

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>Miguel VIDAL DRUMMOND</td> <td>01/22/2013</td> </tr> <tr> <td>Rogério NUNES NOGUEIRA</td> <td>01/22/2013</td> </tr> </tbody> </table>		Name	Execution Date	Miguel VIDAL DRUMMOND	01/22/2013	Rogério NUNES NOGUEIRA	01/22/2013						
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PROPERTY NUMBERS Total: 1													
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13808996</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13808996								
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CORRESPONDENCE DATA													
Fax Number:	6468780801												
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>													
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ATTORNEY DOCKET NUMBER:

P-76786-US

NAME OF SUBMITTER:

Avital Barlev

Total Attachments: 2

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MVD

ASSIGNMENT

In consideration of One Dollar (\$1.00), and other good and valuable consideration, the Receipt of which is hereby acknowledged, We, the undersigned, Miguel VIDAL DRUMMOND, residing at Rua Egas Moniz N°239, P-3860-378 Estarreja, Portugal; and Rogério NUNES NOGUEIRA, residing at Rua Santo André W17, 3° Esq. Frente, Esgueira, P-3800-388 Aveiro, Portugal,

Hereby sell, assign and transfer to UNIVERSIDADE DE AVEIRO, located at Edificio Central da Reitoria Campus, Universitario de Santiago, P-3810-193 Aveiro, Portugal, and INSTITUTO DE TELECOMUNICAÇÕES, located at Avenida Rovisco Pais, no. 1, 1049-001 Lisboa, Portugal, their successors, assigns and legal representatives (hereinafter, the "Assignee"), the entire right, title and interest for all countries, in and to any and all inventions which are disclosed and claimed, and as possessed by the undersigned, any and all inventions which are disclosed but not claimed in the application for United States Application No. 13/808,996, which is a National Phase Application of PCT International Application No. PCT/PT2010/000061, PCT International filing date December 9, 2010 and entitled:

**PHOTONIC SYSTEM AND METHOD FOR TUNABLE BEAMFORMING OF THE
ELECTRIC FIELD RADIATED BY A PHASED ARRAY ANTENNA**

and in and to said application and all divisional, continuing, substitute, renewal, reissue, and all other applications for U.S. Letters Patent or other related property rights in any and all foreign countries which have been or shall be filed on any of said inventions disclosed in said application; and in and to all original and reissued patents or related foreign documents which have been or shall be issued on said inventions; and including the Assignor's right in and to all revenue, income, royalties, damages and payments now or hereafter due or payable with respect to any Letters Patent which may be granted, and in and to all causes of action (either in law or in equity), and the right to sue, counterclaim, and recover for past, present and future infringement of the rights assigned or to be assigned under this Assignment;

Authorize and request the Commissioner of Patents of the United States to issue to said Assignee, the corporation above named, its successors, assigns and legal representatives, in accordance with this assignment, any and all United States Letters Patent on said inventions or any of them disclosed in said application;

Agree that said Assignee may apply for and receive foreign Letters Patent or rights of any other kind for said inventions, or any of them; and may claim, in applications for said foreign Letters Patent or other rights, the priority of the aforesaid United States patent application under the provisions of the International Convention of 1883 and later modifications thereof, under the Patent

Cooperation Treaty, under the European Patent Convention or under any other available international agreement; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the under-signed or the undersigned's executors or administrators will, for the United States and all foreign countries, execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications or other documents on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives, all facts known and documents available to the undersigned relating to said inventions and the history thereof; testify in all legal proceedings; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said inventions and for vesting title to said inventions and all applications for patents or related foreign rights and all patents on said inventions, in said Assignee, its successors, assigns and legal representatives; and

COVENANT with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

FULL NAME OF INVENTOR: Miguel VIDAL DRUMMOND	FULL NAME OF WITNESS: <i>LUI RICARDO LEBREIRO LAXINHAS</i>
SIGNATURE OF INVENTOR: <i>Miguel Vidal Drummond</i>	SIGNATURE OF WITNESS: <i>L. L.</i>
DATE: <u>22/01/2013</u> (day / month / year)	ADDRESS OF WITNESS: <i>RUA FREI AMADOR ARRAS, Nº 9-3º DTO 1700-202 LISBOA / PORTUGAL</i>

FULL NAME OF INVENTOR: Rogério NUNES NOGUEIRA	FULL NAME OF WITNESS: <i>LUI RICARDO LEBREIRO LAXINHAS</i>
SIGNATURE OF INVENTOR: <i>Rogério Nunes Nogueira</i>	SIGNATURE OF WITNESS: <i>L. L.</i>
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