

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4623096

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
<b>Name</b>		<b>Execution Date</b>
VCVC III LLC		09/20/2017
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	FIVER LLC	
<b>Street Address:</b>	2711 CENTERVILLE ROAD, SUITE 400	
<b>City:</b>	WILMINGTON	
<b>State/Country:</b>	DELAWARE	
<b>Postal Code:</b>	19808	
<b>PROPERTY NUMBERS Total: 56</b>		
<b>Property Type</b>	<b>Number</b>	
Patent Number:	8594996	
Patent Number:	9613004	
Application Number:	15444302	
Patent Number:	8700604	
PCT Number:	US2008080202	
Patent Number:	9471670	
Application Number:	15233790	
Patent Number:	8645372	
Application Number:	14169909	
Patent Number:	8838633	
Patent Number:	8645125	
Patent Number:	9092416	
Patent Number:	9501468	
Application Number:	15294627	
Patent Number:	8725739	
Application Number:	14231238	
Patent Number:	7283951	
Patent Number:	7398201	
Patent Number:	7526425	
Patent Number:	8131540	

Property Type	Number
Patent Number:	7953593
Patent Number:	8856096
Patent Number:	9378285
Patent Number:	8954469
Application Number:	14613163
Patent Number:	6510406
Patent Number:	6757646
Patent Number:	7051017
Patent Number:	7269598
Patent Number:	6862710
Patent Number:	7640267
Application Number:	14693013
Patent Number:	7398261
Patent Number:	7584208
Patent Number:	8161066
Patent Number:	7433876
Patent Number:	8275796
Patent Number:	9189479
Patent Number:	8190684
Patent Number:	8965979
Patent Number:	7707161
Patent Number:	8060538
Patent Number:	8924838
Application Number:	14570671
Patent Number:	8868560
Patent Number:	8438124
Application Number:	14520260
Application Number:	12760424
Patent Number:	8862579
Patent Number:	9607089
Application Number:	15430388
Patent Number:	9037567
Application Number:	14713687
Patent Number:	8200617
Patent Number:	9613149
Application Number:	15436341

**CORRESPONDENCE DATA**

**Fax Number:** (650)838-4350

***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:** 650-838-4300

**Email:** ewelply@perkinscoie.com

**Correspondent Name:** PERKINS COIE LLP

**Address Line 1:** P.O. BOX 1247

**Address Line 4:** SEATTLE, WASHINGTON 98111-1247

<b>ATTORNEY DOCKET NUMBER:</b>	FIVER-8807
--------------------------------	------------

<b>NAME OF SUBMITTER:</b>	EILEEN M. WELPLY, PARALEGAL
---------------------------	-----------------------------

<b>SIGNATURE:</b>	/Eileen M. Welply/
-------------------	--------------------

<b>DATE SIGNED:</b>	10/02/2017
---------------------	------------

**Total Attachments: 8**

source=VulcanAssignment1#page1.tif

source=VulcanAssignment1#page2.tif

source=VulcanAssignment1#page3.tif

source=VulcanAssignment1#page4.tif

source=VulcanAssignment1#page5.tif

source=VulcanAssignment1#page6.tif

source=VulcanAssignment1#page7.tif

source=VulcanAssignment1#page8.tif

### ASSIGNMENT OF PATENT RIGHTS

For good and valuable consideration, the receipt of which is hereby acknowledged, VCVC III LLC, a Delaware limited liability company with an address at 505 Fifth Ave S, Suite 900, Seattle, WA 98104 ("Assignor"), does hereby sell, assign, transfer, and convey unto Fiver LLC, a Delaware limited liability company with an address at 2711 Centerville Road, Suite 400, Wilmington, Delaware 19808 ("Assignee"), or its designees, all right, title, and interest in and to any and all of the following (collectively, the "Patent Rights"):

(a) the patent application(s) and patent(s) listed in the table below (the "Patents");

