Atty Dkt No.: ALLEG-039BUS

Form PTQ-1595

103018006

U.S. DEPARTMENT OF COMMERCE
U.S. Parent and Tredemark Office

OMB No. 0651-0027 (exp. 6/30/2005)	SONLY
Tab settings ⇒ ⇒ ▼ ▼ ▼	Y Y Y
To the Honorable Commissioner of Patents and Trademarks:	Please record the attached original documents or copy thereof.
1. Name of conveying party(ies):	2. Name and address of receiving party(ies)
Jay Gagnon Righard Dickinson	Name: Allegro Microsystems, Inc.
Michael C. Doogue	
Andreas P. Friedrich	Internal Address:
William P. Taylor Additional name(s) of conveying party(ies) attached? ☐ Yes █ No	
3. Nature of conveyance:	
Assignment 🖳 Merger	Street Address: 115 Northeast Cutoff
Security Agreement	ducet Addiess:
Other	
May 19, 2005, May 18, 2005, May 19, 2005, May 19, 2005,	City: Worcester State: MA Zip:1615-003
May 18, 2005.	
Execution Date:	Additional name(s) & address(es) attached? 📮 Yes 🤷 No
	May 24, 2005, May 18, 2005, May 19, 2005, May 19,
If this document is being filed together with a new apparent	005 and May 18, 2005 tate of the application is:
A. Patent Application No.(s)	B. Patent No.(s)
**	
Additional numbers at	1 teched? 🛄 Yes 🛍 No
	6. Total number of applications and patents involved:
concerning document should be mailed:	or rotal number of applications and patents involved:
Name: Daly, Crowley, Mofford & Durkee, LLP	7. Total fee (37 CFR 3,41)\$40.00
	☐ Englosed
Internal Address:	_
	Authorized to be charged to deposit account
	8. Deposit account number:
Street Address: 354A Turnplke Street, Suite 301A	
	010854
	4
City: Canton State: MA Zip:02021-2714	(Attach duplicate copy of this page if paying by deposit account)
DO NOT LIKE	I THIS SPACE
9. Statement and eignature.	· · · · · · · · · · · · · · · · · · ·
To the best of my knowledge and belief, the foregoing is	information is true and correct and any attached conv
is a true copy of the original document.	
Judith C. Crowley 35,091	dill Clow 1 3 horas
Name of Person Signing	Signature Date
Total ritisober of pages including cover	

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40.00 DA

11144970 MS Assignment Reportation Services, Director of the U.S. Patent and Trademark Office, P. O. Box 1450, Alexandria, VA 22313-1450

REEL: 016710 FRAME: 0949

ASSIGNMENT

Whereas, ALLEGRO MICROSYSTEMS, INC., a Delaware corporation having a place of business at 115 Northeast Cutoff, Worcester, Massachusetts 01615-0036, and which, together with its successors and assigns, is hereinafter called "Assignee," is desirous of acquiring the title, rights, benefits and privileges hereinafter recited;

Now, therefore, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which we hereby acknowledge, we hereby, without reservation:

- 1. Assign, transfer and convey to Assignee the entire right, title and interest in and to said inventions and discoveries, said United States patent application, any and all other patent applications on said inventions and discoveries in whatsoever countries, including all utility, divisional, renewal, substitute, continuation, reissue and Convention applications based in whole or in part upon said inventions or discoveries, said United States patent application or upon said applications, and any and all Letters Patent, reissues, reexaminations, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent;
- 2. Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in my name or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;
- 3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to transfer said United States application or to issue or transfer any Letters Patent to Assignee based in whole or in part upon said United States application, as assignee of the entire right, title and interest therein or otherwise as Assignee may direct;
- 4. Warrant that I have not knowingly conveyed to others any right in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything embodying or utilizing any of said inventions or discoveries; and that I have good right to assign the same to Assignee without encumbrance;

Attorney Docket No.: ALLEG-039BUS

Client Case No.: A-2065

5. Bind my heirs, legal representatives and assigns, as well as myself, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to me or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by me, my heirs, legal representatives and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to me relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in my control or in the control of my heirs, legal representatives or assigns which may be useful for establishing the facts of my conceptions, disclosures, and reduction to practice of said inventions and discoveries.

