

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT7031495

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
Name		Execution Date
SIGNIFICS AND ELEMENTS, LLC		11/10/2021
RECEIVING PARTY DATA		
Name:	QUALCOMM TECHNOLOGIES, INC.	
Street Address:	5775 MOREHOUSE DRIVE	
City:	SAN DIEGO	
State/Country:	CALIFORNIA	
Postal Code:	92121	
PROPERTY NUMBERS Total: 94		
Property Type	Number	
Application Number:	61394140	
Patent Number:	8914601	
Application Number:	61065294	
Patent Number:	8661422	
Application Number:	61170261	
Patent Number:	8930926	
Patent Number:	9858053	
Patent Number:	10698669	
Application Number:	16876739	
PCT Number:	US2010031524	
Application Number:	61097783	
Application Number:	61097799	
Patent Number:	8572590	
PCT Number:	US2009057194	
Application Number:	61371126	
Patent Number:	8572595	
Application Number:	61245590	
Application Number:	61158665	
Patent Number:	8688619	
Application Number:	61174325	

PATENT

Property Type	Number
Patent Number:	9185020
PCT Number:	US2010033049
Application Number:	61350443
Patent Number:	8892483
Application Number:	61422566
Patent Number:	9134976
Application Number:	61561394
Patent Number:	9489180
Application Number:	61569413
Patent Number:	9830133
Application Number:	15822996
Application Number:	61638078
Patent Number:	9798588
Patent Number:	9613163
Application Number:	61648848
Patent Number:	10936569
Application Number:	17033592
Application Number:	61655965
Patent Number:	9684865
Patent Number:	10839297
Application Number:	17098916
Application Number:	61880592
Patent Number:	10564949
Application Number:	16791361
Application Number:	61903625
Patent Number:	9471377
Application Number:	61985775
Patent Number:	10209971
Application Number:	16277457
Application Number:	61985782
Patent Number:	10145871
Application Number:	16209286
Application Number:	61985791
Patent Number:	10180828
Application Number:	16246658
Application Number:	62007207
Patent Number:	10402747
Patent Number:	10860945

Property Type	Number
Application Number:	17113814
Application Number:	14729731
Application Number:	14854839
Application Number:	62043142
Patent Number:	10095494
Application Number:	62063447
Patent Number:	10313361
Application Number:	16397257
Application Number:	62072183
Patent Number:	10713022
Application Number:	16927016
Application Number:	62099343
Application Number:	62153884
Patent Number:	10466349
Application Number:	16653201
Application Number:	62099345
Patent Number:	10540107
Patent Number:	10496304
Patent Number:	10095434
Patent Number:	11068178
Application Number:	17357723
Application Number:	16745890
Application Number:	62192379
Patent Number:	10451709
Application Number:	62236537
Patent Number:	10097280
Application Number:	62237265
Patent Number:	10789055
Application Number:	17034895
Application Number:	62265715
Patent Number:	10824693
Application Number:	17086772
Application Number:	62286732
Application Number:	15415368
Application Number:	17387871
Application Number:	62328225

CORRESPONDENCE DATA

Fax Number: (858)658-2502

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.

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Email: tbadet@qualcomm.com

Correspondent Name: QUALCOMM INCORPORATED

Address Line 1: 5775 MOREHOUSE DRIVE

Address Line 4: SAN DIEGO, CALIFORNIA 92121

ATTORNEY DOCKET NUMBER:	SIGNIFICS ELEMENTS ACQ
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NAME OF SUBMITTER:	THERESA BADET
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SIGNATURE:	/Theresa Badet/
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DATE SIGNED:	11/18/2021
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Total Attachments: 11

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PATENT ASSIGNMENT

This PATENT ASSIGNMENT (this “**Assignment**”) is made and entered into as of November 10, 2021 (the “**Effective Date**”) by and between Significs and Elements, LLC, a New York limited liability company having a business address at 632 Broadway, Suite 803, New York, NY 10012 (“**Assignor**”), and Qualcomm Technologies, Inc., a Delaware corporation having a business address at 5775 Morehouse Drive, San Diego, California 92129 (“**Assignee**”).

WHEREAS, pursuant to that certain Purchase Agreement (the “**Purchase Agreement**”), dated September 27, 2021 between and among various parties, including without limitation Assignor and Assignee, Assignor has agreed to sell, assign, transfer, convey, and deliver to Assignee all of Assignor’s right, title, and interest in and to certain assets, including, without limitation, the Assigned Patents (defined below); and

WHEREAS, pursuant to the Purchase Agreement and certain transactions documents to be executed at the closing of the Purchase Agreement, Assignor and Assignee have agreed to enter into this Assignment.

