PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JOSHUA GEORGE HALE	10/16/2015

RECEIVING PARTY DATA

Name:	SEMMLE LIMITED	
Street Address:	BLUE BOAR COURT	
Internal Address:	9 ALFRED STREET	
City:	OXFORD	
State/Country:	UNITED KINGDOM	
Postal Code:	OX1 4EH	

PROPERTY NUMBERS Total: 3

Property Type	Number	
Application Number:	15090420	
Application Number:	15090468	
Application Number:	15090485	

CORRESPONDENCE DATA

Fax Number: (877)769-7945

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: (650) 839-5070

Email: apsi@fr.com,penano@fr.com **Correspondent Name:** MICHAEL P. SHEPHERD FISH & RICHARDSON P.C. Address Line 1:

Address Line 2: P.O.BOX 1022

Address Line 4: MINNEAPOLIS, MINNESOTA 55440-1022

ATTORNEY DOCKET NUMBER:	NUMBER: 39348-0038002/3/4	
NAME OF SUBMITTER:	EDWARD L. PENANO	
SIGNATURE:	/EDWARD L. PENANO/	
DATE SIGNED:	04/08/2016	

Total Attachments: 3

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PATENT REEL: 038232 FRAME: 0046

Attorney Docket No.: 39348-Various

ASSIGNMENT

For valuable consideration, the receipt of which I acknowledge, and intending to be bound legally, I, <u>JOSHUA GEORGE HALE</u>, assign to <u>SEMMLE LIMITED</u>, a corporation formed under the laws of <u>The United Kingdom</u> and having a principal place of business at <u>Blue Boar Court</u>, <u>9 Alfred Street</u>, <u>Oxford OX1 4EH, UNITED KINGDOM</u>, and its successors, transferees, and assignces (collectively the "Assignce"), all of my right, title, and interest throughout the world in the subject matter (the "Subject Matter") of each of the patent applications (the "Applications") naming me as an inventor and listed on Schedule 1 attached to this Assignment.

This Assignment assigns (a) the Applications and all other applications that may be made for, and all patents, utility models, design registrations, and other rights of exclusion and inventors' certificates for, any of the Subject Matter (collectively the "Applications and Granted Rights") in every country or region, (b) the right to claim priority based on and the benefit of the filling date of any of the Applications and Granted Rights under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other applicable treaties or conventions, and (c) the right to pursue, collect, and retain in the Assignee's name or otherwise, damages and any other remedies arising from any past, present, or future infringement of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment.

I authorize the Assignee to apply for and pursue protection for any or all of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment in all countries, regions, and territories of the world, in my name or in the Assignee's name.

I represent and warrant that I have the right and power to make this Assignment and that I have not made and will not make any other assignment that conflicts with this Assignment.

I will communicate to the Assignee (or at the request of the Assignee to other parties) all known facts in any form relating to the Subject Matter, will execute and provide all oaths and declarations, statements, testimony, assignments, powers of attorney, applications, and documents, and will perform all other lawful acts necessary or desirable to secure fully to the Assignee the rights, titles, and interests assigned by this Assignment.

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Attorney Docket No.: 39348-Various

John Hake Date: 16th Ochles 2015	
Joshua George Hale	
Witnessed by:	
Signature:	
Print Name: MALCOLM TAYLOR	
The Assignee hereby acknowledges and accepts the foregoing assignment.	
Assignee: SEMMLE LIMITED	
Signature: Date: 100	
Name:	
Title: CEC	

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Attorney Docket No.: 39348-Various

SCHEDULE 1

Application Title	Filing Date	Application Serial No.
Template Dependency Inlining	09/30/2015	14/871,818
Hierarchical Dependency Analysis of Source Code	09/30/2015	62/234,939
Hierarchical Dependency Analysis of Source Code	09/30/2015	14/871,304
Tiered Arrays	09/30/2015	14/871,934
Disjoint-OR Trees	09/30/2015	14/871,753
Query-Based Software Dependency Analysis	09/30/2015	14/871,670
Implicit Software Dependency Analysis	09/30/2015	14/871,983
Template Dependency Relocation	09/30/2015	14/871,813
Specifying a Model Architecture	09/30/2015	14/871,956
Hierarchical Dependency Analysis Enhancements	09/30/2015	14/871,961
Managing Disjoint-OR Trees	09/30/2015	14/871,973
Virtual Compositions	09/30/2015	14/871,996

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RECORDED: 04/08/2016