

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT4202793

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT CONFIRMATION
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
FILIFE CARDOSO	02/22/2016
PAULO JORGE PEIXEIRO DE FREITAS	02/22/2016
TIAGO MIGUEL LOPES MARTA DA COSTA	02/22/2016
JOSE ANTONIO HENRIQUES KUAN GERMANO	02/22/2016
MOISES SIMOES PIEDADE	02/22/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	MAGNOMICS S.A.
<b>Street Address:</b>	PARQUE TECNOLOGICO DE CANTANHEDE
<b>Internal Address:</b>	NUCLEO 4, LOTE 2
<b>City:</b>	CANTANHEDE
<b>State/Country:</b>	PORTUGAL
<b>Postal Code:</b>	P-3060 197
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	14323640
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(816)983-8080
<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>	816-983-8000
<b>Email:</b>	pto-kc@huschblackwell.com
<b>Correspondent Name:</b>	HUSCH BLACKWELL LLP
<b>Address Line 1:</b>	4801 MAIN STREET, SUITE 1000
<b>Address Line 4:</b>	KANSAS CITY, MISSOURI 64112
<b>ATTORNEY DOCKET NUMBER:</b>	525161.10006
<b>NAME OF SUBMITTER:</b>	DEVON A. ROLF
<b>SIGNATURE:</b>	/Devon A. Rolf/
<b>DATE SIGNED:</b>	12/28/2016
<b>Total Attachments: 11</b>	

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**Assignment Confirmation and, in the alternative, Nunc Pro Tunc Assignment**

This Assignment Confirmation and, in the alternative, *Nunc Pro Tunc* Assignment (hereinafter the "Assignment") is made effective this 22<sup>nd</sup> day of February, 2016, by and between Filipe Cardoso, an individual having a mailing address of Rua Forno do Tijolo, 46, S<sup>o</sup>do, 170-137 Lisbon (PT) Paulo Jorge Peixeiro de Freitas, an individual having an address of R. SACACUVA MONTEIRA N<sup>o</sup> 297,  
BAAÇARONA/COVILHAS, PORTUGAL, Tiago Miguel Lopes Marta da Costa, an individual having a mailing address of 433 W 119TH ST. 1 OF NEW YORK, NY 10027, José António Henriques Kuan Germano, an individual having a mailing address of Rua Fernão de magalhães, n2, 1B, Santo António dos Cavaleiros, Portugal 2660-447 and Moisés Simões Piedade, an individual having a mailing address of Praceta Visconde de Porto Salvo no 7, Paço de Arcos, Portugal 2770-172 (hereinafter the "Inventors/Assignors") and Magnomics S.A., a Portuguese Corporation, having its principal office and place of business at Parque Tecnológico de Cantanhede, Nucleo 4, Lote 2, P-3060 197 Cantanhede, Portugal (hereinafter referred to as "Magnomics").

WHEREAS, Inventors/Assignors are the inventors of a certain new and useful invention(s) (the "Invention(s)") relating to **MONOLITHIC DEVICE COMBINING CMOS WITH MAGNETORESISTIVE SENSORS**, for which was filed International Patent Application PCT/IB2013/000397 (WO2013/102850), filed January 4, 2013, entitled MONOLITHIC DEVICE COMBINING CMOS WITH MAGNETORESISTIVE SENSORS, which claims the priority benefit of Portuguese Patent Application No. 106084, filed January 4, 2012 ("the Applications");

WHEREAS, we, Inventors/Assignors Filipe Cardoso and Paulo Jorge Peixeiro de Freitas, executed Declarations dated November 4, 2013 as attached hereto (with English translation for Filipe Cardoso's Declaration) evidencing our assignments to Instituto de Engenharia de Sistemas e Computadores Microsystemas e as Nanotecnologias (hereinafter "INESC-MN") and intentions that INESC-MN owned all of my rights in and to the Invention(s) and the Applications and further acknowledging assignment of INESC-MN's ownership of the Invention(s) and the Applications to Magnomics;

