

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT5369503

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
NORMAN F KRASNER	11/14/2016
ANDREW SENDONARIS	11/06/2016
CHEN MENG	10/28/2016
JAGADISH VENKATARAMAN	10/28/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	NEXTNAV, LLC
<b>Street Address:</b>	484 OAKMEAD PARKWAY
<b>City:</b>	SUNNYVALE
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	94085
<b>PROPERTY NUMBERS Total: 4</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	61786474
<b>Application Number:</b>	14207351
<b>Application Number:</b>	14207432
<b>PCT Number:</b>	US1424979
<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>	8582312473
<b>Email:</b>	kyle@ptlawgroup.com
<b>Correspondent Name:</b>	KYLE PENDERGRASS
<b>Address Line 1:</b>	1965 CHATSWORTH BOULEVARD
<b>Address Line 4:</b>	SAN DIEGO, CALIFORNIA 92107
<b>ATTORNEY DOCKET NUMBER:</b>	NEXN-010-US1-UPDATED
<b>NAME OF SUBMITTER:</b>	KYLE PENDERGRASS
<b>SIGNATURE:</b>	/Kyle Pendergrass/
<b>DATE SIGNED:</b>	02/11/2019

**Total Attachments: 5**

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**ASSIGNMENT**

I, an undersigned Inventor (the "Assignor"), have made one or more inventions (the "Invention(s)") set forth in the following applications for patent:

U.S. Provisional Patent Application No. 61/786,474, filed 03/15/2013; U.S. Patent Application No. 14/207,351, filed 03/12/2014; U.S. Patent Application No. 14/207,432, filed 03/12/2014; and Patent Cooperation Treaty Application No. PCT/US14/24979, filed 03/12/2014; and U.S. Patent Application No. \_\_\_\_\_, filed on \_\_\_\_\_, entitled METHODS AND SYSTEMS FOR IMPROVING TIME OF ARRIVAL DETERMINATION.

**WHEREAS**, NextNav, LLC, a Delaware Limited Liability Company, having its address at 484 Oakmead Parkway, Sunnyvale, California 94085 (the "Assignee"), is desirous of acquiring the entire right, title, and interest in (a) – (h) below.

**NOW, THEREFORE**, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignor hereby sells, assigns, transfers, and sets over, unto the Assignee, its successors, legal representatives, and assigns, the Assignor's entire right, title, and interest in and to (a) – (h) below:

- (a) the Invention(s);
- (b) the one or more applications for patent identified above;
- (c) the right to file applications for patent of the United States and other countries on the Invention(s), including all rights under the Paris Convention for the Protection of Industrial Property and under the Patent Cooperation Treaty (PCT), and further including all rights under the laws of each country;
- (d) any and all applications for patent of the United States and other countries claiming the Invention(s);
- (e) any and all applications for patent of the United States and other countries claiming priority to any of the one or more applications for patent identified above, including any and all divisionals, continuations, and continuations-in-part;
- (f) any and all applications for patent of the United States and other countries to which any of the one or more applications for patent identified above claims priority, including provisional applications filed in the United States to which any of the one or more applications for patent identified above claim priority;
- (g) any provisional or other right to recover damages, including royalties, for prior infringements of any application for patent identified in the preceding paragraphs (b)-(f); and
- (h) any and all patents of the United States and other countries that may be granted for or on any application for patent identified in the preceding paragraphs, including any and all reissues and extensions of patents.

The above-granted rights, titles, and interests are to be held and enjoyed by the Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives, and assigns, as fully and entirely as the same would have been held and enjoyed by the Assignor had this sale, assignment, transfer and set over not been made.

The Assignor hereby represents to the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents the Assignor is a lawful owner of an undivided interest in the entire right, title, and interest in and to the Invention(s), that the Invention(s) is unencumbered, except, if applicable, by obligation to assign in accordance with a prior agreement between the Assignor and the Assignee, and that the Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth herein.

The Assignor hereby sells, assigns, transfers, and sets over, unto the Assignee, its successors, legal representatives, and assigns, the Assignor's entire right, title, and interest in and to (a) – (h) above to the extent that the Assignor has not done so already via a prior agreement with the Assignee. Where the Assignor has already, via a prior agreement with the Assignee, sold, assigned, transferred, and set over, unto the Assignee, its successors, legal representatives, and assigns, the Assignor's entire right, title, and interest in (a) – (h) above, Assignor hereby confirms that prior agreement.

The Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives, and assigns, that the Assignor will sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done in connection with any and all proceedings for the procurement, maintenance, enforcement and defense of the Invention(s)(s), the one or more applications for patent identified above, any patents that issue from the one or more applications for patent identified above, and any other of items (a) – (h) above, without charge to the Assignor, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns.

The Assignor hereby authorizes and requests any of Kyle M. Pendergrass and his law firm, to insert the filing date, the application number, the title, the docket number, and any other information corresponding to the invention(s) and applications identified above when known.

The Assignor hereby requests the Commissioner of Patents to issue said patents of the United States to the Assignee for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

The Assignor hereby requests foreign patent offices to issue patents in those countries to the Assignee for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

ASSIGNOR(S)

Signature: *Norman F. Krasner* Date: 14 Nov 2016  
Inventor Name: NORMAN F. KRASNER  
Address: 3 Lake Court, Redwood City, CA 94062

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Inventor Name: ANDREW SENDONARIS  
Address: 189 Smith Ranch Ct., Los Gatos, CA 95032

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Inventor Name: CHEN MENG  
Address: 1205, Bldg. 2, Beisihuanzhonglu 33, Beijing 100101, P.R. China

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Inventor Name: JAGADISH VENKATARAMAN  
Address: 437 Camille Cir, Unit 12, San Jose, CA 95134

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ASSIGNOR(S)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Inventor Name: NORMAN F. KRASNER  
Address: 3 Lake Court, Redwood City, CA 94062

Signature:  \_\_\_\_\_ Date: 11/6/2016  
Inventor Name: ANDREW SENDONARIS  
Address: 189 Smith Ranch Ct., Los Gatos, CA 95032

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Inventor Name: CHEN MENG  
Address: 1205, Bldg. 2, Beisihuanzhonglu 33, Beijing 100101, P.R. China

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Inventor Name: JAGADISH VENKATARAMAN  
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Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Inventor Name: NORMAN F. KRASNER  
Address: 3 Lake Court, Redwood City, CA 94062

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Inventor Name: ANDREW SENDONARIS  
Address: 189 Smith Ranch Ct., Los Gatos, CA 95032

Signature:  \_\_\_\_\_ Date: 6/28/2016  
Inventor Name: CHEN MENG  
Address: 1205, Bldg. 2, Beisihuanzhonglu 33, Beijing 100101, P.R. China

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Inventor Name: JAGADISH VENKATARAMAN  
Address: 437 Camille Cir, Unit 12, San Jose, CA 95134

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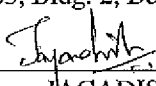
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Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Inventor Name: CHEN MENG  
Address: 1205, Bldg. 2, Beisihuanzhonglu 33, Beijing 100101, P.R. China

Signature:  \_\_\_\_\_ Date: 10/28/10  
Inventor Name: JAGADISH VENKATARAMAN  
Address: 437 Camille Cir, Unit 12, San Jose, CA 95134