PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3601746

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
PTC INC.	11/04/2015

RECEIVING PARTY DATA

Name:	JPMORGAN CHASE BANK, N.A., AS ADMINISTRATIVE AGENT
Street Address:	IL1-1145/54/63, P.O. BOX 6026
City:	CHICAGO
State/Country:	ILLINOIS
Postal Code:	60680-6026

PROPERTY NUMBERS Total: 143

Property Type	Number
Patent Number:	8484553
Patent Number:	8370479
Patent Number:	8769095
Patent Number:	8065397
Patent Number:	8788632
Patent Number:	8478861
Patent Number:	9170902
Patent Number:	9002980
Patent Number:	9172745
Patent Number:	7149792
Patent Number:	8406119
Patent Number:	6757714
Patent Number:	8055758
Patent Number:	8108543
Patent Number:	8762497
Patent Number:	8060886
Patent Number:	8752074
Patent Number:	8635254
Patent Number:	8291039
Patent Number:	8689181

PATENT REEL: 037046 FRAME: 0930

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Property Type	Number
Patent Number:	8898294
Patent Number:	7046134
Patent Number:	7082460
Patent Number:	7117239
Patent Number:	7178149
Patent Number:	7185014
Patent Number:	7254601
Patent Number:	7937370
Patent Number:	7966418
Patent Number:	5771392
Patent Number:	5844555
Patent Number:	7661101
Patent Number:	8121998
Patent Number:	8154545
Patent Number:	8250057
Patent Number:	8589128
Patent Number:	8566066
Patent Number:	8890867
Patent Number:	8818769
Patent Number:	8892404
Patent Number:	6275866
Patent Number:	6377162
Patent Number:	7583189
Patent Number:	6718218
Patent Number:	7392484
Patent Number:	7529773
Patent Number:	6308144
Patent Number:	5615317
Patent Number:	5720022
Patent Number:	5745687
Patent Number:	5768506
Patent Number:	5826020
Patent Number:	5847956
Patent Number:	5850535
Patent Number:	5923336
Patent Number:	6133922
Patent Number:	6738076
Patent Number:	6952660

Property Type	Number
Patent Number:	7124116
Patent Number:	7151551
Patent Number:	7466313
Patent Number:	7571166
Patent Number:	7680932
Patent Number:	7761319
Patent Number:	8032552
Patent Number:	8036939
Patent Number:	8055527
Patent Number:	8082322
Patent Number:	8352297
Patent Number:	8422763
Patent Number:	8661021
Patent Number:	6447223
Patent Number:	6473673
Patent Number:	6665569
Patent Number:	7013246
Patent Number:	7013468
Patent Number:	7069192
Patent Number:	7184940
Patent Number:	7464007
Patent Number:	7529763
Patent Number:	7574329
Patent Number:	8214423
Patent Number:	8806319
Patent Number:	9158532
Patent Number:	6545676
Patent Number:	6580428
Patent Number:	6608623
Patent Number:	6625607
Patent Number:	7251569
Patent Number:	5838331
Patent Number:	7006956
Patent Number:	8725594
Patent Number:	8909641
Patent Number:	9098312
Patent Number:	5914672
Patent Number:	5909640

Property Type	Number
Application Number:	14317151
Application Number:	14335428
Application Number:	14109456
Application Number:	14310324
Application Number:	14298114
Application Number:	14678277
Application Number:	12913998
Application Number:	12914005
Application Number:	14669873
Application Number:	62142756
Application Number:	62147326
Application Number:	14740863
Application Number:	13908638
Application Number:	62060308
Application Number:	14822469
Application Number:	14842981
Application Number:	14546791
Application Number:	14029749
Application Number:	12794923
Application Number:	14222027
Application Number:	14222067
Application Number:	14222083
Application Number:	14222100
Application Number:	14222106
Application Number:	14222118
Application Number:	14222123
Application Number:	14222138
Application Number:	14222152
Application Number:	14222166
Application Number:	14222276
Application Number:	62157234
Application Number:	62142757
Application Number:	14298627
Application Number:	14563191
Application Number:	13679361
Application Number:	14751379
PCT Number:	US2011058406
PCT Number:	US2011058412