WHEREAS, we, Inventors/Assignors Tiago Miguel Lopes Marta da Costa, José António Henriques Kuan Germano, and Moisés Simões Piedade executed Declarations dated November 4, 2013 (José António Henriques Kuan Germano and Moisés Simões Piedade) and November 5, 2013 (Tiago da Costa) as attached hereto (with English translations) evidencing our respective assignments to Instituto de Engenharia de Sistemas e Computadores: Investigação e Desenvolvimento em Lisboa (hereinafter "INESC-ID") and intentions that INESC-ID owned all of our rights in and to the Invention(s) and the Applications and further acknowledging assignment of INESC-ID's ownership of the Invention(s) and the Applications to Magnomics; and

WHEREAS, Magnomics is the owner of the Invention(s) and the Applications by virtue of that Agreement between Magnomics and INESC-ID entitled Intellectual Property Rights Assignment Contract dated May 9, 2014 to which said Declarations of Inventors/Assignors Filipe Cardoso and Paulo Jorge Peixeiro de Freitas were appended and that Agreement between Magnomics and INESC-MN entitled Intellectual Property Rights Assignment Contract dated May 9, 2014 to which said Declarations of Inventors/Assignors Tiago da Costa, José António Henriques Kuan Germano, and Moisés Simões Piedade were appended.

NOW, THEREFORE, to all whom it may concern, be it known that, for good and valuable consideration of €10 (Euro) furnished by Magnomics to each Inventor/Assignor, the receipt and sufficiency of which is hereby acknowledged, the parties agree to the following:

1. We, Inventors/Assignors Filipe Cardoso and Paulo Jorge Peixeiro de Freitas, do hereby (i) confirm that we were under no obligation to assign any rights in the Invention(s) and Applications to any person or entity other than INESC-MN, (ii) confirm our prior assignments of, and our prior intentions to have assigned all right, title, and interest in and to, the Invention(s) and the Applications to INESC-MN, and (iii) in the alternative to our confirmation of prior assignments herein, in order as may ever be considered necessary to perfect the chain of title of the Inventions(s) and the Applications in and to Magnomics, do further hereby assign, transfer, sell and convey to INESC-MN, *nunc pro tunc* effective November 4, 2013 to INESC-MN their entire right, title, and interest, throughout the world, in the Inventions(s) and the Applications.

2. We, Inventors/Assignors Tiago Miguel Lopes Marta da Costa, José António Henriques Kuan Germano, and Moisés Simões Piedade, do hereby (i) confirm that we were under no obligation to assign our rights to any person or entity other than INESC-ID, (ii) confirm our prior assignment of, and our prior intention to have assigned all right, title, and interest in and to, the Invention(s) and the Applications to INESC-ID, and (iii) in the alternative to our confirmation of prior assignments herein, in order as may ever be considered necessary to perfect the chain of title of the Inventions(s) and the Applications in and to Magnomics, do further hereby assign, transfer, sell and convey to INESC-MN, *nunc pro tunc* effective November 4, 2013 to INESC-ID their entire right, title, and interest, throughout the world, in the Inventions(s) and the Applications.

3. Inventors/Assignors further covenant and agree that they will, at any time upon request, execute and deliver any and all documents that may be necessary or desirable to further perfect Magnomics' rights in and to the Invention(s) and/or the Applications, including any and all patent applications and/or Letters Patent(s) that may be filed or granted, throughout the world, relating to the Invention(s) or the Applications.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year written below.

**Filipe Cardoso (Inventor/Assignor)**

Filipe Cardoso 22/02/2016  
Inventor Date

**MAGNOMICS S.A. (Owner/Assignee)**

By Filipe Cardoso 22/02/2016  
Signature Date

**Paulo Jorge Peixeiro de Freitas (Inventor/Assignor)**

Paulo Jorge Peixeiro de Freitas 22/02/2016  
Inventor Date

Filipe Cardoso (CTO) / João Pereira (CEO)  
Printed Name and Title

**Tiago Miguel Lopes Marta da Costa (Inventor/Assignor)**

Tiago Miguel Lopes Marta da Costa 22/02/16  
Inventor Date

**José António Henriques Kuan Germano (Inventor/Assignor)**

José António Henriques Kuan Germano 22/02/2016  
Inventor Date

**Moisés Simões Piedade (Inventor/Assignor)**

Moisés Simões Piedade 22/02/2016  
Inventor Date

Filipe Cardoso  
INESC-MN Rua Alves Redol, 9  
1000-029 Lisboa  
Tel: 21 3100237  
Email: fcardoso@inesc-mn.pt