In testimony of which we have each executed this Assignment on the date indicated next to each of our respective names.

Dated: May 19, 2005

On this 1914day of 194, 2005, before me appeared Jay Gagnon, to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed.

First Witness Signature

Raykumar Adimula
First Witness Printed Name

On this <u>1911</u> day of <u>1912</u>, 2005, before me appeared Jay Gagnon, to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed.

Dated:	Richard Dickinson
On this day of known and known to me to be the pe instrument, and he acknowledged the same	_, 2005, before me appeared Richard Dickinson, to me erson described in and who executed the foregoing e to be his free act and deed.
	First Witness Signature
	First Witness Printed Name
On this day of known and known to me to be the pe instrument, and he acknowledged the same	_, 2005, before me appeared Richard Dickinson, to me erson described in and who executed the foregoing e to be his free act and deed.
	Second Witness Signature
	Second Witness Printed Name

Dated:	Michael C. Doogue
On this day of, 2005, known and known to me to be the person do instrument, and he acknowledged the same to be here.	
	First Witness Signature
	First Witness Printed Name
On this day of, 2005, known and known to me to be the person dinstrument, and he acknowledged the same to be here.	
	Second Witness Signature
	Second Witness Printed Name

Dated:	
	Andreas P. Friedrich
On this day of me known and known to me to be the nstrument, and he acknowledged the sa	, 2005, before me appeared Andreas P. Friedrich, to the person described in and who executed the foregoing e same to be his free act and deed.
	First Witness Signature
	First Witness Printed Name
On this day of me known and known to me to be instrument, and he acknowledged the	, 2005, before me appeared Andreas P. Friedrich, to the person described in and who executed the foregoing e same to be his free act and deed.
	Second Witness Signature
	Second Witness Printed Name

Attorney Docket No.: ALLEG-039BUS

Client Case No.: A-2065

Dated:			
			William P. Taylor
cnown nstrun	On this and known nent, and he ac	day ofto me to be the knowledged the sa	, 2005, before me appeared William P. Taylor, to me person described in and who executed the foregoing me to be his free act and deed.
			First Witness Signature
			First Witness Printed Name
	and known	to me to be the	, 2005, before me appeared William P. Taylor, to me person described in and who executed the foregoing me to be his free act and deed.
			Second Witness Signature
			Second Witness Printed Name

ASSIGNMENT

Whereas we, the undersigned, Jay Gagnon, Richard Dickinson, Michael C. Doogue, Andreas P. Friedrich and William P. Taylor, hereby have made certain inventions or discoveries (or both) set forth in a patent application of the United States of America entitled CURRENT SENSOR, identified as Attorney Docket No. ALLEG-039BUS and Client Case No. A-2065 which application was filed on ________ and Assigned Application No.______. In the event that the filing date and/or Application No. are not entered above at the time we executed this document, and if such information is deemed necessary, we hereby authorize and request our attorneys at DALY, CROWLEY, MOFFORD & DURKEE, LLP, 374A Tumpike Street, Suite 301A, Canton, MA 02021-2714, to insert above the filing date and/or Application No. of said application.

Whereas, ALLEGRO MICROSYSTEMS, INC., a Delaware corporation having a place of business at 115 Northeast Cutoff, Worcester, Massachusetts 01615-0036, and which, together with its successors and assigns, is hereinafter called "Assignee," is desirous of acquiring the title, rights, benefits and privileges hereinafter recited;

Now, therefore, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which we hereby acknowledge, we hereby, without reservation:

- 1. Assign, transfer and convey to Assignee the entire right, title and interest in and to said inventions and discoveries, said United States patent application, any and all other patent applications on said inventions and discoveries in whatsoever countries, including all utility, divisional, renewal, substitute, continuation, reissue and Convention applications based in whole or in part upon said inventions or discoveries, said United States patent application or upon said applications, and any and all Letters Patent, reissues, reexaminations, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent;
- 2. Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in my name or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;
- 3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to transfer said United States application or to issue or transfer any Letters Patent to Assignee based in whole or in part upon said United States application, as assignee of the entire right, title and interest therein or otherwise as Assignee may direct;
- 4. Warrant that I have not knowingly conveyed to others any right in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything embodying or utilizing any of said inventions or discoveries; and that I have good right to assign the same to Assignee without encumbrance;

Attorney Docket No.: ALLEG-039BUS

Client Case No.: A-2065

5. Bind my heirs, legal representatives and assigns, as well as myself, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to me or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by me, my heirs, legal representatives and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to me relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in my control or in the control of my heirs, legal representatives or assigns which may be useful for establishing the facts of my conceptions, disclosures, and reduction to practice of said inventions and discoveries.

