

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ALEXANDER E. MACDONALD	11/08/2017
PETER PLATZER	11/06/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SPIRE GLOBAL, INC.
<b>Street Address:</b>	575 FLORIDA STREET, SUITE 150
<b>City:</b>	SAN FRANCISCO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	94110
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15808954
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<i>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.</i>	
<b>Phone:</b>	212-704-6403
<b>Email:</b>	patents@troutmansanders.com
<b>Correspondent Name:</b>	TROUTMAN SANDERS LLP
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<b>ATTORNEY DOCKET NUMBER:</b>	243004.34 (SPIRE34)
<b>NAME OF SUBMITTER:</b>	MARK LEHI JONES
<b>SIGNATURE:</b>	/Mark Lehi Jones/
<b>DATE SIGNED:</b>	11/10/2017
<b>Total Attachments: 3</b>	
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ASSIGNMENT

WHEREAS, We,

**Alexander E. MACDONALD**

and

**Peter PLATZER**

(collectively referred to as "ASSIGNOR"), have invented certain improvements in:

**SYSTEMS AND METHODS FOR IMPROVED ATMOSPHERIC MONITORING AND  
GPS POSITIONING UTILIZING GNSS TOMOGRAPHIC REFRACTIVITY**

for which a U.S. Non-Provisional Patent Application was filed \_\_\_\_\_ and provided Serial No. \_\_\_\_\_;

for which a PCT International Application was filed \_\_\_\_\_ (date) and provided Application No. PCT/\_\_\_\_\_/\_\_\_\_\_;

OR

**which is filed concurrently herewith;**

and for which future applications may be filed, (collectively referred to as the "Application"),

whereas the above-identified Application was made or authorized to be made by me/us, and we believe that we are the original inventors or original joint inventors of a claimed invention in the Application, and

whereas

**Spire Global, Inc.  
575 Florida Street, Suite 150  
San Francisco, CA 94110**

("ASSIGNEE") desires to purchase all of ASSIGNOR's rights in same;

**NOW THEREFORE**, in consideration of the sum of One Dollar (\$1.00) and other good and valuable considerations paid by the said ASSIGNEE, the receipt and sufficiency of which are hereby acknowledged, ASSIGNOR has and by these presents does hereby sell, assign, transfer and convey unto said ASSIGNEE all of ASSIGNOR's rights, title, and interest in and to said Application, including in and to any conventional, division, continuation, continuation-in-part, substitution, reissue, renewal, reexam, continued prosecution application ("CPA"), or request for continued examination ("RCE") thereof, and in and to all inventions and improvements thereon, (herein collectively referred to as "Related US Applications"), preparatory to obtaining Letters Patent of the

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(herein collectively referred to as "Related US Applications"), preparatory to obtaining Letters Patent of the United States therefore; and ASSIGNOR hereby requests the Commissioner of Patents and Trademarks to issue any and all Letters Patent of the United States resulting from said Application and Related US Applications, to ASSIGNEE, for its interest and for the sole use and benefit of ASSIGNEE and its assigns and legal representatives.

**For the same consideration**, ASSIGNOR, by these presents does sell, assign, and transfer to ASSIGNEE all of ASSIGNOR's rights, title and interest in and to any foreign and international applications related to and/or seeking benefit of said Application and Related US Applications, and in and to all inventions and improvements thereon (herein collectively referred to as "Related Foreign Applications"), in and to any Letters Patent and similar protective rights granted on said Related Foreign Applications, and in and to the right to claim any applicable priority rights arising from or required for said Related Foreign Applications under the terms of any applicable conventions, treaties, statutes, or regulations, said Related Foreign Applications to be filed and issued in the name of ASSIGNEE or its designee, insofar as permitted by applicable law.

**For the same consideration**, ASSIGNOR agrees, without charge to ASSIGNEE, but at ASSIGNEE'S expense, to sign all lawful papers, execute said Application, Related US Applications and Related Foreign Applications, make all assignments and rightful oaths, assist in prosecution of said Application, Related US Applications and Related Foreign Applications, assist in prosecution of legal proceedings, and generally do everything reasonably possible to aid ASSIGNEE its successors, assigns, and nominees, to obtain and enforce proper protection for all said inventions and improvements in all countries throughout the world.

**AND, for the same consideration**, ASSIGNOR also hereby sells, assigns and transfers unto ASSIGNEE all of ASSIGNOR's rights and claims to sue for damages and other remedies with respect to any and all past infringement of all said Application, Related US Applications, and Related Foreign Applications, including said inventions and improvements which may have occurred before the date of this Assignment.

*Alexander E MacDonal*

Alexander E. MACDONALD

*8 Nov 2017*

DATE

\_\_\_\_\_  
Peter PLATZER

\_\_\_\_\_  
DATE

United States therefore; and ASSIGNOR hereby requests the Commissioner of Patents and Trademarks to issue any and all Letters Patent of the United States resulting from said Application and Related US Applications, to ASSIGNEE, for its interest and for the sole use and benefit of ASSIGNEE and its assigns and legal representatives.

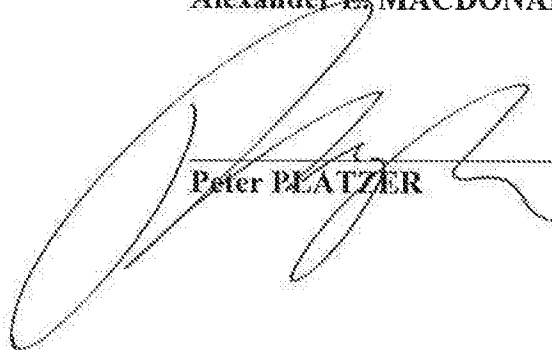
**For the same consideration**, ASSIGNOR, by these presents does sell, assign, and transfer to ASSIGNEE all of ASSIGNOR's rights, title and interest in and to any foreign and international applications related to and/or seeking benefit of said Application and Related US Applications, and in and to all inventions and improvements thereon (herein collectively referred to as "Related Foreign Applications"), in and to any Letters Patent and similar protective rights granted on said Related Foreign Applications, and in and to the right to claim any applicable priority rights arising from or required for said Related Foreign Applications under the terms of any applicable conventions, treaties, statutes, or regulations, said Related Foreign Applications to be filed and issued in the name of ASSIGNEE or its designee, insofar as permitted by applicable law.

**For the same consideration**, ASSIGNOR agrees, without charge to ASSIGNEE, but at ASSIGNEE'S expense, to sign all lawful papers, execute said Application, Related US Applications and Related Foreign Applications, make all assignments and rightful oaths, assist in prosecution of said Application, Related US Applications and Related Foreign Applications, assist in prosecution of legal proceedings, and generally do everything reasonably possible to aid ASSIGNEE its successors, assigns, and nominees, to obtain and enforce proper protection for all said inventions and improvements in all countries throughout the world.

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\_\_\_\_\_  
Alexander E. MACDONALD

\_\_\_\_\_  
DATE

  
\_\_\_\_\_  
Peter PLATZER

\_\_\_\_\_  
Nov 6<sup>th</sup>, 2017  
DATE