PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Ab Initio Software LLC	07/16/2008

RECEIVING PARTY DATA

Name:	Architecture LLC	
Street Address:	201 Spring Street	
City:	Lexington	
State/Country:	MASSACHUSETTS	
Postal Code:	02421	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13936330

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 617-542-5070

Email: pxm@fr.com

Correspondent Name: Jeffrey Weber

Address Line 1: P.O. Box 1022

Address Line 4: Minneapolis, MINNESOTA 55440

ATTORNEY DOCKET NUMBER:	07470-0089003	
NAME OF SUBMITTER:	Paul J. Micele	
Signature:	/Paul J. Micele/	
Date:	07/08/2013	

Total Attachments: 8 source=23049253#page1.tif

PATENT REEL: 030749 FRAME: 0403

source=23049253#page2.tif	
source=23049253#page3.tif	
source=23049253#page4.tif	
source=23049253#page5.tif	
source=23049253#page6.tif	
source=23049253#page7.tif	
source=23049253#page8.tif	

PATENT REEL: 030749 FRAME: 0404

ASSIGNMENT OF TRADE SECRET, INVENTION & PATENT RIGHTS

Assignor: Ab Initio Software LLC, a Delaware limited liability company

Assignee: Architecture LLC, a Delaware limited liability company

- 1. The subject matter of this Assignment of Trade Secret, Invention & Patent Rights (the "Assignment") is the following Invention & Trade Secret Rights: (1) the patents and patent applications identified in attached Exhibit PATENT, the inventions embodied therein, and any and all domestic or foreign continuation, continuation-in-part, or divisional applications and reissue, correction, reexamination, or other patents, or certificates of invention, utility models, design registrations, and the like, that issue or derive priority therefrom or claim priority thereto, and (2) any and all inventions (whether or not patentable), trade secrets, and confidential information, whether tangible or intangible, developed by or on behalf of Assignor for use or potential use in its business, including (without limitation) all technical information, devices, formulae, methods, processes, techniques, know how, show how, designs, patterns, drawings, compilations, cost data, pricing, customer lists, vendor lists, employee lists, and computer programs (including source code) and related documentation.
- 2. For good and valuable consideration, the receipt and sufficiency of which is acknowledged by Assignor, Assignor hereby assigns to Assignee all of Assignor's worldwide rights, title, and interest (without reservation of any rights whatsoever) in and to (1) the Invention & Trade Secret Rights, (2) the right to claim priority based on the filing dates of any of the Invention & Trade Secret Rights, and (3) any claims (known or unknown, suspected or unsuspected) of any nature that Assignor has or may have against any entity for infringement or misappropriation of the Invention & Trade Secret Rights.
- 3. Assignor agrees to sign all lawful papers, make all rightful oaths, communicate to Assignee or its representatives all facts known to Assignor with respect to the Invention & Trade Secret Rights, cooperate with Assignee and its representatives, and generally do everything deemed necessary by Assignee to:
 - a. complete and fulfill the terms of this Assignment;
 - b. enable Assignee, at Assignee's expense, to apply for or prosecute any patent, invention right, or application for Invention & Trade Secret Rights, to maintain any application or issued patent for the Invention & Trade Secret Rights, and to record this Assignment, including executing separate or additional assignments in connection with such recordation or applications, and generally secure and/or perfect legal protection for the Invention & Trade Secret Rights;
 - c. assist Assignee, at Assignee's expense, to apply for, obtain, and enforce legal protection for the Invention & Trade Secret Rights in all countries, including applying for protection of the Invention & Trade Secret Rights under any provisions of the International Convention for Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all similar agreements or treaties, whether in the name of Assignor or of Assignee;
 - d. assist Assignee, at Assignee's expense, with respect to any action, suit, or other legal proceeding relating to enforcement or defense of any of the Invention & Trade Secret Rights, including obtaining evidence and testifying in any such legal proceeding (in any such legal proceeding, Assigner will be represented by the same legal counsel as Assignee).
- 4. Each examining, registration, or recording office or agency (including, without limitation, the United States Patent and Trademark Office) is hereby authorized by Assignor to deliver to Assignee, its attorneys, agents, successors or assigns, all official documents and communications as may be warranted by this Assignment.
- Assignor grants to Assignee the power to insert on this Assignment any further identification when known which may be necessary or desirable in order to comply with the rules of any examining, registration, or recording office or agency for recordation of this Assignment.

