

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT								
NATURE OF CONVEYANCE:	ASSIGNMENT								
CONVEYING PARTY DATA									
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Wei-Hua Guo</td> <td>04/14/2011</td> </tr> <tr> <td>John Donegan</td> <td>04/11/2011</td> </tr> <tr> <td>Qiao-Yin Lu</td> <td>09/21/2012</td> </tr> </tbody> </table>		Name	Execution Date	Wei-Hua Guo	04/14/2011	John Donegan	04/11/2011	Qiao-Yin Lu	09/21/2012
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<table border="1"> <tr> <td>Name:</td> <td>Trinity College Dublin</td> </tr> <tr> <td>Street Address:</td> <td>College Green</td> </tr> <tr> <td>City:</td> <td>Dublin 2</td> </tr> <tr> <td>State/Country:</td> <td>IRELAND</td> </tr> </table>		Name:	Trinity College Dublin	Street Address:	College Green	City:	Dublin 2	State/Country:	IRELAND
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PROPERTY NUMBERS Total: 1									
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CORRESPONDENCE DATA									
<p>Fax Number: 2155686499 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> Phone: 215-568-6400 Email: ltorres@vklaw.com Correspondent Name: Volpe and Koenig, P.C. Address Line 1: 30 South 17th Street Address Line 2: United Plaza Address Line 4: Philadelphia, PENNSYLVANIA 19103</p>									
ATTORNEY DOCKET NUMBER:	PLIGUO-PT002								
NAME OF SUBMITTER:	Stephen B. Schott								
<p>Total Attachments: 6 source=20130219_PLIGUO_PT002_Assignment#page1.tif source=20130219_PLIGUO_PT002_Assignment#page2.tif source=20130219_PLIGUO_PT002_Assignment#page3.tif source=20130219_PLIGUO_PT002_Assignment#page4.tif source=20130219_PLIGUO_PT002_Assignment#page5.tif source=20130219_PLIGUO_PT002_Assignment#page6.tif</p>									

CH \$40.00 13627522

Inventions related to Coherent Receiver
Assignment

This assignment is made the 11th day of April 2011 between Wei-Hua Guo, an Chinese citizen of No. 33 Cranmer Place, Off Haddington Road, Dublin 4, Ireland and of the School of Physics, Trinity College Dublin, (called in the remainder of this document the Inventor) and The Provost, Fellows, Foundation Scholars, and other members of Board of the College of the Holy and Undivided Trinity of Queen Elizabeth near Dublin (called in the remainder of this document Trinity College).

WHEREAS the Inventor claims to be a true and first Inventor jointly with John Donegan also of the School of Physics of an invention relating to a Coherent Receiver which invention was made in the course of the Inventor's work in a collaborative research programme in Trinity College;

AND WHEREAS the inventors, Wei-Hua Guo and John Donegan, have agreed that the invention and all patent rights therein shall be held by Trinity College, this assignment witnesseth that in consideration of €5, the receipt of which is hereby acknowledged, and in consideration of a share in all the royalties which accrue net of legal costs to Trinity College from the invention, following payment of the agreed share to any contracted third parties (such royalties being apportioned between Trinity College and the two inventors according to the present Intellectual Property Regulations of Trinity College, and of which a copy has been received by the Inventor and is hereby acknowledged).

1. The Inventor hereby assigns to Trinity College all his share and interest in the invention, any improvements or modifications to the invention and any know-how relating to it, together with all the rights and interest in the same and all rights and powers to make application for patents in its own name, or jointly with others or in the joint names of Wei-Hua Guo, John Donegan and Trinity College or in the name of their nominee in the Republic of Ireland or in any other country of the world in respect of the invention or improvements in or modifications thereof, together with all rights and benefits arising therefrom under the International Convention for the Protection of Industrial Property. The Inventor agrees that Trinity College may assign or licence the rights to any third parties of its choice for the purpose of commercialisation of the invention.
2. The Inventor hereby covenants with Trinity College that
 - (i) he will (so far as is necessary) permit and enable Trinity College Dublin to apply for and take all reasonable steps to assist Trinity College or its nominees or Licensees in obtaining the grant of patent or like protection jointly with him and John Donegan in respect of the invention assigned in this document, in any territory as may be required by Trinity College Dublin and
 - (ii) he will execute and do all documents and things as may be necessary for the purpose of paragraph 2(i) and to vest his share in any relevant inventions and application for patent or know-how in Trinity College or its nominee or its assigns absolutely.
3. The Inventor hereby appoints Trinity College as his attorney in his name to execute and do any document act or thing which may be necessary to the grant of patent or like protection in its own name, jointly with others, or in its assigns' names to comply with the provisions of Paragraphs 1 and 2 above.

IN WITNESS whereof this assignment has been executed the day and year first printed herein

Signed, sealed and delivered by

Wei-hua Guo 14/06/2011

Wei-Hua Guo

in the presence of:

Pietro Bignardi Witness 14/06/2011

Margaret Woods Witness 14/06/2011

Executed on behalf of Trinity College Dublin

Margaret Woods
Dr Margaret Woods, Technology Transfer Manager, Trinity College Dublin

In the presence of:

Graham McElulthi Witness

Inventions related to Coherent Receiver
Assignment

This assignment is made the 11th day of April 2011 between John Donegan, an Irish citizen of St. Michael's New Road Straffan Co. Kildare Ireland and of the School of Physics Trinity College Dublin, (called in the remainder of this document the Inventor) and The Provost, Fellows, Foundation Scholars, and other members of Board of the College of the Holy and Undivided Trinity of Queen Elizabeth near Dublin (called in the remainder of this document Trinity College).

