

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT7001759

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JEREMY GUY	03/24/2021
SUNG HYUN JO	11/09/2020
HAGOP NAZARIAN	11/09/2020
RUCHIRKUMAR SHAH	11/19/2020
LIANG ZHAO	03/24/2021
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	CROSSBAR, INC.
<b>Street Address:</b>	3200 PATRICK HENRY BLVD., STE. 110
<b>City:</b>	SANTA CLARA
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	95054
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	17242015
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(216)642-8826
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	2166423342
<b>Email:</b>	whvipgroup@wegmanlaw.com
<b>Correspondent Name:</b>	MATTHEW F. CLAPPER
<b>Address Line 1:</b>	6055 ROCKSIDE WOODS BLVD., STE. 200
<b>Address Line 4:</b>	CLEVELAND, OHIO 44131
<b>ATTORNEY DOCKET NUMBER:</b>	190033 0181P2C.US
<b>NAME OF SUBMITTER:</b>	MATTHEW F. CLAPPER
<b>SIGNATURE:</b>	/Matthew F. Clapper/
<b>DATE SIGNED:</b>	11/02/2021
<b>Total Attachments: 5</b>	
source=51C5043#page1.tif	

source=50Y3073#page1.tif

source=50Y3081#page1.tif

source=50Z4810#page1.tif

source=51C5802#page1.tif

**PATENT ASSIGNMENT**

WE, Jeremy Guy ("ASSIGNOR") Sung Hyun JO ("ASSIGNOR"), Hagop NAZARIAN ("ASSIGNOR"), Ruchirkumar SHAH ("ASSIGNOR"), and Liang ZHAO ("ASSIGNOR") have invented subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "RESISTIVE RANDOM ACCESS MEMORY PROGRAM AND ERASE TECHNIQUES AND APPARATUS" ("APPLICATION"), which:

☒ will be filed without this executed PATENT ASSIGNMENT. ASSIGNORS hereby authorize, and request, ASSIGNEE'S legal representatives, of Wegman Hessler, 6055 Rockside Woods Boulevard, Ste. 200, Cleveland, Ohio 44131, who are associated with customer number 129485, to insert here in parenthesis (U.S. Serial No. 16/291,467, filed March 4, 2019) this APPLICATION'S U.S. Serial Number and filing date, when known;

☐ was filed on \_\_\_\_\_ and was given U.S. Serial No. \_\_\_\_\_;

☐ is filed concurrently herewith;

Crossbar, Inc., a California Corporation, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES");

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNORS, the ASSIGNORS hereby sell, assign and transfer to the ASSIGNEE, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES);

ASSIGNORS agree to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Jeremy Guy

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Sung Hyun Jo

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Hagop Nazarian

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Ruchirkumar Shah

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Liang Zhao

**PATENT ASSIGNMENT**

WE, Jeremy Guy ("ASSIGNOR") Sung Hyun JO ("ASSIGNOR"), Hagop NAZARIAN ("ASSIGNOR"), Ruchirkumar SHAH ("ASSIGNOR"), and Liang ZHAO ("ASSIGNOR") have invented subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "RESISTIVE RANDOM ACCESS MEMORY PROGRAM AND ERASE TECHNIQUES AND APPARATUS" ("APPLICATION"), which:

☒ will be filed without this executed PATENT ASSIGNMENT. ASSIGNORS hereby authorize, and request, ASSIGNEE'S legal representatives, of Wegman Hessler, 6055 Rockside Woods Boulevard, Ste. 200, Cleveland, Ohio 44131, who are associated with customer number 129485, to insert here in parenthesis (U.S. Serial No. 16/291,467, filed March 4, 2019) this APPLICATION'S U.S. Serial Number and filing date, when known;

☐ was filed on \_\_\_\_\_ and was given U.S. Serial No. \_\_\_\_\_;

☐ is filed concurrently herewith;

Crossbar, Inc., a California Corporation, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES");

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNORS, the ASSIGNORS hereby sell, assign and transfer to the ASSIGNEE, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES);

