT EXCEEDS CAM KEY SIZE
USA	7,908,431	3/15/2011	METHOD OF PERFORMING TABLE LOOKUP OPERATION WITH TABLE INDEX THAT EXCEEDS CAM KEY SIZE
USA	7,657,619	2/2/2010	METHOD AND SYSTEM FOR MAINTAINING A LOOP-FREE TOPOLOGY ACROSS MULTIPLE SPANNING TREES IN A VIRTUAL LOCAL AREA NETWORK
USA	8,086,232	12/27/2011	TIME SYNCHRONIZED WIRELESS METHOD AND OPERATIONS
USA	7,773,507	8/10/2010	AUTOMATIC TIERED SERVICES BASED ON NETWORK CONDITIONS
USA	7,733,899	6/8/2010	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR RATE-BASED DISTRIBUTION OF LAYER 2 PACKETS FOR IN-LINE PROCESSING AT A LAYER 2 PACKET FORWARDING DEVICE AT A TRANSMISSION RATE LESS THAN A RECEIVED TRANSMISSION RATE
USA	7,752,338	7/6/2010	RING TOPOLOGY DISCOVERY
USA	8,583,833	11/12/2013	RING TOPOLOGY DISCOVERY
USA	8,295,188	10/23/2012	VOIP SECURITY
USA	8,117,336	2/14/2012	METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR PROVIDING ACCIDENTAL STACK JOIN PROTECTION
USA	8,117,657	2/14/2012	DETECTION AND MITIGATION OF RAPIDLY PROPAGATING THREATS FROM P2P, IRC AND GAMING
USA	8,055,800	11/8/2011	ENFORCING HOST ROUTING SETTINGS ON A NETWORK DEVICE
USA	8,135,007	3/13/2012	METHOD AND SYSTEM FOR REDIRECTING OF PACKETS TO AN INTRUSION PREVENTION SERVICE IN A NETWORK SWITCH
USA	7,710,993	5/4/2010	PSEUDO WIRE PROCESSING IN A PACKET FORWARDING DEVICE
USA	8,437,359	5/7/2013	PSEUDO WIRE PROCESSING IN A PACKET FORWARDING DEVICE
USA	9,166,884	10/20/2015	NETWORK LOCATION SERVICE
USA	8,442,030	5/14/2013	SOFTWARE CONTROL PLANE FOR SWITCHES AND ROUTERS
USA	8,107,383	1/31/2012	REDUCING TRAFFIC LOSS IN AN EAPS SYSTEM
USA	7,936,764	5/3/2011	METHOD FOR OPTIMIZING IP ROUTE TABLE SIZE THROUGH IP ROUTE AGGREGATION

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USA	7,903,666	3/8/2011	METHOD AND SYSTEM FOR COMPRESSING ROUTE ENTRIES IN A ROUTE TABLE BASED ON EQUAL-COST MULTI-PATHS (ECMPS) MATCHES
USA	8,174,980	5/8/2012	METHODS, SYSTEMS, AND COMPUTER READABLE MEDIA FOR DYNAMICALLY RATE LIMITING SLOWPATH PROCESSING OF EXCEPTION PACKETS
USA	7,990,850	8/2/2011	REDUNDANT ETHERNET AUTOMATIC PROTECTION SWITCHING ACCESS TO VIRTUAL PRIVATE LAN SERVICES
USA	8,797,849	8/5/2014	REDUNDANT ETHERNET AUTOMATIC PROTECTION SWITCHING ACCESS TO VIRTUAL PRIVATE LAN SERVICES
USA	9,407,455	8/2/2016	REDUNDANT ETHERNET AUTOMATIC PROTECTION SWITCHING ACCESS TO VIRTUAL PRIVATE LAN SERVICES
USA	7,983,192	7/19/2011	METHOD, APPARATUS AND SYSTEM FOR A STACKABLE ETHERNET SWITCH
USA	8,464,312	6/11/2013	INTEGRATED NETWORK POLICY ENFORCEMENT
USA	7,856,019	12/21/2010	CONVERGENCE OF MULTICAST TRAFFIC
USA	8,139,583	3/20/2012	COMMAND SELECTION IN A PACKET FORWARDING DEVICE
USA	7,457,297	11/25/2008	METHODS AND APPARATUS FOR DIFFERENTIATED SERVICES OVER A PACKET-BASED NETWORK
USA	8,023,521	9/20/2011	METHODS AND APPARATUS FOR DIFFERENTIATED SERVICES OVER A PACKET-BASED NETWORK
USA	8,208,418	6/26/2012	METHODS, SYSTEMS, AND COMPUTER READABLE MEDIA FOR CONSERVING MULTICAST PORT LIST RESOURCES IN AN INTERNET PROTOCOL (IP) PACKET FORWARDING DEVICE
USA	7,912,091	3/22/2011	TRAFFIC FORWARDING IN A TRAFFIC-ENGINEERED LINK AGGREGATION GROUP
USA	8,369,344	2/5/2013	CUSTOMER ISOLATION USING A COMMON FORWARDING DATABASE WITH HARDWARE LEARNING SUPPORT
USA	8,159,936	4/17/2012	NETWORK CONVERGENCE IN RESPONSE TO A TOPOLOGY CHANGE
USA	8,160,074	4/17/2012	OPTIMAL READING OF FORWARDING DATABASE FROM HARDWARE
USA	8,233,474	7/31/2012	COMMUNICATION OF LOCATION INFORMATION FOR AN IP TELEPHONY COMMUNICATION DEVICE
USA	8,204,070	6/19/2012	BACKPLANE DEVICE FOR NON-BLOCKING STACKABLE SWITCHES
USA	8,499,093	7/30/2013	METHODS, SYSTEMS, AND COMPUTER READABLE MEDIA FOR STATELESS LOAD BALANCING OF NETWORK TRAFFIC FLOWS
USA	8,331,373	12/11/2012	METHODS, SYSTEMS, AND COMPUTER READABLE MEDIA FOR AUTOMATICALLY SELECTING BETWEEN INTERNET PROTOCOL SWITCHING MODES ON A PER-MODULE BASIS IN A PACKET FORWARDING DEVICE
USA	8,660,118	2/25/2014	METHODS, SYSTEMS, AND COMPUTER READABLE MEDIA FOR NEXT HOP SCALING

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USA	8,605,726	12/10/2013	METHODS, SYSTEMS, AND COMPUTER READABLE MEDIA FOR NEXT HOP SCALING WITH LINK AGGREGATION
USA	9,008,091	4/14/2015	METHODS, SYSTEMS, AND COMPUTER READABLE MEDIA FOR IMPROVED MULTICAST SCALING THROUGH POLICY BASED REDIRECTION
USA	8,730,963	5/20/2014	METHODS, SYSTEMS, AND COMPUTER READABLE MEDIA FOR IMPROVED MULTI-SWITCH LINK AGGREGATION GROUP (MLAG) CONVERGENCE
USA	9,189,317	11/17/2015	SOFTWARE SUSTAINING SYSTEM
USA	8,855,124	10/7/2014	FORWARDING INTER-SWITCH CONNECTION (ISC) FRAMES IN A NETWORK-TO-NETWORK INTERCONNECT TOPOLOGY
USA	8,842,684	9/23/2014	FORWARDING INTER-SWITCH CONNECTION (ISC) FRAMES IN A NETWORK-TO-NETWORK INTERCONNECT TOPOLOGY
USA	9,455,934	9/27/2016	FORWARDING INTER-SWITCH CONNECTION (ISC) FRAMES IN A NETWORK-TO-NETWORK INTERCONNECT TOPOLOGY
USA	8,771,009	7/8/2014	3 X 8 STACKED RJ45 CONNECTOR WITH INTEGRATED LEDS OPTION FOR 1U PRODUCT FORM FACTOR
USA	9,252,548	2/2/2016	HIGH DENSITY NETWORKING COMPONENT FOR 1U PRODUCT FORM FACTOR AND ASSOCIATED RACK SYSTEM
USA	8,659,993	2/25/2014	PRIORITY DOMAINS FOR PROTECTION SWITCHING PROCESSES
USA	9,576,270	2/21/2017	A SYSTEM AND RELATED METHOD FOR MANAGEMENT OF DEVICES OF A NETWORK SYSTEM VIA SOCIAL MEDIA INTERFACES
USA	8,891,533	11/18/2014	METHODS, SYSTEMS, AND APPARATUSES FOR DYNAMICALLY TAGGING VLANS
USA	9,391,803	7/12/2016	METHODS, SYSTEMS, AND APPARATUSES FOR DYNAMICALLY TAGGING VLANS
USA	9,116,660	8/25/2015	MIDPLANE FOR ORTHOGONAL DIRECT CONNECTION
USA	9,143,437	9/22/2015	APPARATUS AND METHOD FOR MULTICAST DATA PACKET FORWARDING
USA	9,584,393	2/28/2017	A DEVICE AND RELATED METHOD FOR DYNAMIC TRAFFIC MIRRORING POLICY
USA	9,256,636	2/9/2016	DEVICE AND RELATED METHOD FOR APPLICATION IDENTIFICATION
USA	9,172,627	10/27/2015	DEVICE AND RELATED METHOD FOR DYNAMIC TRAFFIC MIRRORING
USA	9,130,826	9/8/2015	SYSTEM AND RELATED METHOD FOR NETWORK MONITORING AND CONTROL BASED ON APPLICATIONS
USA	9,230,213	1/5/2016	DEVICE AND RELATED METHOD FOR SCORING APPLICATIONS RUNNING ON A NETWORK
USA	9,385,942	7/5/2016	METHODS, SYSTEMS, AND COMPUTER READABLE MEDIA FOR PROVIDING N-NODE MULTI-SWITCH LINK AGGREGATION GROUPS (MLAGs)
USA	9,716,615	7/25/2017	APPARATUS AND METHOD FOR NETWORK RING RESILIENCY, AVAILABILITY AND PERFORMANCE

