PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5891814

SUBMISSION TYPE:	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:	RELEASE OF SECURITY INTEREST		

CONVEYING PARTY DATA

Name	Execution Date	
CRESTLINE DIRECT FINANCE, L.P.	12/20/2019	

RECEIVING PARTY DATA

Name:	EMPIRE TECHNOLOGY DEVELOPMENT LLC		
Street Address:	C/O ALLIED INVENTORS, LLC		
Internal Address:	520 PIKE STREET, SUITE 1520		
City:	SEATTLE		
State/Country:	WASHINGTON		
Postal Code:	98101		

PROPERTY NUMBERS Total: 29

Property Type	Number
Patent Number:	8214344
Patent Number:	8495051
Patent Number:	9201970
Patent Number:	10380206
Patent Number:	8290924
Patent Number:	9275404
Application Number:	14988413
Patent Number:	9245049
Patent Number:	9324024
Application Number:	15051857
Patent Number:	9336220
Patent Number:	9558261
Patent Number:	8738561
Patent Number:	8566363
Patent Number:	9270491
Patent Number:	8510241
Patent Number:	9734144
Patent Number:	9390164
Application Number:	14410056

PATENT REEL: 051404 FRAME: 0666

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Property Type	Number
Patent Number:	8996439
Application Number:	14412412
Patent Number:	9959307
Patent Number:	9740763
Patent Number:	9489384
Application Number:	14374144
Patent Number:	9361360
Patent Number:	9959317
Patent Number:	9811383
Application Number:	15786165

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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NAME OF SUBMITTER:	LAURA TREMONT			
SIGNATURE:	/Laura Tremont/			
DATE SIGNED:	01/02/2020			

Total Attachments: 3

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NOTICE OF RELEASE OF SECURITY INTEREST IN PATENTS

Dated as of December 20, 2019

The lien and security interest evidenced by that certain Patent Security Agreement, dated as of December 28, 2018, executed by, *inter alia*, EMPIRE TECHNOLOGY DEVELOPMENT LLC, a Delaware limited liability company (the "Grantor"), in favor of CRESTLINE DIRECT FINANCE, L.P., as administrative agent (the "Agent"), which was duly recorded on January 29, 2019, at Reel 048373, Frame 0217 in the United States Patent and Trademark Office, and any other right, title or interest granted to the Agent solely in the patents set forth on Schedule 1 attached hereto is hereby terminated, cancelled and released, without representation or warranty, and the Agent hereby re-assigns to the Grantor any right, title or interest it may have in or to any of the patents set forth on Schedule 1.

CRESTLINE DIRECT FINANCE, L.P.,

as Agent

By: Crestline Direct Finance (GP), L.L.C., its general

partner

By: Crestline Investors, Inc., its managing member

By: 7/000

Name: John Cochran Title: Vice President

SCHEDULE 1

Patent Registrations

Title	Status	Country	App. No.	Publication No.	Patent No.
SEARCH ENGINE INFERENCE	Issued	US	12/724,660	US20110231379	8214344
BASED VIRTUAL ASSISTANCE	100000		12,721,000	0.020110201077	
SEARCH ENGINE INFERENCE BASED VIRTUAL ASSISTANCE	Issued	US	13/479,676	US20120233146	8495051
SEARCH ENGINE INFERENCE BASED VIRTUAL ASSISTANCE	Issued	US	13/919,705	US20130282692	9201970
SEARCH ENGINE INFERENCE BASED VIRTUAL ASSISTANCE	Issued	US	14/851,226	US20160004780	10380206
Providing answer to keyword based query from natural owner of information	Issued	US	12/504,684	US20100057723	8290924
ANALYZING COMMUNICATIONS TO DETERMINE BUSINESS ENTITY POPULARITY	Issued	US	13/497,494	US20130046706	9275404
ANALYZING COMMUNICATIONS TO DETERMINE BUSINESS ENTITY POPULARITY	Abandoned	US	14/988,413	US20160132943	0
Performing Queries Using Semantically Restricted Relations	Issued	US	13/496,773	US20120278273	9245049
PSEUDO MESSAGE RECOGNITION BASED ON ONTOLOGY REASONING	Issued	US	13/810,815	US20130204829	9324024
PSEUDO MESSAGE RECOGNITION BASED ON ONTOLOGY REASONING	Published	US	15/051,857	US20160171375	0
ONTOLOGY-BASED DATA ACCESS MONITORING	Issued	US	14/439,898	US20150317322	9336220
ONTOLOGY-BASED DATA ACCESS MONITORING	Issued	US	15/092,229	US20160217205	9558261
BUT REASONING IN INCONSISTENT KNOWLEDGE BASE	Issued	US	13/818,305	US20130151459	8738561
Ontology Expansion	Issued	US	13/376,804	US20120278363	8566363
SCALABLE NETWORKED DEVICE DYNAMIC MAPPING	Issued	US	13/511,651	US20130124706	9270491
Approach for solving global optimization problem	Issued	US	12/541,171	US20100057652	8510241
THREE-DIMENSIONAL LATENT SEMANTIC ANALYSIS	Issued	US	14/891,810	US20160283467	9734144

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Title	Status	Country	App. No.	Publication No.	Patent No.
IDENTIFYING RELATIONSHIPS AMONG WORDS IN SEMANTIC WEB	Issued	US	14/408,753	US20150199425	9390164
INCREMENTAL REASONING BASED ON SCALABLE AND DYNAMICAL SEMANTIC DATA	Abandoned	US	14/410,056	US20150199607	0
Scalable Reasoning Using a Polarity- Based Module	Issued	US	13/203,969	US20120109870	8996439
COARSE SEMANTIC DATA SET ENHANCEMENT FOR A REASONING TASK	Abandoned	US	14/412,412	US20150154178	0
AUTOMATIC QUESTION SORTING	Issued	US	14/431,490	US20160048545	9959307
ONTOLOGY DECOMPOSER	Issued	US	14/777,668	US20160140203	9740763
CONTENT PROVIDING TECHNIQUES	Issued	US	13/992,737	US20140195537	9489384
INFORMATION EXTRACTION FROM SEMANTIC DATA	Abandoned	US	14/374,144	US20160140105	0
METHOD AND SYSTEM FOR RETRIEVING INFORMATION FROM SEMANTIC DATABASE	Issued	US	13/814,940	US20130138659	9361360
Semantic Data Generation	Issued	US	14/434,227	US20160253323	9959317
PROCESSING A COMPOSITE TASK BASED ON A SEMANTIC RELATION GRAPH	Issued	US	14/647,701	US20160041847	9811383
COMPOSITE TASK PROCESSOR	Abandoned	US	15/786,165	US20180039522	0

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