PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KIRK HARGREAVES	08/22/2015
PATRICK SMITH	08/17/2015
JOSEPH KURTH REYNOLDS	08/25/2015
STEPHEN L. MOREIN	08/21/2015

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:	14788390

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

Email: tjeffrey@pattersonsheridan.com,

psdocketing@pattersonsheridan.com

Correspondent Name: PATTERSON & SHERIDAN, LLP / SYNAPTICS

Address Line 1: 24 GREENWAY PLAZA

Address Line 2: **SUITE 1600**

Address Line 4: HOUSTON, TEXAS 77046

ATTORNEY DOCKET NUMBER:	SYNA/140239US01
NAME OF SUBMITTER:	C. ALEXANDRA LIVINGSTON
SIGNATURE:	/C. Alexandra Livingston/
DATE SIGNED:	09/08/2015

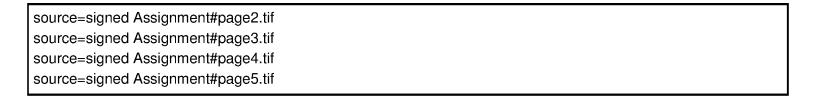
Total Attachments: 5

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PATENT REEL: 036508 FRAME: 0398

EPAS ID: PAT3515660

503469035



PATENT REEL: 036508 FRAME: 0399

SYNAPTICS INCORPORATED ASSIGNMENT AGREEMENT - WORLDWIDE

WHEREAS, We, the undersigned individuals, have invented certain invention(s) described in

an application for Letters Patent (the	"Application") in:		
X the United States	Japan Another	jurisdiction	
X previously filed on date	June 30, 2015	under Serial No.	14/788,390
with docket number SYNA/14 FINGERPRINT SENSING	0239US01 and title: A	MODULATION SCH	IEME FOR
WHEREAS, SYNAPTICS IN place of business at 1251 McKay Dr the entire right, title, and interest in a embodiments of such invention(s) premployment with or within the scope "Inventions"), and in and to the Applutility models, inventor's certificates,	ive; San Jose, CA 9513 and to the invention(s) of eviously conceived, made of my work in any cap lication and any and all	31;U.S.A. ("Synaptics disclosed in the Appl ade, or discovered by pacity for Synaptics (other applications for	s"), desires to acquire ication and all me during my collectively, the or utility patents,

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

Inventions in any and all countries and groups of countries (collectively the "Applications"), and in and to any and all patents, inventors certificates, and other forms of invention protection or rights

- 1. We 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. We 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. Our cooperation shall include prompt production of 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 reexamination or 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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arising therefrom (the "Patents").

- 3. We hereby agree that the terms and covenants of this Assignment 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. We hereby warrant and represent that we have not entered into and will not enter into any assignment, license, contract, or understanding in conflict herewith.
- 5. We hereby agree that if any provision of this Agreement is deemed invalid or otherwise unenforceable, the remaining provisions of this Agreement 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. We hereby agree that this Agreement contains the entire understanding between Synaptics and us relating to the subject matter contained herein, and supersedes all prior and collateral communications and understandings between Synaptics and us.
- 7. In the event that the filing date or application number of the Application is not entered at the time we execute this document, and if such information is deemed necessary, we 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, we have executed and delivered this instrument to Synaptics on the date indicated below.

(Printed legal name of inventor)	Kirk HARGREAVES			
(Inventor's Signature)	Hangs	(Date)	22 Ay	2014
(Inventor's mailing address)	1251 McKay Drive San Jose, California 95131		A-4-0-	
(Printed legal name of inventor)	Patrick SMITH			
(Inventor's Signature)		(Date)		
(Inventor's mailing address)	1251 McKay Drive San Jose, California 95131			
(Printed legal name of inventor)	Joseph Kurth REYNOLDS			
(Inventor's Signature)		(Date)		y
(Inventor's mailing address)	1251 McKay Drive San Jose, California 95131			

- 3. We hereby agree that the terms and covenants of this Assignment 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. We hereby warrant and represent that we have not entered into and will not enter into any assignment, license, contract, or understanding in conflict herewith.
- 5. We hereby agree that if any provision of this Agreement is deemed invalid or otherwise unenforceable, the remaining provisions of this Agreement 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. We hereby agree that this Agreement contains the entire understanding between Synaptics and us relating to the subject matter contained herein, and supersedes all prior and collateral communications and understandings between Synaptics and us.
- 7. In the event that the filing date or application number of the Application is not entered at the time we execute this document, and if such information is deemed necessary, we 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, we have executed and delivered this instrument to Synaptics on the date indicated below.

(Printed legal name of inventor	r) Kirk HARGREAVES		-
(Inventor's Signature)		(Date)	
(Inventor's mailing address)	1251 McKay Drive San Jose, California 95131		
(Printed legal name of inventor	r) Patrick SMITH		
(Inventor's Signature)	as Sh	(Date)	8/17/2015
(Inventor's mailing address)	1251 McKay Drive San Jose, California 95131		
(Printed legal name of invento	r) Joseph Kurth REYNOLDS		
(Inventor's Signature)		(Date)	
(Inventor's mailing address)	1251 McKay Drive San Jose, California 95131		

- 3. We hereby agree that the terms and covenants of this Assignment 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.
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 - 7. In the event that the filing date or application number of the Application is not entered at the time we execute this document, and if such information is deemed necessary, we 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, we have executed and delivered this instrument to Synaptics on the date indicated below.

(Date)
(Date)
(Date) Ang 25th 28/5

(Printed legal name of inventor) Stophen L. MOREIN		, /
(Inventor's Signature)	(Date)	8/2//2015
(Inventor's mailing address) San Jose California 95131		

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