

11-22-2002

Form PTO-1595 (Rev. 03/01) OMB No. 0651-0027 (exp. 5/31/2002) Tab settings

REC



102290620

U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies): 11-14-02 Bruce J. Currivan, Ravi Bhaskaran, Thomas J. Kolze, Ph.D., Kevin Lee Miller, Jeffrey S. Putnam, Fang Lu, Tak K. Lee, Thuji S. Lin, Loke Kun Tan, Gopal Triplicane Venkatesan, Hsin-An Liu, Jonathan S. Min, Ph.D, and James P. Cavallo

2. Name and address of receiving party(ies)

Name: Broadcom Corporation

Internal Address:

Additional name(s) of conveying party(ies) attached? Yes No

3. Nature of conveyance:

- Assignment Merger Security Agreement Change of Name Other

11/05/02, 11/06/02, 11/08/02, 11/11/02, and 11/12/02

Execution Date:

Street Address: 16215 Alton Parkway

City: Irvine State: CA Zip: 92618-7013

Additional name(s) & address(es) attached? Yes No

4. Application number(s) or patent number(s): Attorney Docket No. BP 2259 (new patent application) If this document is being filed together with a new application, the execution date of the application is: 11/14/02

A. Patent Application No.(s)

B. Patent No.(s)

10294048

Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Shayne X. Short, Ph.D.

Internal Address: Garlick Harrison & Markison LLP

RMEBRAHT 00000064 10294048

40.00 00

Street Address: P.O. Box 160727

City: Austin State: TX Zip: 78716-0727

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41) \$ 40.00

Enclosed (PTO-2038 Credit Card Payment Form Enclosed)

Authorized to be charged to deposit account

8. Deposit account number:

DO NOT USE THIS SPACE

9. Signature.

Shayne X. Short, Ph.D. Name of Person Signing

SX Short Signature

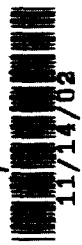
11/14/02 Date

Total number of pages including cover sheet, attachments, and documents: 7

Mail documents to be recorded with required cover sheet information to: Commissioner of Patents & Trademarks, Box Assignments Washington, D.C. 20231

PATENT REEL: 013499 FRAME: 0968

11000 U.S. PTO 10/29/02



11/18/2002 01 FC:8021

**ASSIGNMENT for Patent Application**

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned inventor(s) **Bruce J. Currivan, Ravi Bhaskaran, Thomas J. Kolze, Ph.D., Kevin Lee Miller, Jeffrey S. Putnam, Fang Lu, Tak K. Lee, Thuji S. Lin, Loke Kun Tan, Gopal Triplicane Venkatesan, Hsin-An Liu, Jonathan S. Min, Ph.D, and James P. Cavallo** the undersigned inventor(s) hereby sell(s) and assign(s) to **Broadcom Corporation**, a California corporation having a principal place of business at 16215 Alton Parkway, Irvine, California 92618-7013 (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)*  for the United States of America (as defined in 35 U.S.C. § 100 et seq.),

and throughout the world,

(a) in the invention(s) known as **All digital reference frequency locking (Attorney Docket No. BP 2259)** for which application(s) for patent in the United States of America has (have) been executed by the undersigned on \_\_\_\_\_ in any and all applications thereon, in any and all Letters Patent(s) therefore, 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 therefore 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 therefore; 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(s) agree(s) to execute all papers necessary in connection with the application(s) 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 inventor(s) agree(s) to execute all papers necessary in

connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) 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.

The undersigned inventor(s) hereby represent(s) 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(s) hereby grant(s):

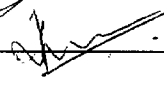
Bruce E. Garlick	Reg. No. 36,520
James A. Harrison	Reg. No. 40,401
Timothy W. Markison	Reg. No. 33,534
Shayne X. Short, Ph.D.	Reg. No. 45,105
Armando Pastrana, Jr.	Reg. No. 44,997

All of:  
Garlick Harrison & Markison, LLP  
P.O. Box 160727  
Austin, Texas 78716-0727

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.

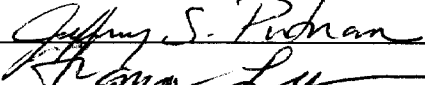
IN WITNESS WHEREOF, executed by the undersigned inventor(s) on the date opposite his/her name.