Property Type	Number
PCT Number:	US2015044487
PCT Number:	US2015036000
PCT Number:	US2015034692
PCT Number:	US2013043883
PCT Number:	US2015053194
PCT Number:	US2015021894
PCT Number:	US2015021882
PCT Number:	US2015021863
PCT Number:	US2015021867

CORRESPONDENCE DATA

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using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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Address Line 4: CHICAGO, ILLINOIS 60611

ATTORNEY DOCKET NUMBER:	049067-0098
NAME OF SUBMITTER:	ZEYNEP GIESEKE
SIGNATURE:	/zg/
DATE SIGNED:	11/04/2015

Total Attachments: 15

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CONFIRMATORY GRANT OF SECURITY INTEREST IN UNITED STATES PATENTS

THIS CONFIRMATORY GRANT OF SECURITY INTEREST IN UNITED STATES PATENTS (the "Confirmatory Grant") is made effective as of November 4, 2015 by and from PTC Inc., a Massachusetts corporation (the "Grantor"), to and in favor of JPMORGAN CHASE BANK, N.A., (the "Grantee") for itself and as Administrative Agent for the Secured Parties (as defined in the Credit Agreement referenced below).

WHEREAS, Grantor, as a Borrower, the Lenders, the Grantee, and the other parties thereto have entered into an Amended and Restated Credit Agreement dated as of November 4, 2015 (as may be amended, restated, supplemented or otherwise modified from time to time, the "Credit Agreement").

WHEREAS, the Grantor and the other Loan Parties have entered into a Security Agreement dated as of November 4, 2015 (as may be amended, restated, supplemented or otherwise modified from time to time, the "Security Agreement").

WHEREAS, the Grantor owns the patents (the "<u>Patents</u>") listed on <u>Exhibit A</u> attached hereto, which Patents are pending or registered with the United States Patent and Trademark Office.

WHEREAS, this Confirmatory Grant has been granted in conjunction with the security interest granted to Grantee under the Security Agreement. The rights and remedies of Grantee with respect to the security interest granted herein are without prejudice to and are in addition to those set forth in the Security Agreement and the other Loan Documents, all terms and provisions of which are incorporated herein by reference. In the event that any provisions of this Confirmatory Grant are deemed to conflict with the Security Agreement, the provisions of the Security Agreement shall govern.

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is hereby agreed that:

1) <u>Definitions</u>. All capitalized terms not defined herein shall have the respective meaning given to them in the Credit Agreement.

2) The Security Interest.

- (a) This Confirmatory Grant is made to secure the satisfactory performance and payment of all the Secured Obligations. Upon the payment in full of all Secured Obligations (other than contingent indemnification obligations), Grantee shall promptly, upon such satisfaction, execute, acknowledge, and deliver to Grantor all reasonably requested instruments in writing releasing the security interest in the Patents acquired under this Confirmatory Grant.
- (b) The Grantor hereby grants to Grantee a security interest in (1) all of Grantor's right, title and interest in and to the Patents now owned or from time to time after the date hereof owned or acquired by the Grantor, together with (2) all proceeds and products of the Patents, (3) the goodwill associated with such Patents, and (4) all causes of action arising prior to or after the date hereof for infringement of the Patents or unfair competition regarding the same.
- 3) <u>Counterparts</u>. This Confirmatory Grant may be executed in any number of counterparts and by different parties in separate counterparts, each of which when so executed shall be deemed to be

an original and all of which taken together shall constitute one and the same agreement. Signature pages may be detached from multiple separate counterparts and attached to a single counterpart.

Governing Law. This Confirmatory Grant and the rights and obligations of the parties hereto shall be governed by, and construed and interpreted in accordance with, the law of the State of New York.

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IN WITNESS WHEREOF, the Grantor has executed this Confirmatory Grant effective as of the date first written above.