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USA	6,008,550	12/28/1999	HOTSWAPPABLE CHASSIS AND ELECTRONIC CIRCUIT CARDS
USA	7,385,984	6/10/2008	PACKET PROCESSING SYSTEM ARCHITECTURE AND METHOD
USA	7,822,038	10/26/2010	PACKET PROCESSING SYSTEM ARCHITECTURE AND METHOD
USA	7,653,033	1/26/2010	INFRASTRUCTURE FOR WIRELESS LANS
USA	8,687,610	4/1/2014	INFRASTRUCTURE FOR WIRELESS LANS
USA	6,385,442	5/7/2002	MULTIPHASE RECEIVER AND OSCILLATOR
USA	6,259,898	7/10/2001	MULTI-COMMUNICATION ACCESS POINT
USA	6,393,261	5/21/2002	MULTI-COMMUNICATION ACCESS POINT
USA	6,600,734	7/29/2003	APPARATUS FOR INTERFACING A WIRELESS LOCAL NETWORK AND A WIRED VOICE TELECOMMUNICATIONS SYSTEM
USA	7,693,101	4/6/2010	APPARATUS FOR INTERFACING A WIRELESS LOCAL NETWORK AND A WIRED VOICE TELECOMMUNICATIONS SYSTEM
USA	6,442,507	8/27/2002	SYSTEM FOR CREATING A COMPUTER MODEL AND MEASUREMENT DATABASE OF A WIRELESS COMMUNICATION NETWORK
USA	6,876,951	4/5/2005	METHOD FOR CREATING A COMPUTER MODEL AND MEASUREMENT DATABASE OF A WIRELESS COMMUNICATION NETWORK
USA	7,096,160	8/22/2006	SYSTEM AND METHOD FOR MEASURING AND MONITORING WIRELESS NETWORK PERFORMANCE IN CAMPUS AND INDOOR ENVIRONMENTS
USA	6,526,506	2/25/2003	MULTI-LEVEL ENCRYPTION ACCESS POINT FOR WIRELESS NETWORK
USA	6,453,159	9/17/2002	MULTI-LEVEL ENCRYPTION SYSTEM FOR WIRELESS NETWORK
USA	6,694,430	2/17/2004	DATA ENCRYPTION INTEGRATED CIRCUIT FOR WITH ON-BOARD DUAL-USE MEMORY
USA	6,317,599	11/13/2001	METHOD AND SYSTEM FOR AUTOMATED OPTIMIZATION OF ANTENNA POSITIONING IN 3-D
USA	7,035,642	4/25/2006	METHOD AND SYSTEM FOR ANALYSIS, DESIGN AND OPTIMIZATION OF COMMUNICATIONS NETWORK
USA	7,155,228	12/26/2006	METHOD AND SYSTEM FOR ANALYSIS, DESIGN AND OPTIMIZATION OF COMMUNICATIONS NETWORK
USA	6,493,679	12/10/2002	METHOD AND SYSTEM FOR MANAGING A REAL TIME BILL OF MATERIALS
USA	7,596,518	9/29/2009	METHOD AND SYSTEM FOR GENERATION A REAL TIME BILL OF MATERIALS AND EVALUATING NETWORK PERFORMANCE
USA	6,850,946	2/1/2005	METHOD AND SYSTEM FOR DEVELOPING INPUT WITH A BUILDING DATABASE MANIPULATOR
USA	6,721,769	4/13/2004	METHOD AND SYSTEM FOR A BUILDING DATABASE MANIPULATOR

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USA	7,711,687	5/4/2010	METHOD AND SYSTEM FOR USING RASTER IMAGES TO CREATE A TRANSPORTABLE BUILDING DATABASE FOR COMMUNICATIONS NETWORK ENGINEERING AND MANAGEMENT
USA	6,499,006	12/24/2002	SYSTEM FOR THE THREE DIMENSIONAL DISPLAY OF WIRELESS COMMUNICATION SYSTEM PERFORMANCE
USA	7,299,168	11/20/2007	SYSTEM FOR THE THREE DIMENSIONAL DISPLAY OF WIRELESS COMMUNICATION SYSTEM PERFORMANCE
USA	7,570,929	8/4/2009	802.11 NETWORKS USING DYNAMIC POWER CONTROL FOR RF TRANSMISSION
USA	7,492,248	2/17/2009	MULTI-TIER WIRELESS COMMUNICATIONS ARCHITECTURE, APPLICATIONS, AND METHODS
USA	7,126,926	10/24/2006	MULTI-TIER WIRELESS COMMUNICATIONS ARCHITECTURE, APPLICATIONS, AND METHODS
USA	7,339,905	3/4/2008	WIRELESS COMMUNICATION SYSTEM FOR TELEPHONIC CALLS
USA	7,173,922	2/6/2007	MULTIPLE WIRELESS LOCAL AREA NETWORKS OCCUPYING OVERLAPPING PHYSICAL SPACES
USA	7,173,923	2/6/2007	SECURITY IN MULTIPLE WIRELESS LOCAL AREA NETWORKS
USA	7,386,298	6/10/2008	METHOD AND APPARATUS FOR ROAMING ON A WIRELESS NETWORK
USA	8,050,240	11/1/2011	MULTIPLE WIRELESS LOCAL AREA NETWORKS OCCUPYING OVERLAPPING PHYSICAL SPACES
USA	8,391,256	3/5/2013	RF PORT FOR MULTIPLE WIRELESS LOCAL AREA NETWORKS
USA	8,699,473	4/15/2014	CELL CONTROLLER FOR MULTIPLE WIRELESS LOCAL AREA NETWORKS
USA	8,498,278	7/30/2013	A SYSTEM FOR MULTIPLE WIRELESS LOCAL AREA NETWORKS
USA	8,699,474	4/15/2014	SYSTEM WITH A CELL CONTROLLER ADAPTED TO PERFORM A MANAGEMENT FUNCTION
USA	8,027,320	9/27/2011	WIRELESS LOCAL AREA NETWORKS
USA	6,411,608	6/25/2002	METHOD AND APPARATUS FOR VARIABLE POWER CONTROL IN WIRELESS COMMUNICATIONS SYSTEMS
USA	6,404,772	6/11/2002	VOICE AND DATA WIRELESS COMMUNICATIONS NETWORK AND METHOD
USA	8,660,061	2/25/2014	VOICE AND DATA WIRELESS COMMUNICATIONS NETWORK AND METHOD
USA	8,149,796	4/3/2012	VOICE AND DATA WIRELESS COMMUNICATIONS NETWORK AND METHOD
USA	8,189,542	5/29/2012	VOICE AND DATA WIRELESS COMMUNICATIONS NETWORK AND METHOD
USA	6,971,063	11/29/2005	SYSTEM, METHOD, AND APPARATUS FOR PORTABLE DESIGN, DEPLOYMENT, TEST AND OPTIMIZATION OF A COMMUNICATION NETWORK

Schedule A

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	7,246,045	7/17/2007	SYSTEM AND METHOD FOR EFFICIENTLY VISUALIZING AND COMPARING COMMUNICATION NETWORK SYSTEM PERFORMANCE
USA	7,286,971	10/23/2007	SYSTEM AND METHOD FOR EFFICIENTLY VISUALIZING AND COMPARING COMMUNICATION NETWORK SYSTEM PERFORMANCE
USA	7,085,697	8/1/2006	METHOD AND SYSTEM FOR DESIGNING OR DEPLOYING A COMMUNICATIONS NETWORK WHICH CONSIDERS COMPONENT ATTRIBUTES
USA	7,096,173	8/22/2006	METHOD AND SYSTEM FOR DESIGNING OR DEPLOYING A COMMUNICATIONS NETWORK WHICH ALLOWS SIMULTANEOUS SELECTION OF MULTIPLE COMPONENTS
USA	6,625,454	9/23/2003	METHOD AND SYSTEM FOR DESIGNING OR DEPLOYING A COMMUNICATIONS NETWORK WHICH ALLOWS SIMULTANEOUS SELECTION OF MULTIPLE COMPONENTS
USA	7,171,208	1/30/2007	METHOD AND SYSTEM, WITH COMPONENT KITS FOR DESIGNING OR DEPLOYING A COMMUNICATIONS NETWORK WHICH CONSIDERS FREQUENCY DEPENDENT EFFECTS
USA	7,680,644	3/16/2010	METHOD AND SYSTEM, WITH COMPONENT KITS FOR DESIGNING OR DEPLOYING A COMMUNICATIONS NETWORK WHICH CONSIDERS FREQUENCY DEPENDENT EFFECTS
USA	7,933,605	4/26/2011	METHOD AND SYSTEM, WITH COMPONENT KITS FOR DESIGNING OR DEPLOYING A COMMUNICATIONS NETWORK WHICH CONSIDERS FREQUENCY DEPENDENT EFFECTS
USA	8,290,499	10/16/2012	METHOD AND SYSTEM TO MODEL FREQUENCY DEPENDENT EFFECTS OF A COMMUNICATIONS NETWORK
USA	7,055,107	5/30/2006	METHOD AND SYSTEM FOR AUTOMATED SELECTION OF OPTIMAL COMMUNICATION NETWORK EQUIPMENT MODEL, POSITION, AND CONFIGURATION
USA	6,973,622	12/6/2005	SYSTEM AND METHOD FOR DESIGN, TRACKING, MEASUREMENT, PREDICTION, AND OPTIMIZATION OF DATA COMMUNICATION NETWORKS
USA	8,503,336	8/6/2013	SYSTEM AND METHOD FOR DESIGN, TRACKING, MEASUREMENT, PREDICTION, AND OPTIMIZATION OF DATA COMMUNICATION NETWORKS
USA	7,030,812	4/18/2006	WIRELESS CLOCK SYNCHRONIZATION
USA	7,250,906	7/31/2007	METHOD AND APPARATUS FOR IDENTIFYING ASSET LOCATION IN COMMUNICATION NETWORKS
USA	7,030,811	4/18/2006	METHOD AND APPARATUS FOR IDENTIFYING ASSET LOCATION IN COMMUNICATION NETWORKS
USA	7,069,025	6/27/2006	METHOD AND APPARATUS FOR IDENTIFYING ASSET LOCATION IN COMMUNICATION NETWORKS
USA	7,359,676	4/15/2008	SYSTEM AND METHODS FOR ADAPTIVELY SCANNING FOR WIRELESS COMMUNICATIONS
USA	7,324,804	1/29/2008	SYSTEM AND METHODS FOR DYNAMIC SENSOR DISCOVERY AND SELECTION
USA	7,522,908	4/21/2009	SYSTEMS AND METHODS FOR WIRELESS NETWORK SITE SURVEY
USA	6,735,450	5/11/2004	METHOD AND APPARATUS FOR WIRELESS OUTDOOR ENVIRONMENT COMMUNICATIONS NETWORKS