Bruce J. Currivan:  Date: 5 Nov 2002

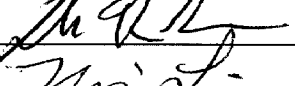
Ravi Bhaskaran:  Date: 5 Nov 2002

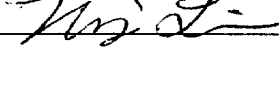
• Thomas J. Kolze, Ph.D.: \_\_\_\_\_ Date: \_\_\_\_\_

• Kevin Lee Miller: \_\_\_\_\_ Date: \_\_\_\_\_

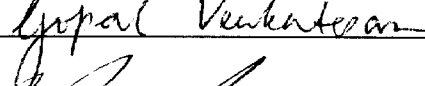
Jeffrey S. Putnam:  Date: 6 Nov. 2002

Fang Lu:  Date: 5 Nov. 2002

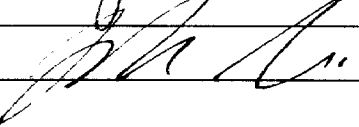
Tak K. Lee:  Date: 6 Nov. 2002

Thuji S. Lin:  Date: 6 Nov. 2002

• Loke Kun Tan: \_\_\_\_\_ Date: \_\_\_\_\_

Gopal Triplicane Venkatesan:  Date: 8 Nov. 2002

• Hsin-An Liu: \_\_\_\_\_ Date: \_\_\_\_\_

• Jonathan S. Min, Ph.D.:  Date: 5 Nov 2002

• James P. Cavallo: \_\_\_\_\_ Date: \_\_\_\_\_

connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) 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.

The undersigned inventor(s) hereby represent(s) 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(s) hereby grant(s):

Bruce E. Garlick	Reg. No. 36,520
James A. Harrison	Reg. No. 40,401
Timothy W. Markison	Reg. No. 33,534
Shayne X. Short, Ph.D.	Reg. No. 45,105
Armando Pastrana, Jr.	Reg. No. 44,997

All of:  
Garlick Harrison & Markison, LLP  
P.O. Box 160727  
Austin, Texas 78716-0727

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(s) on the date opposite his/her name.

Bruce J. Currivan: \_\_\_\_\_ Date: \_\_\_\_\_

Ravi Bhaskaran: \_\_\_\_\_ Date: \_\_\_\_\_

Thomas J. Kolze, Ph.D.: Thomas J. Kolze, Ph.D. Date: 11 Nov 2002

Kevin Lee Miller: \_\_\_\_\_ Date: \_\_\_\_\_

Jeffrey S. Putnam: \_\_\_\_\_ Date: \_\_\_\_\_

Fang Lu: \_\_\_\_\_ Date: \_\_\_\_\_

Tak K. Lee: \_\_\_\_\_ Date: \_\_\_\_\_

Thuji S. Lin: \_\_\_\_\_ Date: \_\_\_\_\_

Loke Kun Tan: \_\_\_\_\_ Date: \_\_\_\_\_

Gopal Triplicane Venkatesan: \_\_\_\_\_ Date: \_\_\_\_\_

Hsin-An Liu: \_\_\_\_\_ Date: \_\_\_\_\_

Jonathan S. Min, Ph.D: \_\_\_\_\_ Date: \_\_\_\_\_

James P. Cavallo: \_\_\_\_\_ Date: \_\_\_\_\_

U.S. UTILITY PATENT APPLICATION

Attorney Docket No. BP 2259

connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) 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.

The undersigned inventor(s) hereby represent(s) 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.

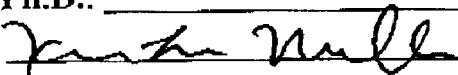
The undersigned inventor(s) hereby grant(s) attorney(s) and/or agent(s) of USPTO Customer Number 34399, those attorney(s) and/or agent(s) currently being,

- Bruce E. Garlick Reg. No. 36,520
- James A. Harrison Reg. No. 40,401
- Timothy W. Markison Reg. No. 33,534
- Shayne X. Short, Ph.D. Reg. No. 45,105
- Armando Pastrana, Jr. Reg. No. 44,997

All of:  
Garlick Harrison & Markison, LLP  
P.O. Box 160727  
Austin, Texas 78716-0727

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(s) on the date opposite his/her name.

