505709665 10/07/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PAOLO CAMPIGLIO	09/11/2019
AMAL HAMDACHE	09/11/2019
JULIEN VOILLOT	09/11/2019
ALLEGRO MICROSYSTEMS FRANCE SAS	09/16/2019
ALLEGRO MICROSYSTEMS EUROPE LIMITED	09/16/2019
CRIVASENSE TECHNOLOGIES SAS	09/16/2019

RECEIVING PARTY DATA

Name:	ALLEGRO MICROSYSTEMS, LLC	
Street Address:	955 PERIMETER ROAD	
City:	MANCHESTER	
State/Country:	NEW HAMPSHIRE	
Postal Code:	03103-3353	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16574419

CORRESPONDENCE DATA

Fax Number: (781)401-9966

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: 7814019988 **Email:** jlm@dc-m.com

Correspondent Name: DALY, CROWLEY, MOFFORD & DURKEE, LLP

Address Line 1: ONE UNIVERSITY AVENUE

Address Line 2: SUITE 201B

Address Line 4: WESTWOOD, MASSACHUSETTS 02090

ATTORNEY DOCKET NUMBER:	ALLLEG-800AUS	
NAME OF SUBMITTER:	ANTHONY T. MOOSEY	
SIGNATURE:	/Anthony T. Moosey/	
DATE SIGNED:	10/07/2019	

PATENT 505709665 REEL: 050636 FRAME: 0556

Total Attachments: 8 source=TO_PTO_ASSIGNMENT#page1.tif source=TO_PTO_ASSIGNMENT#page2.tif source=TO_PTO_ASSIGNMENT#page3.tif source=TO_PTO_ASSIGNMENT#page4.tif source=TO_PTO_ASSIGNMENT#page5.tif source=TO_PTO_ASSIGNMENT#page6.tif source=TO_PTO_ASSIGNMENT#page7.tif source=TO_PTO_ASSIGNMENT#page8.tif

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ASSIGNMENT

Whereas I/we, Paolo Campiglio, Amal Hamdache and Julien Voillot, have made certain
investigate or discoveries (or both) set forth in an application for Letters Patent of the United States
of America entitled: TUNNEL MAGNETORESISTANCE (TMR) ELEMENT HAVING COBALT
of America entitled: I UNIVEL MACHINET CONTROL Description of Attorney Docket No. At LEG-800AUS, and
IRON AND TANTALUM LAYERS, identified as Attorney Docket No. ALLEG 800 AUS, and Client Case No. A-2702A, which application was executed on 114 2014 1 4 10 10 10 10 10 10 10 10 10 10 10 10 10
Client Case No. A-2702A, which application was executed on 17 to 12 february
if 1/EMACATO In the event that the execution date, filing date, and/or Application No. are
and antered above at the time this document is executed, and it such intomistion is decimed
necessary, we hereby authorize and request our attorneys at DALY, CROWLEY, MOFFORD & DURKEE,
LLP, One University Avenue, Suite 201B, Westwood, MA 02090, to insert above the execution
LLP, One University Avenue, State 2015, Westwood, WA 52076, to Miste
date, filing date, and/or Application No. of said application.

Whereas Allegro MicroSystems France SAS (herein AMF), a company registered in France and having a place of business at Parc Altaïs, 60 Rue Cassiopée, Batiment B1, 74650 Chavanod, France may have certain rights in the above identified inventions or discoveries;

Whereas Allegro MicroSystems Europe Limited (herein AMEL), a company registered in England and having a place of business at Melita House, 124 Bridge Road, Chertsey Surrey KT16 8LH United Kingdom may have certain rights in the above identified inventions or discoveries;

Whereas CrivaSense Technologies SAS (herein CST), a company registered in France and having a place of business at Lieudit l'Orme des Mersiers, Parc Technologique de Saint Aubin, Batiment Mercury-Bldg. D, 91193 Saint-Aubin, Paris, France, may have certain rights in the above identified inventions or discoveries;

Whereas, Allegro MicroSystems, LLC, a Delaware limited liability company having a place of business at 955 Perimeter Road, Manchester, New Hampshire 03103-3353, 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 I/we, Paolo Campiglio, Amal Hamdache and Julien Voillot, and