Schedule A

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<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	7,019,753	3/28/2006	TEXTUAL AND GRAPHICAL DEMARCATION OF LOCATION FROM AN ENVIRONMENTAL DATABASE, AND INTERPRETATION OF MEASUREMENTS INCLUDING DESCRIPTIVE METRICS AND QUALITATIVE VALUES
USA	7,574,323	8/11/2009	TEXTUAL AND GRAPHICAL DEMARCATION OF LOCATION AND INTERPRETATION OF MEASUREMENTS
USA	7,164,883	1/16/2007	METHOD AND SYSTEM FOR MODELING AND MANAGING TERRAIN, BUILDINGS AND INFRASTRUCTURE
USA	7,260,115	8/21/2007	SYSTEM AND METHOD OF ORDERING THE TRANSMISSION OF DATA PACKETS IN A RADIO SYSTEM
USA	7,633,974	12/15/2009	SYSTEM AND METHOD OF ORDERING THE TRANSMISSION OF DATA PACKETS IN A RADIO SYSTEM
USA	6,985,461	1/10/2006	SOFTWARE FOR INSTALLATION AND CONFIGURATION MANAGEMENT OF NETWORK NODES
USA	7,680,085	3/16/2010	BLUE TOOTH OUT-OF-BAND MANAGEMENT AND TRAFFIC MONITORING FOR WIRELESS ACCESS POINTS
USA	7,126,945	10/24/2006	POWER SAVING FUNCTION FOR WIRELESS LANS: METHODS, SYSTEM, AND PROGRAM PRODUCTS
USA	7,349,356	3/25/2008	POWER SAVING FUNCTION FOR WIRELESS LANS: METHODS, SYSTEM, AND PROGRAM PRODUCTS
USA	7,961,660	6/14/2011	POWER SAVING FUNCTION FOR WIRELESS LANS: METHODS, SYSTEM, AND PROGRAM PRODUCTS
USA	7,917,610	3/29/2011	XML CONTROL MANAGEMENT
USA	7,383,577	6/3/2008	METHOD AND SYSTEM FOR ENCRYPTED NETWORK MANAGEMENT AND INTRUSION DETECTION
USA	7,086,089	8/1/2006	SYSTEMS AND METHODS FOR NETWORK SECURITY
USA	7,042,852	5/9/2006	SYSTEM AND METHOD FOR WIRELESS LAN DYNAMIC CHANNEL CHANGE WITH HONEYPOT TRAP
USA	7,058,796	6/6/2006	METHOD AND SYSTEM FOR ACTIVELY DEFENDING A WIRELESS LAN AGAINST ATTACKS
USA	7,277,404	10/2/2007	SYSTEM AND METHOD FOR SENSING WIRELESS LAN ACTIVITY
USA	7,322,044	1/22/2008	SYSTEM AND METHODS FOR AUTOMATED NETWORK POLICY EXCEPTION DETECTION AND CORRECTION
USA	7,532,895	5/12/2009	SYSTEMS AND METHODS FOR ADAPTIVE LOCATION TRACKING
USA	7,526,808	4/28/2009	METHOD AND SYSTEM FOR ACTIVELY DEFENDING A WIRELESS LAN AGAINST ATTACKS
USA	7,779,476	8/17/2010	ACTIVE DEFENSE AGAINST WIRELESS INTRUDERS

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	8,060,939	11/15/2011	METHOD AND SYSTEM FOR SECURING WIRELESS LOCAL AREA NETWORKS
USA	7,167,717	1/23/2007	SYSTEM AND METHOD FOR WIRED NETWORK SYNCHRONIZATION FOR REAL TIME LOCATION TRACKING
USA	7,068,999	6/27/2006	SYSTEM AND METHOD FOR DETECTION OF A ROGUE WIRELESS ACCESS POINT IN A WIRELESS COMMUNICATION NETWORK
USA	7,676,218	3/9/2010	SYSTEM AND METHOD FOR DETECTION OF A ROGUE WIRELESS ACCESS POINT IN A WIRELESS COMMUNICATION NETWORK
USA	6,735,445	5/11/2004	SYSTEM AND METHOD FOR MEDIUM ACCESS CONTROL IN A WIRELESS NETWORK
USA	8,170,611	5/1/2012	INTERNAL ACCESSORY ANTENNA SYSTEM AND METHOD FOR WIRELESS NETWORK
USA	6,925,094	8/2/2005	SYSTEM AND METHOD FOR WIRELESS NETWORK CHANNEL MANAGEMENT
USA	7,162,258	1/9/2007	LIGHT FIXTURE WIRELESS ACCESS POINTS
USA	7,295,960	11/13/2007	SYSTEM AND METHOD FOR AUTOMATED PLACEMENT OF CONFIGURATION OF EQUIPMENT FOR OBTAINING DESIRED NETWORK PERFORMANCE OBJECTIVES
USA	7,295,119	11/13/2007	SYSTEM AND METHOD FOR INDICATING THE PRESENCE OR PHYSICAL LOCATION OF PERSONS OR DEVICES IN A SITE SPECIFIC REPRESENTATION OF A PHYSICAL ENVIRONMENT
USA	7,280,520	10/9/2007	VIRTUAL WIRELESS LOCAL AREA NETWORKS
USA	7,492,744	2/17/2009	METHOD AND SYSTEM FOR MULTIPLE BASIC AND EXTENDED SERVICE SET IDENTIFIERS IN WIRELESS LOCAL AREA NETWORKS
USA	7,424,300	9/9/2008	METHOD FOR TRACKING LOCATION OF A MOBILE UNIT
USA	7,873,368	1/18/2011	METHOD FOR TRACKING LOCATION OF A MOBILE UNIT
USA	7,376,079	5/20/2008	BACKUP CELL CONTROLLER
USA	7,542,770	6/2/2009	METHOD FOR MOBILE UNIT LOCATION ESTIMATE IN A WIRELESS LAN
USA	7,668,201	2/23/2010	BANDWIDTH MANAGEMENT IN WIRELESS NETWORKS
USA	7,069,024	6/27/2006	SYSTEM AND METHOD FOR DETERMINING LOCATION OF ROGUE WIRELESS ACCESS POINT
USA	7,127,258	10/24/2006	WLANROAMING BASED ON LOCATION
USA	7,720,445	5/18/2010	MODULAR ACCESS POINT
USA	8,417,302	4/9/2013	MODULAR ACCESS POINT
USA	7,272,414	9/18/2007	METHOD AND APPARATUS FOR CONFIGURING A VOICE OVER IP CLIENT CONNECTION
USA	7,385,476	6/10/2008	A METHOD AND SYSTEM FOR COMMUNICATING DATA TO A WIRELESS ACCESS POINT
USA	7,639,656	12/29/2009	PROTOCOL FOR COMMUNICATION BETWEEN ACCESS PORTS AND WIRELESS SWITCHES

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	7,496,070	2/24/2009	RECONFIGURABLE ARRAYS OF WIRELESS ACCESS POINTS
USA	8,321,545	11/27/2012	SERVICE ORIENTATED PLATFORM ARCHITECTURE FOR A WIRELESS NETWORK
USA	8,019,352	9/13/2011	SYSTEM, METHOD AND APPARATUS FOR DETERMINING AND USING THE POSITION OF WIRELESS DEVICES OR INFRASTRUCTURE FOR WIRELESS NETWORK ENHANCEMENTS
USA	7,349,774	3/25/2008	AIRCRAFT TRAFFIC WARNING SYSTEM USING AN AD-HOC RADIO NETWORK
USA	7,596,388	9/29/2009	SECTORIZED WIRELESS COMMUNICATION NETWORK OPERATING UNDER 802.11 SPECIFICATIONS
USA	7,669,230	2/23/2010	SECURE SWITCHING SYSTEM FOR NETWORKS AND METHOD FOR SECURING SWITCHING
USA	7,515,573	4/7/2009	METHOD, SYSTEM, AND APPARATUS FOR CREATING AN ACTIVE CLIENT LIST TO SUPPORT LAYER 3 ROAMING IN WIRELESS LOCAL AREA NETWORKS (WLANS)
USA	7,443,809	10/28/2008	METHOD, SYSTEM, AND APPARATUS FOR CREATING AN ACTIVE CLIENT LIST TO SUPPORT LAYER 3 ROAMING IN WIRELESS LOCAL AREA NETWORKS (WLANS)
USA	7,424,000	9/9/2008	TIME SLOT RESERVATION SCHEME IN WIRELESS MESHED NETWORKS
USA	7,529,203	5/5/2009	METHOD, SYSTEM, AND APPARATUS FOR LOAD BALANCING OF WIRELESS SWITCHES TO SUPPORT LAYER 3 ROAMING IN WIRELESS LOCAL AREA NETWORKS (WLANS)
USA	7,499,411	3/3/2009	SYSTEM AND METHOD FOR PROVIDING AUTOMATIC LOAD BALANCING AND REDUNDANCY IN ACCESS PORT ADOPTION
USA	7,729,326	6/1/2010	WIRELESS NETWORK SYSTEM WITH WIRELESS ACCESS PORTS
USA	7,822,000	10/26/2010	TIME DIVISION MULTIPLEXING FOR ACCESS PORTS IN A WIRELESS NETWORK
USA	7,437,127	10/14/2008	METHOD AND SYSTEM FOR DETERMINING EXISTENCE OF A PREDETERMINED WIRELESS NETWORK COVERAGE CONDITION IN A WIRELESS NETWORK
USA	7,593,715	9/22/2009	SYSTEM AND METHOD FOR DETECTING ACTIVITY ON A FREQUENCY BAND
USA	7,688,782	3/30/2010	SYSTEM AND METHOD FOR MANAGING MULTI-CHANNEL COMMUNICATION
USA	7,621,497	11/24/2009	CEILING MOUNT
USA	7,742,456	6/22/2010	SYSTEM AND METHOD FOR LOCATONING IN A COMMUNICATIONS NETWORK
USA	8,204,039	6/19/2012	SYSTEM AND METHOD FOR DATA COMMUNICATIONS IN A WIRELESS NETWORK
USA	7,577,424	8/18/2009	SYSTEMS AND METHODS FOR WIRELESS VULNERABILITY ANALYSIS
USA	7,961,673	6/14/2011	SYSTEM AND METHOD FOR CLUSTERING WIRELESS DEVICES IN A WIRELESS NETWORK
USA	7,715,800	5/11/2010	SYSTEM AND METHODS FOR WIRELESS INTRUSTION DETECTION USING SPECTRAL ANALYSIS
USA	7,903,624	3/8/2011	METHODS AND APPARATUS FOR SIMPLIFIED SETUP OF CENTRALIZED WLAN SWITCHING

