PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT3794330

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ARCHITECTURE LLC	07/16/2008

RECEIVING PARTY DATA

Name:	AB INITIO TECHNOLOGY LLC
Street Address:	201 SPRING STREET
City:	LEXINGTON
State/Country:	MASSACHUSETTS
Postal Code:	02421

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14519030

CORRESPONDENCE DATA

Fax Number:	(617)500-2499

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:	6175002500
Email:	INFO@ORPATENT.COM
Correspondent Name:	OCCHIUTI & ROHLICEK LLP
Address Line 1:	321 SUMMER ST.
Address Line 4:	BOSTON, MASSACHUSETTS 02210

ATTORNEY DOCKET NUMBER:	30040-A72004
NAME OF SUBMITTER:	CASSIE A. ZALESKI
SIGNATURE:	/Cassie A. Zaleski/
DATE SIGNED:	03/22/2016

Total Attachments: 8
source=Assignment4#page1.tif
source=Assignment4#page2.tif
source=Assignment4#page3.tif
source=Assignment4#page4.tif
source=Assignment4#page5.tif
source=Assignment4#page6.tif

source=Assignment4#page7.tif
source=Assignment4#page8.tif

ASSIGNMENT OF TRADE SECRET, INVENTION & PATENT RIGHTS

Assignor: Architecture LLC, a Delaware limited liability company

Assignee: Ab Initio Technology 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, **Assignor** 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.

5. **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.

Page 1 of 2

Assignor: Architecture LLC, a Delaware limited liability company
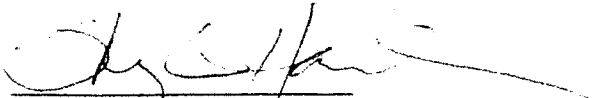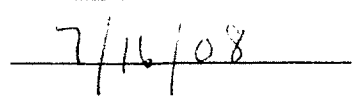
By: _____

Title: _____

Date: _____7/16/08_____

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
	2004-543637	EU	Startup And Control Of Graph-Based Computation
ISSUED	(068001)		
	3770720.5	JP	Startup And Control Of Graph-Based Computation
ISSUED	(068001)		
	2501876	CA	Startup And Control Of Graph-Based Computation
FILED	(068001)		
	2007202782	AU	Startup And Control Of Graph-Based Computation
FILED	(068001)		
	2003-279308	AU	Startup And Control Of Graph-Based Computation
ISSUED	(068001)		
	0101110.8	UK	Startup And Control Of Graph-Based Computation
ISSUED	(068001)		
	1784/DELNP/2005	IN	Startup And Control Of Graph-Based Computation
ISSUED	(068001)		
	2807/DELNP/2007	IN	Startup And Control Of Graph-Based Computation
ISSUED	(068001)		
ISSUED	6,654,907/09/731,234 (057001 CIP of 47001)	US	Continuous Flow Compute Point Based Data Processing
ISSUED	7,164,422/09/627,252 (05001)	US	Parameterized Graphs With Conditional Components
	1055978	EU	Parameterized Graphs With Conditional Components
ISSUED	(05001)		
	2002-515753	JP	Parameterized Graphs With Conditional Components
ISSUED	(05001)		
	2006-302306	JP	Parameterized Graphs With Conditional Components
ISSUED	(05001)		
	2417194	CA	Parameterized Graphs With Conditional Components
FILED	(05001)		
	169/MUMNP/2003	IN	Parameterized Graphs With Conditional Components
ISSUED	(05001)		
ISSUED	6,584,581/09/608,995 (047001)	US	Continuous Flow Checkpointing Data Processing
	992391.3	EU	Continuous Flow Checkpointing Data Processing
ISSUED	(047001)		
	2001-544113	JP	Continuous Flow Checkpointing Data Processing
ISSUED	(047001)		
	2393280	CA	Continuous Flow Checkpointing Data Processing
ISSUED	(047001)		
	31095273	UK	Continuous Flow Checkpointing Data Processing
ISSUED	(047001)		
ISSUED	7,047,232/09/229,849 (030001)	US	Parallelizing Applications Of Script-Driven Applications
	904353	EU	Parallelizing Applications Of Script-Driven Applications
FILED	(030001)		
	2000-594025	JP	Parallelizing Applications Of Script-Driven Applications
ISSUED	(030001)		
	2006-062373	JP	Parallelizing Applications Of Script-Driven Applications
ISSUED	(030001)		
	2360286	CA	Parallelizing Applications Of Script-Driven Applications
ISSUED	(030001)		
ISSUED	6,665,862/09/915,185 (02002 CON OF 02001)	US	Method For Analyzing Capacity Of Parallel Processing Systems
ISSUED	6,266,804/08/997,142 (020001)	US	Method For Analyzing Capacity Of Parallel Processing Systems
	98965461.1	EU	Method For Analyzing Capacity Of Parallel Processing Systems
ISSUED	(020001)		
	2000-525813	JP	Method For Analyzing Capacity Of Parallel Processing Systems
ISSUED	(020001)		

