

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4414794

|   |   |
|---|---|
| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT                          |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT                              |
| <b>CONVEYING PARTY DATA</b>   |   |
| <b>Name</b>   | <b>Execution Date</b>                   |
| JEREMY NABETH   | 03/30/2017                              |
| ONUR N. DEMIRER   | 03/30/2017                              |
| RAMKUMAR KARUR-SHANMUGAM  | 03/30/2017                              |
| CHOON GEORGE HOONG HOO  | 03/31/2017                              |
| CHRISTIAN SPARKA  | 04/05/2017                              |
| HOYOUNG HEO   | 03/30/2017                              |
| STUART SHERWIN  | 04/06/2017                              |
| FATIMA ANIS   | 04/04/2017                              |
| MARK D. SMITH   | 04/04/2017                              |
| WILLIAM PIERSON   | 03/31/2017                              |
| <b>RECEIVING PARTY DATA</b>   |   |
| <b>Name:</b>  | KLA-TENCOR CORPORATION                  |
| <b>Street Address:</b>  | ONE TECHNOLOGY DRIVE                    |
| <b>City:</b>  | MILPITAS                                |
| <b>State/Country:</b>   | CALIFORNIA                              |
| <b>Postal Code:</b>   | 95035                                   |
| <b>PROPERTY NUMBERS Total: 1</b>  |   |
| <b>Property Type</b>  | <b>Number</b>                           |
| <b>Application Number:</b>  | 15451038                                |
| <b>CORRESPONDENCE DATA</b>  |   |
| <b>Fax Number:</b>  | (402)496-0333                           |
| <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>   | 402.496.0300                            |
| <b>Email:</b>   | file@suiter.com                         |
| <b>Correspondent Name:</b>  | SUITER SWANTZ/KLA JOINT CUSTOMER NUMBER |
| <b>Address Line 1:</b>  | 14301 FNB PARKWAY                       |
| <b>Address Line 2:</b>  | SUITE 220                               |
| <b>Address Line 4:</b>  | OMAHA, NEBRASKA 68154-5299              |
| <b>ATTORNEY DOCKET NUMBER:</b>  | KLA P4818                               |

PATENT

|   |                     |
|---|---------------------|
| <b>NAME OF SUBMITTER:</b>   | MATTHEW A. POULSEN  |
| <b>SIGNATURE:</b>   | /matthew a poulsen/ |
| <b>DATE SIGNED:</b>   | 05/15/2017          |
| <b>Total Attachments: 12</b><br>source=P4818_Assignment#page1.tif<br>source=P4818_Assignment#page2.tif<br>source=P4818_Assignment#page3.tif<br>source=P4818_Assignment#page4.tif<br>source=P4818_Assignment#page5.tif<br>source=P4818_Assignment#page6.tif<br>source=P4818_Assignment#page7.tif<br>source=P4818_Assignment#page8.tif<br>source=P4818_Assignment#page9.tif<br>source=P4818_Assignment#page10.tif<br>source=P4818_Assignment#page11.tif<br>source=P4818_Assignment#page12.tif |                     |

Please return signed/Recorded to:

**CUSTOMER No. 78238**

Sean Patrick Suiter

SUITER • SWANTZ PC LLO

14301 FNB Parkway, Suite 220

Omaha, NE 68154-5299

**ASSIGNMENT OF U.S. PATENT APPLICATION  
(sole or joint inventor(s))**

WHEREAS, the undersigned, to wit:

- 1) Jeremy Nabeth
- 2) Onur N. Demirer
- 3) Ramkumar Karur-Shanmugam
- 4) Choon (George) Hoong Hoo
- 5) Christian Sparka
- 6) Hoyoung Heo
- 7) Stuart Sherwin
- 8) Fatima Anis
- 9) Mark D. Smith
- 10) William Pierson

(hereinafter collectively ASSIGNOR), have made application for United States Letters Patent

