PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Seong-Ook Jung	10/21/2009
Jisu Kim	10/19/2009
Jee-Hwan Song	10/19/2009
Seung H. Kang	10/08/2009

RECEIVING PARTY DATA

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Street Address:	5775 Morehouse Drive	
Internal Address:	Patent Department	
City:	San Diego	
State/Country:	CALIFORNIA	
Postal Code:	92121-1714	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12691415

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Address Line 4: San Diego, CALIFORNIA 92121-1714

ATTORNEY DOCKET NUMBER: 082589

NAME OF SUBMITTER: Nicholas J. Pauley

PATENT

REEL: 023833 FRAME: 0309

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Total Attachments: 5

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ASSIGNMENT

TO WHOM IT MAY CONCERN:

For the sum of One Dollar and other valuable consideration to us in hand paid, receipt of which

is hereby acknowledged, be it known that We/I,

Seong-Ook Jung, a citizen of Korea, having a mailing address of 510-504 Baeksong

Maeul 5-danji Baekseok 1-dong IlsanDong=gu, Goyang-si Gyeonggi-do, Seoul 410-720; and a

resident of Korea.

Jisu Kim, a citizen of Korea, having a mailing address of 504-15 Seongnam-dong Seo-gu,

Incheon 404-826; and a resident of Korea.

Jee-Hwan Song, a citizen of Korea, having a mailing address of 216 Sinbanpo Hanshin

Apt. Jamwon-dong Seocho-gu, Seoul 137-949; and a resident of Korea.

Seung H. Kang, a citizen of Korea, having a mailing address of 5775 Morehouse Drive,

San Diego, CA 92121; and a resident of San Diego, California.

have sold, assigned and transferred and by these presents do sell, assign, transfer and set over

unto QUALCOMM Incorporated, a Delaware corporation, having a place of business at 5775

Morehouse Drive, San Diego, California 92121-1714 and Industry-Academic Cooperation

Foundation, Yonsei University, having a place of business at 134 Sinchon-dong, Seodaemun-

gu, Seoul 120-749, Korea, its successors, legal representatives, or assigns, the entire right, title

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ASSIGNMENT

and interest in and to a certain invention relating to System And Method Of Adjusting A Resistance-Based Memory Circuit by me devised and the application for United States Patent therefore filed in the United States Patent and Trademark Office on 2012/ 21, 2010, and assigned Serial No. 12/1091, 4/5, (and I hereby authorize and instruct QUALCOMM Incorporated to hereafter complete this Assignment by inserting the serial number and date in the space provided above when known), including, without limitation, all provisional patent applications, and all original and reissue patents granted thereof, and all divisions, continuations and continuations-in-part thereof, including the subject matter of any and all claims which may be obtained in every such patent, and all foreign rights to said invention, and covenant that I have full right to do so, and agree that I will communicate to said corporation or its representatives all facts known to me respecting said invention, whenever requested, and testify in any legal proceedings, sign all lawful papers, make all rightful oaths and generally do everything possible to aid said corporation, its successors, assigns and nominees, to obtain and enforce proper patent protection for said invention in all countries. The Commissioner of Patents and Trademarks is requested to issue the Letters Patent which may be granted for said invention or any part thereof unto said corporation in keeping with this. Assignment. Done at Seoul, Korea this 2 | day of 10, 2009. Done at Incheon, Korea this ____ day of ____, 2009.

> PATENT REEL: 023833 FRAME: 0312

Jisu Kim

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ASSIGNMENT

and interest in and to a certain invention relating to $System \ And \ Method \ Of \ Adjusting \ A$
Resistance-Based Memory Circuit by me devised and the application for United States
Patent therefore filed in the United States Patent and Trademark Office on
, and assigned Serial No, (and I hereby
authorize and instruct QUALCOMM Incorporated to hereafter complete this Assignment by inserting the serial number and date in the space provided above when known), including, without limitation, all provisional patent applications, and all original and reissue patents granted thereof, and all divisions, continuations and continuations-in-part thereof, including the subject matter of any and all claims which may be obtained in every such patent, and all foreign rights to said invention, and covenant that I have full right to do so, and agree that I will communicate to said corporation or its representatives all facts known to me respecting said invention, whenever requested, and testify in any legal proceedings, sign all lawful papers, make all rightful oaths and generally do everything possible to aid said corporation, its successors, assigns and nominees, to
obtain and enforce proper patent protection for said invention in all countries. The Commissioner of Patents and Trademarks is requested to issue the Letters Patent which may
be granted for said invention or any part thereof unto said corporation in keeping with this
Assignment.
Done at Seoul, Korea this day of, 2009.
Seong-Ook Jung
Done at Incheon, Korea this 19th day of Cetsher, 2009.

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ASSIGNMENT

Done :	at Seoul,	Korea th	is <u>19 Al</u> uday	of Cutober, 20	009.	K
	4		FF	A Commission of the Commission	Jee-Hwan S	ong
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Done (at San Di	iego, Cali	fornia this	day of	, 2009.	
					Sound H K	inia

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ASSIGNMENT

Done at San Diego, California this	day of, 2009.
	Jee-Hwan Song
Done at San Diego, California this 9	th day of October, 2009.
	Seung H. Kang

PATENT REEL: 023833 FRAME: 0315

RECORDED: 01/22/2010