06/24/2015 503364895

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3411517

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PETR SHEPELEV	09/30/2013
CHRISTOPHER A LUDDEN	09/30/2013
JEFFREY LUKANC	09/30/2013
STEPHEN L MOREIN	09/30/2013
GREG P SEMERARO	09/30/2013
JOSEPH KURTH REYNOLDS	09/30/2013

RECEIVING PARTY DATA

Name:	SYNAPTICS INCORPORATED
Street Address:	1251 MCKAY DRIVE
City:	SAN JOSE
State/Country:	CALIFORNIA
Postal Code:	95131

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14747405

CORRESPONDENCE DATA

Fax Number: (713)623-4846

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.

Phone: 7136234844

nholland@pattersonsheridan.com, Email:

psdocketing@pattersonsheridan.com

Correspondent Name: PATTERSON + SHERIDAN, LLP Address Line 1: 595 SHREWSBURY AVENUE

Address Line 4: SHREWSBURY, NEW JERSEY 07702

ATTORNEY DOCKET NUMBER:	SYNA/130051US05
NAME OF SUBMITTER:	KEITH TABOADA
SIGNATURE:	/Keith Taboada/
DATE SIGNED:	06/24/2015

PATENT REEL: 035963 FRAME: 0718 503364895

Total Attachments: 11 source=SYNA 130051 US05 - Assignment#page1.tif source=SYNA 130051 US05 - Assignment#page2.tif source=SYNA 130051 US05 - Assignment#page3.tif source=SYNA 130051 US05 - Assignment#page4.tif source=SYNA 130051 US05 - Assignment#page5.tif source=SYNA 130051 US05 - Assignment#page6.tif source=SYNA 130051 US05 - Assignment#page7.tif source=SYNA 130051 US05 - Assignment#page8.tif source=SYNA 130051 US05 - Assignment#page9.tif source=SYNA 130051 US05 - Assignment#page10.tif source=SYNA 130051 US05 - Assignment#page11.tif

PATENT REEL: 035963 FRAME: 0719

ASSIGNMENT, CONVEYANCE, AND AGREEMENT - WORLDWIDE

WHEREAS:

I, an undersigned individual whose name and mailing address appear below:

11	Petr SHEPELEV	2)	Christopher A. LUDDEN
1)	1251 McKay Drive	2)	90 Linden Oaks
	San Jose, CA 95131		Rochester, NY 14625
2.	Jeffrey LUKANC	4)	Stephen L. MOREIN
3)	1251 McKay Drive		1251 McKay Drive
	San Jose, CA 95131		San Jose, CA 95131
£)	Greg P. SEMERARO	6)	Joseph Kurth REYNOLDS
5)	90 Linden Oaks		1251 McKay Drive
	Rochester, NY 14625	ļ	San Jose, CA 95131

have invented certain invention	on(s) described in an	application for Letters F	atent in the United
States ("hereinafter the "APPLICATION (")	ON") enclosed herew	rith or previously filed o	n
under Serial	No	; and entitled:	

MATRIX SENSOR FOR IMAGE TOUCH SENSING

WHEREAS, Synaptics Incorporated, a corporation of the State of Delaware, having a place of business at 1251 McKay Drive, San Jose, California 95131 (hereinafter "SYNAPTICS"), desires to acquire the entire right, title, and interest in and to the invention(s) disclosed in the APPLICATION and all embodiments of such invention(s) previously conceived, made, or discovered by me during my employment with or within the scope of my work in any capacity for SYNAPTICS (hereinafter the "INVENTIONS"), and in and to the APPLICATION and any and all other applications for utility patents, utility models, inventor's certificates, and other forms of invention protection or rights for the INVENTIONS in any and all countries and groups of countries (hereinafter collectively the "APPLICATIONS"), and in and to any and all patents, inventors certificates, and other forms of invention protection or rights arising therefrom (hereinafter the "PATENTS").

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by me to have been received in full from SYNAPTICS:

- 1. I hereby sell, assign, transfer and convey to SYNAPTICS the entire right, title and interest (a) in and to the INVENTIONS and the APPLICATION; (b) in and to all rights to apply for patents and all other forms of invention protection or rights on the INVENTIONS in any and all countries pursuant to the Paris Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, or otherwise; (c) in and to any and all APPLICATIONS filed and any and all PATENTS granted on the INVENTIONS in any and all countries and groups of countries, including each and every application filed and each and every patent granted on any application which is a conventional, division, substitution, continuation, or continuation-in-part of any of the APPLICATIONS; and (d) in and to each and every reissue or extension of any of the PATENTS.
- 2. I hereby covenant and agree to cooperate with SYNAPTICS to enable SYNAPTICS to enjoy to the fullest extent the right, title and interest to the INVENTIONS herein conveyed in any and all countries and groups of countries. My cooperation shall include prompt production of