- Bruce J. Currivan: \_\_\_\_\_ Date: \_\_\_\_\_
- Ravi Bhaskaran: \_\_\_\_\_ Date: \_\_\_\_\_
- Thomas J. Kolze, Ph.D.: \_\_\_\_\_ Date: \_\_\_\_\_
- Kevin Lee Miller:  \_\_\_\_\_ Date: 11/12/02
- Jeffrey S. Putnam: \_\_\_\_\_ Date: \_\_\_\_\_
- Fang Lu: \_\_\_\_\_ Date: \_\_\_\_\_
- Tak K. Lee: \_\_\_\_\_ Date: \_\_\_\_\_
- Thuji S. Lin: \_\_\_\_\_ Date: \_\_\_\_\_
- Loke Kun Tan: \_\_\_\_\_ Date: \_\_\_\_\_
- Gopal Triplicane Venkatesan: \_\_\_\_\_ Date: \_\_\_\_\_
- Hsin-An Liu: \_\_\_\_\_ Date: \_\_\_\_\_
- Jonathan S. Min, Ph.D: \_\_\_\_\_ Date: \_\_\_\_\_
- James P. Cavallo: \_\_\_\_\_ Date: \_\_\_\_\_

U.S. UTILITY PATENT APPLICATION

Attorney Docket No. BP 2259

connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) 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.

The undersigned inventor(s) hereby represent(s) 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(s) hereby grant(s):

Bruce E. Garlick	Reg. No. 36,520
James A. Harrison	Reg. No. 40,401
Timothy W. Markison	Reg. No. 33,534
Shayne X. Short, Ph.D.	Reg. No. 45,105
Armando Pastrana, Jr.	Reg. No. 44,997

All of:  
Garlick Harrison & Markison, LLP  
P.O. Box 160727  
Austin, Texas 78716-0727

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(s) on the date opposite his/her name.

Bruce J. Currivan: \_\_\_\_\_ Date: \_\_\_\_\_

Ravi Bhaskaran: \_\_\_\_\_ Date: \_\_\_\_\_

Thomas J. Kolze, Ph.D.: \_\_\_\_\_ Date: \_\_\_\_\_


Kevin Lee Miller: \_\_\_\_\_ Date: \_\_\_\_\_

Jeffrey S. Putnam: \_\_\_\_\_ Date: \_\_\_\_\_

Fang Lu: \_\_\_\_\_ Date: \_\_\_\_\_

Tak K. Lee: \_\_\_\_\_ Date: \_\_\_\_\_

Thuji S. Lin: \_\_\_\_\_ Date: \_\_\_\_\_

\* Loke Kun Tan:  \_\_\_\_\_ Date: 11/12/02

Gopal Triplicane Venkatesan: \_\_\_\_\_ Date: \_\_\_\_\_

Hsin-An Liu: \_\_\_\_\_ Date: \_\_\_\_\_

Jonathan S. Min, Ph.D: \_\_\_\_\_ Date: \_\_\_\_\_

James P. Cavallo: \_\_\_\_\_ Date: \_\_\_\_\_

U.S. UTILITY PATENT APPLICATION

Attorney Docket No. BP 2259

connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) 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.

The undersigned inventor(s) hereby represent(s) 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.


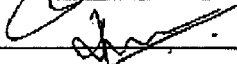
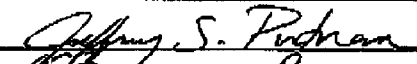

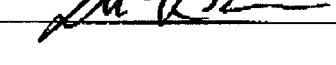
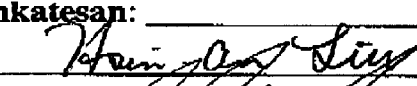

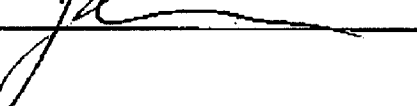
The undersigned inventor(s) hereby grant(s):

Bruce E. Garlick	Reg. No. 36,520
James A. Harrison	Reg. No. 40,401
Timothy W. Markison	Reg. No. 33,534
Shayne X. Short, Ph.D.	Reg. No. 45,105
Armando Pastrana, Jr.	Reg. No. 44,997

All of:  
Garlick Harrison & Markison, LLP  
P.O. Box 160727  
Austin, Texas 78716-0727

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(s) on the date opposite his/her name.

Bruce J. Currivan:		Date: <u>5 Nov 2002</u>
Ravi Bhaskaran:		Date: <u>5 Nov 2002</u>
Thomas J. Kolze, Ph.D.:	_____	Date: _____
Kevin Lee Miller:	_____	Date: _____
Jeffrey S. Putnam:		Date: <u>6 Nov. 2002</u>
Fang Lu:		Date: <u>5 Nov. 2002</u>
Tak K. Lee:		Date: <u>6 Nov. 2002</u>
Thuji S. Lin:	_____	Date: _____
Loke Kun Tan:	_____	Date: _____
Gopal Triplicane Venkatesan:	_____	Date: _____
Hsin-An Liu:		Date: <u>8 Nov 2002</u>
Jonathan S. Min, Ph.D:		Date: <u>5 Nov 2002</u>
James P. Cavallo:		Date: <u>8 Nov 2002</u>