

PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT4316891

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	CAVIUM NETWORKS LLC	03/08/2016
RECEIVING PARTY DATA		
Name:	CAVIUM, INC.	
Street Address:	2315 N. FIRST STREET	
City:	SAN JOSE	
State/Country:	CALIFORNIA	
Postal Code:	95131	
PROPERTY NUMBERS Total: 1		
	Property Type	Number
	Application Number:	15457959
CORRESPONDENCE DATA		
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NAME OF SUBMITTER:	JONATHAN O. OWENS	
SIGNATURE:	/Jonathan O. Owens/	
DATE SIGNED:	03/13/2017	
Total Attachments: 10		
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ASSIGNMENT

WHEREAS, Caviium Networks LLC, a limited liability company of the State of Delaware, located at 2315 N. First Street, San Jose, CA 95131, hereinafter referred to as "ASSIGNOR", is the current holder of all the applications for United States Letters Patent listed in the attached Appendix A.

WHEREAS, Caviium, Inc., a Delaware Corporation, located at 2315 N. First Street, San Jose, CA 95131, hereinafter referred to as "ASSIGNEE", is desirous of acquiring the entire right, title and interest in said inventions and applications and in any Letters Patent which may be granted on the same;

NOW THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for good and valuable consideration, receipt of which is hereby acknowledged, Assignor has sold, assigned and transferred, and by these presents does sell, assign and transfer unto said Assignees, and Assignee successors and assigns, all right, title and interest in and to said inventions, said applications for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in whole or in part, substitutions, conversions, reissues, prolongations or extensions thereof, said interest to be held and enjoyed by said Assignees as fully and exclusively as it would have been held and enjoyed by said Assignor had this assignment and transfer not been made, to the full end and term of any Letters Patent.

Assignor further agrees that it will, without charge to said Assignee, but at Assignee's expense, cooperate with Assignee in the prosecution of said applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as Assignee lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignor has hereunto signed their name to this assignment on the date indicated below.

CAVIUM NETWORKS, LLC

Albert J. Harnois, Jr.
Albert J. Harnois, Jr.
Assistant Secretary

March 8, 2016
Date

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of Santa Clara }

On March 8, 2016 before me, Paullette Fernandez, personally appeared Albert J. Harnois, Jr., who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

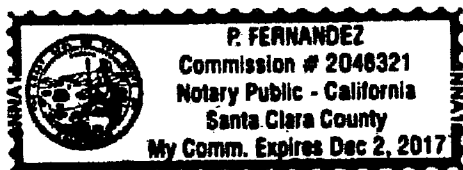
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

[SEAL]

Signature

Signature of Notary



PATENT

REEL: 041563 FRAME: 0746

APPENDIX A
RECORDED ASSIGNMENTS TO XPLIANT, INC.

Atty Docket	Serial No.	Title	Filing Date	Reel/Frame	Inventors
00100	14/141,076	SYSTEM FOR AND METHOD OF COMBINING CMOS INVERTERS OF MULTIPLE DRIVE STRENGTHS TO CREATE TUNE-ABLE CLOCK INVERTERS OF VARIABLE DRIVE STRENGTHS IN HYBRID TREE-MESH CLOCK DISTRIBUTION NETWORKS	12/26/13	032681/0040	Nikhil Jayakumar Vivek Trivedi Vasant K. Palisetti Bhagavati R. Mula Daman Ahluwalia Amir H. Motamedi
00200	14/141,096	SYSTEM FOR AND METHOD OF PLACING AND ROUTING CLOCK STATIONS USING VARIABLE DRIVE-STRENGTH CLOCK DRIVERS BUILT OUT OF A SMALLER SUBSET OF BASE CELLS FOR HYBRID TREE-MESH CLOCK DISTRIBUTION NETWORKS	12/26/13	032681/0079	Nikhil Jayakumar Vivek Trivedi Vasant K. Palisetti Bhagavati R. Mula Daman Ahluwalia Amir H. Motamedi
00400	14/144,260	METHOD AND APPARATUS FOR PARALLEL AND CONDITIONAL DATA MANIPULATION IN A SOFTWARE-DEFINED NETWORK PROCESSING ENGINE	12/30/13	032681/0134	Anh T. Tran Gerald Schmidt Tsahi Daniel Mohan Balan
00500	14/142,497	A MATRIX OF ON-CHIP ROUTERS INTERCONNECTING A PLURALITY OF PROCESSING ENGINES AND A METHOD OF ROUTING USING THEREOF	12/27/13	032681/0139	Anh T. Tran Gerald Schmidt Tsahi Daniel Nimalan Siva
00600	14/142,511	METHOD AND SYSTEM FOR RECONFIGURABLE PARALLEL LOOKUPS USING MULTIPLE SHARED MEMORIES	12/27/13	032681/0165	Anh T. Tran Gerald Schmidt Tsahi Daniel Saurabh Shrivastava