WHEREAS the Inventor claims to be a true and first Inventor jointly with Wei-Hua Guo also of the School of Physics of an invention relating to a Coherent Receiver which invention was made in the course of the Inventor's work in a collaborative research programme in Trinity College;

AND WHEREAS the inventors, John Donegan and Wei-Hua Guo have agreed that the invention and all patent rights therein shall be held by Trinity College, this assignment witnesseth that in consideration of €5, the receipt of which is hereby acknowledged, and in consideration of a share in all the royalties which accrue net of legal costs to Trinity College from the invention, following payment of the agreed share to any contracted third parties (such royalties being apportioned between Trinity College and the two inventors according to the present Intellectual Property Regulations of Trinity College, and of which a copy has been received by the Inventor and is hereby acknowledged);

1. The Inventor hereby assigns to Trinity College all his share and interest in the invention, any improvements or modifications to the invention and any know-how relating to it, together with all the rights and interest in the same and all rights and powers to make application for patents in its own name, or jointly with others or in the joint names of John Donegan, Wei-Hua Guo and Trinity College or in the name of their nominee in the Republic of Ireland or in any other country of the world in respect of the invention or improvements in or modifications thereof, together with all rights and benefits arising therefrom under the International Convention for the Protection of Industrial Property. The Inventor agrees that Trinity College may assign or licence the rights to any third parties of its choice for the purpose of commercialisation of the invention.
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IN WITNESS whereof this assignment has been executed the day and year first printed herein

Signed, sealed and delivered by

John Donegan

John Donegan

In the presence of:

Kevin Macdonald Witness

[Signature] Witness

Executed on behalf of Trinity College Dublin

Margaret Woods

Dr Margaret Woods, Technology Transfer Manager, Trinity College Dublin

In the presence of:

Graham McMullen Witness

**Inventions related to Coherent Receiver
Assignment**

This assignment is made the 21st day of September 2012 between Qiao-Yin Lu, an Chinese citizen citizen of 33 Cranmer Place, Off Haddington Road, Dublin 4, Ireland and of the School of Physics, Trinity College Dublin, (called in the remainder of this document the Inventor) and The Provost, Fellows, Foundation Scholars, and the other members of Board, of the College of the Holy and Undivided Trinity of Queen Elizabeth near Dublin (called in the remainder of this document Trinity College).

WHEREAS the Inventor claims to be a true and first Inventor jointly with John Donegan of the School of Physics and Wei-Hua Guo, previously of the School of Physics of an invention relating to Coherent Receiver which invention was made in the course of the Inventor's work in a collaborative research programme in Trinity College;

AND WHEREAS the inventors, Qiao-Yin Lu, John Donegan and Wei-Hua Guo, have agreed that the invention and all patent rights therein shall be held by Trinity College, this assignment witnesseth that in consideration of €5, the receipt of which is hereby acknowledged, and in consideration of a share in all the royalties which accrue net of legal costs to Trinity College from the invention, following payment of the agreed share to any contracted third parties (such royalties being apportioned between Trinity College and the three inventors according to the present Intellectual Property Regulations of Trinity College, and of which a copy has been received by the Inventor and is hereby acknowledged).

1. The Inventor hereby assigns to Trinity College all her share and interest in the invention, any improvements or modifications to the invention and any know-how relating to it, together with all the rights and interest in the same and all rights and powers to make application for patents in its own name, or jointly with others or in the joint names of Qiao-Yin Lu, John Donegan, Wei-Hua Guo and Trinity College or in the name of their nominee in the Republic of Ireland or in any other country of the world in respect of the invention or improvements in or modifications thereof, together with all rights and benefits arising therefrom under the International Convention for the Protection of Industrial Property. The Inventor agrees that Trinity College may assign or licence the rights to any third parties of its choice for the purpose of commercialisation of the invention.
1. The Inventor hereby covenants with Trinity College that
 - (i) she will (so far as is necessary) permit and enable Trinity College Dublin to apply for and take all reasonable steps to assist Trinity College or its nominees or Licensees in obtaining the grant of patent or like protection jointly with her, John Donegan and Wei-Hua Guo, in respect of the invention assigned in this document, in any territory as may be required by Trinity College Dublin and
 - (ii) she will execute and do all documents and things as may be necessary for the purpose of paragraph 2(i) and to vest her share in any relevant inventions and application for patent or know-how in Trinity College or its nominee or its assigns absolutely.
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IN WITNESS whereof this assignment has been executed the day and year first printed herein

Signed, sealed and delivered by

Qiao-Yin Lu

Qiao-Yin Lu

in the presence of:

Arat Abdullayev Witness

Maria Hursulic Witness

Executed on behalf of Trinity College Dublin

Margaret Woods

Dr Margaret Woods, Technology Transfer Manager, Trinity College Dublin

In the presence of:

Graham McMullen Witness