- (a) \_\_\_\_\_ which was executed and is being filed herewith in the United States Patent and Trademark Office, titled SYSTEMS AND METHODS FOR AUTOMATED MULTI-ZONE DETECTION AND MODELING
- (b) \_\_\_\_\_ which was filed on \_\_\_\_\_ and titled \_\_\_\_\_
- (c)  X  which was filed on March 6, 2017, and known as Appln. No. 15/451,038, titled SYSTEMS AND METHODS FOR AUTOMATED MULTI-ZONE DETECTION AND MODELING

AND WHEREAS, KLA-Tencor Corporation (hereinafter ASSIGNEE), organized and existing under the laws of Delaware, and having its principal place of business at One Technology Drive, Milpitas, CA 95035, is desirous of acquiring our entire right, title and interest in and to the invention, and in and to the said application and any Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ASSIGNOR does hereby sell, assign and transfer unto ASSIGNEE, its successors, assigns and legal representatives its entire right, title and interest in and to said invention and in and to said application and all patents which may be granted therefore, and all divisions, reissues, substitutions, continuations, continuations-in-part and extensions thereof; and ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue all patents for said invention, or patents resulting therefrom,

insofar as ASSIGNOR's interest is concerned, to the said ASSIGNEE of ASSIGNOR's entire right, title and interest.


ASSIGNOR also hereby sells and assigns to said ASSIGNEE, its successors, assigns and legal representatives the full and exclusive rights, title and interest to the invention disclosed in said application throughout the world, including the right to file applications and obtain patents, utility models, industrial models and designs for said invention in its own name throughout the world including all rights of priority, all rights to publish cautionary notices reserving ownership of said invention and all rights to register said invention in appropriate registries; and

ASSIGNOR further agrees to execute any and all powers of attorney, applications, assignments, declarations, affidavits, and any other papers in connection therewith necessary to perfect such rights, title and interest in ASSIGNEE, its successors, assigns and legal representatives.

ASSIGNOR hereby further agrees to communicate with said ASSIGNEE, or its successors, assigns and legal representatives, any facts known to us respecting any improvements; and, at the expense of said ASSIGNEE, to testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, continuation-in-part, reissue and substitute applications, make all lawful oaths, and generally do everything possible to vest title in said ASSIGNEE and to aid said ASSIGNEE, its successors, assigns and legal representatives to obtain and enforce proper protection for said invention in all countries.

ASSIGNOR hereby grant(s) the firm of SUITER • SWANTZ PC LLO or its agents the power to insert on this assignment any further identification, including but not limited to application number(s) and filing dates, which may be necessary or desirable in order to comply with any rule or request of the United States Patent and Trademark office for the purposes of recording this document.

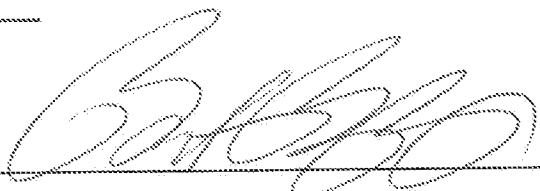
IN WITNESS WHEREOF, we have hereunto signed our names on the day and year set forth below.

  
\_\_\_\_\_  
First Inventor's Signature

3/30/17  
\_\_\_\_\_  
DATE

Jeremy Nabeth  
\_\_\_\_\_  
Inventor's Printed Name

Witness Signature: \_\_\_\_\_



Witness Printed Name: \_\_\_\_\_

Brent Rogers

Witness Address: \_\_\_\_\_

10409 Canyon Mark Way  
Austin, TX 78717

IN WITNESS WHEREOF, we have hereunto signed our names on the day and year set forth below.

  
\_\_\_\_\_  
Second Inventor's Signature

3/30/2017  
\_\_\_\_\_  
DATE

Onur N. Demirer  
\_\_\_\_\_  
Inventor's Printed Name

Witness Signature:

  
\_\_\_\_\_

Witness Printed Name:

Witness Address:

Brent Riggs  
\_\_\_\_\_  
10409 Canyon Mark Way  
\_\_\_\_\_  
Austin, TX 78717  
\_\_\_\_\_

IN WITNESS WHEREOF, we have hereunto signed our names on the day and year set forth below.

