

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT6516855

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT

**CONVEYING PARTY DATA**

Name	Execution Date
LUMEDYNE TECHNOLOGIES INCORPORATED	12/17/2020

**RECEIVING PARTY DATA**

<b>Name:</b>	GOOGLE LLC
<b>Street Address:</b>	1600 AMPHITHEATRE PARKWAY
<b>City:</b>	MOUNTAIN VIEW
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	94043

**PROPERTY NUMBERS Total: 16**

Property Type	Number
Application Number:	15160091
Application Number:	15160098
Application Number:	14751465
Application Number:	14751536
Application Number:	14751727
Application Number:	15227773
Application Number:	14751347
Application Number:	14954749
Application Number:	15198924
Application Number:	15221563
Application Number:	15221566
Application Number:	15267024
Application Number:	15275188
Application Number:	14751745
Application Number:	12534538
Application Number:	13588643

**CORRESPONDENCE DATA**

Fax Number:

*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.*

**PATENT**

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**Email:** Todd@colbynipper.com  
**Correspondent Name:** COLBY NIPPER  
**Address Line 1:** 291 E. SHORE DRIVE  
**Address Line 2:** SUITE 200  
**Address Line 4:** EAGLE, IDAHO 83616

**ATTORNEY DOCKET NUMBER:** GOOGLE/LUMEDYNE

**NAME OF SUBMITTER:** MICHAEL K. COLBY

**SIGNATURE:** /Michael K. Colby/

**DATE SIGNED:** 01/26/2021

**Total Attachments: 10**

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## ASSIGNMENT

WHEREAS, Lumedyne Technologies Incorporated, a corporation formed under the laws of the State of California and having a principal place of business at 9275 Sky Park Ct, Suite 100, San Diego, CA 92123 ("**Lumedyne**"), is the owner of the entire right, title, and interest in and to the patents and/or patent applications listed in the attached Exhibit A ("**Patents and Patent Applications**").

WHEREAS, GOOGLE LLC, a limited liability company organized under the laws of the State of Delaware, having a place of business at 1600 Amphitheatre Parkway, Mountain View, CA 94043 ("**Google**"), desires to obtain the entire right, title, and interest in and to the **Patents and Patent Applications**.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration received by **Lumedyne** from **Google**, the receipt and sufficiency of which is hereby acknowledged, **Lumedyne** hereby assigns and transfers to **Google** the entire right, title, and interest in and to the **Patents and Patent Applications**, and all rights of enforcement thereto, including all rights to sue or recover for the past infringement thereof, and further including the right to file and prosecute in its own name, wherever so permitted by law, patent applications, including corresponding applications, based on any of the **Patents and Patent Applications**, and to claim priority to any of the **Patents and Patent Applications** pursuant to the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes. **Google** may apply for and receive patents in its own name wherever so permitted by law and **Lumedyne** shall, when requested by **Google**, execute or cause to

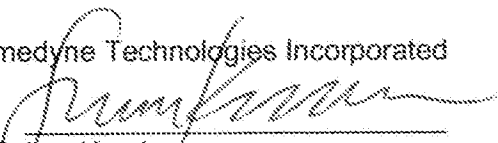
be executed all rightful oaths, assignments, and powers of attorney to **Google** or to agents and legal representatives of **Google**, and all other papers necessary and proper to carry out the intent and purposes of this Assignment, and **Lumedyne** further agrees:

- a. to execute all papers necessary in connection with the **Patents and Patent Applications**, and any continuing, divisional, reissue, reexamination or other corresponding application thereof and to execute any separate Assignment in connection with such application as **Google** may deem necessary or expedient; and
- b. to perform all affirmative acts which may be necessary to obtain a grant of a valid patent to **Google** on any of the **Patents and Patent Applications** and on any continuation, division, reissue, or reexamination of any of the **Patents and Patent Applications**.

**Lumedyne** retains no ownership rights in the **Patents and Patent Applications** and the rights transferred to **Google** hereunder.

*[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]*

IN WITNESS WHEREOF, Lumedyne has caused this Assignment to be executed by its  
duly authorized representative on this 17 day of December, 2020.

Lumedyne Technologies Incorporated  
By:   
Svilen Karaivanov

Title: Director, Lumedyne Technologies  
Incorporated

Date: \_\_\_\_\_

Google hereby accepts the receipt of the entire right, title, and interest in and to the Patents and Patent Applications.

Google LLC

By: Michael Lee  
Michael Lee

Title: Authorized Signatory of Google LLC

Date: December 23, 2020

**Exhibit A - Patents and Patent Applications**

<b>Application No.</b>	<b>Title</b>	<b>Docket No.</b>	<b>Case Status</b>	<b>Jurisdiction</b>
15/160,091	Extracting Inertial Information from Nonlinear Periodic Signals	2381000US	Issued	USA
201680019583.0	Extracting inertial information from nonlinear periodic signals	2381000CN	Allowed	China
20160730553	Extracting inertial information from nonlinear periodic signals	2381000EP	Published	Europe
105115787	Systems and Methods for Extracting Inertial Information from Nonlinear Periodic Signals	2381000TW	NFA/Issued	Taiwan
107139565	Systems and Methods for Extracting Inertial Information from Nonlinear Periodic Signals	2381000TWDIV	Issued	Taiwan
15/160,098	Extracting inertial information from nonlinear periodic signals	2381001US	Issued	USA
14/751,465	Systems and methods for extracting system parameters from nonlinear periodic signals from sensors	578313US	Issued	USA
14/751,536	Systems and methods for extracting system parameters from nonlinear periodic signals from sensors	578312US	Issued	USA