STATUS (filing date)	PATENT NO./SERIAL NO. (F&R Docket No.)	COUNTRY	TITLE
ISSUED	~~9045790~~ (020001)	CA	~~Method For Analyzing Capacity Of Parallel Processing Systems~~
ISSUED	6,088,716/08/847,909 (010001)	US	Method For Preventing Buffer Deadlock In Dataflow Computations
ISSUED	~~98048928.8~~ (010001)	EU	~~Method For Preventing Buffer Deadlock In Dataflow Computations~~
ISSUED	~~10-547203~~ (010001)	JP	~~Method For Preventing Buffer Deadlock In Dataflow Computations~~
ISSUED	~~2239996~~ (010001)	CA	~~Method For Preventing Buffer Deadlock In Dataflow Computations~~
ISSUED	5,857,204/08/678,398 (008001)	US	A Method For Restoring The State Of A Set Of Files
ISSUED	~~97923468.8~~ (008001)	EU	~~A Method For Restoring The State Of A Set Of Files~~
FILED	~~P-10-504474~~ (008001)	JP	~~A Method For Restoring The State Of A Set Of Files~~
ISSUED	~~2259994~~ (008001)	CA	~~A Method For Restoring The State Of A Set Of Files~~
ISSUED	5,897,638/08/876,734 (006001)	US	A Parallel Virtual File System
ISSUED	~~98930283.1~~ (006001)	EU	~~A Parallel Virtual File System~~
ISSUED	~~11-504685~~ (006001)	JP	~~A Parallel Virtual File System~~
ISSUED	~~2294397~~ (006001)	CA	~~A Parallel Virtual File System~~
ISSUED	5,712,971/08/570,724 (004001)	US	Methods And Systems For Reconstructing The State Of A Computation
ISSUED	~~96943730~~ (004001)	EU	~~Methods And Systems For Reconstructing The State Of A Computation~~
ISSUED	~~09-522217~~ (004001)	JP	~~Methods And Systems For Reconstructing The State Of A Computation~~
ISSUED	~~2002-349460~~ (004001)	JP	~~Methods And Systems For Reconstructing The State Of A Computation~~
ISSUED	~~2240247~~ (004001)	CA	~~Methods And Systems For Reconstructing The State Of A Computation~~
ISSUED	5,966,072/08/678,411 (003001)	US	Executing Computations Expressed As Graphs
ISSUED	~~97931542.9~~ (003001)	EU	~~Executing Computations Expressed As Graphs~~
ISSUED	~~504479~~ (003001)	JP	~~Executing Computations Expressed As Graphs~~
ISSUED	~~2259362~~ (003001)	CA	~~Executing Computations Expressed As Graphs~~
ISSUED	5,819,021/08/570585 (002001)	US	Overpartitioning System And Method For Increasing Checkpoints In Component-Based Parallel Applications
ISSUED	~~864704~~ (002001)	EU	~~Overpartitioning System And Method For Increasing Checkpoints In Component-Based Parallel Applications~~
ISSUED	179820 (002001)	JP	~~Overpartitioning System And Method For Increasing Checkpoints In Component-Based Parallel Applications~~
ISSUED	~~2240296~~ (002001)	CA	~~Overpartitioning System And Method For Increasing Checkpoints In Component-Based Parallel Applications~~
FILED	11/467,724 (068002 CON of 068001)	US	Startup And Control Of Graph-Based Computation
FILED	11/733,579 (068003 CON of 068001)	US	Transactional Graph Based Computation
FILED	10/873,681 (069001)	US	Computer-Aided Parallelizing Of Computation Graphs
FILED	~~P-2006-01101~~ (069001)	EU	~~Computer-Aided Parallelizing Of Computation Graphs~~
FILED	~~1117726.6~~ (069001)	JP	~~Computer-Aided Parallelizing Of Computation Graphs~~
FILED	~~2929328~~ (069001)	CA	~~Computer-Aided Parallelizing Of Computation Graphs~~