K.S. Karur  
Third Inventor's Signature

03/30/2017  
DATE

Ramkumar Karur-Shanmugam  
Inventor's Printed Name

Witness Signature:

Brent Riggs

Witness Printed Name:

Witness Address:

Brent Riggs  
10409 Cannon Mark Way  
Austin, TX 78717


IN WITNESS WHEREOF, we have hereunto signed our names on the day and year set forth below

  
\_\_\_\_\_  
Fourth Inventor's Signature

3/31/2017  
\_\_\_\_\_  
DATE

Choon (George) Hoong Hoo  
\_\_\_\_\_  
Inventor's Printed Name

Witness Signature:

  
\_\_\_\_\_

Witness Printed Name:

Witness Address:

Brent Riggs  
\_\_\_\_\_  
10409 Cannon Mark Way  
\_\_\_\_\_  
Austin, TX 78717  
\_\_\_\_\_



IN WITNESS WHEREOF, we have hereunto signed our names on the day and year set forth below.

Christian Sparka  
Fifth Inventor's Signature

2017-04-05  
DATE

Christian Sparka  
Inventor's Printed Name

Witness Signature:

John Newby

Witness Printed Name:

John Newby

Witness Address:

Moritzburger Weg 67  
Germany, 01109 Dresden

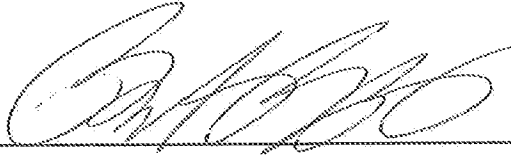
IN WITNESS WHEREOF, we have hereunto signed our names on the day and year set forth below.

Hoyoung Heo  
Sixth Inventor's Signature

3/30/2017  
DATE

Hoyoung Heo  
Inventor's Printed Name

Witness Signature:



Witness Printed Name:

Brent Riggs

Witness Address:

10409 Cannon Mark Way  
Austin, TX 78717

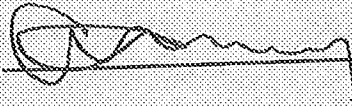
IN WITNESS WHEREOF, we have hereunto signed our names on the day and year set forth below.

  
Seventh Inventor's Signature

4/6/17  
DATE

Stuart Sherwin  
Inventor's Printed Name

Witness Signature:



Witness Printed Name:

Alyssa Weng Conway

Witness Address:

744 Walker Ave  
Oakland, CA 94610

IN WITNESS WHEREOF, we have hereunto signed our names on the day and year set forth below.

Fatima Anis  
Eighth Inventor's Signature

04-04-2017  
DATE

Fatima Anis  
Inventor's Printed Name

Witness Signature:

Siddique Khan

Witness Printed Name:

Witness Address:

Siddique Khan  
875 Blake Wilbur Dr., Stanford  
Cancer Center, Palo Alto, CA, 94304

IN WITNESS WHEREOF, we have hereunto signed our names on the day and year set forth below.

  
\_\_\_\_\_  
Ninth Inventor's Signature

4/4/2017  
\_\_\_\_\_  
DATE

Mark D. Smith  
\_\_\_\_\_  
Inventor's Printed Name

Witness Signature:   
\_\_\_\_\_

Witness Printed Name: Ankur Agarwal  
\_\_\_\_\_

Witness Address: 3 Technology Drive  
Milpitas CA 95035  
\_\_\_\_\_

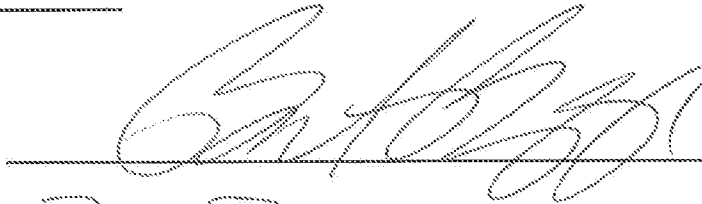
IN WITNESS WHEREOF, we have hereunto signed our names on the day and year set forth below.

  
Tenth Inventor's Signature

3/31/2017  
DATE

William Pierson  
Inventor's Printed Name

Witness Signature:



Witness Printed Name:

Brent Riggs

Witness Address:

10409 Cannon Mark Way  
Austin, TX 78717