NOW, THEREFORE, in consideration of the promises and covenants set forth in the Purchase Agreement and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

1. Conveyance. Assignor hereby sells, assigns, transfers, conveys, and delivers to Assignee and Assignee hereby accepts all of Assignor’s right, title and interest in, to and under the issued patents and patent applications listed on Schedule A, including, without limitation (i) all provisional applications relating thereto and all reissues, divisionals, continuations, continuations-in-part, revisions, reexaminations, extensions, and counterparts (whether foreign or domestic) claiming priority to or based on any of the foregoing items, together with all patents issuing therefrom, (ii) all patents arising from or issuing on any of such patent applications and provisional applications; (iii) all inventions, discoveries, and improvements claimed or described in any of the foregoing and all worldwide patent applications that have been filed or may be filed in the future based on the inventions and improvements; (iv) any patent or patent application that is referenced by a terminal disclaimer filed in connection with any of the foregoing patent applications or patents; (v) all rights of priority under International Conventions, Treaties, or Agreements arising from or relating to the foregoing items, (vi) all rights to collect royalties and proceeds in connection with any of the foregoing (collectively (i)-(vi) above, the “**Assigned Patents**”), (vii) all rights to prosecute and maintain any of the foregoing, and (viii) all past, present, and future causes of action (whether known or unknown or whether currently pending, filed or otherwise) and all enforcement rights under, or on account of, the Assigned Patents, including without limitation the sole right to sue for and obtain injunctive relief and damages (including attorneys’ fees and expenses), lost profits, and other remedies for infringement, misappropriation, or other violation of such Assigned Patents accruing at any time prior to, on, and/or after the execution of this Assignment.
2. Recordation. Assignor agrees that this Assignment may be submitted for public recordation with the United States Patent and Trademark Office and any other worldwide patent office, and Assignor hereby requests the United States Patent and Trademark Office Commissioner for

Patents and other foreign Patent Office and Intellectual Property Offices and any other applicable governmental entity or registrar (including any applicable foreign or international office or registrar), to record Assignee as the assignee and owner of the Assigned Patents. Assignor also hereby authorizes the respective patent office or governmental agency in each jurisdiction to issue any and all patents or certificates of invention which may be granted upon any of the Assigned Patents in the name of Assignee, as the assignee to the entire interest therein.

3. Information and Assistance.

- a. Upon Assignee's reasonable request and without further compensation, Assignor shall execute, acknowledge, and deliver all the instruments and documents and shall take all the actions reasonably necessary or required by law to (i) consummate and make fully effective the transaction contemplated by this Assignment and (ii) assist the Assignee in obtaining, defending and enforcing the Assigned Patents and with any other proceedings that may be brought by or against the Assignee relating to the rights assigned by this Assignment.
 - b. If Assignee is unable for any reason to secure Assignor's signature to any document required to file, prosecute, register, issue, enforce, or memorialize the assignment of any rights under any Assigned Patents as provided under this Assignment, Assignor hereby irrevocably designates and appoints Assignee and Assignee's duly authorized officers and agents as Assignor's agents and attorneys-in-fact to act for and on Assignor's behalf and instead of Assignor to take all lawfully permitted acts to further the filing, prosecution, registration, memorialization of assignment, issuance, and enforcement of rights under such Assigned Patents, all with the same legal force and effect as if executed by Assignor. The foregoing is deemed a power coupled with an interest and is irrevocable.
4. Successors and Assigns. This Assignment and all the provisions hereof shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and permitted assigns. Nothing herein, express or implied, shall give or be construed to give to any person, other than the parties hereto and such permitted assigns, any legal or equitable rights hereunder.
5. Counterparts. This Assignment may be executed in two or more consecutive counterparts (including by facsimile), each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. The Assignment shall become effective when each party has signed one or more counterparts and delivered them (by facsimile or otherwise) to the other party.
6. Purchase Agreement Controls. This Assignment is provided pursuant to the Purchase Agreement, to which reference is made for a further statement of the rights and obligations of Assignor and Assignee with respect to the Assigned Patents. Nothing contained in this Assignment shall be deemed to modify, supersede, enlarge, or affect the rights of any person under the Purchase Agreement. If any provision of this Assignment is inconsistent or conflicts with the Purchase Agreement, the Purchase Agreement shall control.