Atty Docket	Serial No.	Title	Filing Date	Reel/Frame	Inventors
00700	14/144,270	APPARATUS AND METHOD OF GENERATING LOOKUPS AND MAKING DECISIONS FOR PACKET MODIFYING AND FORWARDING IN A SOFTWARE-DEFINED NETWORK ENGINE	12/30/13	032681/0176	Anh T. Tran Gerald Schmidt Tsahi Daniel Harish Krishnamoorthy
00800	14/331,099	A NETWORK DEVICE, SYSTEM AND METHOD HAVING A ROTATED CHIP FLOORPLAN	7/14/14	033688/0593	Amir H. Motamedi Nikhil Jayakumar Bhagavathi R. Mula Vivek Trivedi Vasant K. Paliseti Daman Ahluwalia
00900	14/331,105	A BASEBOARD INTERCONNECTION DEVICE, SYSTEM AND METHOD	7/14/14	033688/0430	Amir H. Motamedi Nikhil Jayakumar Bhagavathi R. Mula Vivek Trivedi Vasant K. Paliseti Daman Ahluwalia
01000	14/289,533	METHOD AND APPARATUS FOR FLEXIBLE AND EFFICIENT ANALYTICS IN A NETWORK SWITCH	5/28/14	033286/0294	Wei Huang Wang Gerald Schmidt Tsahi Daniel Saurabh Shrivastava
01100	14/289,548	METHOD AND APPARATUS FOR TABLE AGING IN A NETWORK SWITCH	5/28/14	033286/0450	Wei Huang Wang Gerald Schmidt Tsahi Daniel Mohan Balan
01200	14/302,343	COUNTER WITH OVERFLOW FIFO AND A METHOD THEREOF	6/11/14	033286/0658	Wei Huang Wang Srinath Atluri

Atty Docket	Serial No.	Title	Filing Date	Reel/Frame	Inventors
01300	14/302,351	HIERARCHICAL STATISTICALLY MULTIPLEXED COUNTERS AND A METHOD THEREOF	6/11/14	033286/0915	Weihuang Wang Gerald Schmidt Srinath Atluri Weinan Ma Shrikant Sundaram Lnu
01400	14/309,603	METHOD OF MODIFYING PACKETS TO A GENERIC FORMAT FOR ENABLING PROGRAMMABLE MODIFICATIONS AND AN APPARATUS THEREOF	6/19/14	033288/0312	Chirinjeev Singh Vishal Anand Tsahi Daniel Gerald Schmidt
01500	14/309,619	METHOD OF REPRESENTING A GENERIC FORMAT HEADER USING CONTINUOUS BYTES AND AN APPARATUS THEREOF	6/19/14	033291/0380	Chirinjeev Singh Vishal Anand
01600	14/309,633	METHOD OF USING A UNIQUE PACKET IDENTIFIER TO IDENTIFY STRUCTURE OF A PACKET AND AN APPARATUS THEREOF	6/19/14	033291/0422	Chirinjeev Singh Tsahi Daniel Gerald Schmidt Saurin Patel
01700	14/309,650	METHOD OF USING GENERIC MODIFICATION INSTRUCTIONS TO ENABLE FLEXIBLE MODIFICATIONS OF PACKETS AND AN APPARATUS THEREOF	6/19/14	033291/0459	Chirinjeev Singh Tsahi Daniel Gerald Schmidt Saurin Patel
01800	14/309,659	METHOD OF USING BIT VECTORS TO ALLOW EXPANSION AND COLLAPSE OF HEADER LAYERS WITHIN PACKETS FOR ENABLING FLEXIBLE MODIFICATIONS AND AN APPARATUS THEREOF	6/19/14	033288/0453	Chirinjeev Singh Tsahi Daniel Gerald Schmidt