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	7,869,346	1/11/2011	METHODS AND APPARATUS FOR CLUSER LICENSING IN WIRELESS SWITCH ARCHITECTURE
USA	7,971,251	6/28/2011	SYSTEMS AND METHODS FOR WIRELESS SECURITY USING DISTRIBUTED COLLABORATION OF WIRELESS CLIENTS
USA	7,720,464	5/18/2010	SYSTEM AND METHOD FOR PROVIDING DIFFERENTIATED SERVICE LEVELS TO WIRELESS DEVICES
USA	7,813,443	10/12/2010	TRANSMIT DIVERSITY SYSTEM AND METHOD
USA	7,970,013	6/28/2011	SYSTEMS AND METHODS FOR WIRELESS NETWORK CONTENT FILTERING
USA	7,804,806	9/28/2010	TECHNIQUES FOR PEER WIRELESS SWITCH DISCOVERY WITHIN A MOBILITY DOMAIN
USA	7,826,869	11/2/2010	MOBILITY RELAY TECHNIQUES FOR REDUCING LAYER 3 MOBILITY CONTROL TRAFFIC AND PEERING SESSIONS TO PROVIDE SCALABILITY IN LARGE WIRELESS SWITCH NETWORKS
USA	7,916,682	3/29/2011	WIRELESS SWITCH NETWORK ARCHITECTURE IMPLEMENTING LAYER 3 MOBILITY DOMAINS
USA	7,639,648	12/29/2009	TECHNIQUES FOR HOME WIRELESS SWITCH REDUNDANCY AND STATEFUL SWITCHOVER IN A NETWORK OF WIRELESS SWITCHES SUPPORTING LAYER 3 MOBILITY WITHIN A MOBILITY DOMAIN
USA	7,826,425	11/2/2010	METHOD AND SYSTEM FOR LOSS-LESS ROAMING WITH WIRELESS BRIDGING
USA	8,111,676	2/7/2012	LOSELESS ROAMING VIA BRIDGING BETWEEN ACCESS PORTS
USA	8,281,392	10/2/2012	METHODS AND SYSTEMS FOR WIRED EQUIVALENT PRIVACY AND WI-FI PROTECTED ACCESS PROTECTION
USA	7,869,438	1/11/2011	PRE-AUTHENTICATION ACROSS AN 802.11 LAYER-3 IP NETWORK
USA	7,760,695	7/20/2010	METHODS AND SYSTEMS FOR CENTRALIZED CLUSTER MANAGEMENT IN WIRELESS SWITCH ARCHITECTURE
USA	7,783,300	8/24/2010	SYSTEMS AND METHODS FOR PROACTIVELY ENFORCING A WIRELESS FREE ZONE
USA	8,205,244	6/19/2012	SYSTEMS AND METHODS FOR GENERATING, MANAGING, AND DISPLAYING ALARMS FOR WIRELESS NETWORK MONITORING
USA	8,134,985	3/13/2012	SYSTEM AND METHOD FOR WLAN MULTI-CHANNEL REDUNDANCY FOR VOIP OPTIMIZATION
USA	7,912,469	3/22/2011	SYSTEM AND METHOD FOR DEPLOYMENT OF A WIRELESS INFRASTRUCTURE
USA	8,320,321	11/27/2012	OPTIMIZING POSITIONS OF TIME SLOTS IN A HYBRID TIME DIVISION MULTIPLE ACCESS (TDMA)-CARRIER SENSE MULTIPLE ACCESS (CSMA) MEDIUM ACCESS CONTROL (MAC) FOR MULTI-HOP AD HOC NETWORKS
USA	7,826,862	11/2/2010	METHOD AND APPARATUS FOR IMPROVED LOCATIONING IN A WIRELESS NETWORK

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	8,300,618	10/30/2012	USER PRIORITY BASED PREEMPTION TECHNIQUES IN A TIME DIVISION MULTIPLE ACCESS MULTI-HOP AD HOC NETWORK
USA	7,961,725	6/14/2011	ENTERPRISE NETWORK ARCHITECTURE FOR IMPLEMENTING A VIRTUAL PRIVATE NETWORK FOR WIRELESS USERS BY MAPPING WIRELESS LANS TO IP TUNNELS
USA	7,885,233	2/8/2011	FORWARDING BROADCAST/MULTICAST DATA WHEN WIRELESS CLIENTS LAYER 3 ROAM ACROSS IP SUBNETS IN A WLAN
USA	8,130,656	3/6/2012	METHOD AND DEVICE FOR ROUTING MESH NETWORK TRAFFIC
USA	8,027,266	9/27/2011	OPTIMIZED RF COVERAGE USING AJAX AND SVG
USA	8,185,121	5/22/2012	OPTIMIZATION OF DISPLAYED RF COVERAGE
USA	8,134,987	3/13/2012	METHODS AND APPARATUS FOR SPLIT POLICY ENFORCEMENT IN WIRELESS NETWORKS
USA	7,792,110	9/7/2010	METHOD AND SYSTEM FOR UPDATING A VIRTUAL LOCAL AREA NETWORK (VLAN) STATUS OF A NODE IN A MESH NETWORK
USA	8,249,105	8/21/2012	METHOD FOR AGGREGATING FRAMES IN A WIRELESS COMMUNICATIN NETWORK
USA	7,737,573	6/15/2010	POWER OVER ETHERNET COMBINER
USA	8,223,732	7/17/2012	METHOD AND APPARATUS FOR BALANCING LOAD ACROSS ACCESS DEVICES IN A WIRELESS NETWORK
USA	8,036,161	10/11/2011	WIRELESS SWITCH WITH VIRTUAL WIRELESS SWITCH MODULES
USA	8,225,124	7/17/2012	METHOD AND SYSTEM FOR DETERMINING POWER OVER ETHERNET CLASS CAPABILITIES
USA	8,811,295	8/19/2014	METHODS AND APPARATUS FOR PRIORITY-BASED ADOPTION OF AN ACCESS DEVICE
USA	8,027,248	9/27/2011	ACCESS PORT ADOPTION TO MULTIPLE WIRELESS SWITCHES
USA	7,966,010	6/21/2011	METHOD AND SYSTEM FOR TUNING AND SELF-MONITORING OF WIRELESS NETWORKS
USA	8,139,543	3/20/2012	COVERAGE-HOLE DETECTION AND SELF HEALING
USA	8,189,547	5/29/2012	SELF-CONFIGURATION OF WIRELESS ACCESS DEVICES IN A WIRELESS NETWORK ENVIRONMENT
USA	8,588,146	11/19/2013	METHOD AND APPARATUS FOR CHANNEL SELECTION IN A WIRELESS COMMUNICATION SYSTEM
USA	8,170,050	5/1/2012	SELF-ASSIGNMENT OF DETECTORS AND WORKERS AMONG ACCESS DEVICES IN A WIRELESS NETWORK ENVIRONMENT
USA	8,612,752	12/17/2013	COMMUNICATING A PACKET FROM A MESH-ENABLED ACCESS POINT TO A MESH PORTAL IN A MULTI-HOP MESH NETWORK
USA	8,391,169	3/5/2013	METHODS AND APPARATUS FOR LOCATING A MOBILE DEVICE IN A SLEEP MODE
USA	8,184,610	5/22/2012	METHOD FOR ADAPTIVE BEACONING

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	8,171,539	5/1/2012	METHODS AND APPARATUS FOR IMPLEMENTING A SEARCH TREE
USA	8,281,134	10/2/2012	METHODS AND APPARATUS FOR LAYER 2 AND LAYER 3 SECURITY BETWEEN WIRELESS TERMINATION POINTS
USA	8,121,102	2/21/2012	METHODS AND APPARATUS FOR RECOVERING FROM MISCONFIGURATION IN A WLAN
USA	8,033,149	10/11/2011	METHOD AND SYSTEM FOR COLLECTING LOCATIONING INFORMATION IN A WIRELESS LOCAL AREA NETWORK
USA	8,798,034	8/5/2014	SYSTEM AND METHOD FOR SELECTING A ROUTE BASED ON LINK METRICS INCORPORATING CHANNEL BANDWIDTH, SPATIAL STREAMS AND/OR GUARD INTERVAL IN A MULTIPLE-INPUT MULTIPLE-OUTPUT (MIMO) NETWORK
USA	9,003,205	4/7/2015	METHOD TO LOWER THE OPERATING COST OF WIRELESS NETWORK BY ENFORCING LOW POWER INFRASTRUCTURE OPERATION
USA	8,694,624	4/8/2014	SYSTEMS AND METHODS FOR CONCURRENT WIRELESS LOCAL AREA NETWORK ACCESS AND SENSING
USA	8,223,657	7/17/2012	MODIFYING SYSTEM CLOCKS BASED ON PARTICULAR WLAN CHANNEL THAT IS SELECTED TO IMPROVE RF SENSITIVITY OF A RADIO MODULE
USA	8,451,735	5/28/2013	SYSTEMS AND METHODS FOR DYNAMIC LOAD BALANCING IN A WIRELESS NETWORK
USA	8,756,690	6/17/2014	EXTENSIBLE AUTHENTICATION PROTOCOL ATTACK DETECTION SYSTEMS AND METHODS
USA	8,826,413	9/2/2014	WIRELESS LOCAL AREA NETWORK INFRASTRUCTURE DEVICES HAVING IMPROVED FIREWALL FEATURES
USA	8,798,000	8/5/2014	MANAGING WIRELESS WIDE AREA NETWORK BANDWIDTH CONSTRAINTS IN A COMMUNICATION NETWORK
USA	8,392,990	3/5/2013	MITIGATING EXCESSIVE OPERATIONS ATTACKS IN A WIRELESS COMMUNICATION NETWORK
USA	8,352,604	1/8/2013	DISTRIBUTED PROPAGATION OF DATA IN A WIRELESS COMMUNICATION NETWORK
USA	8,549,634	10/1/2013	METHOD AND APPARATUS FOR DETECTING A ROGUE ACCESS POINT IN A COMMUNICATION NETWORK
USA	8,493,977	7/23/2013	DETECTION OF AN UNAUTHORIZED ACCESS POINT IN A WIRELESS COMMUNICATION NETWORK
USA	8,923,133	12/30/2014	DETECTION OF UNAUTHORIZED CHANGES TO AN ADDRESS RESOLUTION PROTOCOL CACHE IN A COMMUNICATION NETWORK
USA	8,594,064	11/26/2013	MODE STEERING IN A WIRELESS COMMUNICATION NETWORK
USA	8,553,603	10/8/2013	CLIENT BRIDGE BETWEEN WIRED AND WIRELESS COMMUNICATION NETWORKS
USA	8,705,967	4/22/2014	SERIALY DISTRIBUTED ACCESS POINT IN A COMMUNICATION NETWORK
USA	9,088,837	7/21/2015	SERIALY DISTRIBUTED ACCESS POINT IN A COMMUNICATION NETWORK