Dear Directors of  
INESC-MN - Instituto de Engenharia  
de Sistemas e Computadores para os  
Microsistemas e as Nanotecnologias

SUBJECT: DECLARATION – Patent *MONOLITHIC DEVICE COMBINING CMOS WITH MAGNETORESISTIVE SENSORS (WO 2013/102850 A1)*

Dear Sirs:

I, Filipe Arroyo Cardoso, holder of Citizen's Card no.11988982, issued by the Portuguese Republic and valid until 07-08-2014, for all due and legal purposes, hereby declare:

- 1<sup>st</sup> – That I fully acknowledge the intention of INESC-MN to assign its rights of exploitation over the patent identified above (whose applicants are INESC-ID and INESC-MN) to MAGNOMICS, LDA, so that the latter will commercially exploit it;
- 2<sup>nd</sup> – That I have no objection to the cession referred in the previous paragraph, not intending, consequently, to exercise any right of option regarding the exploitation of the mentioned patent, or claim, in the future, any right concerning the exploitation of the invention;
- 3<sup>rd</sup> – That the patent was collectively developed by INESC-ID and INESC-MN's multidisciplinary teams, under their aegis and guidance, with the own resources of these two institutions, considering myself reimbursed for my contribution to the invention, provided nothing else is owed.

With best regards,

Lisbon, November 4<sup>th</sup> 2013

Signature



Tiago Costa  
INESC-ID Rua Alves Redol, 9  
1000-029 Lisboa  
Tel: 21 3100300  
email: tcosta@sips.inesc-id.pt

Ex<sup>mos</sup> Senhores Diretores do  
INESC-ID - Instituto de Engenharia de Sistemas  
e Computadores: Investigação e  
Desenvolvimento em Lisboa

ASSUNTO: DECLARAÇÃO - Patente MONOLITHIC DEVICE COMBINING CMOS WITH  
MAGNETORESISTIVE SENSORS (WO 2013/102850 A1)

Exmos Senhores:

Eu, Tiago Miguel Lopes Marta Da Costa, titular do Cartão de Cidadão n.º 125630302, emitido por República Portuguesa e válido até 07-10-2018, venho, pela presente e para os devidos e legais efeitos, declarar o seguinte:

1º - Que tomei inteiro e cabal conhecimento da intenção do INESC-ID de ceder os seus direitos de exploração sobre a patente identificada em epígrafe (cujos requerentes são o INESC-ID e o INESC-MN) à empresa MAGNOMICS, LDA, com o objetivo de que a referida empresa a explore comercialmente;

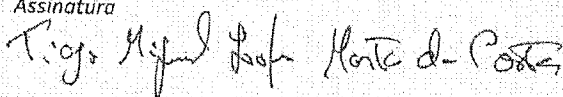
2º - Que nada tenho a opor à cedência indicada no parágrafo anterior, não pretendendo, em consequência, exercer qualquer direito de opção relativamente à exploração da referida patente, nem reivindicar, no futuro, qualquer direito relacionado com a exploração do invento;

3º - Que a patente foi, coletivamente, desenvolvida por equipas multidisciplinares do INESC-ID e do INESC-MN, sob sua égide e orientação, com os recursos próprios dessas duas instituições, considerando-me pessoalmente ressarcido do meu contributo para o invento, nada mais me sendo devido.

Com os melhores cumprimentos,

Lisboa, 05 de Novembro de 2013.

