

**PATENT ASSIGNMENT**

Electronic Version v1.1  
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT																
NATURE OF CONVEYANCE:	ASSIGNMENT																
<b>CONVEYING PARTY DATA</b>																	
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Saishankar Nandagopalan</td> <td>03/24/2009</td> </tr> <tr> <td>Jeyhan Karaoguz</td> <td>04/21/2009</td> </tr> <tr> <td>Jason A. Trachewsky</td> <td>03/31/2009</td> </tr> <tr> <td>Vinko Erceg</td> <td>04/10/2009</td> </tr> <tr> <td>Christopher J. Hansen</td> <td>03/27/2009</td> </tr> <tr> <td>Matthew James Fischer</td> <td>03/27/2009</td> </tr> <tr> <td>Murat Mese</td> <td>03/30/2009</td> </tr> </tbody> </table>		Name	Execution Date	Saishankar Nandagopalan	03/24/2009	Jeyhan Karaoguz	04/21/2009	Jason A. Trachewsky	03/31/2009	Vinko Erceg	04/10/2009	Christopher J. Hansen	03/27/2009	Matthew James Fischer	03/27/2009	Murat Mese	03/30/2009
Name	Execution Date																
Saishankar Nandagopalan	03/24/2009																
Jeyhan Karaoguz	04/21/2009																
Jason A. Trachewsky	03/31/2009																
Vinko Erceg	04/10/2009																
Christopher J. Hansen	03/27/2009																
Matthew James Fischer	03/27/2009																
Murat Mese	03/30/2009																
<b>RECEIVING PARTY DATA</b>																	
Name:	Broadcom Corporation																
Street Address:	5300 California Avenue																
City:	Irvine																
State/Country:	CALIFORNIA																
Postal Code:	92617																
<b>PROPERTY NUMBERS Total: 1</b>																	
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>12428185</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	12428185												
Property Type	Number																
Application Number:	12428185																
<b>CORRESPONDENCE DATA</b>																	
Fax Number:	(888)711-8076																
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>																	
Phone:	5122885299																
Email:	khudson@texaspatents.com																
Correspondent Name:	Bruce E. Garlick																
Address Line 1:	P.O. BOX 160727																
Address Line 4:	Austin, TEXAS 78716																
ATTORNEY DOCKET NUMBER:	BP20434																

OP \$40.00 12428185

NAME OF SUBMITTER:

Bruce E. Garlick, Reg.No. 36,520

**Total Attachments: 6**

source=BP20434 Executed Assignment#page1.tif

source=BP20434 Executed Assignment#page2.tif

source=BP20434 Executed Assignment#page3.tif

source=BP20434 Executed Assignment#page4.tif

source=BP20434 Executed Assignment#page5.tif

source=BP20434 Executed Assignment#page6.tif

Utility Patent Appl. Serial No.: 12/428,185Utility Patent Appl. Filing Date: 4/22/2009

Patent No.: \_\_\_\_\_

Patent Issue Date: \_\_\_\_\_

Country: \_\_\_\_\_

**ASSIGNMENT**

**WHEREAS**, the undersigned inventor(s), hereinafter called the "Assignors", have invented a new and useful invention entitled:

**TRANSCIEVER WITH PLURAL SPACE HOPPING PHASED ARRAY ANTENNAS AND METHODS FOR USE THEREWITH**

for which reference a full description is here made in an application for Letters Patent of the United States filed herewith or that was filed with the United States Patent and Trademark Office on the 22nd day of April, 2009. The Assignors believe himself/herself/themselves to be the original inventor(s) of the invention disclosed and claimed in the application for Letters Patent.

**WHEREAS**, The entity identified immediately below having a principal office and place of business as identified, hereinafter called the "Assignee", is desirous of acquiring the entire right, title and interest in and to said invention, the application above identified, and in, to and under Letters Patent which may be obtained for said invention, as hereinafter more fully set forth;

**Broadcom Corporation**, a California Corporation  
5300 California Avenue  
Irvine, CA 92617

**NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN**, be it known that for valuable legally sufficient consideration, the receipt of which by the Assignors from the Assignee is hereby acknowledged, the Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer unto the Assignee, its successors and assigns, the entire right, title and interest in and to the invention and the application herein above identified, any and all provisional patent applications from which the application claims priority, and all Letters Patents that may issue for the said invention, and all division, reissues, substitutions, continuations, and extensions thereof, to have and to hold for the sole and exclusive use and benefit of the Assignee, its successors and assigns to the full end of the term for which any and all of said Letters Patents for the said invention may issue.