PTC INC.,

as Grantor

Name: Andrew D. Miller Title: Chief Financial Officer

Signature Page for Supplemental Confirmatory Grant of Security Interest in United States Patents

JPMORGAN CHASE BANK, N.A., as Administrative Agent

Namez Daglas Panchal

Title: Authorized Signatory

CONFIRMATORY GRANT OF SECURITY INTEREST IN UNITED STATES PATENTS Exhibit A - SCHEDULE OF PATENTS

Issued Patents:

Patent Number	Patent Title	Date Issued
8,484,553	System and Method for Defining Specification for Outputting Content in Multiple Formats (Styler)	7/9/2013
8,370,479	A SYSTEM AND METHOD FOR DYNAMICALLY GROUPING DEVICES BASED ON PRESENT DEVICE CONDITIONS	2/5/2013
8,769,095	SYSTEM AND METHOD FOR DYNAMICALLY GROUPING DEVICES BASED ON PRESENT DEVICE CONDITIONS	7/1/2014
8,065,397	MANAGING CONFIGURATIONS OF DISTRIBUTED DEVICES	11/22/2011
8,788,632	MANAGING CONFIGURATIONS OF DISTRIBUTED DEVICES	7/22/2014
8,478,861	MANAGING DISTRIBUTED DEVICES WITH LIMITED CONNECTIVITY	7/2/2013
9,170,902	METHOD AND APPARATUS FOR MANAGING INTELLIGENT ASSETS IN A DISTRIBUTED ENVIRONMENT	10/27/2015
9,002,980 B2	ESTABLISHING A VIRTUAL TUNNEL BETWEEN TWO COMPUTER PROGRAMS	4/7/2015
9,172,745	SCRIPTING WEB SERVICES	10/27/2015
7,149,792	DEVICE REGISTRATION MECHANISM	12/26/2006
8,406,119	ADAPTIVE DEVICE-INITIATED POLLING	3/26/2013
6,757,714	REPORTING THE STATE OF AN APPARATUS TO A REMOTE COMPUTER	6/29/2004
8,055,758	REPORTING THE STATE OF AN APPARATUS TO A REMOTE COMPUTER	11/8/2011
8,108,543	RETRIEVING DATA FROM A SERVER	1/31/2012
8,762,497	RETRIEVING DATA FROM A SERVER	6/24/2014
8,060,886	XML SCRIPTING OF SOAP COMMANDS	11/15/2011

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Patent Number	Patent Title	Date Issued
8,752,074	SCRIPTING OF SOAP COMMANDS	6/10/2014
8,635,254	MAINTAINING INDEPENDENT STATES FOR MULTIPLE WEB BROWSER INSTANCES	1/21/2014
8,291,039	ESTABLISHING A VIRTUAL TUNNEL BETWEEN TWO COMPUTER PROGRAMS	10/16/2012
8,689,181	SCRIPTING WEB SERVICES	4/1/2014
8,898,294	REPORTING THE STATE OF AN APPARATUS TO A REMOTE COMPUTER	11/25/2014
7,046,134	SCREEN SHARING	5/16/2006
7,082,460	CONFIGURING A NETWORK GATEWAY	7/25/2006
7,117,239	REPORTING THE STATE OF AN APPARATUS TO A REMOTE COMPUTER	10/3/2006
7,178,149	XML SCRIPTING OF SOAP COMMANDS	2/13/2007
7,185,014	RETRIEVING DATA FROM A SERVER	2/27/2007
7,254,601	METHOD AND APPARATUS FOR MANAGING INTELLIGENT ASSETS IN A DISTRIBUTED ENVIRONMENT	8/7/2007
7,937,370	RETRIEVING DATA FROM A SERVER	5/3/2011
7,966,418	ESTABLISHING A VIRTUAL TUNNEL BETWEEN TWO COMPUTER PROGRAMS	6/21/2011
5,771,392	Encoding Method to Enable Vectors and Matrices to be Elements of Vectors and Matrices	6/23/1998
5,844,555	Locking Mechanism For Live Mathematical Documents	12/1/1998
7,661,101	Synchronous and Asynchronous Collaboration Between Heterogeneous Applications	2/9/2010
8,121,998	Method for Automatically Enabling Traceability of Engineering Calculations	2/21/2012
8,154,545	Method for producing technical drawings from 3D models with at least two colliding 3D bodies AKA - HIDDEN LINE APPROACH	4/10/2012
8,250,057	Method for Automatically Sensing a Set of Items	8/21/2012