Assignor: Ab Initio Software LLC, a Delaware limited liability company

Ву:

CFI

Date:

Title:

EXHIBIT PATENT

EXHIBIT PATENT

STATUS (filing date)	PATENT NO./SERIAL NO. (F&R Docket No.)	COUNTRY	TITLE
ISSUED	7,167,850/10/268,509 (068001)	US	Startup And Control Of Graph-Based Computation
	2014.540837	EII	Startus And Control Of Graph-Based Computation
	2770720 5	IP.	Startup And Control Of Graph-Based Computation
-1000E0	2504076		
TILLU	[000001]		Startup And Control Of Graph-Based Computation
FICEU	2007202782	ALL	Startup And Control Of Graph-Based Computation
and the second s	2003 27022	All	Startus And Control Of Croph Record Computation
ISSUED	(00000)		2 12 12 12 12 12 12 12 12 12 12 12 12 12
ISSUED	(000001)		
INNUEV	(000001)		Charles And Control Of Creek Record Computation
	2907/DELND/2007	IV.	Clodus And Control Of Creat Paged Computation
	6,654,907/09/731,234	US	Continuo o Flor Company
ISSUED	(057001 CIP of 47001)		Continuous Flow Compute Point Based Data Processing
ISSUED	7,164,422/09/627,252 (05001)	US	Parameterized Graphs With Conditional Components
are any arrangement and a second	1056070	FIL	Parameterized Granks With Conditional Companents
TOOGED	2002-515753	IP	Parameterized Graphs With Conditional Components
ISSULU	2006-302306		
ISSUED	(00001)	I ID	Parameterized Granhs With Conditional Components
	2/1/7/10/	LCA	Person statisted Crapha With Conditional Company
TILED	160MUMND 2002	Lin	Garage designed Crooks With Conditional Company
ISSUED	C 594 594 00 000 005		
ISSUED	6,584,581/09/608,995 (047001)	US	Continuous Flow Checkpointing Data Processing
IOOUED	(017001)	EII	Continuous Flow Checkgointing Data Processing
	2004-544443	10	Continue Charles International Programming
NOULU	2202200		Continuous Flow Chapter State Date Date
SOULU	(047001)		Continuous Flow Charles inting Date Processing
SSUEU	(047001)	LIV	Continuous Flow Chackpointing Data Processing
Total Control	7,047,232/09/229,849	US	Parallelizing Applications Of Script-Driven Applications
SSUED	(030001)	FIL	
TCED	[000001]		Parallelizing Applications Of Script-Driven Applications
330ED	(000001)		Parallelizing Applications Of Script Driven Applications
	2006-062272	(0)	Possilalizing Applications Of Societ Origin Applications
SSUED	2360296	CA	Parallalizing Applications Of Social Driver Applications
990ED	(030001)		Possillativing Applications Of Societ Osiusa Applications
	6,665,862/09/915,185 (02002 CON OF 02001)	US	Method For Analyzing Capacity Of Parallel Processing Systems
7		us	Method For Analyzing Capacity Of Parallel Processing Systems
	6,266,804/08/997,142 (020001)	1	
	00065464.4	EII.	Mathad For Anglysing Coggety, Of Parallel Processing Systems
SSUED	(020001)	11.00	Nathania Control of the Control of t
SUEU	(020001)		Mathew For Assistance Consider Of Parallel Proposition Systems

Page 1 of 6

PATENT REEL: 030749 FRAME: 0407

STATUS (filling date)	PATENT NO /SERIAL NO. (F&R Docket No.)	COUNTRY	TITLE
ISSUED	6,088,716/08/847,909 (010001)	US	Method For Preventing Buffer Deadlock in Dataflow Computations Method For Preventing Buffer Deadlock in Dataflow Computations
	10 517000	I D	Method For Properting Ruffer Deadlock to Datafley Computations
	201000		Make of Earling Duffer Doodlook to Doloffory Computations
ISSUED	5,857,204/08/678.398 (008001)	US	A Method For Restoring The State Of A Set Of Files
NOOULD	(000001)	10	A Mothed For Restoring The State Of A Sat Of Files
	2200001		The Continue of the Continue o
ISSUED	5,897,638/08/876,734 (006001) 08030383 ±	US	A Parallel Virtual File System
leenev .	11.50489F		A Desertion of the Control of the Co
COLED	0000017		
ISSUED	5,712.971/08/570,724 (004001)	US	Methods And Systems For Reconstructing The State Of A Computa-
18eues	00.602247	10	Mothode And Systems For Possestructing The State Of A Computer
10000	(801001)	ır.	Marked And Services Consideration The Class CMA Community
1990ED	0040047	-CA	Malhada And Systems For Pasagolikuston The State Of A Communication
ISSUED	5,966,072/08/678,411 (003001)	US	Executing Computations Expressed As Graphs
	504472	16	Expanding Computations Expressed As Crashs Expanding Computations Expressed As Crashs
	2250262	CA	Executing Computations Expressed As Crapts
	5,819,021/08/570585 (002001)	US	Overpartitioning System And Method For Increasing Checkpoints In Component-Based Parallel Applications
ISOUTE	179820	ĪĒ	Overnatificating System And Method For Increasing Checkgoints in
	9240200		O A Maria Charles Charles
A 10 10 10 10 10 10 10 10 10 10 10 10 10	the contract of the contract o	us	Startup And Control Of Graph-Based Computation
	and the same of th	US	Transactional Graph Based Computation
		ÛS	Computer-Aided Parallelizing Of Computation Graphs
ricev	009001		Company macon aranoming or Company or Company
	003001)		
	00000		