STATUS (filing date)	PATENT NO./SERIAL NO. (F&R Docket No.)	COUNTRY	TITLE
FILED	(060001)		Computer-Aided Parallelizing Of Computation Graphs
FILED	(060001)	CN	Computer-Aided Parallelizing Of Computation Graphs
FILED	(060001)	IN	Computer-Aided Parallelizing Of Computation Graphs
FILED	(060001)	UK	Computer-Aided Parallelizing Of Computation Graphs
FILED	10/941,402 (070001)	US	Data Profiling
FILED	(070001)	EP	Data Profiling
FILED	(070001)	JP	Data Profiling
FILED	(070001)	CA	Data Profiling
FILED	(070001)		
FILED	(070001)	CN	Data Profiling
FILED	(070001)	UK	Data Profiling
FILED	(070001)	IN	Data Profiling
FILED	(070001)	KR	Data Profiling
FILED	10/941,373 (070002)	US	Joint Field Profiling
FILED	11/467,724 (070003)	US	Functional Dependency Data Profiling
FILED	10/795,374 (071001)	US	Dependency Graph Parameter Scoping
FILED	(071001)		Dependency Graph Parameter Scoping
FILED	(071001)	JP	Dependency Graph Parameter Scoping
FILED	(071001)	CA	Dependency Graph Parameter Scoping
FILED	(071001)	AU	Dependency Graph Parameter Scoping
FILED	(071001)	CN	Dependency Graph Parameter Scoping
FILED	(071001)	EA	Dependency Graph Parameter Scoping
FILED	(071001)	IN	Dependency Graph Parameter Scoping
FILED	(071001)	UK	Dependency Graph Parameter Scoping
FILED	10/796,612 (072001)	US	Controlling Task Execution
FILED	(072001)	EU	Controlling Task Execution
FILED	(072001)	JP	Controlling Task Execution
FILED	(072001)	CA	Controlling Task Execution
FILED	(072001)	AU	Controlling Task Execution
FILED	(072001)	IN	Controlling Task Execution
FILED	(072001)	UK	Controlling Task Execution
FILED	11/169,073 (084001)	US	Aggregating Data With Complex Operations

STATUS (filing date)	PATENT NO./SERIAL NO. (F&R Docket No.)	COUNTRY	TITLE
FILED	PCT/US2006/024280 (084001)	PCT	Aggregating Data With Complex Operations
FILED	06773738.5 (084001)	EP	Aggregating Data With Complex Operations
FILED	(084001)	JP	Aggregating Data With Complex Operations
FILED	(084001)	CA	Aggregating Data With Complex Operations
FILED	2006261118 (084001)	AU	Aggregating Data With Complex Operations
FILED	10-2007-7000888 (084001)	KR	Aggregating Data With Complex Operations
FILED	9/36/DELNP/2007 (084001)	IN	Aggregating Data With Complex Operations
FILED	200680022282.2 (084001)	CN	Aggregating Data With Complex Operations
FILED	11/169,074 (085001)	US	Managing Message Queues
FILED	PCT/US2006/024233 (085001)	PCT	Managing Message Queues
FILED	06773738.7 (085001)	EP	Managing Message Queues
FILED	(085001)	JP	Managing Message Queues
FILED	(085001)	CA	Managing Message Queues
FILED	2006263163 (085001)	AU	Managing Message Queues
FILED	10-2007-7000861 (085001)	KR	Managing Message Queues
FILED	0595/DELNP/2007 (085001)	IN	Managing Message Queues
FILED	200680022270.1 (085001)	CN	Managing Message Queues
FILED	11/169,246 (086001)	US	Managing Memory Pages
FILED	PCT/US2006/024291 (086001)	PCT	Managing Memory Pages
FILED	06785241.6 (086001)	EP	Managing Memory Pages
FILED	(086001)	JP	Managing Memory Pages
FILED	2549400 (086001)	CA	Managing Memory Pages
FILED	2006263111 (086001)	AU	Managing Memory Pages
FILED	10-2007-7027864 (086001)	KR	Managing Memory Pages
FILED	10063/DELNP/2007 (086001)	IN	Managing Memory Pages
FILED	200680040765.2 (086001)	CN	Managing Memory Pages
FILED	11/169,247 (087001)	US	Translating Expressions In A Computing Environment
FILED	PCT/US2006/024943 (087001)	PCT	Translating Expressions In A Computing Environment
FILED	0678526.0 (087001)	EP	Translating Expressions In A Computing Environment
FILED	(087001)	JP	Translating Expressions In A Computing Environment
FILED	(087001)	CA	Translating Expressions In A Computing Environment
FILED	2006201751 (087001)	AU	Translating Expressions In A Computing Environment