Patent No. / Application No.	Country	Filing Date	Title of Patent
8,594,996 (12/288,158)	US	10/15/2008	NLP-BASED ENTITY RECOGNITION AND DISAMBIGUATION
2008312487	AU	4/20/2010	NLP-BASED ENTITY RECOGNITION AND DISAMBIGUATION
2,703,007	CA	4/16/2010	NLP-BASED ENTITY RECOGNITION AND DISAMBIGUATION
08839965.4	EP	4/30/2010	NLP-BASED ENTITY RECOGNITION AND DISAMBIGUATION
9,613,004 (13/944,340)	US	7/17/2013	NLP-BASED ENTITY RECOGNITION AND DISAMBIGUATION
15/444,302	US	2/27/2017	NLP-BASED ENTITY RECOGNITION AND DISAMBIGUATION
8,700,604 (12/288,349)	US	10/16/2008	NLP-BASED CONTENT RECOMMENDER
PCT/US08/80202	WO	10/16/2008	NLP-BASED CONTENT RECOMMENDER
2008312423	AU	4/20/2010	NLP-BASED CONTENT RECOMMENDER
2,702,937	CA	4/16/2010	NLP-BASED CONTENT RECOMMENDER
08840300.1	EP	5/4/2010	NLP-BASED CONTENT RECOMMENDER
9,471,670 (14/181,591)	US	2/14/2014	NLP-BASED CONTENT RECOMMENDER
15/233,790	US	8/10/2016	NLP-BASED CONTENT RECOMMENDER
8,645,372 (12/915,213)	US	10/29/2010	KEYWORD-BASED SEARCH ENGINE RESULTS USING ENHANCED QUERY STRATEGIES
2,779,208	CA	4/27/2012	IMPROVING KEYWORD-BASED SEARCH ENGINE RESULTS USING ENHANCED QUERY STRATEGIES

14/169,909	US	1/31/2014	KEYWORD-BASED SEARCH ENGINE RESULTS USING ENHANCED QUERY STRATEGIES
2,551,803	CA	2/12/2004	METHOD AND SYSTEM FOR ENHANCED DATA SEARCHING
2,823,178	CA	2/12/2004	METHOD AND SYSTEM FOR ENHANCED DATA SEARCHING
8,838,633 (13/208,278)	US	8/11/2011	NLP-BASED SENTIMENT ANALYSIS
8,645,125 (13/075,799)	US	3/30/2011	NLP-BASED SYSTEMS AND METHODS FOR PROVIDING QUOTATIONS
9,092,416 (14/169,972)	US	1/31/2014	NLP-BASED SYSTEMS AND METHODS FOR PROVIDING QUOTATIONS
9,501,468 (14/748,137)	US	6/23/2015	NLP-BASED SYSTEMS AND METHODS FOR PROVIDING QUOTATIONS
15/294,627	US	10/14/2016	NLP-BASED SYSTEMS AND METHODS FOR PROVIDING QUOTATIONS
8,725,739 (13/286,778)	US	11/1/2011	CATEGORY-BASED CONTENT RECOMMENDATION
14/231,238	US	3/31/2014	CATEGORY-BASED CONTENT RECOMMENDATION
7,283,951 (10/007,299)	US	11/8/2001	METHOD AND SYSTEM FOR ENHANCED DATA SEARCHING
2,457,693	CA	8/14/2002	METHOD AND SYSTEM FOR ENHANCED DATA SEARCHING
02757098.5	EP	8/14/2002	METHOD AND SYSTEM FOR ENHANCED DATA SEARCHING
04109167.4	HK	11/19/2004	METHOD AND SYSTEM FOR ENHANCED DATA SEARCHING
2004/001488	MX	8/14/2002	METHOD AND SYSTEM FOR ENHANCED DATA SEARCHING
7,398,201 (10/371,399)	US	2/19/2003	METHOD AND SYSTEM FOR ENHANCED DATA SEARCHING
542223	NZ	2/12/2004	METHOD AND SYSTEM FOR ENHANCED DATA SEARCHING
7,526,425 (11/012,089)	US	12/13/2004	METHOD AND SYSTEM FOR EXTENDING KEYWORD SEARCHING TO SYNTACTICALLY AND SEMANTICALLY ANNOTATED DATA
8,131,540 (12/401,421)	US	3/10/2009	METHOD AND SYSTEM FOR EXTENDING KEYWORD SEARCHING TO SYNTACTICALLY AND SEMANTICALLY ANNOTATED DATA