Patent Number	Patent Title	Date Issued
8,589,128	METHODS AND SYSTEMS FOR CREATION OF A DYNAMICALLY CONFIGURABLE PRODUCT DESIGN	11/19/2013
8,566,066 B2	ENFORCING PARAMETRIC CONSTRAINTS IN A DIRECT MODELING INTERFACE IN COMPUTER-AIDED DESIGN	10/22/2013
8,890,867	METHODS AND SYSTEMS FOR DYNAMICALLY LOADING PORTIONS OF A COMPUTER-AIDED DESIGN MODEL ON DEMAND	11/18/2014
8,818,769 B2	METHODS AND SYSTEMS FOR MANAGING SYNCHRONIZATION OF A PLURALITY OF INFORMATION ITEMS OF A COMPUTER- AIDED DESIGN DATA MODEL	8/26/2014
8,892,404	METHODS AND SYSTEMS FOR CONSISTENT CONCURRENT OPERATION OF A PLURALITY OF COMPUTER-AIDED DESIGN APPLICATIONS	11/18/2014
6,275,866	Manipulation and Coupling of Object Oriented Components	8/14/2001
6,377,162	MEDICAL DIAGNOSTIC FIELD SERVICE METHOD AND APPARATUS	4/23/2002
7,583,189	METHODS FOR MANAGING REMOTE DEVICES OVER AN INSTANT MESSAGING NETWORK AND SYSTEMS THEREOF	9/1/2009
6,718,218	CAD DATA MODEL WITH DESIGN NOTES	4/6/2004
7,392,484	METHOD AND SYSTEM FOR CAPTURING, STORING, SHARING, AND MANAGING NOTES TAKEN DURING A COMPUTER BASED MEETING	6/24/2008
7,529,773	IDEA SERVICE FOR AUTOMATIC FILE NAMING AND STORING	5/5/2009
6,308,144 B1	Method and Apparatus For Providing Three- Dimensional Model Associativity	10/23/2001
5,615,317	METHOD FOR BLENDING EDGES OF A GEOMETRIC OBJECT IN A COMPUTER- AIDED DESIGN SYSTEM	3/25/1997

Patent Number	Patent Title	Date Issued
5,720,022	METHOD OF CONVERTING A DIMENSIONAL REPRESENTATION OF A TECHNICAL DRAWING IN A CAD SYSTEM FROM A FIRST DIMENSIONAL REPRESENTATION STANDARD INTO A SECOND DIMENSIONAL REPRESENTATION STANDARD	2/17/1998
5,745,687	SYSTEM FOR DISTRIBUTED WORKFLOW IN WHICH A ROUTING NODE SELECTS NEXT MODE TO BE PERFORMED WITHIN A WORKFLOW PROCEDURE	4/28/1998
5,768,506	METHOD AND APPARATUS FOR DISTRIBUTED WORKFLOW BUILDING BLOCKS OF PROCESS DEFINITION, INITIALIZATION AND EXECUTION	6/16/1998
5,826,020	WORKFLOW REAL TIME INTERVENTION	10/20/1998
5,847,956	Automatic Trimming of Geometric Objects in a CAD/CAM Systems	12/8/1998
5,850,535	Roll-Back During Regeneration in a CAD System	12/15/1998
5,923,336	METHOD OF ASSOCIATING A DIMENSIONAL REPRESENTATION WITH A STRUCTURE IN A CAD SYSTEM	7/13/1999
6,133,922	METHOD OF INTEGRATING A BLEND OR CHAMFER SURFACE REPLACING AN EDGE OF A GEOMETRICAL BODY INTO A SOLID MODEL	10/17/2000
6,718,218	CAD DATA MODEL WITH DESIGN NOTES	4/6/2004
6,738,076	Method and System for Maintaining Persistence of Graphical Markups in a Collaborative Graphical Viewing System	5/18/2004
6,952,660	Collaboration Session Recording Model	10/4/2005
7,124,116	METHOD FOR PERFORMING MARKET- ADAPTED PRICE PLANNING	10/17/2006
7,151,551	Method and system for maintaining persistence of graphical markups in a collaborative graphical viewing system	12/19/2006
7,392,484	METHOD AND SYSTEM FOR CAPTURING, STORING, SHARING, AND MANAGING NOTES TAKEN DURING A COMPUTER BASED MEETING	6/24/2008