7. Governing Law. This Assignment and all claims or causes of action (whether in contract, tort or otherwise) that may be based upon, arise out of or relate to this Assignment or the negotiation, execution, or performance of this Assignment shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to any choice or conflict of law provision or rule.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned have caused this Patent Assignment to be executed, effective as of the Effective Date.

ASSIGNOR:

Significs and Elements, LLC

By: 

Name: Richard Lethin

Title: Manager

Address: 632 Broadway, Suite 803
New York, NY 10012

Acknowledged and Accepted:

ASSIGNEE

Qualcomm Technologies, Inc.

By: _____

Name: _____

Title: _____

Address: _____

[Signature Page to Patent Assignment]

IN WITNESS WHEREOF, the undersigned have caused this Patent Assignment to be executed,
effective as of the Effective Date.

ASSIGNOR:

Significs and Elements, LLC

By: _____

Name: _____

Title: _____

Address: _____

Acknowledged and Accepted:

ASSIGNEE:

Qualcomm Technologies, Inc.

By:  _____

Name: John DelMastro

Title: Assistant Secretary

Address: 5775 N. Torrey Pines Dr.

San Diego, CA 92121

[Signature Page to Patent Assignment]

PATENT
REEL: 058896 FRAME: 0646

SCHEDULE A TO PATENT ASSIGNMENT

See Schedule 2.1(b)(i)(A) of the Purchase Agreement

Schedule 2.1(b)(i)(A)**S&E Patents**

Country	Title	Status	Patent Application Number	Filed Date	Patent Number	Issue Date
US	Fast Interconnect Table (FIT)	Expired	61/394,140	10/18/2010		
US	Systems And Methods For A Fast Interconnect Table	Granted	13/275,688	10/18/2011	8,914,601	12/16/2014
US	System, Apparatus, And Methods For Source Code Compilation	Expired	61/065,294	2/8/2008		
US	Methods And Apparatus For Local Memory Compaction	Granted	12/365,780	2/4/2009	8,661,422	2/25/2014
US	Automatic CUDA Mapping In The R-Stream Compiler	Expired	61/170,261	4/17/2009		
US	System, Methods And Apparatus For Program Optimization For Multi-Threaded Processor Architectures	Granted	12/762,281	4/16/2010	8,930,926	1/6/2015
US	Methods And Apparatus For Data Transfer Optimization	Granted	14/181,201	2/14/2014	9,858,053	1/2/2018
US	Methods And Apparatus For Data Transfer Optimization	Granted	15/837,551	12/11/2017	10,698,669	6/30/2020
US	Methods And Apparatus For Data Transfer Optimization	Application	16/876,739	5/18/2020		
WO	System, Methods And Apparatus For Program Optimization For Multi-Threaded Processor Architectures	Expired	PCT/US2010/031524	4/16/2010		
US	Static Software Tools To Optimize BMD Radar Algorithms To COTS Hardware	Expired	61/097,783	9/17/2008		
US	Static Software Tools To Optimize BMD Radar Algorithms To COTS Hardware	Expired	61/097,799	9/17/2008		
US	Methods And Apparatus For Joint Parallelism And Locality Optimization In Source Code Compilation	Granted	12/561,152	9/16/2009	8,572,590	10/29/2013
WO	Methods And Apparatus For Joint Parallelism And Locality Optimization In Source Code Compilation	Expired	PCT/US2009/057194	9/16/2009		
US	System, Method And Apparatus For Aggressive Program Scheduling	Expired	61/371,126	8/5/2010		
US	Methods And Apparatus For Aggressive Scheduling In Source Code Compilation	Granted	13/204,517	8/5/2011	8,572,595	10/29/2013
US	Automatic CUDA Mapping The R-Stream Compiler	Expired	61/245,590	9/24/2009		