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USA	8,811,361	8/19/2014	HYBRID BROADCAST PACKET REPLICATION FOR VIRTUAL LOCAL AREA NETWORKS
USA	8,755,274	6/17/2014	ADAPTIVE DATA RATE LIMITER IN A WIRELESS COMMUNICATION DEVICE
USA	8,516,567	8/20/2013	DISTRIBUTED FIREWALLING IN A WIRELESS COMMUNICATION NETWORK
USA	8,929,803	1/6/2015	RADIO FREQUENCY BARRIER IN A WIRELESS COMMUNICATION NETWORK
USA	8,867,342	10/21/2014	ADAPTIVE STANDBY ACCESS IN A LOCAL AREA COMMUNICATION NETWORK
USA	8,934,867	1/13/2015	ON-DEMAND ACCESS TUNNEL BETWEEN SERVICE PROVIDER NETWORK AND WIRELESS COMMUNICATION NETWORK
USA	8,842,651	9/23/2014	ACCESS POINT GROUPINGS BRIDGING TUNNELED TRAFFIC FOR A COMMUNICATION NETWORK
USA	9,198,034	11/24/2015	VALIDATING PRESENCE OF A COMMUNICATION DEVICE USING A WIRELESS LOCAL AREA NETWORK
USA	9,065,497	6/23/2015	CONTEXT AWARE MULTIPLE-INPUT AND MULTIPLE-OUTPUT ANTENNA SYSTEMS AND METHODS
USA	9,525,486	12/20/2016	VISIBLE LIGHT COMMUNICATIONS PERSONAL AREA NETWORK CONTROLLER AND ACCESS POINT SYSTEMS AND METHODS
USA	9,706,426	7/11/2017	SYSTEMS AND METHODS FOR VISIBLE LIGHT COMMUNICATIONS PERSONAL AREA NETWORK AND WIRELESS LOCAL AREA NETWORK INTERWORKING
USA	7,885,606	2/8/2011	ASSISTED MEASUREMENT SURVEY OF A WIRELESS COMMUNICATION NETWORK
USA	8,699,392	4/15/2014	METHOD AND APPARATUS FOR CONSERVING ACCESS POINT POWER USAGE DURING LOW NETWORK USAGE INTERVALS
USA	7,355,996	4/8/2008	SYSTEM AND METHODS FOR ADAPTIVE MONITORING WITH BANDWIDTH CONSTRAINTS
USA	7,961,690	6/14/2011	WIRELESS SWITCH NETWORK ARCHITECTURE IMPLEMENTING MOBILITY AREAS WITHIN A MOBILITY DOMAIN
USA	7,613,150	11/3/2009	HITLESS RESTART MECHANISM FOR NON-STOP DATA-FORWARDING IN THE EVENT OF L3-MOBILITY CONTROL-PLANE FAILURE WIRELESS SWITCH
USA	7,720,076	5/18/2010	DISTRIBUTED CONNECTION-ORIENTED SERVICES FOR SWITCHED COMMUNICATION NETWORKS
USA	8,023,515	9/20/2011	DISTRIBUTED CONNECTION-ORIENTED SERVICES FOR SWITCHED COMMUNICATION NETWORKS
USA	8,462,794	6/11/2013	DISTRIBUTED CONNECTION-ORIENTED SERVICES FOR SWITCHED COMMUNICATION NETWORKS
USA	6,400,777	6/4/2002	LINEAR MODULATOR
USA	6,084,944	7/4/2000	SYSTEM FOR AUTOMATED VOICE TERMINAL RECOGNITION AND DYNAMIC REPRESENTATION ON A TEST FACILITY

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	6,374,084	4/16/2002	METHOD AND SYSTEM FOR CALIBRATING ELECTRONIC DEVICES USING POLYNOMIAL FIT CALIBRATION SCHEME
USA	6,603,847	8/5/2003	INCOMING CALL ROUTING SYSTEM WITH INTEGRATED WIRELESS COMMUNICATION SYSTEM
USA	6,567,075	5/20/2005	FEATURE ACCESS CONTROL IN A DISPLAY-BASED TERMINAL ENVIRONMENT
USA	6,356,168	3/12/2002	SHEET-METAL FILTER
USA	6,326,920	12/4/2001	SHEET-METAL ANTENNA
USA	6,317,011	11/13/2001	RESONANT CAPACITIVE COUPLER
USA	6,329,949	12/11/2001	TRANSCIEVER STACKED ASSEMBLY
USA	6,313,719	11/6/2001	A METHOD OF TUNING A PLANAR FILTER WITH ADDITIONAL COUPLING CREATED BY BENT RESONATOR ELEMENTS
USA	7,348,862	3/25/2008	MODULAR CONNECTOR WITH SUPPRESSION OF CONDUCTED AND RADIATED EMISSIONS
USA	7,296,066	11/13/2007	MOBILE COMMUNICATION SYSTEM FOR A NETWORK
USA	7,400,879	7/15/2008	CONFERENCE SERVER
USA	8,411,700	4/2/2013	DLP-BASED WIRELESS DOCKING FOR WIFI-BASED ENDPOINTS WITH DESKTOP
USA	9,270,533	2/23/2016	FAST NETWORK DISCOVERY USING SNMP MULTI-CAST
USA	9,137,101	9/15/2015	MULTI-LAYER NETWORK DIAGNOSTIC TRACING
USA	8,750,299	6/10/2014	MULTICAST TREE DISCOVERY USING 802.1ag
USA	9,300,540	3/29/2016	MULTICAST NETWORK DIAGNOSTICS
USA	8,824,293	9/2/2014	IMPLEMENTATION OF A QOS PROCESSING FILTER TO MANAGE UPSTREAM OVER-SUBSCRIPTION
USA	9,152,423	10/6/2015	METHOD AND APPARATUS FOR EFFICIENT LOOP INSTRUCTION EXECUTION USING BIT VECTOR SCANNING
USA	8,625,468	1/7/2014	SYSTEMS AND METHODS FOR GRANTING FEATURE CONTROL BASED ON USER LOCATION
USA	8,634,417	1/21/2014	METHOD AND APPARATUS PROVIDING SELECTIVE FLOW REDISTRIBUTION ACROSS MULTI LINK TRUNK/LINK AGGREGATION GROUP (MLT/LAG) AFTER PORT MEMBER FAILURE AND RECOVERY
USA	8,804,507	8/12/2014	METHOD AND APPARATUS FOR TEMPORAL-BASED FLOW DISTRIBUTION ACROSS MULTIPLE PACKET PROCESSORS
USA	8,861,334	10/14/2014	METHOD AND APPARATUS FOR LOSSLESS LINK RECOVERY BETWEEN TWO DEVICES INTERCONNECTED VIA MULTI LINK TRUNK/LINK AGGREGATION GROUP (MLT/LAG)

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	8,787,377	7/22/2014	USAGE OF MASKED BMAC ADDRESSES IN A PROVIDER BACKBONE BRIDGED (PBB) NETWORK
USA	8,755,383	6/17/2014	USAGE OF MASKED ETHERNET ADDRESSES BETWEEN TRANSPARENT INTERCONNECT OF LOTS OF LINKS (TRILL) ROUTING BRIDGES
USA	8,479,279	7/2/2013	SECURITY POLICY ENFORCEMENT FOR MOBILE DEVICES CONNECTING TO A VIRTUAL PRIVATE NETWORK GATEWAY
USA	8,965,326	2/24/2015	DETERMINATION BY PSAPS OF CALLER LOCATION BASED ON THE WIFI HOT SPOTS DETECTED AND REPORTED BY THE CALLERS DEVICES)
USA	9,648,479	5/9/2017	DETERMINATION BY PSAPS OF CALLER LOCATION BASED ON THE WIFI HOT SPOTS DETECTED AND REPORTED BY THE CALLERS DEVICES)
USA	9,019,964	4/28/2015	METHODS AND SYSTEMS FOR ROUTING APPLICATION TRAFFIC
USA	9,282,489	3/8/2016	MEDIA ESCALATION WITH USE OF ENDPOINT ADAPTER
USA	9,143,602	9/22/2015	METHODS AND SYSTEMS TO ENSURE THAT THE USER OF A TOUCH OR KEYPAD OPERATED DEVICE WITHIN A MOVING VEHICLE MUST USE TWO HANDS FOR DEVICE OPERATION
USA	9,094,889	7/28/2015	METHOD AND SYSTEM TO MANAGE MOBILE DATA NETWORK USAGE FOR VOIP CALLS
USA	9,779,222	10/3/2017	SECURE MANAGEMENT OF HOST CONNECTIONS
USA	7,408,885	8/5/2008	METHOD AND APPARATUS FOR AUTOMATIC DETERMINATION OF PERFORMANCE PROBLEM LOCATIONS IN A NETWORK
USA	7,873,012	1/18/2011	ROAMING WIRELESS CLIENT COMMUNICATION
USA	7,493,124	2/17/2009	METHOD AND APPARATUS FOR UPDATING INFORMATION WITHIN A COMMUNICATION SYSTEM
USA	7,768,929	8/3/2010	HOST DISCOVERY AND ATTACH
USA	8,879,707	11/4/2014	PRIVATE BRANCH EXCHANGE THAT MANAGES INTERACTIONS BETWEEN ASSOCIATED TELECOMMUNICATIONS TERMINALS
USA	8,259,920	9/4/2012	CALL EXTENSION IN TELECOMMUNICATIONS SYSTEMS
USA	7,924,733	4/12/2011	ROOT CAUSE ANALYSIS OF NETWORK PERFORMANCE BASED ON EXCULPATION OR INCULPATION SETS
USA	7,991,143	8/2/2011	RAPID RESPONSE TO USER INPUT AT A TELECOMMUNICATIONS TERMINAL
USA	8,442,202	5/14/2013	PRIVATE-BRANCH EXCHANGE THAT PROVIDES OUTGOING CALLING FOR AN OFF-PREMISES TERMINAL IN THE PRESENCE OF A THIRD-PARTY APPLICATION
USA	8,160,228	4/17/2012	PRIVATE-BRANCH EXCHANGE THAT PROVIDES INCOMING CALLING EXTENDED TO AN OFF-PREMISES TERMINAL IN THE PRESENCE OF A THIRD-PARTY APPLICATION
USA	8,619,956	12/31/2013	PRIVATE-BRANCH EXCHANGE THAT PROVIDES CALL BRIDGING TO AN OFF-PREMISES TERMINAL IN THE PRESENCE OF A THIRD-PARTY APPLICATION

