PATENT ASSIGNMENT

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SUBMISSION TYPE:		NEW ASSIGNMENT			
NATURE OF CONVEYANCE:		ASSIGNMENT			
CONVEYING PARTY DATA					
		N	lame	Execution Date	
Jonathan S. MIN				06/05/2002	
Fang LU				05/31/2002	
RECEIVING PARTY I	DATA				1
Name:	Broadcom Cor	porat	ion		
Street Address:	5300 California	a Ave	nue		
City:	Irvine				
State/Country:	CALIFORNIA				
Postal Code:	92617	92617			
PROPERTY NUMBERS Total: 1					
Property Type		Number			
Application Number: 12538		600		860	
Application Number: 12538600 8000 CORRESPONDENCE DATA 70000					
Fax Number:	(202)371-				\$40.00
Phone:	<i>be sent via US N</i> 202-371-2		hen the fax attempt is unsuccessful.		
Email:	mspecht@		f.com		РР
Correspondent Name: Sterne, Kessler, Goldstein & Fox PLLC					
Address Line 1: 1100 New York Avenue, NW					
Address Line 4: Washington, DISTRICT OF COLUMBIA 20005					
ATTORNEY DOCKET NUMBER:		1875.1520003			
NAME OF SUBMITTER:		/Michael D. Specht/			
Total Attachments: 4 source=1875.1520003 Assignment#page1.tif source=1875.1520003 Assignment#page2.tif source=1875.1520003 Assignment#page3.tif					

PATENT REEL: 023073 FRAME: 0690

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: (1) Jonathan S. MIN and (2) Fang LU, the undersigned inventors hereby sell and assign to Broadcom Corporation (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:

check applicable box(es) \square for the United States of America (as defined in 35 U.S.C. § 100), \square and throughout the world,

(a) in the invention known as <u>System and Method for Performing Ranging in a Cable</u> <u>Modem System</u> for which application for patent in the United States of America has been executed by the undersigned on (1) $\sqrt{Sincs, 2cod}$ and (2) $\sqrt{}$ (also known as United States Application No. (to be assigned), filed (herewith)), in any and all applications thereon, in any and all Letters Patent(s) therefor, and

(b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing 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 and any 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 inventors agree to execute all papers necessary in connection with any interference or patent enforcement action (judicial or otherwise) related to the application or any 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.

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Docket Number: 1875.1520001

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 James D. Bennett, Registration No. 37,550 and David J. Rosmann, Registration No. 43,059, of Broadcom Corporation, and Robert Greene Sterne, Esquire, Registration No. 28,912; Edward J. Kessler, Esquire, Registration No. 25,688; Jorge A. Goldstein, Esquire, Registration No. 29,021; David K.S. Cornwell, Esquire, Registration No. 31,944; Robert W. Esmond, Esquire, Registration No. 32,893; Tracy-Gene G. Durkin, Esquire, Registration No. 32,831; Michael A. Cimbala, Esquire, Registration No. 33,851; Michael B. Ray, Esquire, Registration No. 32,831; Michael Q. Lee, Esquire, Registration No. 35,239; Steven R. Ludwig, Esquire, Registration No. 36,003; John M. Covert, Esquire, Registration No. 38,759; Linda E. Alcorn, Esquire, Registration No. 39,588; Lawrence B. Bugaisky, Esquire, Registration No. 35,086; Donald J. Featherstone, Esquire, Registration No. 33,876; and Robert C. Millonig, Esquire, Registration No. 34,395, all of STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C., 1100 New York Avenue, N.W., Suite 600, Washington, D.C. 20005-3934, 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.

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

Date:	1 June S. 2002	Signature of Inventor: Jonathan & MIN
Date:	1	Signature of Inventor: /

Fang LU

SKGF_DC1:19730.1

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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 each of the undersigned inventors: (1) <u>Jonathan S. MIN</u> and (2) <u>Fang LU</u>, the undersigned inventors hereby sell and assign to <u>Broadcom Corporation</u> (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:

check applicable box(es) \square for the United States of America (as defined in 35 U.S.C. § 100), \square and throughout the world,

(a) in the invention known as <u>System and Method for Performing Ranging in a Cable</u> <u>Modem System</u> for which application for patent in the United States of America has been executed by the undersigned on $(1) \checkmark$ and $(2) \checkmark 5-31-02$ (also known as United States Application No. (to be assigned), filed (herewith)), in any and all applications thereon, in any and all Letters Patent(s) therefor, and

(b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing 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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Page 1 of 2

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

Date:	/	Signature of Inventor: 🖌
		Jonathan S. MIN
Date:	1 5-3/-02	Signature of Inventor: / Tang Lu
		Fang LU

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RECORDED: 08/10/2009

PATENT REEL: 023073 FRAME: 0694