Atty Docket	Serial No.	Title	Filing Date	Reel/Frame	Inventors
01900	14/309,679	METHOD OF SPLITTING A PACKET INTO INDIVIDUAL LAYERS FOR MODIFICATION AND INTELLIGENTLY STITCHING LAYERS BACK TOGETHER AFTER MODIFICATION AND AN APPARATUS THEREOF	6/19/14	033291/0476	Chirinjeev Singh Tsahi Daniel Gerald Schmidt Saurin Patel
02000	14/309,700	A LEAKY-BUCKET MODEL TO MIMIC BEHAVIOR OF A MAC AND A METHOD THEREOF	6/19/14	033291/0502	Chirinjeev Singh Vandana Desai
02100	14/309,726	A METHOD OF EXTRACTING DATA FROM PACKETS AND AN APPARATUS THEREOF	6/19/14	033291/0515	Vishal Anand Tsahi Daniel Gerald Schmidt
02200	14/309,739	A METHOD OF FORMING A HASH INPUT FORM PACKET CONTENTS AND AN APPARATUS THEREOF	6/19/14	033291/0532	Vishal Anand Tsahi Daniel Gerald Schmidt
02300	14/309,763	A METHOD OF HANDLING LARGE PROTOCOL LAYERS FOR CONFIGURABLE EXTRACTION OF LAYER INFORMATION AND AN APPARATUS THEREOF	6/19/14	033291/0534	Vishal Anand Tsahi Daniel Premshanth Theivendran
02400	14/309,773	A METHOD OF REDUCING LATENCY IN A FLEXIBLE PARSER AND AN APPARATUS THEREOF	6/19/14	033291/0549	Vishal Anand Tsahi Daniel Gerald Schmidt
02500	14/309,789	A METHOD OF DYNAMICALLY RENUMBERING PORTS AND AN APPARATUS THEREOF	6/19/14	033291/0556	Vishal Anand Vamsi Panchagnula
02600	14/309,802	A METHOD OF IDENTIFYING INTERNAL DESTINATIONS OF NETWORK PACKETS AND AN APPARATUS THEREOF	6/19/14	033291/0569	Vishal Anand Tsahi Daniel Gerald Schmidt Premshanth Theivendran

Atty Docket	Serial No.	Title	Filing Date	Reel/Frame	Inventors
02701	14/675,710	A COMPILER ARCHITECTURE FOR PROGRAMMABLE APPLICATION SPECIFIC INTEGRATED CIRCUIT BASED NETWORK DEVICES	3/31/15	036114/0471	Ajeer Salil Pudiyapura Kishore Badari Atreya Ravindran Suresh
02801	14/675,702	A CODE GENERATOR FOR PROGRAMMABLE NETWORK DEVICES	3/31/15	036157/0172	Ajeer Salil Pudiyapura Kishore Badari Atreya Ravindran Suresh
02901	14/675,696	AN ALGORITHM TO ACHIEVE OPTIMAL LAYOUT OF INSTRUCTION TABLES FOR PROGRAMMABLE NETWORK DEVICES	3/31/15	036103/0965	Ajeer Salil Pudiyapura Kishore Badari Atreya Ravindran Suresh
03001	14/675,692	AN ALGORITHM TO DERIVE LOGIC EXPRESSION TO SELECT EXECUTION BLOCKS FOR PROGRAMMABLE NETWORK DEVICES	3/31/15	036153/0411	Ajeer Salil Pudiyapura Kishore Badari Atreya Ravindran Suresh
03101	14/675,682	AN ALGORITHM TO ARCHIEVE OPTIMAL LAYOUT OF DECISION LOGIC ELEMENTS FOR PROGRAMMABLE NETWORK DEVICES	3/31/15	036103/0771	Ajeer Salil Pudiyapura Kishore Badari Atreya Ravindran Suresh
03200	14/494,168	A HIERARCHICAL HARDWARE LINKED LIST APPROACH FOR MULTICAST REPLICATION ENGINE IN A NETWORK ASIC	9/23/14	034314/0684	Gerald Schmidt Harish Krishnamoorthy Tsahi Daniel

Atty Docket	Serial No.	Title	Filing Date	Reel/Frame	Inventors
03300	14/494,187	FAST HARDWARE SWITCH-OVER IN CONTROL PATH IN A NETWORK ASIC	9/23/14	034314/0735	Gerald Schmidt Harish Krishnamoorthy Tsahi Daniel
03400	14/494,229	SESSION BASED PACKET MIRRORING IN A NETWORK ASIC	9/23/14	034314/0766	Gerald Schmidt Harish Krishnamoorthy Tsahi Daniel
03500	14/494,291	A MULTICAST REPLICATION ENGINE OF A NETWORK ASIC AND METHODS THEREOF	9/23/14	034314/0785	Gerald Schmidt Harish Krishnamoorthy Tsahi Daniel
03600	14/521,333	AN APPARATUS AND A METHOD OF DETECTING ERRORS ON REGISTERS	10/22/14	034265/0861	Vishal Anand Harish Krishnamoorthy Guy Townsend Hutchison
03700	14/521,354	TWO MODES OF CONFIGURATION INTERFACE OF A NETWORK ASIC	10/22/14	034266/0034	Guy Townsend Hutchison Harish Krishnamoorthy Gerald Schmidt Vishal Anand
03800	14/521,359	SMART HOLDING REGISTERS TO ENABLE MULTIPLE REGISTER ACCESS	10/22/14	034266/0085	Vishal Anand Harish Krishnamoorthy Guy Townsend Hutchison