Patent Number	Patent Title	Date Issued
7,466,313	Method for interactive construction of virtual 3D models	12/16/2008
7,571,166	VIRTUAL PRIVATE SUPPLY CHAIN	8/4/2009
7,680,932	VERSION CONTROL SYSTEM FOR SOFTWARE DEVELOPMENT	3/16/2010
7,761,319	SUPPLY CHAIN MANAGEMENT	7/20/2010
8,032,552	VIRTUAL PRIVATE SUPPLY CHAIN	10/4/2011
8,036,939	REPORTING IN A SUPPLY CHAIN	10/11/2011
8,055,527	POLICY BASED AUTOMATION FOR A SUPPLY CHAIN	11/8/2011
8,082,322	Federation of Information From Multiple Data Sources Into A Common, Role-Based Distribution Model	12/20/2011
8,352,297	SUPPLY CHAIN MANAGEMENT	1/8/2013
8,422,763	Method for comparing a first computer-aided 3D model with a second computer-aided 3D model	4/16/2013
8,661,021	VIRTUAL PRIVATE SUPPLY CHAIN (CON2)	2/25/2014
6,447,223 B1	Control For High Speed Cutting Tool	9/10/2002
6,473,673 B1	Method and System for Management of Heterogeneous Assemblies	10/29/2002
6,665,569 B1	Method and System for Dynamically Updating Geometric Models [aka- Feature Based Reference Mechanism as Method and System of Creation, Support and Usage of Logical Objects]	12/16/2003
7,013,246 B1	Parametric Exchange of Data Between a Modeling System and an External Application Program	3/14/2006
7,013,468 B2	Method and Apparatus for Design and Manufacturing Application Associative Interoperability	3/14/2006
7,069,192 B1	CAD SYSTEM	6/27/2006
7,184,940 B2	Collaboration Session Recording Model	2/27/2007
7,464,007 B2	Flexible Object Representation Flexible Components (Wildfire)	12/9/2008

Patent Number	Patent Title	Date Issued
7,529,763 B2	SYSTEM AND METHOD FOR PROVIDING DYNAMIC CLIENT ARCHITECTURE IN AN APPLICATION DEVELOPMENT ENVIRONMENT	5/5/2009
7,574,329 B1	OBJECT MODEL FOR DECISION AND ISSUE TRACKING	8/11/2009
8,214,423 B2	CAD SYSTEM	7/3/2012
8,806,319 B1	A METHOD AND APPARATUS FOR LINKING NON-GEOMETRIC DATA TO GEOMETRIC ELEMENTS OF A CAD FILE INDEPENDENT OF THE PROPRIETARY CAD FILE FORMAT	8/12/2014
9,158,532	METHODS FOR MANAGING APPLICATIONS USING SEMANTIC MODELING AND TAGGING AND DEVICES THEREOF	10/13/2015
6,545,676 B1	Method and System for Creating a Tessellated Approximation of an Outer Envelope of a Complex Model	4/8/2003
6,580,428 B1	Method and System for Identifying Peripheral Elements of a Complex Model	6/17/2003
6,608,623 B1	Feature-Based Macro Language for Definition of Customized Analytic and Customized Geometric Functionality	8/19/2003
6,625,607 B1	Method Of Comparing Parts	9/23/2003
7,251,569	METHOD AND APPARATUS FOR DETERMING MATERIAL BREAKDOWN AND PRODUCT COMPLIANCE	7/31/2007
5,838,331	Computer System For Reconstructing 3d Object Using Transformations Between Screen And Model Space as Amended (Formerly: Computer Graphics System for Creating and Enhancing Texture Maps)	11/17/1998
7,006,956	Integration of an Analysis Into the Features of a Model of an Object	2/28/2006
8,725,594	CONTINUOUS FLOW EXECUTION	5/13/2014
8,909,641	METHOD FOR ANALYZING TIME SERIES ACTIVITY STREAMS AND DEVICES THEREOF	12/9/2014