STATUS (filing date)	PATENT NO./SERIAL NO. (F&R Docket No.)	COUNTRY	TITLE
FILED	10-2007-7030528 (087001)	KR	Translating Expressions In A Computing Environment
FILED	200680023180.0 (087001)	CN	Translating Expressions In A Computing Environment
FILED	10116/DELNP/2007 (087001)	IN	Translating Expressions In A Computing Environment
FILED	11/169,014 (088001)	US	Managing Parameters For Graph-Based Computations
FILED	PCT/US2006/024957 (088001)	PCT	Managing Parameters For Graph-Based Computations
FILED	06774093.8 (088001)	EP	Managing Parameters For Graph-Based Computations
FILED	(088001)	JP	Managing Parameters For Graph-Based Computations
FILED	(088001)	CA	Managing Parameters For Graph-Based Computations
FILED	2006261760 (088001)	AU	Managing Parameters For Graph-Based Computations
FILED	10-2007-7030527 (088001)	KR	Managing Parameters For Graph-Based Computations
FILED	10109/DELNP/2007 (088001)	IN	Managing Parameters For Graph-Based Computations
FILED	200680023178.1 (088001)	CN	Managing Parameters For Graph-Based Computations
FILED	11/167,902 (089001)	US	Managing Metadata For Graph-Based Computations
FILED	PCT/US2006/024933 (089001)	PCT	Managing Metadata For Graph-Based Computations
FILED	06774093.8 (089001)	EP	Managing Metadata For Graph-Based Computations
FILED	(089001)	JP	Managing Metadata For Graph-Based Computations
FILED	2610080 (089001)	CA	Managing Metadata For Graph-Based Computations
FILED	2006261740 (089001)	AU	Managing Metadata For Graph-Based Computations
FILED	200680023178.1 (089001)	CN	Managing Metadata For Graph-Based Computations
FILED	10117/DELNP/2007 (089001)	IN	Managing Metadata For Graph-Based Computations
FILED	10-2007-7030528 (089001)	KR	Managing Metadata For Graph-Based Computations
FILED	10/979,742 (090001)	US	Managing Related Data Objects
FILED	PCT/US2004/036065 (090001)	PCT	Managing Related Data Objects
FILED	04820020.8 (090001)	EP	Managing Related Data Objects
FILED	(090001)	JP	Managing Related Data Objects
FILED	2584029 (090001)	CA	Managing Related Data Objects
FILED	2005303270 (090001)	AU	Managing Related Data Objects
FILED	200580037483.1 (090001)	CN	Managing Related Data Objects
FILED	3334/DELNP/2007 (090001)	IN	Managing Related Data Objects
FILED	11/733,434 (091001)	US	Business Rules Editor
FILED	11/434,623 (095001)	US	Managing Computing Resources In Graph-Based Computations
FILED	PCT/US2007/068946 (095001)	PCT	Managing Computing Resources In Graph-Based Computations

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
FILED	(117001)		
FILED	11/555,458 (119001)	US	Managing Storage Of Individually Accessible Data Units
FILED	(119001)		
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

PATENT