In testimony of which we have each executed this Assignment on the date indicated next to each of our respective names.

Dated:	Jay Gagnon
	Jay Gagnon
	, 2005, before me appeared Jay Gagnon, to me known rson described in and who executed the foregoing instrument, and be his free act and deed.
	First Witness Signature
	First Witness Printed Name
	, 2005, before me appeared Jay Gagnon, to me known rson described in and who executed the foregoing instrument, and be his free act and deed.
	Second Witness Signature
	Second Witness Printed Name

Attorney Docket No.: ALLEG-039BUS

Client Case No.: A-2065

Dated: 18 May, 2005

Richard Dickinson

On this day of day of 2005, before me appeared Richard Dickinson, to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed

First Witness Signature

Sean Pringle
First Witness Printed Name

On this 18 day of May, 2005, before me appeared Richard Dickinson, to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed.

Second Witness Signature Ger

Second Witness Printed Name

Attorney Docket No.: ALLEG-039BUS

Client Case No.: A-2065

Dated: 05/19/2005	Michael C. Doogue
On this day of MA known and known to me to be to instrument, and he acknowledged the	Michael C. Doogue, , 2005, before me appeared Michael C. Doogue, to me the person described in and who executed the foregoing e same to be his free act and deed.
	First Witness Signature
19m 22a	First Witness Printed Name
On this day of My known and known to me to be instrument, and he acknowledged th	, 2005, before me appeared Michael C. Doogue, to me the person described in and who executed the foregoing e same to be his free act and deed
	Second Witness Signature
	Second Witness Printed Name

Dated:	Andreas P. Friedrich
On this day of me known and known to me to be instrument, and he acknowledged the	, 2005, before me appeared Andreas P. Friedrich, to the person described in and who executed the foregoing same to be his free act and deed.
	First Witness Signature
	First Witness Printed Name
On this day of me known and known to me to be instrument, and he acknowledged the	, 2005, before me appeared Andreas P. Friedrich, to the person described in and who executed the foregoing same to be his free act and deed.
	Second Witness Signature
	Second Witness Printed Name

Attorney Docket No.: ALLEG-039BUS

Client Case No.: A-2065

Dated: 18 May 2005	William P. Taylor William P. Taylor
	, 2005, before me appeared William P. Taylor, to me person described in and who executed the foregoing me to be his free act and deed. First Witness Signature Sean Prince First Witness Printed Name

On this $\frac{18}{100}$ day of $\frac{100}{100}$, 2005, before me appeared William P. Taylor, to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed.

Suzanne Wildberger Second Witness Signature

Second Witness Printed Name

ASSIGNMENT

Whereas we, the undersigned, Jay Gagnon, Richard Dickinson, Michael C. Doogue, Andreas P. Friedrich and William P. Taylor, hereby have made certain inventions or discoveries (or both) set forth in a patent application of the United States of America entitled CURRENT SENSOR, identified as Attorney Docket No. ALLEG-039BUS and Client Case No. A-2065 which application was filed on _______ and Assigned Application No.______. In the event that the filing date and/or Application No. are not entered above at the time we executed this document, and if such information is deemed necessary, we hereby authorize and request our attorneys at DALY, CROWLEY, MOFFORD & DURKEE, LLP, 374A Turnpike Street, Suite 301A, Canton, MA 02021-2714, to insert above the filing date and/or Application No. of said application.