Country	Title	Status	Patent Application Number	Filed Date	Patent Number	Issue Date
US	Alef: A SAT Solver For MPI-Connected Clusters	Expired	61/158,665	3/9/2009		
US	Systems, Methods And Apparatus For Distributed Decision Processing	Granted	12/719,750	3/8/2010	8,688,619	4/1/2014
US	Compilation And Optimization Of Protocol Analyzers	Expired	61/174,325	4/30/2009		
US	System, Apparatus And Methods To Implement High-Speed Network Analyzers	Granted	12/770,649	4/29/2010	9,185,020	11/10/2015
WO	System, Apparatus And Methods To Implement High-Speed Network Analyzers	Expired	PCT/US2010/033049	4/29/2010		
US	Method Of SAT-Based Iterative Repair	Expired	61/350,443	6/1/2010		
US	Systems And Methods For Planning A Solution To A Dynamically Changing Problem	Granted	13/149,517	5/31/2011	8,892,483	11/18/2014
US	Method Of Specification Compliance Testing With Support For Cross-Format Static Analysis	Expired	61/422,566	12/13/2010		
US	Cross-Format Analysis Of Software Systems	Granted	13/324,943	12/13/2011	9,134,976	9/15/2015
US	Joint Scheduling And Layout Optimization To Enable Multi-Level Vectorization	Expired	61/561,394	11/18/2011		
US	Methods And Apparatus For Joint Scheduling And Layout Optimization To Enable Multi-Level Vectorization	Granted	13/679,861	11/16/2012	9,489,180	11/8/2016
US	Communication Optimization In The R-Stream Compiler	Expired	61/569,413	12/12/2011		
US	Methods And Apparatus For Automatic Communication Optimizations In A Compiler Based On A Polyhedral Representation	Granted	13/712,659	12/12/2012	9,830,133	11/28/2017
US	Communication Optimization In The R-Stream Compiler	Application	15/822,996	11/27/2017		
US	Intelligent Load Balancer Towards Terabit-Scale Cyber-Security And Cloud Computing Architecture	Expired	61/638,078	4/25/2012		
US	Efficient Packet Forwarding Using Cyber-Security Aware Policies	Granted	13/870,814	4/25/2013	9,798,588	10/24/2017
US	Efficient Packet Forwarding Using Cyber-Security Aware Policies	Granted	14/939,881	11/12/2015	9,613,163	4/4/2017
US	Efficient And Scalable Computations With Sparse Tensors	Expired	61/648,848	5/18/2012		
US	Efficient And Scalable Computations With Sparse Tensors	Granted	13/898,159	5/20/2013	10,936,569	3/2/2021

Country	Title	Status	Patent Application Number	Filed Date	Patent Number	Issue Date
US	Efficient And Scalable Computations With Sparse Tensors	Application	17/033,592	9/25/2020		
US	Method Of Using Machine Learning To Drive Adaptive Ensemble Configuration In A Constraint Solver	Expired	61/655,965	6/5/2012		
US	System And Method For Configuration Of An Ensemble Solver	Granted	13/910,467	6/5/2013	9,684,865	6/20/2017
US	System And Method For Configuration Of An Ensemble Solver	Granted	15/617,602	6/8/2017	10,839,297	11/17/2020
US	Method Of Using Machine Learning To Drive Adaptive Ensemble Configuration In A Constraint Solver	Application	17/098,916	11/16/2020		
US	System And Method For Generation Of Event Driven, Tuple-Space Based Programs	Expired	61/880,592	9/20/2013		
US	System And Method For Generation Of Event Driven, Tuple-Space Based Programs	Granted	14/492,899	9/22/2014	10,564,949	2/18/2020
US	System And Method For Generation Of Event Driven, Tuple-Space Based Programs	Application	16/791,361	2/14/2020		
US	Parallelizing And Optimizing Sparse Tensor Computations	Expired	61/903,625	11/13/2013		
US	Systems And Methods For Parallelizing And Optimizing Sparse Tensor Computations	Granted	14/540,427	11/13/2014	9,471,377	10/18/2016
US	Adaptive Approximate Strength Reduction	Expired	61/985,775	4/29/2014		
US	Systems And Methods For Approximation Based Optimization Of Data Processors	Granted	14/699,854	4/29/2015	10,209,971	2/19/2019
US	Adaptive Approximate Strength Reduction	Abandoned	16/277,457	2/15/2019		
US	Compressive Sensing	Expired	61/985,782	4/29/2014		
US	Systems And Methods For Joint Angle-Frequency Determination	Granted	14/699,871	4/29/2015	10,145,871	12/4/2018
US	Compressive Sensing	Abandoned	16/209,286	12/4/2018		
US	Polyhedral Compilation Optimizations	Expired	61/985,791	4/29/2014		
US	Systems And Methods For Power Optimization Of Processors	Granted	14/699,876	4/29/2015	10,180,828	1/15/2019
US	Polyhedral Compilation Optimizations	Abandoned	16/246,658	1/14/2019		