**FURTHER**, be it known that the Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer unto the Assignee, its successors and assigns, the entire foreign rights to the invention disclosed in said application, in all countries of the world, including the right to file applications and obtain patents under the terms of the International Convention, and further agrees to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

And the Assignors do hereby covenant and agree, for themselves and their legal representatives, that they will assist the Assignee in the prosecution of the application herein

Docket No. BP20434

identified; in the making and prosecution of any other applications for Letters Patent that the Assignee may elect to make covering the invention herein identified, as herein before set forth, including any application for reissue, application for reexamination, application for foreign patent rights, or any proceeding in the United States Patent and Trademark Office affecting the invention, investing in the Assignee exclusive title in and to all such other applications and Letters Patent; and in the prosecution of any interference which may arise involving said invention, or any application or Letters Patents herein contemplated; that they will promptly execute and deliver to the Assignee any and all additional papers and make all lawful oaths which may be requested by the Assignee to fully carry out the terms of this assignment; and further that they will communicate to Assignee, or to its successors, assigns, and legal representatives, and facts known respecting said invention, and at the expense of the Assignee, testify in any legal proceedings, and generally do everything possible to aid the Assignee, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

And the Commissioner of the United States Patent and Trademark Office is hereby authorized and requested to issue all Letters Patent to the Assignee in accordance with the terms of the assignment.

**IN TESTIMONY WHEREOF**, the Assignors have hereunto set their hands on the date indicated below. The undersigned hereby authorizes and requests the attorneys and/or agents of record in the application above identified, and in, to and under Letters Patent which may be obtained for said invention, to insert in this assignment the filing date and serial number of said application (and/or issue date and patent number of said corresponding Letters Patent) when officially known, if applicable.

**Inventor(s):**

<u>Sai Chanka</u>	<u>03/24/09</u>		
Saishankar Nandagopalan	Date	Jeyhan Karaoguz	Date
Jason A. Trachewsky	Date	Vinko Erceg	Date
Christopher J. Hansen	Date	Matthew James Fischer	Date
Murat Mese	Date		Date
	Date		Date

Docket No. BP20434

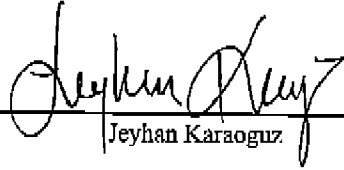
identified; in the making and prosecution of any other applications for Letters Patent that the Assignee may elect to make covering the invention herein identified, as herein before set forth, including any application for reissue, application for reexamination, application for foreign patent rights, or any proceeding in the United States Patent and Trademark Office affecting the invention, investing in the Assignee exclusive title in and to all such other applications and Letters Patent; and in the prosecution of any interference which may arise involving said invention, or any application or Letters Patents herein contemplated; that they will promptly execute and deliver to the Assignee any and all additional papers and make all lawful oaths which may be requested by the Assignee to fully carry out the terms of this assignment; and further that they will communicate to Assignee, or to its successors, assigns, and legal representatives, and facts known respecting said invention, and at the expense of the Assignee, testify in any legal proceedings, and generally do everything possible to aid the Assignee, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

And the Commissioner of the United States Patent and Trademark Office is hereby authorized and requested to issue all Letters Patent to the Assignee in accordance with the terms of the assignment.

**IN TESTIMONY WHEREOF**, the Assignors have hereunto set their hands on the date indicated below. The undersigned hereby authorizes and requests the attorneys and/or agents of record in the application above identified, and in, to and under Letters Patent which may be obtained for said invention, to insert in this assignment the filing date and serial number of said application (and/or issue date and patent number of said corresponding Letters Patent) when officially known, if applicable.

**Inventor(s):**

_____	_____
Saishankar Nandagopalan	Date
_____	_____
Jason A. Trachewsky	Date
_____	_____
Christopher J. Hansen	Date
_____	_____
Murat Mesc	Date
_____	_____
	Date

_____	_____
	4-21-09
Jeyhan Karaoguz	Date
_____	_____
Vinko Erceg	Date
_____	_____
Matthew James Fischer	Date
_____	_____
	Date
_____	_____
	Date



Docket No. BP20434

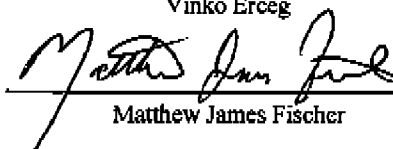
identified; in the making and prosecution of any other applications for Letters Patent that the Assignee may elect to make covering the invention herein identified, as herein before set forth, including any application for reissue, application for reexamination, application for foreign patent rights, or any proceeding in the United States Patent and Trademark Office affecting the invention, investing in the Assignee exclusive title in and to all such other applications and Letters Patent; and in the prosecution of any interference which may arise involving said invention, or any application or Letters Patents herein contemplated; that they will promptly execute and deliver to the Assignee any and all additional papers and make all lawful oaths which may be requested by the Assignee to fully carry out the terms of this assignment; and further that they will communicate to Assignee, or to its successors, assigns, and legal representatives, and facts known respecting said invention, and at the expense of the Assignee, testify in any legal proceedings, and generally do everything possible to aid the Assignee, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

And the Commissioner of the United States Patent and Trademark Office is hereby authorized and requested to issue all Letters Patent to the Assignee in accordance with the terms of the assignment.