STATUS (filming date)	PATENT NO./SERIAL NO. (F&R Docket No.)	COUNTRY	TITLE
	1000004)		
	2.00-102		Computer Aided Constitutions Of Computation Consti
	5000 5 10 1000	are and a substitution of profession and a substitution of the sub	
714.0	(000004)		
EUED	/060001\ /060001\	LIV	Computer Aided Parallelining Of Computation Out
	10/941,402	US	Data Profiling
FILED	(070001)		Data Froming
STAGE	(070001)		Data Profiles
	-170/143) E	10	Deta Constitution of the C
	-2520509	- CA	
			Data Oralife
	(070004)		Pota Profile
	(6.26)		
-51-50	(070004)		
	MATOELNO/000C	LIN	Date Gooffing
	(0.70004)		
	10 0000 70050CC	1/0	DA Profit
And Mile State	10/941,373	US	Joint Field Profiling
FILED	(0 70002)		
FILED	11/467,724 (070003)	US	Functional Dependency Data Profiling
The second secon	10/795,374	US	Dependency Graph Parameter Scoping
FILED	(071001)		, and a state of discipling
	(0.000.00.00.00.00.00.00.00.00.00.00.00.		
		-10	Described Creak Parameter Caraina
THEE	(674001)		
	0005004440		
		^3I	
THEE	(074004)		
-EH-ED	2000010F7 (071001)	C /	Dapandancy Cough Daysmatas Consina
**************************************	CASADEL ND/SOOS	IN	Department Crock Reservotor Securing
=====================================	(0.74001)	LIV.	
TILLD	(071001)		Pagandanay Crook Parameter Scaping
	10/796,612	US	Controlling Task Execution
FILED	(072001)		
erneo	(070004)		Controlling Took Supports
	5705064.0	10	Controlling York Evapution
	2559242	-CA	
	(072004)		Controlling Task Execution
	2005224076	AU	Controlling Tack Evegution
	(0.72004)		
	07/00/00 0	1.07	County True County
	Company of the Compan	US	Aggregating Data With Complex Operations
	(084001)		- 55-15-11-13 Para Trial Complex Operations

Page 3 of 6

STATUS (filing date)	PATENT NO./SERIAL NO. (F&R Docket No.)	COUNTRY	TITLE
FILED	[004001]		Aggregating Data With Complex Operations
TICEU	00110100.0		Assessment of the Mark Complete Operations
	(004001)	•	Aggregating Date With Complex Operations
FILLD	[(004001)	CA	
TICEO	(00,00)		Aggregating Data With Complex Operations
FILED	ZOUOZOTIO	7.4	Auguogowng Const Till Complete Specific
7. Rept. State Sta	10-2001 100000		A William Connections
FIEEU	(004001)		
FICEU	(00-00 I)		agragating that this Company of the
FILED	200000002202		Agongating Date With Complex Operations
, ii.e.b	11/169,074	US	Managing Message Queues
FILED	(085001) PCT(US2006/024233		
TILED	(000001)	PCT	Managing Message Queries
Control of the Contro	.06772799 7	CP	Managing Massage Quaries
		The state of the s	
TILED	COSO CONTRACTOR CONTRA		
FILED	(005001)	CA	Managing Marcago Quartos
	2006263463	ALL	Managina Massaga Quayas
PILED	10 0087 700004	L KD	
FILLO	(000001)		Manager O Manage
ril ev	0505/DELND/2007 (060001)	IM	Managing Massage Queues
	2000000000070.4	- CN	A section of the sect
MECO	11/169.246	118	
FILED	(086001)	US	Managing Memory Pages
TILES .	PCT/US2006/024201	PCT	Managina Maman, Pages
	06796241.6	EO	Managing Managar Pagas
FILED	(088001)		
TICEU	(000001)	10	Managing Mamoni Pages
	0.4.0.4.0.0	- ^ ^	Managing Marray, Pages
TLLD	2006262444	Δ11	Managing Marroy Panas
KED	100000		
TEO .	10.2007.7027964 (888001)	VO	Managing Manage Pages
		- IN	Managing Names Paras
(CLC)	2000001)	CN	
neco /	A CONTRACT OF THE CONTRACT OF		Monaging Monage, Grane
TLED	11/169,247 (087001)	US	Translating Expressions In A Computing Environment
	DCTAIC200CID24042	PCT	Translating Everossions in A Computing Equipment
	1007.001)	**************************************	
	(00/001)	ED	Translating Expressions in A Computing Environment
	***	JP	Translating Expressions In A Computing Environment
The Lay Ass		<u> </u>	
ICEU	(00/00/)		Tennelsting Expressions In A Computing Environment
	0000201751		