Assinatura



José Germano  
INESC-ID Rua Alves Redol, 9  
1000-029 Lisboa  
Tel: 21 3100300  
email: jahg@inesc-id.pt

Ex<sup>mos</sup> Senhores Diretores do  
INESC-ID - Instituto de Engenharia de Sistemas  
e Computadores; Investigação e  
Desenvolvimento em Lisboa

ASSUNTO: DECLARAÇÃO - Patente *MONOLITHIC DEVICE COMBINING CMOS WITH  
MAGNETORESISTIVE SENSORS (WO 2013/102850 A1)*

Eximos Senhores:

Eu, José António Henriques Kuan Germano, titular do Cartão de Cidadão n.º 11938496, emitido por República Portuguesa e válido até 17-06-2018, venho, pela presente e para os devidos e legais efeitos, declarar o seguinte:

1º - Que tomei inteiro e cabal conhecimento da intenção do INESC-ID de ceder os seus direitos de exploração sobre a patente identificada em epígrafe (cujos requerentes são o INESC-ID e o INESC-MN) à empresa MAGNOMICS, LDA, com o objetivo de que a referida empresa a explore comercialmente;

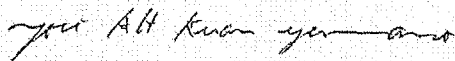
2º - Que nada tenho a opor à cedência indicada no parágrafo anterior, não pretendendo, em consequência, exercer qualquer direito de opção relativamente à exploração da referida patente, nem reivindicar, no futuro, qualquer direito relacionado com a exploração do invento;

3º - Que a patente foi, coletivamente, desenvolvida por equipas multidisciplinares do INESC-ID e do INESC-MN, sob sua égide e orientação, com os recursos próprios dessas duas instituições, considerando-me pessoalmente ressarcido do meu contributo para o invento, nada mais me sendo devido.

Com os melhores cumprimentos,

Lisboa, 04 de Novembro de 2013.

Assinatura



Moisés Piedade  
INESC-ID Rua Alves Redol, 9  
1000-029 Lisboa  
Tel: 21 3100300  
email: msp@inesc.pt

Ex<sup>mos</sup> Senhores Diretores do  
INESC-ID - Instituto de Engenharia de Sistemas  
e Computadores: Investigação e  
Desenvolvimento em Lisboa

ASSUNTO: DECLARAÇÃO - Patente *MONOLITHIC DEVICE COMBINING CMOS WITH  
MAGNETORESISTIVE SENSORS (WO 2013/102850 A1)*

Exmos Senhores:

Eu, Moisés Simões Piedade, titular do Cartão de Cidadão n.º 522481, emitido por República Portuguesa e válido até 02-03-2017, venho, pela presente e para os devidos e legais efeitos, declarar o seguinte:

1º - Que tomei inteiro e cabal conhecimento da intenção do INESC-ID de ceder os seus direitos de exploração sobre a patente identificada em epígrafe (cujos requerentes são o INESC-ID e o INESC-MN) à empresa MAGNOMICS, LDA, com o objetivo de que a referida empresa a explore comercialmente;


2º - Que nada tenho a opor à cedência indicada no parágrafo anterior, não pretendendo, em consequência, exercer qualquer direito de opção relativamente à exploração da referida patente, nem reivindicar, no futuro, qualquer direito relacionado com a exploração do invento;

3º - Que a patente foi, coletivamente, desenvolvida por equipas multidisciplinares do INESC-ID e do INESC-MN, sob sua égide e orientação, com os recursos próprios dessas duas instituições, considerando-me pessoalmente ressarcido do meu contributo para o invento, nada mais me sendo devido.

Com os melhores cumprimentos,

Lisboa, 04 de Novembro de 2013.

