

## 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>
JI ZHANG	11/28/2018
SANJIV SINGH	11/30/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	KAARTA, INC.
<b>Street Address:</b>	5001 BAUM BOULEVARD
<b>Internal Address:</b>	SUITE 430
<b>City:</b>	PITTSBURGH
<b>State/Country:</b>	PENNSYLVANIA
<b>Postal Code:</b>	15213
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16125054
<b>CORRESPONDENCE DATA</b>	
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<b>ATTORNEY DOCKET NUMBER:</b>	KRTA-0005-U01
<b>NAME OF SUBMITTER:</b>	JENNIFER SAMMARTIN
<b>SIGNATURE:</b>	/Jennifer Sammartin/
<b>DATE SIGNED:</b>	12/12/2018
<b>Total Attachments: 3</b>	
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**ASSIGNMENT**

WHEREAS, as a below named inventor, I have invented certain new and useful improvements in

for which a United States Patent application was filed on September 7, 2018, and bears Application Number 16/125,054 entitled LASER SCANNER WITH REAL-TIME, ONLINE EGO-MOTION ESTIMATION;

(hereinafter "Application(s)")

AND, WHEREAS, Kaarta, Inc., a corporation of the State of Delaware, having a place of business at 5001 Baum Boulevard, Suite 430, Pittsburgh, PA 15213, (hereinafter the "Assignee"), has acquired, or is desirous of acquiring, the entire right, title, and interest in and to (i) the Application(s), (ii) the inventions and improvements therein disclosed and (iii) any subsequent improvements thereto ((i), (ii) and (iii) collectively, the "Inventions").

NOW, THEREFORE, for good and valuable consideration paid to me by the Assignee, the receipt and sufficiency of which are hereby acknowledged, I as a named inventor (hereinafter the "Assignor"), do hereby confirm my previous assignment, sale and transfer to the Assignee, or if no such previous assignment, sale and transfer occurred, do hereby assign, sell and transfer unto the Assignee the full and exclusive right, title and interest in and to the Inventions for the United States and all foreign countries and any Letters Patent which may issue therefor in the United States and all foreign countries, and all conversions, divisions, reissues, continuations, continuations-in-part, renewals and/or extensions thereof (the "Subsequent Filings"). Such assignment also includes the right to claim priority to the Application(s) and Subsequent Filings under any law, rule, treaty, or convention. Such assignment extends to the full ends of the terms of the Application(s), such Letters Patent and any Subsequent Filings as fully and entirely as the same would have been held and enjoyed by me had assignment not been made. Said full and exclusive right, title, and interest referred to above includes all rights to all past, present and future claims for infringement of any patent resulting from the Inventions including the right to grant licenses, to bring lawsuits, and to recover damages for any past, present, and future infringement, whether known or unknown, now existing or hereafter arising.

I, as a named inventor, covenant that, at the time of my assignment, I was or am a lawful owner of the Inventions and had or have the full right to make assignment of the Inventions. I further covenant that the Inventions are unencumbered and that no license has been granted to make, use, import, offer for sale or sell the Inventions.

And for the consideration aforesaid, I agree individually and, if applicable, jointly, that I will communicate to the Assignee or the representatives thereof any facts known to me respecting the Inventions, and will, upon request but without expense to me, testify in any legal proceedings, sign all lawful papers, execute all documents in connection with the Application(s) and any Subsequent Filing, make all rightful oaths and declarations, and generally do all other and further lawful acts deemed necessary or expedient by the Assignee or by counsel for the Assignee to assist or enable the Assignee to obtain and enforce full benefits from the rights and interests assigned. My assignment shall be binding upon my heirs, executors, administrators and/or assigns, and shall

inure to the benefit of the heirs, executors, administrators, successors and/or assigns, as the case may be, of the Assignee.

The Commissioner of Patents and Trademarks is hereby authorized and requested to issue patents to the Assignee in accordance with the terms of my assignment.

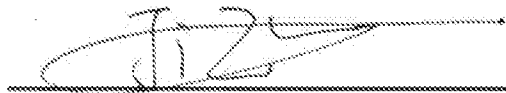
1. FULL NAME OF ASSIGNOR:

RESIDENCE:

JI ZHANG

PITTSBURGH, PA

EXECUTED this 28<sup>th</sup> day of November 2018



SIGNATURE

2. FULL NAME OF ASSIGNOR:

RESIDENCE:

SANJIV SINGH

PITTSBURGH, PA

EXECUTED this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

\_\_\_\_\_

SIGNATURE

inure to the benefit of the heirs, executors, administrators, successors and/or assigns, as the case may be, of the Assignee.

The Commissioner of Patents and Trademarks is hereby authorized and requested to issue patents to the Assignee in accordance with the terms of my assignment.

1. FULL NAME OF ASSIGNOR:

RESIDENCE:

**JI ZHANG**

**PITTSBURGH, PA**

EXECUTED this \_\_\_ day of \_\_\_\_\_, 20\_\_

\_\_\_\_\_  
SIGNATURE

2. FULL NAME OF ASSIGNOR:

RESIDENCE:

**SANJIV SINGH**

**PITTSBURGH, PA**

EXECUTED this 30 day of November, 2018

  
\_\_\_\_\_  
SIGNATURE