

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
AVRAHAM KLIGER	05/26/2014
BA-ZHONG SHEN	05/22/2014
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<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	14290102
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<b>NAME OF SUBMITTER:</b>	KATHRYN A. MCCROSSEN
<b>SIGNATURE:</b>	/Kathryn A. McCrossen/
<b>DATE SIGNED:</b>	05/29/2014
<b>Total Attachments: 3</b>	
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**Application No.:** 14/290,102  
**Filing Date:** 05-29-2014  
**Patent No.:** \_\_\_\_\_  
**Issue Date:** \_\_\_\_\_

### ASSIGNMENT

**WHEREAS**, the undersigned inventor(s), hereinafter called the "Assignors", have invented a new and useful invention entitled:

**Cyclic redundancy check (CRC) and forward error correction (FEC) for ranging within communication systems**

for which reference a full description is here made in an application for Letters Patent of the United States filed herewith or that was filed with the United States Patent and Trademark Office on the 29<sup>th</sup> day of May, 2014. The Assignors believe himself/herself/themselves to be the original inventor(s) of the invention disclosed and claimed in the application for Letters Patent.

**WHEREAS**, The entity identified immediately below having a principal office and place of business as identified, 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;

**Broadcom Corporation, a California Corporation**  
**5000 California Avenue**  
**Irvine, CA 92617**

**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, any and all provisional patent applications from which the application claims priority, and all Letters Patents that may issue for the said invention, and all divisional, 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. Assignors further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection with any and all domestic and foreign patent applications identified herein or related to such identified patent applications in respective prosecution thereof and/or 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

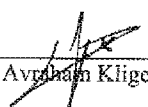
deliver to the Assignee any and all additional papers and make all lawful oaths which may be requested by the Assignee to fully carry out the terms of this Assignment; and further that they will communicate to Assignee, or to its successors, assigns, and legal representatives, and facts known respecting 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.

Employee irrevocably assigns to the Company all right, title, and interest Employee may have or may acquire in and to all Inventions, including, without limitation, all copyright, trademark, trade secret, patent and mask work and other intellectual property rights throughout the universe. Employee acknowledges and agrees that no rights relating to any Invention are reserved to Employee. Employee irrevocably confirms that consideration received by the Employee is in lieu of any rights for compensation that may arise in connection with the Inventions under applicable law and the Employee waives any legal right he may have in connection with the Inventions including without limitation any moral rights and/or right to claim royalties or any other consideration from the Company with regard to the assigned Inventions, including without limitation, in respect of Service Inventions according to Section 134 of the Patent Law 5727-1967.

The United States Patent and Trademark Office 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. The undersigned hereby authorizes and requests the attorneys and/or agents of record in the application above identified, and in, to and under Letters Patent which may be obtained for said invention, to insert in this assignment the filing date and serial number of said application (and/or issue date and patent number of said corresponding Letters Patent) when officially known, if applicable.

Inventor(s):

 Avraham Kliger	May 26, 2014 Date	_____ Date
Ba-Zhong Shen	_____ Date	_____ Date
_____	_____ Date	_____ Date
_____	_____ Date	_____ Date
_____	_____ Date	_____ Date
_____	_____ Date	_____ Date

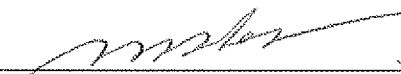
deliver to the Assignee any and all additional papers and make all lawful oaths which may be requested by the Assignee to fully carry out the terms of this Assignment; and further that they will communicate to Assignee, or to its successors, assigns, and legal representatives, and facts known respecting 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.

Employee irrevocably assigns to the Company all right, title, and interest Employee may have or may acquire in and to all Inventions, including, without limitation, all copyright, trademark, trade secret, patent and mask work and other intellectual property rights throughout the universe. Employee acknowledges and agrees that no rights relating to any Invention are reserved to Employee. Employee irrevocably confirms that consideration received by the Employee is in lieu of any rights for compensation that may arise in connection with the Inventions under applicable law and the Employee waives any legal right he may have in connection with the Inventions including without limitation any moral rights and/or right to claim royalties or any other consideration from the Company with regard to the assigned Inventions, including without limitation, in respect of Service Inventions according to Section 134 of the Patent Law 5727-1967.

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Inventor(s):

Avraham Kliger	Date		Date
 5/22/14	Date		Date
Ba-Zhong Shen	Date		Date
	Date		Date
	Date		Date
	Date		Date
	Date		Date