Whereas, ALLEGRO MICROSYSTEMS, INC., a Delaware corporation having a place of business at 115 Northeast Cutoff, Worcester, Massachusetts 01615-0036, and which, together with its successors and assigns, is hereinafter called "Assignee," is desirous of acquiring the title, rights, benefits and privileges hereinafter recited;

Now, therefore, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which we hereby acknowledge, we hereby, without reservation:

- 1. Assign, transfer and convey to Assignee the entire right, title and interest in and to said inventions and discoveries, said United States patent application, any and all other patent applications on said inventions and discoveries in whatsoever countries, including all utility, divisional, renewal, substitute, continuation, reissue and Convention applications based in whole or in part upon said inventions or discoveries, said United States patent application or upon said applications, and any and all Letters Patent, reissues, reexaminations, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent;
- 2. Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in my name or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;
- 3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to transfer said United States application or to issue or transfer any Letters Patent to Assignee based in whole or in part upon said United States application, as assignee of the entire right, title and interest therein or otherwise as Assignee may direct;
- 4. Warrant that I have not knowingly conveyed to others any right in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything embodying or utilizing any of said inventions or discoveries; and that I have good right to assign the same to Assignee without encumbrance;

Attorney Docket No.: ALLEG-039BUS

Client Case No.: A-2065

5. Bind my heirs, legal representatives and assigns, as well as myself, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to me or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by me, my heirs, legal representatives and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to me relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in my control or in the control of my heirs, legal representatives or assigns which may be useful for establishing the facts of my conceptions, disclosures, and reduction to practice of said inventions and discoveries.

In testimony of which we have each executed this Assignment on the date indicated next to each of our respective names.

Dated:	Jay Gagnon
	Jay Gagnon
On this day of and known to me to be the person d he acknowledged the same to be his	, 2005, before me appeared Jay Gagnon, to me known lescribed in and who executed the foregoing instrument, and free act and deed.
	First Witness Signature
	First Witness Printed Name
On this day of and known to me to be the person d he acknowledged the same to be his	, 2005, before me appeared Jay Gagnon, to me known described in and who executed the foregoing instrument, and free act and deed.
	Second Witness Signature
	Second Witness Printed Name

Dated:	Richard Dickinson
On this day of known and known to me to be the prinstrument, and he acknowledged the same	_, 2005, before me appeared Richard Dickinson, to me erson described in and who executed the foregoing to be his free act and deed.
	First Witness Signature
	First Witness Printed Name
On this day of known and known to me to be the p instrument, and he acknowledged the same	_, 2005, before me appeared Richard Dickinson, to me erson described in and who executed the foregoing are to be his free act and deed.
	Second Witness Signature
	Second Witness Printed Name

PATENT Attorney Docket No.: ALLEG-039BUS

Client Case No.: A-2065

Dated:	
	Michael C. Doogue
known and known to me	f, 2005, before me appeared Michael C. Doogue, to me to be the person described in and who executed the foregoing edged the same to be his free act and deed.
	First Witness Signature
	First Witness Printed Name
known and known to me	of, 2005, before me appeared Michael C. Doogue, to me to be the person described in and who executed the foregoing edged the same to be his free act and deed.
	Second Witness Signature
	Second Witness Printed Name

Attorney Docket No.: ALLEG-039BUS

Client Case No.: A-2065

Dated: _	05/15/05	Andreas P. Friedrich
me know	On this 19 day of May, 200 yn and known to me to be the personent, and he acknowledged the same to be	05, before me appeared Andreas P. Friedrich, to described in and who executed the foregoing
		_
		LANCE FOWLER
		First Witness Printed Name
me knov	on this 10 ⁿ day of 10 ⁿ , 20 wn and known to me to be the person ent, and he acknowledged the same to be	05, before me appeared Andreas P. Friedrich, to a described in and who executed the foregoing this free act and deed. Second Witness Signature LARY REGINN Second Witness Printed Name

Attorney Docket No.: ALLEG-039BUS Client Case No.: A-2065

Dated:	
	William P. Taylor
known and known to me to be	, 2005, before me appeared William P. Taylor, to me the person described in and who executed the foregoing the same to be his free act and deed.
	First Witness Signature
	First Witness Printed Name
known and known to me to be	, 2005, before me appeared William P. Taylor, to me the person described in and who executed the foregoing the same to be his free act and deed.
	Second Witness Signature
	Second Witness Printed Name

10355

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PATENT REEL: 016710 FRAME: 0967

RECORDED: 06/03/2005