7,953,593 (12/401,386)	US	3/10/2009	METHOD AND SYSTEM FOR EXTENDING KEYWORD SEARCHING TO SYNTACTICALLY AND SEMANTICALLY ANNOTATED DATA
2,633,458	CA	12/13/2005	METHOD AND SYSTEM FOR EXTENDING KEYWORD SEARCHING TO SYNTACTICALLY AND SEMANTICALLY ANNOTATED DATA
05853812.5	EP	12/13/2005	METHOD AND SYSTEM FOR EXTENDING KEYWORD SEARCHING TO SYNTACTICALLY AND SEMANTICALLY ANNOTATED DATA
08103737.4	HK	4/2/2008	METHOD AND SYSTEM FOR EXTENDING KEYWORD SEARCHING TO SYNTACTICALLY AND SEMANTICALLY ANNOTATED DATA
8,856,096 (11/601,612)	US	11/16/2006	EXTENDING KEYWORD SEARCHING TO SYNTACTICALLY AND SEMANTICALLY ANNOTATED DATA
2,669,236	CA	5/8/2009	EXTENDING KEYWORD SEARCHING TO SYNTACTICALLY AND SEMANTICALLY ANNOTATED DATA
06827854.8	EP	11/16/2006	EXTENDING KEYWORD SEARCHING TO SYNTACTICALLY AND SEMANTICALLY ANNOTATED DATA
569107	NZ	11/16/2006	EXTENDING KEYWORD SEARCHING TO SYNTACTICALLY AND SEMANTICALLY ANNOTATED DATA
9,378,285 (14/479,094)	US	9/5/2014	EXTENDING KEYWORD SEARCHING TO SYNTACTICALLY AND SEMANTICALLY ANNOTATED DATA
8,954,469 (12/049,184)	US	3/14/2008	QUERY TEMPLATES AND LABELED SEARCH TIP SYSTEM, METHODS, AND TECHNIQUES
2,717,462	CA	9/8/2010	QUERY TEMPLATES AND LABELED SEARCH TIP SYSTEM, METHODS, AND TECHNIQUES
14/613,163	US	2/3/2015	QUERY TEMPLATES AND LABELED SEARCH TIP SYSTEM, METHODS, AND TECHNIQUES
6,510,406 (09/532,605)	US	3/22/2000	INVERSE INFERENCE ENGINE FOR HIGH PERFORMANCE WEB SEARCH
6,757,646 (09/962,798)	US	9/25/2001	EXTENDED FUNCTIONALITY FOR AN INVERSE INFERENCE ENGINE BASED WEB SEARCH

