503391177 07/14/2015

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
WAEL WILLIAM DIAB	02/18/2008
HOWARD FRAZIER	03/03/2008
SCOTT POWELL	03/23/2010

RECEIVING PARTY DATA

Name:	BROADCOM CORPORATION
Street Address:	5300 CALIFORNIA AVE.
City:	IRVINE
State/Country:	CALIFORNIA
Postal Code:	92617

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14100365

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	106861-0865
NAME OF SUBMITTER:	BRETT P. BELDEN
SIGNATURE:	/Brett P. Belden/
DATE SIGNED:	07/14/2015

Total Attachments: 7

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PATENT 503391177 REEL: 036080 FRAME: 0291

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PATENT REEL: 036080 FRAME: 0292

ASSIGNMENT

Filing Date:

File No.: 19096US02 Serial No.:

12/042,139

Wael William Diab Inventors:

March 4, 2008

Howard Frazier

In consideration of One Dollar (\$1.00) and other good and valuable considerations in hand paid, the receipt and sufficiency whereof are hereby acknowledged, each of the undersigned hereby assigns to Broadcom Corporation, incorporated under the laws of the state of California, its successors and assigns, the entire right, title and interest in the invention or improvements of the undersigned disclosed in an application for Letters Patent of the United States, entitled: "METHOD AND SYSTEM FOR TRAINING AN ETHERNET CHANNEL BASED ON AN ACTIVE CHANNEL TO SUPPORT ENERGY EFFICIENT ETHERNET NETWORKS" and identified as File No. 19096US02, in the offices of McANDREWS, HELD & MALLOY, LTD., and in a provisional application filed in the United States Patent and Trademark Office as Serial No. 60/979,433 on October 12, 2007, and in said application and any and all other applications, both United States and foreign, which the undersigned may file, either solely or jointly with others, on said invention or improvements, and in any and all Letters Patent of the United States and foreign countries, which may be obtained on any of said applications, and in any continuation, continuation-in-part, divisional, re-examination, reissue or extension of such patents, and further assigns to said assignee the priority right provided by the International Convention.

Each of the undersigned hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to said assignee. Each of the undersigned hereby authorizes and requests the attorneys of record in said application to insert in this assignment the filing date and serial number of said application when officially known. Each of the undersigned warrants himself/herself to be the owner of the entire right, title and interest in said invention or improvements and to have the right to make this assignment, and further warrants that there are no outstanding prior assignments, licenses, or other encumbrances on the interest herein assigned.

For said considerations, each of the undersigned hereby agrees, upon the request and at the expense of said assignee, its successors and assigns, to execute any and all continuation, continuation-in-part, divisional, re-examination, extension, and substitute applications for said invention or improvements, and any necessary oath, affidavit or declaration relating thereto, and any application for the reissue, reexamination, or extension of any Letters Patent that may be granted upon said application, and any and all applications and other document for Letters Patent in foreign countries on said invention or improvements, that said assignee, its successors or assigns may deem necessary or expedient, and for the said considerations each of the undersigned authorizes said assignee to apply for patents for said invention or improvements in its own name in such countries where such procedure is proper and further agrees, upon the request of said assignee, its successors and assigns, to cooperate to the best of the ability of the undersigned with said assignee, its successors and assigns, in any proceedings or transactions involving such applications or patents, including the preparation and execution of preliminary statements, giving

> **PATENT** REEL: 036080 FRAME: 0293

and producing evidence and performing any and all other acts necessary to obtain said Letters Patent, both United States and foreign, and vest all rights therein hereby conveyed in the assignee, its successors and assigns, whereby said Letters Patent will be held and enjoyed by the said assignee, its successors and assigns, to the full end of the term for which said Letters Patent will be granted, as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

WITNESS my hand this 19 th day of Fernand , 2008

Wael William Diab

WITNESS my hand this	3.4	_ day of	march	, 2008.
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ASSIGNMENT

File No.:

19096US02

Serial No.:

12/042,139

Inventors:

Wael William Diab

Filing Date:

March 4, 2008

Howard Frazier Scott Powell

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Each of the undersigned hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to said assignee. Each of the undersigned hereby authorizes and requests the attorneys of record in said application to insert in this assignment the filing date and serial number of said application when officially known. Each of the undersigned warrants himself/herself to be the owner of the entire right, title and interest in said invention or improvements and to have the right to make this assignment, and further warrants that there are no outstanding prior assignments, licenses, or other encumbrances on the interest herein assigned.

For said considerations, each of the undersigned hereby agrees, upon the request and at the expense of said assignee, its successors and assigns, to execute any and all continuation, continuation-in-part, divisional, re-examination, extension, and substitute applications for said invention or improvements, and any necessary oath, affidavit or declaration relating thereto, and any application for the reissue, re-examination, or extension of any Letters Patent that may be granted upon said application, and any and all applications and other document for Letters Patent in foreign countries on said invention or improvements, that said assignee, its successors or assigns may deem necessary or expedient, and for the said considerations each of the undersigned authorizes said assignee to apply for patents for said invention or improvements in its own name in such countries where such procedure is proper and further agrees, upon the request of said assignee, its successors and assigns, to cooperate to the best of the ability of the undersigned with said assignee, its successors and assigns, in any proceedings or transactions involving such applications

PATENT REEL: 036080 FRAME: 0296 or patents, including the preparation and execution of preliminary statements, giving and producing evidence and performing any and all other acts necessary to obtain said Letters Patent, both United States and foreign, and vest all rights therein hereby conveyed in the assignee, its successors and assigns, whereby said Letters Patent will be held and enjoyed by the said assignee, its successors and assigns, to the full end of the term for which said Letters Patent will be granted, as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

WITNESS my hand this	day of	, 2010.
	Wael William Diah	

Docket No. 19096US02

WITNESS my hand this	day of	, 2010.
	Howard Frazier	

Docket No. 19096US02

WITNESS my hand this _	23 <u>rd</u> day of _	Morch	_, 2010.
		Than	
	Scot	t Powell	