14/751,727	Systems and methods for controlling oscillation of a gyroscope	578311US	Issued	USA
20150734284	System and methods for determining rotation from nonlinear periodic signals	578310EP	Abandoned	Europe
201580034055	System and methods for determining rotation from nonlinear periodic signals	578310CN	Abandoned	China
15/227,773	Systems and methods for extracting system parameters from nonlinear periodic signals from sensors	578309USCON	Abandoned	USA
20120825824	Time Domain Switched Analog-to Digital Converter Apparatus And Methods	578303EP	NFA	Europe
2014527206A	Time Domain Switched Analog-to Digital Converter Apparatus And Methods	578303JP	Abandoned	Japan
2012800512668	Time domain switched analog-to-digital converter apparatus and methods	578303CN	Issued	China
201610629158	Time domain switched analog-to-digital converter apparatus and methods	578303CNDIV	NFA	China
14/751,347	Systems and methods for extracting system parameters from nonlinear periodic signals from sensors	578309US	Issued	USA
2015-117887	Apparatus and Methods for Time Domain Measurement	578302JPDIV	Abandoned	Japan



20150734805	Systems and methods for extracting system parameters from nonlinear periodic signals from sensors	578309EP	Abandoned	Europe
201580034051.0	Systems and methods for extracting system parameters from nonlinear periodic signals from sensors	578309CN	NFA	China
14/954,749	Systems and methods for determining inertial parameters using integration	2461500US	Abandoned	USA
201680038756.0	System and method for determining inertial parameter using the integration of stream of pulses	2461500CN	NFA	China
20160816074	Systems and methods for determining inertial parameters using integration of pulse streams	2461500EP	Abandoned	Europe
201747044163.0	Systems and methods for determining inertial parameters using integration of pulse streams	2461500IN	NFA	India
2018-502207	System and method for determining inertial parameters using integrals	2461500JP	NFA	Japan
10-2018-7003394	Systems and methods for determining inertia parameters using integration of pulse streams	2461500KR	NFA	Korea
15/198,924	Z-axis physical proximity switch	2407300US	Abandoned	USA
105120796	Systems and Methods for Using a Z-Axis Proximity Switch in an	2407300TW	Allowed	Taiwan

	Inertial Sensor			
15/221,563	Multi-axis, single-drive inertial device	20027800US	Abandoned	USA
106125144	Multi-axis, single-drive inertial device	20027800TW	NFA	Taiwan
15/221,566	Converting rotational motion to linear motion	20027900US	Abandoned	USA
106125146	System for converting rotational motion to linear motion	20027900TW	Issued	Taiwan
201780041650.2	The rotary motion of inertial sensor is converted to the linear movement of its inspection quality block	20027900CN	Published	China
15/267,024	Systems and methods for detecting inertial parameters using a vibratory accelerometer with multiple degrees of freedom	20027600US	Abandoned	USA
201780041639.6	For using the system and method with multivariant vibration accelerometer detection inertial parameter	20027600CN	Published	China
106125143	Systems and methods for detecting inertial parameters using a vibratory accelerometer with multiple degrees of freedom	20027600TW	NFA	Taiwan
15/275,188	Composite vibratory in-plane accelerometer	20027700US	Issued	USA
201780041550.X	Accelerometer in complex vibration plane	20027700CN	Published	China
602017016666.9	Composite vibratory in-plane accelerometer	20027700DE	Issued	Germany
17749073.7	Composite vibratory in-	20027700EP	Issued	Europe

	plane accelerometer			
17749073.7	Composite vibratory in-plane accelerometer	20027700GB	Issued	Great Britain
106125142	Composite mass system and method for determining an inertial parameter	20027700TW	Issued	Taiwan
14/751,745	Systems and methods for determining rotation from nonlinear periodic signals	108827-1318-101	Issued	USA
12/534,538	High Sensitivity Geophone	108827-1308-101	Issued	USA
2010281508	High Sensitivity Geophone	N/A	Issued	Australia
2013501240A	High Sensitivity Geophone	N/A	Pending	Japan
2462472B1	High Sensitivity Geophone	N/A	Issued	Europe
13/588,643	Time domain switched analog-to-digital converter apparatus and methods	N/A	Issued	USA
12/534,538	High Sensitivity Geophone	N/A	Issued	USA
14/751,745	Systems And Methods For Determining Rotation From Nonlinear Periodic Signals	N/A	Issued	USA
201280051266	Time Domain Switched Analog-to Digital Converter Apparatus And Methods	N/A	Issued	China
101129980	Time Domain Switched Analog-to Digital Converter Apparatus And Methods	N/A	Issued	Taiwan

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

**CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California )

County of Santa Clara )

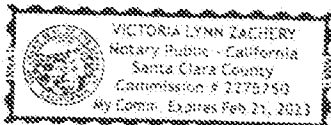
On December 17, 2020 before me, Victoria Lynn Zachery, Notary Public  
Date Here Insert Name and Title of the Officer

personally appeared Sylian Karaivanov  
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature [Handwritten Signature]  
Signature of Notary Public

Place Notary Seal Above

**OPTIONAL**

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

**Description of Attached Document**

Title or Type of Document: \_\_\_\_\_ Document Date: \_\_\_\_\_

Number of Pages: \_\_\_\_\_ Signer(s) Other Than Named Above: \_\_\_\_\_

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: \_\_\_\_\_

Corporate Officer -- Title(s): \_\_\_\_\_

Partner --  Limited  General

Individual  Attorney in Fact

Trustee  Guardian or Conservator

Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_

Signer's Name: \_\_\_\_\_

Corporate Officer -- Title(s): \_\_\_\_\_

Partner --  Limited  General

Individual  Attorney in Fact

Trustee  Guardian or Conservator

Other: \_\_\_\_\_

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