Patent Number	Patent Title	Date Issued
9,098,312	METHODS FOR DYNAMICALLY GENERATING APPLICATION INTERFACES FOR MODELED ENTITIES AND DEVICES THEREOF	8/4/2015
5,914,672	SYSTEM FOR FIELD INSTALLATION OF A REMOTE METER INTERFACE	6/22/1999
5,909,640	WIRELESS COMMUNICATION SYSTEM FOR ADAPTING TO FREQUENCY DRIFT	6/1/1999

Pending Patents:

Application Number	Patent Title	Date Filed
14/317,151	A SYSTEM AND METHOD FOR DYNAMICALLY GROUPING DEVICES BASED ON PRESENT DEVICE CONDITIONS	6/27/2014
14/335,428	MANAGING CONFIGURATIONS OF DISTRIBUTED DEVICES	7/18/2014
14/109,456	MAINTAINING INDEPENDENT STATES FOR MULTIPLE WEB BROWSER INSTANCES	12/17/2013
14/310,324	RETRIEVING DATA FROM A SERVER	6/20/2014
14/298,114	SCRIPTING OF SOAP COMMANDS	6/6/2014
14/678,277	ESTABLISHING A VIRTUAL TUNNEL BETWEEN TWO COMPUTER PROGRAMS	4/3/2015
PCT/US11/58406	METHODS AND SYSTEMS FOR COMPUTER-AIDED DESIGN	10/28/2011
12/913,998	METHODS AND SYSTEMS FOR DIRECT- PARAMETRIC INTEROPERABILITY IN COMPUTER-AIDED DESIGN	10/28/2010
12/914,005	METHODS AND SYSTEMS FOR MANAGING CONCURRENT DESIGN OF COMPUTER-AIDED DESIGN OBJECTS	10/28/2010
PCT/US11/58412	METHODS AND SYSTEMS FOR COMPUTER-AIDED DESIGN	10/28/2011

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PCT/US15/44487	AN AUTOMATED METHODOLOGY FOR INDUCTIVE BIAS SELECTION AND ADAPTIVE ENSEMBLE CHOICE TO OPTIMIZE PREDICTIVE POWER	8/10/2015
PCT/US15/36000	AN ARCHITECTURE AND METHODOLOGY FOR PERFORMING REAL-TIME AUTONOMOUS ANALYTICS OVER MULTIPLE ACTUAL AND VIRTUAL DEVICES	6/16/2015
PCT/US15/34692	METHODS AND SYSTEM FOR INCREMENTAL EXPLORATION OF DESIGN CHANGES IN LARGE COMPUTER-AIDED DESIGN MODELS	6/8/2015
PCT/US2013/043883	RESULTS-BASED TOOL SELECTION, DIAGNOSIS, AND HELP SYSTEM FOR A FEATURE-BASED MODELING ENVIRONMENT	6/3/2013
14/669,873	PROFILING A POPULATION OF EXAMPLES	3/26/2015
62/142,756	PROFILING A POPULATION OF EXAMPLES IN A PRECISELY DESCRIPTIVE OR TENDENCY-BASED MANNER	4/3/2015
62/147,326	SCORING A POPULATION OF EXAMPLES USING A MODEL	4/14/2015
14/740,863	AN ARCHITECTURE AND METHODOLOGY FOR PERFORMING REAL-TIME AUTONOMOUS ANALYTICS OVER MULTIPLE ACTUAL AND VIRTUAL DEVICES	6/16/2015
13/908,638	RESULTS-BASED TOOL SELECTION, DIAGNOSIS, AND HELP SYSTEM FOR A FEATURE-BASED MODELING ENVIRONMENT	6/30/2013
62/060,308	VIRTUAL SENSORS SUPPORTED BY A COMPUTER AIDED DESIGN (CAD) MODEL AND SOFTWARE	10/6/2014
14/822,469	Automated Methodology for Inductive Bias Selection and Adaptive Ensemble Choice to Optimize Predictive Power	8/10/2015