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pertinent facts and documents, giving testimony, executing petitions, oaths, specifications, declarations or other papers, and providing other assistance to the extent deemed necessary or desirable by SYNAPTICS (a) for perfecting in SYNAPTICS the right, title and interest herein conveyed; (b) for prosecuting the APPLICATIONS; (c) for filing and prosecuting substitute, conventional, divisional, continuation, continuation-in-part, or additional applications covering the INVENTIONS; (d) for filing and prosecuting applications for reissuance of any of the PATENTS; (e) in assisting SYNAPTICS in any pre-grant or post-grant proceeding involving any of the INVENTIONS, APPLICATIONS, or PATENTS; and (f) in assisting SYNAPTICS in any court or administrative proceeding involving any of the INVENTIONS, APPLICATIONS, or PATENTS, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, and infringement actions; provided, however, that reasonable expenses incurred by me in providing such cooperation shall be paid for by SYNAPTICS.

- 3. I hereby agree that the terms and covenants of this Assignment, Conveyance, and Agreement (the "AGREEMENT") shall inure to the benefit of SYNAPTICS, its successors, assigns and other legal representatives, and shall be binding upon me, my heirs, my legal representatives, and my assigns.
- 4. I hereby warrant and represent that I have not entered into and will not enter into any assignment, license, contract, or understanding in conflict herewith.
- 5. I hereby agree that all provisions of this AGREEMENT are severable, and that if any provision of this AGREEMENT is deemed invalid or otherwise unenforceable, the remaining provisions of this AGEEMENT shall remain valid, enforceable, and binding, and the invalid or otherwise unenforceable provision shall be deemed to be replaced by a provision that is valid and enforceable and that comes closest to expressing the intent expressed by the invalid or unenforceable provision.
- 6. I hereby agree that this AGREEMENT contains the entire understanding between SYNAPTICS and me relating to the subject matter contained herein, and supersedes all prior and collateral communications and understandings between us.
- 7. In the event that the filing date or application number of the APPLICATION is not entered at the time I execute this document, and if such information is deemed necessary, I hereby authorize SYNAPTICS, its successors and assigns, its legal representatives, or anyone it properly designates to enter above such filing date or application number.

IN WITNESS WHEREOF, I have executed and delivered this instrument to SYNAPTICS on the date indicated below.

1)	(Signature) #	2)	(Signature)
	(Printed Name) Petr SHEPELEV		(Printed Name) <u>Christopher A. LUDDEN</u>
	(Date) 30 Sept 2013		(Date)

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3)	(Signature) 9'-30-(3) (Printed Name) Jeffrey LUKANC (Date)	4) *C	(Signature) (Printed Name) Steph en L. MOREIN (Date) 30, 2 7/5
5)	(Signature)	6)	(Signature) JEHM
	(Printed Name) <u>Greg P. SEMERARO</u>		(Printed Name) Joseph Kurth REYNOLDS
***************************************	(Date)		(Date)

ASSIGNMENT, CONVEYANCE, AND AGREEMENT - WORLDWIDE

WHEREAS:

I, an undersigned individual whose name and mailing address appear below:

	Petr SHEPELEV	23	Christopher A. LUDDEN
1)	1251 McKay Drive	2)	90 Linden Oaks
	San Jose, CA 95131		Rochester, NY 14625
3	Jeffrey LUKANC	Stephen L. MOREIN	
3)	1251 McKay Drive	4)	1251 McKay Drive
	San Jose, CA 95131		San Jose, CA 95131
5)	Greg P. SEMERARO	6)	Joseph Kurth REYNOLDS
	90 Linden Oaks		1251 McKay Drive
	Rochester, NY 14625		San Jose, CA 95131

have invented certain invention(s)	described in an application for Letters Patent in the United
States ("hereinafter the "APPLICATION"	enclosed herewith or previously filed on
under Serial No.	; and entitled:

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WHEREAS, Synaptics Incorporated, a corporation of the State of Delaware, having a place of business at 1251 McKay Drive, San Jose, California 95131 (hereinafter "SYNAPTICS"), desires to acquire the entire right, title, and interest in and to the invention(s) disclosed in the APPLICATION and all embodiments of such invention(s) previously conceived, made, or discovered by me during my employment with or within the scope of my work in any capacity for SYNAPTICS (hereinafter the "INVENTIONS"), and in and to the APPLICATION and any and all other applications for utility patents, utility models, inventor's certificates, and other forms of invention protection or rights for the INVENTIONS in any and all countries and groups of countries (hereinafter collectively the "APPLICATIONS"), and in and to any and all patents, inventors certificates, and other forms of invention protection or rights arising therefrom (hereinafter the "PATENTS").