Country	Title	Status	Patent Application Number	Filed Date	Patent Number	Issue Date
US	Systems And Methods For Unrestricted Incremental Constraint Solving	Expired	62/007,207	6/3/2014		
US	Systems And Methods For Solving Unrestricted Incremental Constraint Problems	Granted	14/729,722	6/3/2015	10,402,747	9/3/2019
US	Systems And Methods For Solving Unrestricted Incremental Constraint Problems	Granted	14/854,825	9/15/2015	10,860,945	12/8/2020
US	Systems And Methods For Multiresolution Parsing	Application	17/113,814	12/7/2020		
US	Systems And Methods For Solving Unrestricted Incremental Constraint Problems	Application	14/729,731	6/3/2015		
US	Systems And Methods For Solving Unrestricted Incremental Constraint Problems	Application	14/854,839	9/15/2015		
US	System, Method And Apparatus For Footprint-Conscious Scheduling	Expired	62/043,142	8/28/2014		
US	Systems And Methods For Footprint Based Scheduling	Granted	14/839,539	8/28/2015	10,095,494	10/9/2018
US	Systems And Methods For Multiresolution Parsing	Expired	62/063,447	10/14/2014		
US	Systems And Methods For Multiresolution Parsing	Granted	14/883,294	10/14/2015	10,313,361	6/4/2019
US	Systems And Methods For Multiresolution Parsing	Application	16/397,257	4/29/2019		
US	Systems And Method For Stencil Amplification	Expired	62/072,183	10/29/2014		
US	Systems And Methods For Stencil Amplification	Granted	14/927,053	10/29/2015	10,713,022	7/14/2020
US	Systems And Methods For Stencil Amplification	Application	16/927,016	7/13/2020		
US	Systems And Methods For Radar Targeting	Expired	62/099,343	1/2/2015		
US	Compressive Sensing	Expired	62/153,884	4/28/2015		
US	Systems And Methods For Efficient Targeting	Granted	14/987,240	1/4/2016	10,466,349	11/5/2019
US	Systems And Methods For Efficient Targeting	Application	16/653,201	10/15/2019		
US	Systems And Methods For Software Optimization	Expired	62/099,345	1/2/2015		
US	Systems And Methods For Energy Proportional Scheduling	Granted	14/987,202	1/4/2016	10,540,107	1/21/2020

Country	Title	Status	Patent Application Number	Filed Date	Patent Number	Issue Date
US	Systems And Methods For Minimizing Communications	Granted	14/987,216	1/4/2016	10,496,304	12/3/2019
US	Systems And Methods For Efficient Determination Of Task Dependences After Loop Tiling	Granted	14/987,223	1/4/2016	10,095,434	10/9/2018
US	Systems And Methods For Minimizing Communications	Granted	16/700,331	12/2/2019	11,068,178	7/20/2021
	Systems And Methods For Minimizing Communications	Application	17/357,723	6/24/2021		
US	Systems And Methods For Energy Proportional Scheduling	Application	16/745,890	1/17/2020		
US	Passive Tracking Of An Airborne Jammer Using Bistatic Dual-Polarization Receivers	Expired	62/192,379	7/14/2015		
US	Passive Tracking Of Objects Using Bistatic Dual-Polarization Receivers	Granted	15/210,138	7/14/2016	10,451,709	10/22/2019
US	Systems And Methods For Communication	Expired	62/236,537	10/2/2015		
US	Systems And Methods For Communication Using Sparsity Based Pre-Compensation	Granted	15/283,781	10/3/2016	10,097,280	10/9/2018
US	Systems And Methods For Scalable Hierarchical Polyhedral Compilation	Expired	62/237,265	10/5/2015		
US	Systems And Methods For Scalable Hierarchical Polyhedral Compilation	Granted	15/285,810	10/5/2016	10,789,055	9/29/2020
US	Systems And Methods For Selective Expansive Recursive Tensor Analysis	Application	17/034,895	9/28/2020		
US	Systems And Methods For Selective Expansive Recursive Tensor Analysis	Expired	62/265,715	12/10/2015		
US	Systems And Methods For Selective Expansive Recursive Tensor Analysis	Granted	15/375,620	12/12/2016	10,824,693	11/3/2020
US	Systems And Methods For Selective Expansive Recursive Tensor Analysis	Application	17/086,772	11/2/2020		
US	Sparse Multidimensional Fast Fourier Transform (SMFFT)	Expired	62/286,732	1/25/2016		
US	Systems And Method For Determining Frequency Coefficients Of Signals	Application	15/415,368	1/25/2017		
US	Methods And Apparatus For Automatic Communication Optimizations In A Compiler Based On A Polyhedral Representation	Application	17/387,871	7/28/2021		
US	Systems And Methods For Solving Polynomials For Statistical Machine Learning And Other Applications	Expired	62/328,225	4/27/2016		

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