**IN TESTIMONY WHEREOF**, the Assignors have hereunto set their hands on the date indicated below. The undersigned hereby authorizes and requests the attorneys and/or agents of record in the application above identified, and in, to and under Letters Patent which may be obtained for said invention, to insert in this assignment the filing date and serial number of said application (and/or issue date and patent number of said corresponding Letters Patent) when officially known, if applicable.

**Inventor(s):**

Saishankar Nandagopalan	Date
	3/31/09
Jason A. Trachewsky	Date
	3/27/09
Christopher J. Hansen	Date
Murat Mese	Date
	Date

Jeyhan Karaoguz	Date
Vinko Erceg	Date
 March 27, 2009	Date
Matthew James Fischer	Date
	Date
	Date

Docket No. BP20434

identified; in the making and prosecution of any other applications for Letters Patent that the Assignee may elect to make covering the invention herein identified, as herein before set forth, including any application for reissue, application for reexamination, application for foreign patent rights, or any proceeding in the United States Patent and Trademark Office affecting the invention, investing in the Assignee exclusive title in and to all such other applications and Letters Patent; and in the prosecution of any interference which may arise involving said invention, or any application or Letters Patents herein contemplated; that they will promptly execute and deliver to the Assignee any and all additional papers and make all lawful oaths which may be requested by the Assignee to fully carry out the terms of this assignment; and further that they will communicate to Assignee, or to its successors, assigns, and legal representatives, and facts known respecting said invention, and at the expense of the Assignee, testify in any legal proceedings, and generally do everything possible to aid the Assignee, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

And the Commissioner of the United States Patent and Trademark Office is hereby authorized and requested to issue all Letters Patent to the Assignee in accordance with the terms of the assignment.

**IN TESTIMONY WHEREOF**, the Assignors have hereunto set their hands on the date indicated below. The undersigned hereby authorizes and requests the attorneys and/or agents of record in the application above identified, and in, to and under Letters Patent which may be obtained for said invention, to insert in this assignment the filing date and serial number of said application (and/or issue date and patent number of said corresponding Letters Patent) when officially known, if applicable.

**Inventor(s):**

_____ Saishankar Nandagopalan	_____ Date	_____ Jeyhan Karaoguz	_____ Date
_____ Jason A. Trachewsky	_____ Date	<i>Vinko Erceg</i> Vinko Erceg	<i>4/10/2009</i> Date
_____ Christopher J. Hansen	_____ Date	_____ Matthew James Fischer	_____ Date
_____ Murat Mese	_____ Date	_____ Date	_____ Date
_____ Date	_____ Date	_____ Date	_____ Date

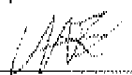
Docket No. BP20434

identified; in the making and prosecution of any other applications for Letters Patent that the Assignee may elect to make covering the invention herein identified, as herein before set forth, including any application for reissue, application for reexamination, application for foreign patent rights, or any proceeding in the United States Patent and Trademark Office affecting the invention, investing in the Assignee exclusive title in and to all such other applications and Letters Patent; and in the prosecution of any interference which may arise involving said invention, or any application or Letters Patents herein contemplated; that they will promptly execute and deliver to the Assignee any and all additional papers and make all lawful oaths which may be requested by the Assignee to fully carry out the terms of this assignment; and further that they will communicate to Assignee, or to its successors, assigns, and legal representatives, and facts known respecting said invention, and at the expense of the Assignee, testify in any legal proceedings, and generally do everything possible to aid the Assignee, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

And the Commissioner of the United States Patent and Trademark Office is hereby authorized and requested to issue all Letters Patent to the Assignee in accordance with the terms of the assignment.

**IN TESTIMONY WHEREOF**, the Assignors have hereunto set their hands on the date indicated below. The undersigned hereby authorizes and requests the attorneys and/or agents of record in the application above identified, and in, to and under Letters Patent which may be obtained for said invention, to insert in this assignment the filing date and serial number of said application (and/or issue date and patent number of said corresponding Letters Patent) when officially known, if applicable.

**Inventor(s):**

_____	_____	_____	_____
Saishankar Nandagopalan	Date	Jeyhan Karanguz	Date
_____	_____	_____	_____
Jason A. Trachewsky	Date	Vinko Erecog	Date
_____	_____	_____	_____
Christopher J. Hansen	Date	Matthew James Fischer	Date
	<i>03/30/09</i>	_____	_____
Murat Mese	Date	_____	Date
_____	_____	_____	_____
	Date		Date