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PATENT

pertinent facts and documents, giving testimony, executing petitions, oaths, specifications, declarations or other papers, and providing other assistance to the extent deemed necessary or desirable by SYNAPTICS (a) for perfecting in SYNAPTICS the right, title and interest herein conveyed; (b) for prosecuting the APPLICATIONS; (c) for filing and prosecuting substitute, conventional, divisional, continuation, continuation-in-part, or additional applications covering the INVENTIONS; (d) for filing and prosecuting applications for reissuance of any of the PATENTS; (e) in assisting SYNAPTICS in any pre-grant or post-grant proceeding involving any of the INVENTIONS, APPLICATIONS, or PATENTS; and (f) in assisting SYNAPTICS in any court or administrative proceeding involving any of the INVENTIONS, APPLICATIONS, or PATENTS, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, and infringement actions; provided, however, that reasonable expenses incurred by me in providing such cooperation shall be paid for by SYNAPTICS.

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1)	(Signature)	2)	(Signature) Mulast Lund
	(Printed Name) Petr SHEPELEV		(Printed Name) <u>Christopher A. LUDDEN</u>
	(Date)		(Date)

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3)	(Signature)	4)	(Signature)
	(Printed Name) <u>Jeffrey LUKANC</u>		(Printed Name) <u>Stephen L. MOREIN</u>
	(Date)		(Date)
5)	(Signature)	6)	(Signature)
	(Printed Name) <u>Greg P. SEMERARO</u>		(Printed Name) Joseph Kurth REYNOLDS
	(Date)		(Date)

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	San Jose, CA 95131		San Jose, CA 95131
5)	Greg P. SEMERARO		Joseph Kurth REYNOLDS
ارد	90 Linden Oaks	6)	1251 McKay Drive
~	Rochester, NY 14625		San Jose, CA 95131

have invented certain invention(s) descri	bed in an application for Letters Patent in the United
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1)	(Signature)	2)	(Signature)
	(Printed Name) Petr SHEPELEV		(Printed Name) <u>Christopher A. LUDDEN</u>
	(Date)		(Date)

2932876v2

3)	(Signature)	4)	(Signature)
	(Printed Name) <u>Jeffrey LUKANC</u>		(Printed Name) Stephen L. MOREIN
	(Date)		(Date)
5)	(Signatury Leg B- Semeraro	6)	(Signature)
	(Printed Name) Greg P. SEMERARO		(Printed Name) Joseph Kurth REYNOLDS
	(Date) 30 Sept 13		(Date)



UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

OCTOBER 2, 2013

PTAS

PATTERSON & SHERIDAN, LLP - SYNAPTICS 3040 POST OAK BOULEVARD SUITE 1500 HOUSTON, TX 77056

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UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT RECORDATION BRANCH OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE ASSIGNMENT RECORDATION BRANCH AT 571-272-3350. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, MAIL STOP: ASSIGNMENT RECORDATION BRANCH, P.O. BOX 1450, ALEXANDRIA, VA 22313.

RECORDATION DATE: 09/30/2013 REEL/FRAME: 031313/0364

NUMBER OF PAGES: 11

BRIEF: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

DOCKET NUMBER: SYNA\\0055

ASSIGNOR:

SHEPELEV, PETR DOC DATE: 09/30/2013

ASSIGNOR:

LUKANC, JEFFREY DOC DATE: 09/30/2013

ASSIGNOR:

MOREIN, STEPHEN L. DOC DATE: 09/30/2013

ASSIGNOR:

REYNOLDS, JOSEPH KURTH DOC DATE: 09/30/2013

ASSIGNOR:

LUDDEN, CHRISTOPHER A. DOC DATE: 09/30/2013

ASSIGNOR:

SEMERARO, GREG P. DOC DATE: 09/30/2013

 ASSIGNEE:

SYNAPTICS INCORPORATED 1251 MCKAY DRIVE SAN JOSE, CALIFORNIA 95131

APPLICATION NUMBER: 14042661 FILING DATE: PATENT NUMBER: ISSUE DATE:

TITLE: MATRIX SENSOR FOR IMAGE TOUCH SENSING

ASSIGNMENT RECORDATION BRANCH PUBLIC RECORDS DIVISION

PATENT REEL: 035963 FRAME: 0730

RECORDED: 06/24/2015