

FORM PTO-1619A

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U.S. Department of Commerce  
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PATENT

8-3004  
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Execution Date

Month Day Year

Party 1	Jason A. Trachewsky	8-25-04
Party 2	R. Tushar Moorti	8-26-04
Party 3	Christopher J. Hansen	8-26-04
Party 4		
Party 5		
Party 6		

**Receiving Party**☐ Mark if additional name of conveying parties attached

Name (line 1)	Broadcom Corporation		
Name (line 2)			
Address	16215 Alton Parkway		
Address	Irvine	California	92618-7013
	City	State/Country	Zip Code

☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment)**Domestic Representative Name and Address**

Enter for the first Receiving Party Only

Name	Timothy W. Markison		
Address (line 1)	P.O. Box 160727		
Address (line 2)	Austin	TX	78716-0727
Address (line 3)			
Address (line 4)			

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PATENT  
REEL: 015764 FRAME: 0441

## Correspondent Name and Address

## Area Code and Telephone Number

(512) 342-0612

Name (line 1)

Timothy W. Markison

Name (line 2)

Address

P.O. Box 160727

Address

Austin

TX

78716-0727

City

State/Country

Zip Code

## Pages

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## Application Number(s) or Patent Number(s)

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Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

## Patent Application Numbers(s)

## Patent Numbers



If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor.

Month Day Year

8-25-04

## Patent Cooperation Treaty (PCT)

PCT

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Enter PCT application number only  
if a U.S. Application Number  
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## Number of Properties

Enter the total number of properties involved.

#

1

## Fee Amount

Fee Amount for Properties Listed (37 CFR 3.41):

\$

\$40.00

Method of Payment:

Enclosed

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Deposit Account

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Deposit Account

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Deposit Account Number

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50-2126

Authorization to charge additional fees: Yes

☒

No

☐

## Statement and Signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.

Timothy W. Markison

Name of Person Signing



Signature



Date

### ASSIGNMENT

**WHEREAS**, the undersigned inventors, hereinafter called the "Assignors", have invented a new and useful invention entitled:

LONG TRAINING SEQUENCE FOR MIMO WLAN SYSTEMS

for which reference a full description is here made in an application for Letters Patent of the United States filed herewith.

**WHEREAS**, **Broadcom Corporation**, a USA company having a principal office and a place of business at, 16215 Alton Parkway

Irvine California 92618-7013

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;

**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, 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.


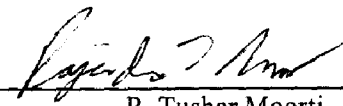
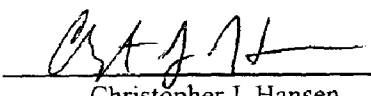
**FURTHER**, be it known that the Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer unto the Assignee, its successors and assigns, the entire foreign rights to the invention disclosed in said application, in all countries of the world, including the right 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 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 Patents and Trademarks 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.

 Jason A. Trachewsky	<u>8/25/04</u> Date	 R. Tushar Moorti	<u>8/26/04</u> Date
 Christopher J. Hansen	<u>8/26/04</u> Date	_____	_____ Date
_____	_____ Date	_____	_____ Date