AMF, Allegro MicroSystems France SAS, by signature of Robert C. Hunt,

AMEL, Allegro MicroSystems Europe Limited, by signature of Robert C. Hunt, and

CST, CrivaSense Technologies SAS, by signature of Robert C. Hunt,

hereby acknowledge, I/we each hereby, without reservation:

1. Assign, transfer and convey to Assignee the entire right, title and interest in and to said inventions and discoveries, said application for Letters Patent of the United States of America, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, reissue, PCT, re-examination and Convention applications based in whole or in part upon said inventions or discoveries, 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 and any provisional applications from which priority is claimed in said Letters Patent;

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Atty. Dckt. No.: ALLEG-800AUS

Client Case No.: A-2702A

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 issue or transfer all said Letters Patent to Assignee, 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;
- 5. Bind my heirs, legal representatives, assigns, and successors, 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, assigns, and successors 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, assigns, or successors which may be useful for establishing the facts of my conceptions, disclosures, and reduction to practice of said inventions and discoveries;

6. Warrant that:

For AMF, Robert C. Hunt, Legal Representative of Allegro MicroSystems France SAS, is authorized to act on behalf of, and to bind Allegro MicroSystems France SAS.

For AMEL, Robert C. Hunt, General Manager of Allegro MicroSystems Europe Limited, is authorized to act on behalf of, and to bind Allegro MicroSystems Europe Limited.

For CST. Robert C. Hunt, Legal Representative of CrivaSense Technologies SAS, is authorized to act on behalf of, and to bind Crivasense Technologies.

In testimony of which I/we have each executed this Assignment on the date indicated next to our name(s).

Atty. Dckt. No.: ALLEG-800AUS

Client Case No.: A-2702A

Dated: 11 September 2019	ACCOU
2005000 Million Millio	Paolo Campiglio

On this 11 day of September, 2019, before me appeared Paolo Campiglio, to me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

First Witness Signature
SA/MOY Anthony
First Witness Printed Name

On this U day of Sept 2013, before me appeared Paolo Campiglio,

to me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

Second Witness Signature

Atty. Dckt. No.: ALLEG-800AUS

Client Case No.: A-2702A

Dated: Sptembre 11,219

On this day of Amel Amal Hamdache, Very Day day of Amal Hamdache,

to me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

First Witness Signature FORT CAROLINE

First Witness Printed Name

On this day of September. Will, before me appeared Amal Hamdache,

to me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free pot and deed.

Second Witness Signature KEHY LASSAY LE-SALTER

Atty. Dckt. No.: ALLEG-800AUS

Client Case No.: A-2702A

Dated: 11/09/2015 Julien Vaisibil

On this $11 \text{ day of } \frac{\text{Septent.}}{\text{Menth}}$, $\frac{2015}{\text{Vest}}$, before me appeared Julien Voillot, to me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

First Witness Signature

CHAICA OF HOUR HOURS Printed Name

On this $\frac{1}{Day}$ day of $\frac{1}{Ntonlet}$, $\frac{2010}{Yes}$, before me appeared Julien Voillot, to me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

Second Witness Signature OEORGET OUVER

Atty, Dekt. No.: AELEG-800AUS Client Case No.: A-2702A

Dated:

| Comparison of the person described in and who executed the foregoing instrument, and he acknowledged the same to be the person described in and who executed the foregoing instrument, 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.

| On this | Day | D

Atty. Dckt. No.: ALLEG-800AUS

Client Case No.: A-2702A

AMEL	
Dated: 16 [9]/4.	Allegro MicroSystems Europe Limited By: Robert C. Hunt In his capacity as General Manager of Allegro MicroSystems Europe Limited
On this 16 th day of he flender, Octs to me known and known to me to be the person des instrument, and he acknowledged the same to be his	cribed in and who executed the foregoing
On this HOTA day of SCOT	cribed in and who executed the foregoing

PATENT Atty. Dekt. No.: ALLEG-800AUS Client Case No.: A-2702A

Dated:

Dated:

Dated:

CrivaSense Technologies SAS
By: Robert C. Hunt
In his capacity as Legal Representative of
CrivaSense Technologies SAS

On this day of Secretary, Acc, before me appeared Robert C. Hunt,
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.

Pirst Witness Signature

Pirst Witness Printed Name

On this Day day of Secretary, 2011, before me appeared Robert C. Hunt,
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

Second Witness Signature

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RECORDED: 10/07/2019