Assinatura





Filipe Cardoso  
INESC-MN Rua Alves Redol, 9  
1000-029 Lisboa  
Tel: 21 3100237  
email: fcardoso@inesc-mn.pt

V.C.  
F. Arroyo  
7/11

Ex<sup>mos</sup> Senhores Diretores do  
INESC-MN - Instituto de Engenharia de  
Sistemas e Computadores para os  
Microsistemas e as Nanotecnologias

ASSUNTO: DECLARAÇÃO - Patente MONOLITHIC DEVICE COMBINING CMOS WITH  
MAGNETORESISTIVE SENSORS (WO 2013/102850 A1)

Exmos Senhores:

Eu, Filipe Arroyo Cardoso, titular do Cartão de Cidadão n.º 11988982, emitido por República Portuguesa e válido até 07-08-2014, venho, pela presente e para os devidos e legais efeitos, declarar o seguinte:

1º - Que tomei inteiro e cabal conhecimento da intenção do INESC-MN de ceder os seus direitos de exploração sobre a patente identificada em epígrafe (cujos requerentes são o INESC-ID e o INESC-MN) à empresa MAGNOMICS, LDA, com o objetivo de que a referida empresa a explore comercialmente;

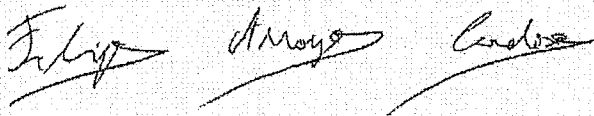
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3º - Que a patente foi, coletivamente, desenvolvida por equipas multidisciplinares do INESC-ID e do INESC-MN, sob sua égide e orientação, com os recursos próprios dessas duas instituições, considerando-me pessoalmente ressarcido do meu contributo para o invento, nada mais me sendo devido.

Com os melhores cumprimentos,

Lisboa, 04 de Novembro de 2013.

Assinatura



Paulo Freitas  
INESC-MN Rua Alves Redol, 9  
1000-029 Lisboa  
Tel: 21 3100348  
email: pfreitas@inesc-mn.pt

V.G.  
F. J.  
M.

Exmos. Senhores Diretores do  
INESC-MN - Instituto de Engenharia de  
Sistemas e Computadores para os  
Microssistemas e as Nanotecnologias

ASSUNTO: DECLARAÇÃO - Patente *MONOLITHIC DEVICE COMBINING CMOS WITH  
MAGNETORESISTIVE SENSORS (WO 2013/102850 A1)*

Exmos Senhores:

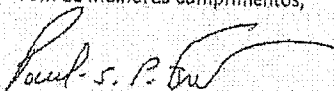
Eu, Paulo Jorge Peixeiro de Freitas, titular do Bilhete de Identidade n.º 6246682, emitido pela República Portuguesa e válido até 11-03-2019, venho, pela presente e para os devidos e legais efeitos, declarar o seguinte:

1º - Que tomei inteiro e cabal conhecimento da intenção do INESC-MN de ceder os seus direitos de exploração sobre a patente identificada em epígrafe (cujos requerentes são o INESC-ID e o INESC-MN) à empresa MAGNOMICS, LDA, com o objetivo de que a referida empresa a explore comercialmente;

2º - Que nada tenho a opor à cedência indicada no parágrafo anterior, não pretendendo, em consequência, exercer qualquer direito de opção relativamente à exploração da referida patente, nem reivindicar, no futuro, qualquer direito relacionado com a exploração do invento;

3º - Que a patente foi, coletivamente, desenvolvida por equipas multidisciplinares do INESC-ID e do INESC-MN, sob sua égide e orientação, com os recursos próprios dessas duas instituições, considerando-me pessoalmente ressarcido do meu contributo para o invento, nada mais me sendo devido.

Com os melhores cumprimentos,



Assinatura

Lisboa, 04 de Novembro de 2013.

