

PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT3857133

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	EDWARD WAYNE BOYD	02/08/2013
RECEIVING PARTY DATA		
Name:	BROADCOM CORPORATION	
Street Address:	5300 CALIFORNIA AVENUE	
City:	IRVINE	
State/Country:	CALIFORNIA	
Postal Code:	92617	
PROPERTY NUMBERS Total: 1		
	Property Type	Number
	Application Number:	13974823
CORRESPONDENCE DATA		
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<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>		
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ATTORNEY DOCKET NUMBER:	3875.6120001	
NAME OF SUBMITTER:	KAVON NASABZADEH	
SIGNATURE:	/Kavon Nasabzadeh, #62,721/	
DATE SIGNED:	05/03/2016	
Total Attachments: 6		
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ASSIGNMENT

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to the undersigned inventor: **Edward Wayne BOYD**, hereby sells and assigns to **Broadcom Corporation**, a corporation formed under the laws of California, whose mailing address is 5300 California Avenue, Irvine, California 92617 (hereafter referred to as the Assignee), his/her entire right, title and interest, including the right to sue for past infringement and to collect for all past, present and future damages, for the United States of America (as defined in 35 U.S.C. § 100) and throughout the world,

(a) in the invention(s) known as **EPON Over Cable Frequency Division Duplexing Downstream Spectrum and Channel Bonding** for which a provisional application for patent in the United States of America was filed on August 24, 2012 (also known as United States Application No. 61/693,179), in any and all non-provisional applications therefrom, in any and all Letters Patent(s) granted from such non-provisional applications, and

(b) in any and all applications that claim the benefit of the patent application listed above in part (a), including non-provisional applications, continuing (continuation, divisional, or continuation-in-part) applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and

(c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

The undersigned inventor agrees to execute all papers necessary in connection with the application(s) and any non-provisional, continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such application(s) as the Assignee may deem necessary or expedient.

The undersigned inventor agrees to execute all papers necessary in connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) or any non-provisional, continuing (continuation, divisional, or continuation-in-part), reissue or reexamination application(s) thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or patent enforcement action.

The undersigned inventor hereby represents that he/she has full right to convey the entire interest herein assigned, and that he/she has not executed, and will not execute, any agreement in conflict therewith.

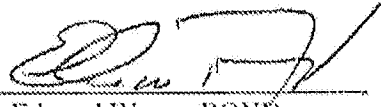
The undersigned inventor hereby grants the patent practitioners associated with **CUSTOMER NUMBER 49579** the power to insert in this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

The undersigned inventor hereby represents that he/she understands that the patent practitioners associated with **CUSTOMER NUMBER 49579** are the legal representatives of, and attorneys for, the assignee, and are NOT the legal representatives of, and attorneys for, the inventor.

IN WITNESS WHEREOF, executed by the undersigned inventor on the date opposite his/her name.

Date: 2/8/13

Signature of Inventor: _____


Edward Wayne BOYD

1589369_1

ASSIGNMENT

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned inventors: **Avi KLIGER, Ed (Edward) BOYD and Leo MONTREUIL**, hereby sell and assign to **Broadcom Corporation**, a corporation formed under the laws of California, whose mailing address is 5300 California Avenue, Irvine, California 92617 (hereafter referred to as the Assignee), his/her entire right, title and interest, including the right to sue for past infringement and to collect for all past, present and future damages, for the United States of America (as defined in 35 U.S.C. § 100) and throughout the world,

(a) in the invention(s) known as **Ethernet Passive Optical Network over Coaxial (EPoC) Bandwidth Allocation** for which a provisional application for patent in the United States of America was filed on September 17, 2012 (also known as United States Application No. 61/702,104), in any and all non-provisional applications therefrom, in any and all Letters Patent(s) granted from such non-provisional applications, and

(b) in any and all applications that claim the benefit of the patent application listed above in part (a), including non-provisional applications, continuing (continuation, divisional, or continuation-in-part) applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and

(c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

The undersigned inventors agree to execute all papers necessary in connection with the application(s) and any non-provisional, continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application(s) thereof and also to execute separate

assignments in connection with such application(s) as the Assignee may deem necessary or expedient.

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The undersigned inventors hereby represent that he/she has full right to convey the entire interest herein assigned, and that he/she has not executed, and will not execute, any agreement in conflict therewith.

The undersigned inventors hereby grant the patent practitioners associated with **CUSTOMER NUMBER 49579** the power to insert in this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

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IN WITNESS WHEREOF, executed by the undersigned inventors on the date opposite his/her name.

Date: _____ Signature of Inventor: _____

Avi KLIGER

Date: 4/2/13 Signature of Inventor: _____

Ed (Edward) BOYD

Date: _____ Signature of Inventor: _____

Leo MONTREUIL

ASSIGNMENT

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned inventors: **Ed (Edward) BOYD, Avi KLIGER, Leo MONTREUIL, Mark LAUBACH, Yitshak OHANA, Victor HOU, Thomas KOLZE, Eyal ABRAHAMOV, Niki PANTELIAS, Tony (Tak) LEE, Kelly CAMERON, BZ (Bazhong) SHEN and Howard TRAN**, hereby sell and assign to **Broadcom Corporation**, a corporation formed under the laws of California, whose mailing address is 5300 California Avenue, Irvine, California 92617 (hereafter referred to as the Assignee), his/her entire right, title and interest, including the right to sue for past infringement and to collect for all past, present and future damages, for the United States of America (as defined in 35 U.S.C. § 100) and throughout the world,

(a) in the invention(s) known as **Ethernet Passive Optical Network over coaxial (EPoC)** for which a provisional application for patent in the United States of America was filed on September 17, 2012 (also known as United States Application No. 61/702,113), in any and all non-provisional applications therefrom, in any and all Letters Patent(s) granted from such non-provisional applications, and

(b) in any and all applications that claim the benefit of the patent application listed above in part (a), including non-provisional applications, continuing (continuation, divisional, or continuation-in-part) applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and

(c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

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part), reissue, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such application(s) as the Assignee may deem necessary or expedient.

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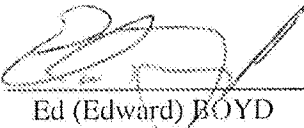
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IN WITNESS WHEREOF, executed by the undersigned inventors on the date opposite his/her name.

Date: 4/2/13

Signature of Inventor: 

Ed (Edward) BOYD

Date: _____

Signature of Inventor: _____

Avi KLIGER

Date: _____

Signature of Inventor: _____

Leo MONTREUIL

Date: _____

Signature of Inventor: _____

Mark LAUBACH

Date: _____

Signature of Inventor: _____

Yitshak OHANA