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	9,009,585	4/14/2015	SOFTWARE WIZARD INTERFACE
USA	8,760,275	6/24/2014	OBSTACLE WARNING SYSTEM AND METHOD
USA	9,053,624	6/9/2015	SYSTEM AND METHOD FOR TRACKING IN MULTI-STORY BUILDINGS
USA	8,576,717	11/5/2013	SYSTEM AND METHOD FOR DETECTING ROGUE TRAFFIC USING FLOW STATISTICS WITH A LIST OF AUTHORIZED ENGINES
USA	8,917,602	12/23/2014	SYSTEM AND METHOD FOR DETECTING ROGUE TRAFFIC USING FLOW STATISTICS WITH A LIST OF AUTHORIZED ENGINES
USA	8,873,403	10/28/2014	SYSTEM AND METHOD FOR AUTOMATIC DSCP TRACING FOR XOIP ELEMENTS
USA	9,438,524	9/6/2016	SYSTEM AND METHOD FOR VERIFYING MULTIPROTOCOL LABEL SWITCHING CONTRACTS
USA	9,351,140	5/24/2016	SPECIAL HANDLING OF CERTAIN TYPES OF COMMUNICATIONS
USA	8,483,044	7/9/2013	SYSTEMS, METHODS, AND MEDIA FOR IDENTIFYING DEGRADED VIDEO CALL LINKS
USA	9,338,303	5/10/2016	WIRELESS ENTERPRISE CONGESTION MANAGEMENT
USA	9,008,689	4/14/2015	DYNAMIC GUIDANCE TO A TARGET CONVERSATION AREA WITH A COMMUNICATION DEVICE
USA	6,488,533	12/3/2002	DEVICES FOR PROTECTING NETWORK EQUIPMENT FROM ELECTROSTATIC DISCHARGE EMANATING FROM NETWORK CABLES
USA	7,752,449	7/6/2010	SYSTEM AND METHOD FOR GENERATING A NON-REPUTABLE RECORD OF A DATA STREAM
USA	8,694,789	4/8/2014	SYSTEM AND METHOD FOR GENERATING A NON-REPUTABLE RECORD OF A DATA STREAM
USA	9,124,516	9/1/2015	METHOD AND APPARATUS PROVIDING SPLIT MULTI LINK TRUNK (SMLT) FOR ADVANCED TECHNOLOGY ATTACHMENT (ATA) OVER ETHERNET
USA	8,830,998	9/9/2014	SEPARATION OF EDGE AND ROUTING/CONTROL INFORMATION FOR MULTICAST OVER SHORTEST PATH BRIDGING
USA	8,743,875	6/3/2014	EXTENSION OF THE INTERPRETATION AND DEFINITION OF THE IS-IS TLV/SUB-TLV
USA	8,675,522	3/18/2014	CONVEYING THE VLAN/L2 VSN/BRIDGING-DOMAIN OF THE INCOMING INTERFACE (IIF) WHEN TRANSPORTING MULTICAST TRAFFIC OVER A SHORTEST PATH BRIDGED (SPB) NETWORK
USA	8,804,722	8/12/2014	METHOD AND APPARATUS FOR ROUTING MULTICAST DATA ACROSS MULTIPLE MULTICAST ROUTING DOMAINS CONNECTED BY A SHORTEST PATH BRIDGING (SPB) NETWORK
USA	8,817,782	8/26/2014	METHOD TO ROUTE MULTICAST DATA IN SPB NETWORK BY ESTABLISHING THE VIRTUAL PIM ADJACENCY ACROSS THE SPB NETWORKS IN A SINGLE PIM DOMAIN

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	8,949,385	2/3/2015	METHOD AND APPARATUS FOR RESOLVING CONFLICTING UNICAST ADVERTISEMENTS IN A TRANSPORT NETWORK
USA	8,675,658	3/18/2014	USING MULTIPLE IGMP QUERIES IN A LAYER 2 NETWORK
USA	8,693,335	4/8/2014	METHOD AND APPARATUS FOR CONTROL PLANE CPU OVERLOAD PROTECTION
USA	8,750,122	6/10/2014	METHOD AND APPARATUS FOR LAYER 2 LOOP PREVENTION IN A MULTI-NODE SWITCH CLUSTER
USA	9,094,318	7/28/2015	REMOTE MIRRORING
USA	8,730,793	5/20/2014	METHOD AND APPARATUS PROVIDING NETWORK REDUNDANCY AND HIGH AVAILABILITY TO REMOTE NETWORK NODES
USA	8,867,360	10/21/2014	METHOD AND APPARATUS FOR LOSSLESS BEHAVIOR FOR MULTIPLE PORTS SHARING A BUFFER POOL
USA	9,729,346	8/8/2017	METHOD FOR LAYER 2 FORWARDING IN A MULTI-NODE SWITCH CLUSTER
USA	9,083,563	7/14/2015	METHOD FOR REDUCING PROCESSING LATENCY IN A MULTI THREAD PACKET PROCESSOR WITH AT LEAST ONE RE-ORDER QUEUE
USA	9,164,771	10/20/2015	METHOD FOR THREAD REDUCTION IN A MULTI-THREAD PACKET PROCESSOR
USA	8,934,501	1/13/2015	BIDIRECTIONAL TRANSLATION OF NETWORK EDGE VIRTUALIZATION ENCAPSULATION TO CORE NETWORK VIRTUALIZATION ENCAPSULATION
USA	9,451,056	9/20/2016	METHOD FOR MAPPING PACKETS TO NETWORK VIRTUALIZATION INSTANCES
USA	8,867,350	10/21/2014	METHOD AND APPARATUS FOR PACKET BUFFERING MEASUREMENT
USA	8,929,370	1/6/2015	MECHANISM FOR EFFICIENTLY TRANSMITTING TUNNEL KEEP-ALIVE MESSAGES
USA	9,225,627	12/29/2015	REDISTRIBUTING ROUTES IN BACKBONE EDGE BRIDGE MULTI-CHASSIS LINK AGGREGATION GROUP TOPOLOGIES BETWEEN TWO ROUTING PROTOCOLS
USA	9,270,586	2/23/2016	METHOD FOR ABSTRACTING DATAPATH HARDWARE ELEMENTS
USA	8,918,847	12/23/2014	LAYER 7 AUTHENTICATION USING LAYER 2 OR LAYER 3 AUTHENTICATION
USA	9,088,506	7/21/2015	SYSTEM AND METHOD FOR DATA STREAM MIRRORING
USA	9,086,950	7/21/2015	METHOD FOR HEAP MANAGEMENT
USA	9,137,155	9/15/2015	NETWORK VIRTUALIZATION IN ACCESS NETWORKS
USA	9,553,802	1/24/2017	LAYER 2 VPN SERVICE ADVERTISEMENT FROM ACCESS NODES TO A CORE NETWORK
USA	9,225,699	12/29/2015	SECURITY KEY GENERATION IN LINK AGGREGATION GROUP TOPOLOGIES
USA	9,680,882	6/13/2017	AUTOMATIC CONFIGURATION OF ENDPOINT COMMUNICATION DEVICES TO SET UP A VOIP NETWORK
USA	9,077,550	7/7/2015	METHOD AND APPARATUS FOR PERFORMING MULTICAST BACKBONE MEDIA ACCESS CHANNEL (BMAC) HEADER TRANSFORMATIONS

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	9,178,710	11/3/2015	SELECTIVE MULTICAST
USA	9,537,669	1/3/2017	SELECTIVE MULTICAST
USA	9,258,222	2/9/2016	IMPLEMENTING A SHORTEST PATH BRIDGING (SPB) NETWORK USING A VIRTUAL ROUTING AND FORWARDING (VRF) IDENTIFIER
USA	8,848,707	9/30/2014	METHOD FOR IP LONGEST PREFIX MATCH USING PREFIX LENGTH SORTING
USA	8,798,066	8/5/2014	METHOD FOR IPV6 LONGEST PREFIX MATCH
USA	9,514,091	12/6/2016	LINK AGGREGATION USING DIGESTS
USA	9,413,637	8/9/2016	MIXER FOR MULTI-COMPONENT PASTES
USA	9,106,556	8/11/2015	METHOD TO ACHIEVE THE USE OF AN EXTERNAL METRIC AS THE PRIMARY TIE-BREAKER IN INTERMEDIATE SYSTEM TO INTERMEDIATE SYSTEM (ISIS) ROUTE SELECTIONS
USA	9,374,295	6/21/2016	METHOD TO ACHIEVE THE USE OF AN EXTERNAL METRIC AS THE PRIMARY TIE-BREAKER IN INTERMEDIATE SYSTEM TO INTERMEDIATE SYSTEM (ISIS) ROUTE SELECTIONS
USA	9,258,214	2/9/2016	OPTIMIZED DISTRIBUTED ROUTING FOR STRETCHED DATA CENTER MODELS THROUGH UPDATING ROUTE ADVERTISEMENTS BASED ON CHANGES TO ADDRESS RESOLUTION PROTOCOL (ARP) TABLES
USA	9,270,574	2/23/2016	METHOD AND APPARATUS PROVIDING DELAYED PATH CALCULATIONS BASED ON SERVICE TYPE
USA	9,191,314	11/17/2015	IN-BAND MANAGEMENT USING L2 ADDRESSES OVER B-VLAN IN AN SPBM NETWORK
USA	9,344,527	5/17/2016	A METHOD FOR MIGRATING TO LAYER-2 VIRTUAL SERVICES NETWORK FROM VLAN WITH NO PACKET LOSS
USA	9,154,409	10/6/2015	METHOD FOR DEBUGGING PRIVATE VLAN
USA	9,692,677	6/27/2017	IMPLEMENTING MULTICAST LINK TRACE CONNECTIVITY FAULT MANAGEMENT IN AN ETHERNET NETWORK
USA	9,525,624	12/20/2016	VIRTUAL ROUTER REDUNDANCY PROTOCOL FOR SCALABLE DISTRIBUTED DEFAULT ROUTING GATEWAY
USA	9,355,240	5/31/2016	MULTI-DEVICE SINGLE NETWORK SIGN-ON
USA	9,438,509	9/6/2016	DEFAULT GATEWAY REDUNDANCY SUPPORT ACROSS SPB NETWORKS
USA	9,712,393	7/18/2017	NETWORK LOOP PREVENTION
USA	9,467,302	10/11/2016	QUALITY OF SERVICE AWARE HYBRID MULTICAST NETWORKS
USA	9,191,233	11/17/2015	MESSAGE TRANSMISSION IN NETWORKS
USA	9,338,066	5/10/2016	TUNNEL KEEP-ALIVE TIMEOUT MECHANISM BASED ON QUALITY OF SERVICE (QOS) VALUE OF RECEIVED KEEP-ALIVE MESSAGES