Atty Docket	Serial No.	Title	Filing Date	Reel/Frame	Inventors
03900	14/521,367	MULTIPLE- INTERRUPT PROPAGATION SCHEME IN A NETWORK ASIC	10/22/14	034266/0138	Vishal Anand Harish Krishnamoorthy Guy Townsend Hutchison Gerald Schmidt
04000	14/536,937	HYBRID WILD-CARD MATCH TABLE	11/10/14	034493/0064	Weihuang Wang Tsahi Daniel Srinath Atluri
04002	14/932,791	HYBRID WILD-CARD MATCH TABLE	11/04/15	036963/0513	Jeffrey T. Huynh Weihuang Wang Tsahi Daniel Srinath Atluri Mohan Balan
04100	14/671,993	CO-VERIFICATION - OF HARDWARE AND SOFTWARE, A UNIFIED APPROACH IN VERIFICATION	3/27/15	036152/0802	Mohan Balan Harish Krishnamoorthy Nimalan Siva Kishore Badari Atreya
04701	14/675,667	A PARSER ENGINE PROGRAMMING TOOL FOR PROGRAMMABLE NETWORK DEVICES	3/31/15	036114/0130	Kishore Badari Atreya Ajeer Salil Pudiyapura Ravindran Suresh
04801	14/675,674	A CODE PROCESSOR TO BUILD ORTHOGONAL EXECUTION BLOCKS FOR PROGRAMMABLE NETWORK DEVICES	3/31/15	036113/0602	Kishore Badari Atreya Ajeer Salil Pudiyapura Ravindran Suresh

Atty Docket	Serial No.	Title	Filing Date	Reel/Frame	Inventors
04901	14/676,679	POLICER ARCHITECTURE	4/1/15	035333/0549	Srinath Atluri Wei Huang Wang Weinan Ma
05000	14/672,016	PACKET TRACKING IN A VERIFICATION ENVIRONMENT	3/27/15	036151/0993	Harish Krishnamoorthy Nimalan Siva Vandana Desai
05200	14/672,025	TESTBENCH BUILDER, SYSTEM, DEVICE AND METHOD INCLUDING LATENCY DETECTION	3/27/15	036151/0824	Saurin Patel Nimalan Siva Kegin Kenneth Han
05300	14/672,006	SOFTWARE ASSISTED HARDWARE CONFIGURATION FOR SOFTWARE DEFINED NETWORK SYSTEM-ON-CHIP	3/27/15	036153/0059	Nimalan Siva Premshanth Theivendran Kishore Badari Atreya
05400	14/667,488	PACKET PROCESSOR FORWARDING DATABASE CACHE	3/24/15	036062/0873	Martin Leslie White
05501	14/667,568	PHANTOM QUEUE LINK LEVEL LOAD BALANCING SYSTEM, METHOD AND DEVICE	3/24/15	036084/0169	Martin Leslie White
05600	14/673,807	A PACKET MEMORY SYSTEM, METHOD AND DEVICE FOR PREVENTING UNDERRUN	3/30/15	036083/0834	Enrique Musoll
05700	14/673,813	A PACKET PROCESSING SYSTEM, METHOD AND DEVICE TO OPTIMIZE PACKET BUFFER SPACE	3/30/15	036083/0996	Enrique Musoll
05800	14/673,819	A PACKET PROCESSING SYSTEM, METHOD AND DEVICE HAVING REDUCED STATIC POWER CONSUMPTION	3/30/15	036083/0580	Enrique Musoll

Atty Docket	Serial No.	Title	Filing Date	Reel/Frame	Inventors
05900	14/673,828	A PACKET PROCESSING SYSTEM, METHOD AND DEVICE UTILIZING A PORT CLIENT CHAIN	3/30/15	036153/0684	Enrique Musoll Tsahi Daniel
06000	14/673,835	A PACKET PROCESSING SYSTEM, METHOD AND DEVICE UTILIZING MEMORY SHARING	03/30/15	036083/0347	Enrique Musoll Wei Huang Wang
06001	14/673,836	A CONTROL PATH SUBSYSTEM, METHOD AND DEVICE UTILIZING MEMORY SHARING	3/30/15	036083/0218	Enrique Musoll Wei Huang Wang
06002	14/673,840	A DATAPATH SUBSYSTEM, METHOD AND DEVICE UTILIZING MEMORY SHARING	03/30/15	036083/0092	Enrique Musoll Wei Huang Wang
06100	14/675,728	A BARREL COMPACTOR SYSTEM, METHOD AND DEVICE	3/31/15	036157/0098	Premshanth Theivendran Wei Huang Wang Sowmya Hotha Srinath Atluri
06300	14/675,734	A BARREL COMPACTOR SYSTEM, METHOD AND DEVICE HAVING CELL COMBINATION LOGIC	3/31/15	036156/0959	Premshanth Theivendran Wei Huang Wang Sowmya Hotha Srinath Atluri