7,051,017 (10/316,973)	US	12/10/2002	INVERSE INFERENCE ENGINE FOR HIGH PERFORMANCE WEB SEARCH
7,269,598 (10/855,786)	US	5/26/2004	EXTENDED FUNCTIONALITY FOR AN INVERSE INFERENCE ENGINE BASED WEB SEARCH
6,862,710 (09/533,884)	US	3/22/2000	INTERNET NAVIGATION USING SOFT HYPERLINKS
2,423,476	CA	9/25/2001	EXTENDED FUNCTIONALITY FOR AN INVERSE INFERENCE ENGINE BASED WEB SEARCH
01977165.8	EP	9/25/2001	EXTENDED FUNCTIONALITY FOR AN INVERSE INFERENCE ENGINE BASED WEB SEARCH
03109285.2	HK	12/22/2003	EXTENDED FUNCTIONALITY FOR AN INVERSE INFERENCE ENGINE BASED WEB SEARCH
7,640,267	US	11/20/2003	METHODS AND SYSTEMS FOR MANAGING ENTITIES IN A COMPUTING DEVICE USING SEMANTIC OBJECTS
14/693,013	US	4/22/2015	SEMANTICALLY REPRESENTING A TARGET ENTITY USING A SEMANTIC OBJECT
7,398,261	US	11/20/2003	METHOD AND SYSTEM FOR MANAGING AND TRACKING SEMANTIC OBJECTS
7,584,208	US	11/20/2003	METHODS AND SYSTEMS FOR MANAGING OFFERS AND REQUESTS IN A NETWORK
8,161,066	US	1/23/2009	METHODS AND SYSTEMS FOR CREATING A SEMANTIC OBJECT
7,433,876	US	2/19/2005	SEMANTIC WEB PORTAL AND PLATFORM
8,275,796	US	8/22/2008	SEMANTIC WEB PORTAL AND PLATFORM
9,189,479	US	9/12/2012	SEMANTIC WEB PORTAL AND PLATFORM
8,190,684	US	4/16/2008	METHODS AND SYSTEMS FOR SEMANTICALLY MANAGING OFFERS AND REQUESTS OVER A NETWORK
8,965,979	US	4/24/2012	METHODS AND SYSTEMS FOR SEMANTICALLY MANAGING OFFERS AND REQUESTS OVER A NETWORK
7,707,161 (11/489,243)	US	7/18/2006	METHOD AND SYSTEM FOR CREATING A CONCEPT-OBJECT DATABASE

8,060,538 (12/718,774)	US	3/5/2010	METHOD AND SYSTEM FOR CREATING A CONCEPT-OBJECT DATABASE
8,924,838 (11/835,079)	US	8/7/2007	HARVESTING DATA FROM PAGE
14/570,671	US	12/15/2014	HARVESTING DATA FROM PAGE
8,868,560 (11/874,881)	US	10/18/2007	SYSTEM AND METHOD OF A KNOWLEDGE MANAGEMENT AND NETWORKING ENVIRONMENT
8,438,124 (11/874,882)	US	10/18/2007	SYSTEM AND METHOD OF A KNOWLEDGE MANAGEMENT AND NETWORKING ENVIRONMENT
14/520,260	US	10/21/2014	SYSTEM AND METHOD OF A KNOWLEDGE MANAGEMENT AND NETWORKING ENVIRONMENT
12/760,424	US	4/14/2010	SEARCH-ENHANCED SEMANTIC ADVERTISING
8,862,579 (12/760,387)	US	4/14/2010	SEARCH AND SEARCH OPTIMIZATION USING A PATTERN OF A LOCATION IDENTIFIER
9,607,089 (14/514,313)	US	10/14/2014	SEARCH AND SEARCH OPTIMIZATION USING A PATTERN OF A LOCATION IDENTIFIER
15/430,388	US	2/10/2017	SEARCH AND SEARCH OPTIMIZATION USING A PATTERN OF A LOCATION IDENTIFIER
9,037,567 (12/760,411)	US	4/14/2010	GENERATING USER-CUSTOMIZED SEARCH RESULTS AND BUILDING A SEMANTICS-ENHANCED SEARCH ENGINE
14/713,687	US	5/15/2015	GENERATING USER-CUSTOMIZED SEARCH RESULTS AND BUILDING A SEMANTICS-ENHANCED SEARCH ENGINE
8,200,617 (12/489,352)	US	6/22/2009	AUTOMATIC MAPPING OF A LOCATION IDENTIFIER PATTERN OF AN OBJECT TO A SEMANTIC TYPE USING OBJECT METADATA
9,613,149 (13/450,416)	US	4/18/2012	AUTOMATIC MAPPING OF A LOCATION IDENTIFIER PATTERN OF AN OBJECT TO A SEMANTIC TYPE USING OBJECT METADATA
15/436,341	US	2/17/2017	AUTOMATIC MAPPING OF A LOCATION IDENTIFIER PATTERN OF AN OBJECT TO A SEMANTIC TYPE USING OBJECT METADATA



(b) all patents and patent applications to which any of the Patents claims priority or for which any of the Patents forms a basis for priority;