STATUS (filing date)	PATENT NO./SERIAL NO. (F&R Docket No.)	COUNTRY	TITLE
TILED	10-2007-7030326	KR	Translating Expressions in A Computing Charletter
11660	2000000024000		
TILLO.	(007004)		Translating Expressions In A. Samputing Environment
EILED	10416/DELNIN/2007	18	Tensalating Euponomics In A. Computing Caurage
and the second s	11/169,014	US	No. of the second secon
FILED	(088001)	03	Managing Parameters For Graph-Based Computations
- 4	DCT/UC200C/0240C7	DOT	The same statement of the same
Y See See See	007740000		The state of the s
EWED.	(000004)		Managing Parameters For Craph Rased Computations
CUED		T.	Managing Parameter For One 1 Parameter For
	/000004		
FILED	(088001)	1.7	Honoging Parameters Fas Croph Ragad Computations
	2006261760	ALL	Managing Parameters Fox Croph Recod Computations
FILED	10.0007.7000507	COLOR O S. COCCURRENCE WAS ARRESTED	
7669	(000001)		Managing Parameters For Oraph Based Sempatations
AND CONTRACTOR OF THE STREET,	10100 DEL VID 2007		
CH CD	(099001)		3 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
THEO	200680022178 1 (000001)	CN	Managing Parameters For Graph-Based Computations
	11/167,902	US	Manager Malada E. C.
FILED	(089001)		Managing Metadata For Graph-Based Computations
4.50	PCTAIS2006/024023	PCT	Managing Matadata For Craph Rased Computations
	00774000.0	FO	
TLED	(000004)		Managing Materials For Creek Based Computations
		-in	Monoging Monadata For Shaph Based Sompations
	2610000		The state of the s
*ED	(000001)		Managing Materials For Croph Regard Computations
H.E.	2006264740	AII	Managing Methodate Fox Croph Pageri Computations
	200000002178.1		
t-ED	(000004)	CN	Managing Maladata Co. Cooph Board Computations
	10117/BELNT/2007		Managing Materials Control of Con
	(000001)		
	10.00001)	VD.	Managing Materials For Coople Percel Computations
	10/979,742	US	Managina Palata I Cara Oh
ILED	(090001)		Managing Related Data Objects
		-007	
	(U3UUU1)		The state of the s
LLD.	(030001)		Managang Hanasa Data Departs
		10	Managing Balabad Data Object
	050000		Committee and the second of the committee and the committee of the committ
EED	(050001)		Monaging Natures Cate Objects
	200000270		Michaging Related Data Objects
	200690037492 1		o j
	(000001)	CAL	Hannesing Palatra Pala Objecto
	2004/DCL ND/2007	\$ 100 mm - 1	
EC.	000001)		managing residue pata objects
	11/733,434	US	Business Rules Editor
	091001) 11/434 623	US	None
.ED (095001)	00	Managing Computing Resources in Graph-Based Computations
	OCTUE 200 Y/06 BOAG	DCT	Alexander Company Comp
	006.004)		

STATUS (filing date)	PATENT NO./SERIAL NO. (F&R Docket No.)	COUNTRY	TITLE
FILED	11/836,349 (117001)	US	Distributing Services In Graph-Based Computations
FUED	(4470)		
FILED	11/555,458 . (119001)	US	Managing Storage Of Individually Accessible Data Units
riceo -			Managing Glorage Of Individually Processions Batte Online
FILED	60/952,075 (128PO1)	US	Transaction Graph-Based Computation With Error Handling
FILED	60/973,979 (131PO1)	US	Managing Data Flows In Graph-Based Computations
FILED	12/015,085 (130001)	US	Managing An Archive For Approximate String Matching