<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	9,640,998	5/2/2017	AC POWER OF ETHERNET
USA	9,294,920	3/22/2016	CAPTIVE PORTAL SYSTEMS, METHODS, AND DEVICES
USA	9,787,502	10/10/2017	CAPTIVE PORTAL SYSTEMS, METHODS, AND DEVICES
USA	9,515,924	12/6/2016	METHOD AND APPARATUS PROVIDING SINGLE-TIER ROUTING IN A SHORTEST PATH BRIDGING (SPB) NETWORK
USA	9,467,366	10/11/2016	METHOD AND APPARATUS PROVIDING SINGLE-TIER ROUTING IN A SHORTEST PATH BRIDGING (SPB) NETWORK
USA	9,264,974	2/16/2016	MOBILITY INTEGRATION WITH FABRIC ENABLED NETWORK
USA	9,357,484	5/31/2016	ELASTIC WIRELESS CONTROL PLANE
USA	9,614,752	4/4/2017	MULTI-THREADED MULTI-PATH PROCESSING
USA	9,584,333	2/28/2017	OPTIMIZATION OF RULES USED FOR PREVENTION OF DUPLICATION AND LOOPING OF MULTICAST TRAFFIC WITHIN A MULTI-HOMED CLUSTER OF BACKBONE EDGE BRIDGES IN A SHORTEST PATH BRIDGING MULTICAST NETWORK
USA	9,021,569	4/28/2015	WIRELESS GUEST ACCESS
USA	9,461,842	10/4/2016	LIMITING NETWORK SERVICE CONFIGURATION BASED ON NETWORK SERVICE TYPE AND MODE ADVERTISEMENTS
USA	9,424,276	8/23/2016	EFFICIENT STATE CHANGE SUPPORT FOR HIERARCHICAL DATA MODELS IN A VIRTUALIZED SYSTEM
USA	9,531,591	12/27/2016	CONFIGURATION OF NETWORKS USING SWITCH DEVICE ACCESS OF REMOTE SERVER
USA	9,549,385	1/17/2017	CONFIGURATION OF NETWORKS USING CLIENT DEVICE ACCESS OF REMOTE SERVER
USA	9,705,826	7/11/2017	L2 REDIRECTION IN MULTI-CHASSIS LAG ENVIRONMENTS
USA	9,762,403	9/12/2017	SHORTEST PATH BRIDGING (SPB) - PROTOCOL-INDEPENDENT MULTICAST (PIM) INTERACTIONS ON A BACKBONE EDGE BRIDGE (BEB) ACTING AS A MULTICAST BOUNDARY ROUTER INTERFACING WITH A PIM NETWORK
USA	9,755,845	9/5/2017	PROTOCOL-INDEPENDENT MULTICAST (PIM) SNOOPING FOR A SHORTEST PATH BRIDGING MULTICAST (SPBM) NETWORK
USA	9,641,628	5/2/2017	DETERMINATION OF ENDPOINT DEVICE LOCATION FOR EFFICIENT ANALYSIS OF NETWORK PERFORMANCE
USA	9,608,841	3/28/2017	METHOD FOR REAL-TIME SYNCHRONIZATION OF ARP RECORD IN RSMULT CLUSTER
USA	7,801,743	9/21/2010	USE OF LOCATION AWARENESS TO ENHANCE COMMUNICATIONS FUNCTIONS IN A HEALTHCARE ENVIRONMENT
USA	7,707,044	4/27/2010	USE OF LOCATION AWARENESS TO ENHANCE COMMUNICATIONS FUNCTIONS IN A HEALTHCARE ENVIRONMENT
USA	7,676,380	3/9/2010	USE OF LOCATION AWARENESS TO ENHANCE COMMUNICATIONS FUNCTIONS IN A HEALTHCARE ENVIRONMENT

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<u>Jurisdiction</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>
USA	7,966,008	6/21/2011	USE OF LOCATION AWARENESS TO CONTROL RADIO FREQUENCY INTERFERENCE IN A HEALTHCARE ENVIRONMENT
USA	8,180,650	5/15/2012	USE OF LOCATION AWARENESS TO REQUEST ASSISTANCE FOR A MEDICAL EVENT OCCURRING IN A HEALTHCARE ENVIRONMENT
USA	8,929,528	1/6/2015	METHOD AND SYSTEM FOR ENHANCING COLLABORATION
USA	8,050,939	11/1/2011	METHODS AND SYSTEMS FOR USE IN THE PROVISION OF SERVICES IN AN INSTITUTIONAL SETTING SUCH AS A HEALTHCARE FACILITY
USA	9,621,464	4/11/2017	MULTICAST SPRAY OVER LAG
USA	9,565,138	2/7/2017	RULE BASED DATA NETWORK TRAFFIC INTERCEPTION AND DISTRIBUTION SCHEME
USA	9,648,542	5/9/2017	SESSION-BASED PACKET ROUTING FOR FACILITATING ANALYTICS
USA	8,047,383	11/1/2011	RACKMOUNT SYSTEM INCLUDING CONVERSION RAIL
USA	7,903,654	3/8/2011	SYSTEM AND METHOD FOR ECMP LOAD SHARING
USA	9,112,780	8/18/2015	TECHNIQUES FOR PROCESSING INCOMING FAILURE DETECTION PROTOCOL PACKETS
USA	8,395,996	3/12/2013	TECHNIQUES FOR PROCESSING INCOMING FAILURE DETECTION PROTOCOL PACKETS
USA	9,294,367	3/22/2016	DUPLICATING NETWORK TRAFFIC THROUGH TRANSPARENT VLAN FLOODING
USA	9,479,415	10/25/2016	DUPLICATING NETWORK TRAFFIC THROUGH TRANSPARENT VLAN FLOODING
USA	8,615,008	12/24/2013	DUPLICATING NETWORK TRAFFIC THROUGH TRANSPARENT VLAN FLOODING
USA	7,978,614	7/12/2011	TECHNIQUES FOR DETECTING NON-RECEIPT OF FAULT DETECTION PROTOCOL PACKETS
USA	8,155,011	4/10/2012	TECHNIQUES FOR USING DUAL MEMORY STRUCTURES FOR PROCESSING FAILURE DETECTION PROTOCOL PACKETS
USA	8,509,236	8/13/2013	TECHNIQUES FOR SELECTING PATHS AND/OR TUNK PORTS FOR FORWARDING TRAFFIC FLOWS

Pending U.S. Patent Applications of the Grantor

<u>Jurisdiction</u>	<u>Application No.</u>	<u>Filing Date</u>	<u>Title</u>
USA	14/451,851	8/5/2014	SYSTEM, METHOD AND APPARATUS FOR TRAFFIC MIRROR SETUP, SERVICE AND SECURITY IN COMMUNICATION NETWORKS
USA	15/190,922	6/23/2016	REDUNDANT ETHERNET AUTOMATIC PROTECTION SWITCHING ACCESS TO VIRTUAL PRIVATE LAN SERVICES
USA	15/242,633	8/22/2016	FORWARDING INTER-SWITCH CONNECTION (ISC) FRAMES IN A NETWORK-TO-NETWORK INTERCONNECT TOPOLOGY
USA	15/410,475	1/19/2017	SYSTEM AND RELATED METHOD FOR MANAGEMENT OF DEVICES OF A NETWORK SYSTEM VIA SOCIAL MEDIA INTERFACES
USA	15/180,931	6/13/2016	METHODS, SYSTEMS, AND APPARATUSES FOR DYNAMICALLY TAGGING VLANs
USA	14/861,838	9/22/2015	APPARATUS AND METHOD FOR MULTICAST DATA PACKET FORWARDING
USA	13/836,048	3/15/2013	DEVICE AND RELATED METHOD FOR ESTABLISHING NETWORK POLICY BASED ON APPLICATIONS
USA	14/842,508	9/1/2015	SYSTEM AND RELATED METHOD FOR NETWORK MONITORING AND CONTROL BASED ON APPLICATIONS
USA	14/922,481	10/26/2015	DEVICE AND RELATED METHOD FOR DYNAMIC TRAFFIC MIRRORING
USA	14/565,338	12/9/2014	LOAD SHARING OF MPLS PSEUDO-WIRES
USA	14/565,343	12/9/2014	METHOD AND SYSTEM FOR DYNAMIC USAGE OF MULTIPLE TABLES FOR INTERNET PROTOCOL HOSTS
USA	14/710,533	5/12/2015	METHODS, SYSTEMS, AND COMPUTER READABLE MEDIA FOR VIRTUAL FABRIC ROUTING
USA	14/710,534	5/12/2015	METHODS, SYSTEMS, AND NON-TRANSITORY COMPUTER READABLE MEDIA FOR GENERATING A TREE STRUCTURE WITH NODAL COMPARISON FIELDS AND CUT VALUES FOR RAPID TREE TRAVERSAL AND REDUCED NUMBERS OF FULL COMPARISONS AT LEAF NODES
USA	14/805,362	7/21/2015	NETWORK MANAGEMENT INTERFACE FOR A NETWORK ELEMENT WITH NETWORK-WIDE INFORMATION
USA	14/784,020	10/12/2015	BANDWIDTH ON DEMAND IN SDN NETWORKS
USA	14/975,094	12/18/2015	METHODS, SYSTEMS, AND COMPUTER READABLE MEDIA FOR ADVANCED DISTRIBUTION IN A LINK AGGREGATION GROUP
USA	13/184,142	7/15/2011	SELF-TESTING OF SERVICES IN AN ACCESS POINT OF A COMMUNICATION NETWORK
USA	15/354,350	11/17/2016	VISIBLE LIGHT COMMUNICATIONS PERSONAL AREA NETWORK CONTROLLER AND ACCESS POINT SYSTEMS AND METHODS

<u>Jurisdiction</u>	<u>Application No.</u>	<u>Filing Date</u>	<u>Title</u>
USA	14/844,151	9/3/2015	METHODS AND SYSTEMS FOR MITIGATING THE IMPACT OF BEAMFORMING ON THE ACCURACY OF WI-FI BASED LOCATION TRACKING OF CLIENT DEVICES
USA	14/844,064	9/3/2015	AUTOMATICALLY GROUPING, AUTHENTICATING AND PROVISIONING ACCESS POINTS USING CLOUD-BASED MANAGEMENT OF WLAN INFRASTRUCTURE
USA	14/806,738	7/23/2015	METHOD OF, AND ARRANGEMENT FOR, ENHANCING ROAMING PERFORMANCE OF A MOBILE CLIENT THAT IS ROAMING BETWEEN ACCESS POINTS CONNECTED TO A DISTRIBUTION SYSTEM
USA	15/227,258	8/3/2016	NOTIFICATION FRAMEWORK FOR ACCESS POINT CONTROLLERS
USA	15/219,461	7/26/2016	ACCESS POINT CLOUD CONTROLLER AUTO-DISCOVERY
USA	14/446,381	7/30/2014	PRIVATE WIRELESS COMMUNICATION NETWORK FOR GUEST USERS
USA	12/907,535	10/19/2010	ACCESS NETWORK DUAL PATH CONNECTIVITY
USA	13/241,507	9/23/2011	CONNECTOR ILLUMINATION STATUS
USA	13/285,392	10/31/2011	ROUTE LOOKUP RESOLUTION
USA	14/254,465	4/16/2014	SESSION MANAGER ANTI-LOOPING
USA	13/930,308	6/28/2013	VIRTUALIZED HOST ID KEY SHARING
USA	14/794,989	7/9/2015	SYSTEM AND METHOD FOR PREVENTION OF DENIAL OF SERVICE ATTACKS FOR HOSTED NETWORK ADDRESS TRANSLATOR
USA	15/283,903	10/3/2016	DYNAMIC FIREWALLS AND FORENSIC GATEWAYS
USA	15/284,131	10/3/2016	ENHANCED ACCESS SECURITY GATEWAY
USA	13/303,347	11/23/2011	FAST DESIGNATED ROUTER TRANSITIONS IN BROADCAST NETWORKS FOR LINK STATE PROTOCOLS
USA	15/660,709	7/26/2017	METHOD FOR LAYER 2 FORWARDING IN A MULTI-NODE SWITCH CLUSTER
USA	13/599,915	8/30/2012	SINGLE AUTHENTICATION CONTEXT FOR NETWORK AND APPLICATION ACCESS
USA	13/591,105	8/21/2012	DYNAMIC ROUTING OF AUTHENTICATION REQUESTS
USA	13/628,358	9/27/2012	SELF ADAPTING DRIVER FOR CONTROLLING DATAPATH HARDWARE ELEMENTS
USA	15/605,692	5/25/2017	AUTOMATIC CONFIGURATION OF ENDPOINT COMMUNICATION DEVICES TO SET UP A VOIP NETWORK
USA	13/627,260	9/26/2012	MULTI-CHASSIS CLUSTER SYNCHRONIZATION USING SHORTEST PATH BRIDGING (SPB) SERVICE INSTANCE IDENTIFIER (I-SID) TREES
USA	15/397,132	1/3/2017	SELECTIVE MULTICAST
USA	13/763,603	2/8/2013	VIRTUAL MACHINE DISCOVERY AND IDENTIFICATION
USA	13/924,570	6/22/2013	MDNS SUPPORT IN UNIFIED ACCESS NETWORKS