ASSIGNORS agree to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

\_\_\_\_\_  
DATE

11/09/2020

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Jeremy Guy

*Sung Hyun Jo*

\_\_\_\_\_  
Sung Hyun Jo

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Hagop Nazarian

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Ruchirkumar Shah

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Liang Zhao

**PATENT ASSIGNMENT**

WE, Jeremy Guy ("ASSIGNOR") Sung Hyun JO ("ASSIGNOR"), Hagop NAZARIAN ("ASSIGNOR"), Ruchirkumar SHAH ("ASSIGNOR"), and Liang ZHAO ("ASSIGNOR") have invented subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "RESISTIVE RANDOM ACCESS MEMORY PROGRAM AND ERASE TECHNIQUES AND APPARATUS" ("APPLICATION"), which:

☒ will be filed without this executed PATENT ASSIGNMENT. ASSIGNORS hereby authorize, and request, ASSIGNEE'S legal representatives, of Wegman Hessler, 6055 Rockside Woods Boulevard, Ste. 200, Cleveland, Ohio 44131, who are associated with customer number 129485, to insert here in parenthesis (U.S. Serial No. 16/291,467, filed March 4, 2019) this APPLICATION'S U.S. Serial Number and filing date, when known;

☐ was filed on \_\_\_\_\_ and was given U.S. Serial No. \_\_\_\_\_;

☐ is filed concurrently herewith;

Crossbar, Inc., a California Corporation, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES");

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNORS, the ASSIGNORS hereby sell, assign and transfer to the ASSIGNEE, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES);

ASSIGNORS agree to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Jeremy Guy

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Sung Hyun Jo

11/9/2020

\_\_\_\_\_  
DATE

H. Nazarian  
\_\_\_\_\_  
Hagop Nazarian

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Ruchirkumar Shah

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Liang Zhao

PATENT ASSIGNMENT

WE, Jeremy Guy ("ASSIGNOR"), Sung Hyun JO ("ASSIGNOR"), Hagop NAZARIAN ("ASSIGNOR"), Ruchikumar SHAH ("ASSIGNOR"), and Liang ZHAO ("ASSIGNOR") have invented subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "RESISTIVE RANDOM ACCESS MEMORY PROGRAM AND ERASE TECHNIQUES AND APPARATUS" ("APPLICATION"), which:

☒ will be filed without this executed PATENT ASSIGNMENT. ASSIGNORS hereby authorize, and request, ASSIGNEE'S legal representatives, of Wegman Hessler, 6055 Rockside Woods Boulevard, Ste. 200, Cleveland, Ohio 44131, who are associated with customer number 129485, to insert here in parenthesis (U.S. Serial No. 15/291,467, filed March 1, 2012) this APPLICATION'S U.S. Serial Number and filing date, when known,

☐ was filed on \_\_\_\_\_ and was given U.S. Serial No. \_\_\_\_\_

☐ is filed concurrently herewith.

Crossbar, Inc., a California Corporation, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES")).

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNORS, the ASSIGNORS hereby sell, assign and transfer to the ASSIGNEE, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES).

ASSIGNORS agree to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

DATE

Jeremy Guy

DATE

Sung Hyun Jo

DATE

Hagop Nazarian

DATE

Ruchikumar Shah

DATE

Liang Zhao

PATENT ASSIGNMENT

WE, Jeremy Guy ("ASSIGNOR"), Sung Hyun JO ("ASSIGNOR"), Hagop NAZARIAN ("ASSIGNOR"), Ruchirkumar SHAH ("ASSIGNOR"), and Liang ZHAO ("ASSIGNOR") have invented subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "RESISTIVE RANDOM ACCESS MEMORY PROGRAM AND ERASE TECHNIQUES AND APPARATUS" ("APPLICATION"), which:

☒ will be filed without this executed PATENT ASSIGNMENT. ASSIGNORS hereby authorize, and request, ASSIGNEE'S legal representatives, of Wegman Hessler, 6055 Rockside Woods Boulevard, Ste. 200, Cleveland, Ohio 44131, who are associated with customer number 129485, to insert here in parenthesis (U.S. Serial No. 16/291,467, filed March 4, 2019) this APPLICATION'S U.S. Serial Number and filing date, when known;

☐ was filed on \_\_\_\_\_ and was given U.S. Serial No. \_\_\_\_\_;

☐ is filed concurrently herewith;

Crossbar, Inc., a California Corporation, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNORS, the ASSIGNORS hereby sell, assign and transfer to the ASSIGNEE, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES);

ASSIGNORS agree to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Jeremy Guy

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Sung Hyun Jo

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Hagop Nazarian

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Ruchirkumar Shah

\_\_\_\_\_  
DATE

03/24/2021

\_\_\_\_\_  
Liang Zhao

PATENT