(c) all reissues, results of any reexaminations, extensions, continuations, continuations in part, continuing prosecution applications, requests for continuing examinations, divisions and registrations of any item in any of the foregoing categories (a) and (b);

(d) all foreign patents, foreign patent applications, and foreign counterparts of any item in any of the foregoing categories (a) through (c), including, without limitation, certificates of invention, utility models, industrial design protection, design patent protection, and other similar governmental grants or issuances;

(e) inventions, invention disclosures, and discoveries described in any of the Patents and/or any item in the foregoing categories (b) through (d) that (i) are included in any claim in the Patents and/or any item in the foregoing categories (b) through (d), (ii) are subject matter capable of being reduced to a patent claim in a reissue or reexamination proceeding brought on any of the Patents and/or any item in the foregoing categories (b) through (d), and/or (iii) could have been included as a claim in any of the Patents and/or any item in the foregoing categories (b) through (e) based upon descriptions in any of the Patents;

(f) all rights to apply in any or all countries of the world for patents, certificates of invention, utility models, industrial design protections, design patent protections, or other similar governmental grants or issuances of any type related to any item in any of the foregoing categories (a) through (e), including, without limitation, under the Paris Convention for the Protection of Industrial Property, the International Patent Cooperation Treaty, or any other similar convention, treaty, agreement, or understanding;

(g) all causes of action (whether known or unknown or whether currently pending, filed, or otherwise) and other enforcement rights under, or on account of, any of the Patents and/or any item in any of the foregoing categories (b) through (f), including, without limitation, all causes of action and other enforcement rights for

- (1) damages,
- (2) injunctive relief, and
- (3) any other remedies of any kind

for past, current, and future infringement; and

(h) all rights to collect royalties and other payments under or on account of any of the Patents and/or any item in any of the foregoing categories (b) through (g).

Except as expressly set forth in the related Patent Purchase Agreement between the Assignor and Assignee, the Patent Rights are assigned "as is" and without any representation or warranty of any kind, express or implied, including without limitation any warranties of or related to title, non-infringement, merchantability, fitness for a particular purpose, validity or enforceability.

Assignor hereby authorizes the respective patent office or governmental agency in each jurisdiction to issue any and all patents, certificates of invention, utility models or other governmental grants or issuances that may be granted upon any of the Patent Rights in the name of Assignee, as the assignee to the entire interest therein.

Assignor will, at the reasonable request of Assignee, do all things necessary, proper, or advisable, including without limitation, the execution, acknowledgment, and recordation of specific assignments, oaths, declarations, and other documents on a country-by-country basis, to assist Assignee in obtaining, perfecting, sustaining, and/or enforcing the Patent Rights.

The terms and conditions of this Assignment of Patent Rights will inure to the benefit of Assignee, its successors, assigns, and other legal representatives and will be binding upon Assignor, its successors, assigns, and other legal representatives.

IN WITNESS WHEREOF this Assignment of Patent Rights is executed at  
Seattle, WA, on September 20, 2017.

ASSIGNOR:

VCVC III LLC

By: VCVC Management III LLC, Its Manager

By: Cougar Investment Holdings LLC

By: Susan Drake  
Name: Susan Drake  
Title: Vice President  
(Signature MUST be attested)

#### ATTESTATION OF SIGNATURE PURSUANT TO 28 U.S.C. § 1746

The undersigned witnessed the signature of Susan Drake to the above Assignment of Patent Rights on behalf of VCVC III LLC and makes the following statements;

1. I am over the age of 18 and competent to testify as to the facts in this Attestation block if called upon to do so.
2. Susan Drake is personally known to me (or proved to me on the basis of satisfactory evidence) and appeared before me on 9/20, 2017 to execute the above Assignment of Patent Rights on behalf of VCVC III LLC.
3. Susan Drake subscribed to the above Assignment of Patent Rights on behalf of VCVC III LLC.

I declare under penalty of perjury under the laws of the United States of America that the statements made in the three (3) numbered paragraphs immediately above are true and correct.

EXECUTED on 9/20/2017 (date)

Carolyn Vahromov  
Print Name Carolyn Vahromov