14/842,981	METHODS FOR MANAGING APPLICATIONS USING SEMANTIC MODELING AND TAGGING AND DEVICES THEREOF	9/2/2015
14/546,791	REPORTING THE STATE OF AN APPARATUS TO A REMOTE COMPUTER	11/18/2014
PCT/US2015/053194	VIRTUAL SENSORS SUPPORTED BY A COMPUTER AIDED DESIGN (CAD) MODEL AND SOFTWARE	9/30/2015
14/029,749	METHODS FOR MANAGING APPLICATIONS USING SEMANTIC MODELING AND TAGGING AND DEVICES THEREOF	3/14/2014
62/060,308	VIRTUAL SENSORS SUPPORTED BY A COMPUTER AIDED DESIGN (CAD) MODEL AND SOFTWARE	10/6/2014
12/794,923	CORRECTION OF TOPOLOGY INTERFERENCE FOR SOLID OBJECTS IN A MODELING ENVIRONMENT	6/7/2010
13/908,638	RESULTS-BASED TOOL SELECTION, DIAGNOSIS, AND HELP SYSTEM FOR A FEATURE-BASED MODELING ENVIRONMENT	6/3/2013
14/222,027	CHUNK-BASED COMMUNICATION OF BINARY DYNAMIC REST MESSAGES	3/21/2014
14/222,067	SYSTEM AND METHOD OF ABSTRACTING COMMUNICATION PROTOCOL USING SELF-DESCRIBING MESSAGES	3/21/2014
14/222,083	SYSTEM AND METHOD OF USING DYNAMIC REST MESSAGES WITH WEB- SOCKETS	3/21/2014
14/222,100	SYSTEM AND METHOD OF USING BINARY DYNAMIC REST MESSAGES	3/21/2014
14/222,106	SYSTEM AND METHOD OF MESSAGE ROUTING VIA CONNECTION SERVERS IN A DISTRIBUTED COMPUTING ENVIRONMENT	3/21/2014
14/222,118	SYSTEM AND METHOD OF INJECTING STATES INTO MESSAGE ROUTING IN A DISTRIBUTED COMPUTING ENVIRONMENT	3/21/2014

14/222,123	SYSTEM AND METHOD OF MESSAGE ROUTING USING NAME-BASED IDENTIFIER IN A DISTRIBUTED COMPUTING ENVIRONMENT	3/21/2014
14/222,138	SYSTEM AND METHOD OF USING MULTI- LEVEL HIERARCHICAL DATA IN DISPLAYING REAL-TIME WEB-SERVICE OBJECTS	3/21/2014
14/222,152	SYSTEM AND METHOD OF ESTABLISHING PERMISSION FOR MULTI- TENANCY STORAGE USING ORGANIZATION MATRICES	3/21/2014
14/222,166	SYSTEM AND METHOD FOR TESTING COMPUTING DEVICES IN A HETEROGENEOUS ENVIRONMENT	3/21/2014
14/222,276	SYSTEM AND METHOD FOR DEVELOPING REAL-TIME WEB-SERVICE OBJECTS	3/21/2014
62/157,234	AUGMENTED REALITY SYSTEM	5/5/2015
62/142,757	PROFILING A POPULATION OF EXAMPLES IN A PRECISELY DESCRIPTIVE OR TENDENCY-BASED MANNER	4/3/2015
14/298,627	METHODS AND SYSTEM FOR INCREMENTAL EXPLORATION OF DESIGN CHANGES IN LARGE COMPUTER-AIDED DESIGN MODELS	6/6/2014
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13/679,361	METHODS FOR INTEGRATING SEMANTIC SEARCH, QUERY, AND ANALYSIS ACROSS HETEROGENEOUS DATA TYPES AND DEVICES THEREOF THEREOF	11/16/2012
14/751,379	METHODS FOR DYNAMICALLY GENERATING APPLICATION INTERFACES FOR MODELED ENTITIES AND DEVICES THEREOF	6/26/2015

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