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<u>Jurisdiction</u>	<u>Application No.</u>	<u>Filing Date</u>	<u>Title</u>
USA	15/787,469	10/18/2017	MDNS SUPPORT IN UNIFIED ACCESS NETWORKS
USA	13/905,764	5/30/2013	LAYER 3 (L3) BEST ROUTE SELECTION RULE FOR SHORTEST PATH BRIDGING MULTICAST (SPBM) NETWORKS
USA	13/920,218	6/18/2013	GENERAL USER NETWORK INTERFACE (UNI) MULTI-HOMING TECHNIQUES FOR SHORTEST PATH BRIDGING (SPB) NETWORKS
USA	13/906,662	5/31/2013	DYNAMIC MULTICAST STATE AGGREGATION IN TRANSPORT NETWORKS
USA	15/169,663	5/31/2016	MULTI-DEVICE SINGLE NETWORK SIGN-ON
USA	14/041,342	9/30/2013	ENABLING CONFIGURATION IN NETWORKS
USA	14/041,242	9/30/2013	PERFORMING MAC-IN-MAC ENCAPSULATION USING SHORTEST PATH BRIDGING CONFIGURATION INFORMATION
USA	15/252,910	8/31/2016	METHOD AND APPARATUS PROVIDING SINGLE-TIER ROUTING IN A SHORTEST PATH BRIDGING (SPB) NETWORK
USA	15/169,661	5/31/2016	ELASTIC WIRELESS CONTROL PLANE
USA	14/097,232	12/4/2013	SECURING MDNS IN ENTERPRISE NETWORKS
USA	15/265,736	9/14/2016	PROVIDING NETWORK SERVICES BASED ON SERVICE MODE AND SERVICE TYPE
USA	15/243,273	8/22/2016	EFFICIENT STATE CHANGE SUPPORT FOR HIERARCHICAL DATA MODELS IN A VIRTUALIZED SYSTEM
USA	14/656,604	3/12/2015	CONFIGURATION OF NETWORKS WITH SERVER CLUSTER DEVICE
USA	14/656,622	3/12/2015	AUTHENTICATION OF CLIENT DEVICES IN NETWORKS
USA	15/384,651	12/20/2016	CONFIGURATION OF NETWORKS USING SWITCH DEVICE ACCESS OF REMOTE SERVER
USA	15/407,166	1/16/2017	SHORTEST PATH BRIDGING (SPB) CONFIGURATION OF NETWORKS USING CLIENT DEVICE ACCESS OF REMOTE
USA	14/298,011	6/6/2014	METHOD OF REDUCING TRAFFIC LOSS WHEN BRINGING UP A SWITCH WITHIN A MULTI CHASSIS SWITCH CLUSTER WITHOUT USING DEDICATED INTRA CLUSTER LINKS
USA	14/740,454	6/16/2015	PROVIDING SECURE NETWORKS
USA	14/534,099	11/5/2014	NETWORK DISCOVERY OPTIMIZATION USING SUPPLEMENTAL INFORMATION PUBLISHED BY DEVICES
USA	15/661,932	7/27/2017	SHORTEST PATH BRIDGING (SPB) - PROTOCOL-INDEPENDENT MULTICAST (PIM) INTERACTIONS ON A BACKBONE EDGE BRIDGE (BEB) ACTING AS A MULTICAST BOUNDARY ROUTER INTERFACING WITH A PIM NETWORK
USA	15/663,502	7/28/2017	PROTOCOL-INDEPENDENT MULTICAST (PIM) SNOOPING FOR A SHORTEST PATH BRIDGING MULTICAST (SPBM) NETWORK
USA	14/690,315	4/17/2015	SYNCHRONIZING PEER NODES OF A MULTI-CHASSIS SWITCHING CLUSTER

Schedule A

sf-3834244

<u>Jurisdiction</u>	<u>Application No.</u>	<u>Filing Date</u>	<u>Title</u>
USA	14/744,294	6/19/2015	DEBUGGING AUTO-ATTACH ENTITIES (CLIENT AND PROXY) USING CONNECTIVITY FAULT MANAGEMENT (CFM) AND SHORTEST PATH BRIDGING MAC (SPBM) CLOUD
USA	14/657,278	3/13/2015	POWER OVER ETHERNET (POE) POWERED NETWORK ADAPTER INCORPORATING OPEN VSWITCH (OVS) AND FABRIC ATTACH (FA) CAPABILITIES
USA	14/872,073	9/30/2015	DYNAMIC TEMPLATES FOR VIRTUALIZED SYSTEMS
USA	15/010,009	1/29/2016	AUTOMATED MIRRORING AND REMOTE SWITCH PORT ANALYZER (RSPAN)/ ENCAPSULATED REMOTE SWITCH PORT ANALYZER (ERSPAN) FUNCTIONS USING FABRIC ATTACH (FA) SIGNALING
USA	15/010,249	1/29/2016	AUTOMATED MIRRORING AND REMOTE SWITCH PORT ANALYZER (RSPAN)/ ENCAPSULATED REMOTE SWITCH PORT ANALYZER (ERSPAN) FUNCTIONS USING FABRIC ATTACH (FA) SIGNALING
USA	15/162,488	5/23/2016	SECURELY ONBOARDING VIRTUAL MACHINES USING A CENTRALIZED POLICY SERVER
USA	15/040,499	2/10/2016	A METHOD FOR CONTEXT BASED DYNAMIC WHITELISTING IN CAPTIVE PORTAL
USA	15/646,151	7/11/2017	AUTO ATTACH SIGNALING USED AS A WLAN SELECTION CRITERION
USA	15/645,253	7/10/2017	INGRESS GATEWAY SELECTION FOR AN SPB NETWORK TO SUPPORT INTER DOMAIN MULTICAST ROUTING
USA	15/398,530	1/4/2017	OVERLAY IP MULTICAST OVER UNICAST IP NETWORKS
USA	15/425,777	02/06/2017	RULE BASED DATA NETWORK TRAFFIC INTERCEPTION AND DISTRIBUTION SCHEME
USA	14/848,586	09/09/2015	TECHNIQUES FOR EXCHANGING CONTROL AND CONFIGURATION INFORMATION IN A NETWORK VISIBILITY SYSTEM
USA	14/848,645	09/09/2015	TECHNIQUES FOR EFFICIENTLY PROGRAMMING FORWARDING RULES IN A NETWORK VISIBILITY SYSTEM
USA	14/848,677	09/09/2015	TECHNIQUES FOR USER-DEFINED TAGGING OF TRAFFIC IN A NETWORK VISIBILITY SYSTEM
USA	14/927,478	10/30/2015	CONFIGURATION OF A NETWORK VISIBILITY SYSTEM
USA	14/927,479	10/30/2015	ARCHITECTURE FOR A NETWORK VISIBILITY SYSTEM
USA	14/927,482	10/30/2015	CONFIGURATION OF RULES IN A NETWORK VISIBILITY SYSTEM
USA	14/927,484	10/30/2015	CONFIGURATION OF LOAD-SHARING COMPONENTS OF A NETWORK VISIBILITY ROUTER IN A NETWORK VISIBILITY SYSTEM
USA	15/336,333	10/27/2016	OFFLINE, INTELLIGENT LOAD BALANCING OF SCTP TRAFFIC
USA	15/205,889	07/08/2016	SOFTWARE-BASED PACKET BROKER
USA	15/206,008	07/08/2016	TRAFFIC DEDUPLICATION IN A VISIBILITY NETWORK



Schedule A

<u>Jurisdiction</u>	<u>Application No.</u>	<u>Filing Date</u>	<u>Title</u>
USA	15/466,732	03/22/2017	ANOMALY DETECTION AND PREDICTION IN A PACKET BROKER
USA	15/467,766	03/23/2017	SMART EXPERT FILTER GENERATOR



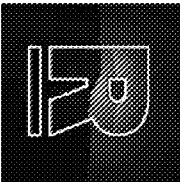
SCHEDULE B
to the Amended and Restated Patent and Trademark Security Agreement

EXTREME NETWORKS, INC.

U.S. Trademarks of the Grantor

United States	4032543	09/27/2011	Extreme Networks, Inc.	AIRDEFENSE
United States	2456966	06/05/2001	Extreme Networks, Inc.	BAYSTACK
United States	2281382	09/28/1999	Extreme Networks, Inc.	BLACKDIAMOND
United States	2301696	12/21/1999	Extreme Networks, Inc.	CONTIVITY
United States	4841944	10/27/2015	Extreme Networks, Inc.	E Logo
United States	4874975	12/22/2015	Extreme Networks, Inc.	E Logo EXTREME NETWORKS Stylized
United States	2243238	05/04/1999	Extreme Networks, Inc.	 EXTREME NETWORKS
United States	3840628	08/31/2010	Extreme Networks, Inc.	EXTREME NETWORKS (Stylized) & Design
United States	2549958	03/19/2002	Extreme Networks, Inc.	 EXTREME NETWORKS
United States	3379396	02/05/2008	Extreme Networks, Inc.	EXTREMEXOS
United States	3349489	12/04/2007	Extreme Networks, Inc.	IDENGINES
United States	3349580	12/04/2007	Extreme Networks, Inc.	IGNITION

Schedule B

United States	2388859	09/19/2000	Extreme Networks, Inc.	Purple Network Switch Design	
United States	3910064	01/25/2011	Extreme Networks, Inc.	Purple Network Switch Design	
United States	4073424	12/20/2011	Extreme Networks, Inc.	R Underscore & Design	
United States	3796814	06/01/2010	Extreme Networks, Inc.	REACHNXT	
United States	2365696	07/11/2000	Extreme Networks, Inc.	SUMMIT	
United States	4837384	10/20/2015	Extreme Networks, Inc.	WIFI COACH	
United States	2312393	01/25/2000	Extreme Networks, Inc.	BIGIRON	
United States	3975571	06/07/2011	Extreme Networks, Inc.	MLX	
United States	2174495	07/21/1998	Extreme Networks, Inc.	NETIRON	
United States	4960698	05/17/2016	Extreme Networks, Inc.	STACKSTORM	
United States	4057074	11/15/2011	Extreme Networks, Inc.	VCS	
United States	4046730	10/25/2011	Extreme Networks, Inc.	VDX	
United States	4068603	12/06/2011	Extreme Networks, Inc.	VDX	

Pending U.S. Trademark Applications of the Grantor

None.