Moisés Piedade  
INESC-ID Rua Alves Redol,9  
1000-029 Lisboa  
Tel: 21 3100300  
email:mSP@inesc.pt

Dear Directors of  
INESC-ID - Instituto de Engenharia de Sistemas e Computadores: Investigação e  
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SUBJECT: DECLARATION - Patent MONOLITHIC DEVICE COMBINING CMOS WITH MAGNETORESISTIVE SENSORS (WO 2013/102850 A1)

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I, Moisés Simões Piedade, holder of Citizen's Card no.522481, Issued by the Portuguese Republic and valid until 02-03-2017, for all due and legal purposes, hereby declare:

1<sup>st</sup> - That I fully acknowledge the intention of INESC-ID to assign its rights of exploitation over the patent identified above (whose applicants are INESC-ID and INESC-MN) to MAGNOMICS, LDA, so that the latter can commercially exploit it;

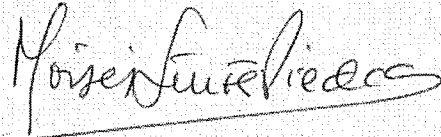
2<sup>nd</sup> - That I have no objection to the cession referred in the previous paragraph, not intending, consequently, to exercise any right of option regarding the exploitation of the mentioned patent, or claim, in the future, any right concerning the exploitation of the invention;

3<sup>rd</sup> - That the patent was collectively developed by INESC-ID and INESC-MN's multidisciplinary teams, under their aegis and guidance, with the own resources of these two institutions, considering myself reimbursed for my contribution to the invention, provided nothing else is owed.

With best regards,

Lisbon, November 4th, 2013

Signature



José Germano  
INESC-ID Rua Alves Redol, 9  
1000-029 Lisboa  
Tel: 21 3100300  
Email:jahg@inesc-id.pt

Dear Directors of  
INESC-ID - Instituto de Engenharia de Sistemas e Computadores:  
Investigação e Desenvolvimento em Lisboa

SUBJECT: DECLARATION – Patent MONOLITHIC DEVICE COMBINING CMOS WITH MAGNETORESISTIVE SENSORS (WO  
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Dear Sirs:

I, José António Henriques Kuan Germano, holder of Citizen's Card no.11938496, issued by the Portuguese Republic and valid until 17-06-2018, for all due and legal purposes, hereby declare:

1<sup>st</sup> – That I fully acknowledge the intention of INESC-ID to assign its rights of exploitation over the patent identified above (whose applicants are INESC-ID and INESC-MN) to MAGNOMICS, LDA, so that the latter may commercially exploit it;

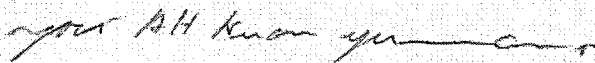
2<sup>nd</sup> – That I have no objection to the cession referred in the previous paragraph, not intending, consequently, to exercise any right of option regarding the exploitation of the mentioned patent, or claim, in the future, any right concerning the exploitation of the invention;

3<sup>rd</sup> – That the patent was collectively developed by INESC-ID and INESC-MN's multidisciplinary teams, under their aegis and guidance, with the own resources of these two institutions, considering myself reimbursed for my contribution to the invention, provided nothing else is owed.

With best regards,

Lisbon, November 4th, 2013

Signature



Tiago Costa  
INESC-ID Rua Alves Redol,9  
1000-029 Lisboa  
Tel: 21 3100300  
email: tcosta@sips.inesc-id.pt

Dear Directors of  
INESC-ID - Instituto de Engenharia de Sistemas  
e Computadores: Investigação e  
Desenvolvimento em Lisboa

SUBJECT: DECLARATION - Patent *MONOLITHIC DEVICE COMBINING CMOS WITH MAGNETORESISTIVE SENSORS (WO 2013/102850 A1)*

Dear Sirs:

I, Tiago Miguel Lopes Marta da Costa, holder of Citizen's Card no.125630302, issued by the Portuguese Republic and valid until 07-10-2018, for all due and legal purposes, hereby declare:

1<sup>st</sup> - That I fully acknowledge the intention of INESC-ID to assign its rights of exploitation over the patent identified above (whose applicants are INESC-ID and INESC-MN) to MAGNOMICS, LDA, so that the latter can commercially exploit it;

2<sup>nd</sup> - That I have no objection to the cession referred in the previous paragraph, not intending, consequently, to exercise any right of option regarding the exploitation of the mentioned patent, or claim, in the future, any right concerning the exploitation of the invention;

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With best regards,

Lisbon, November 5th, 2013

Signature  
