# Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
Mr. Hong-Boem Pyeon	06/23/2008

#### **RECEIVING PARTY DATA**

Name:	MOSAID Technologies Incorporated	
Street Address:	11 Hines Road	
City:	Kanata, Ontario	
State/Country:	CANADA	
Postal Code:	K2K 2X1	

#### PROPERTY NUMBERS Total: 3

Property Type	Number
Application Number:	11942173
Application Number:	11966152
Application Number:	12018272

#### **CORRESPONDENCE DATA**

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Address Line 4: Kanata, Ontario, CANADA K2K 2X1

ATTORNEY DOCKET NUMBER:	1247-02 1260-02 1239-03US

NAME OF SUBMITTER: Victoria Donnelly

**Total Attachments: 8** 

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## **CONFIRMATORY ASSIGNMENT OF PATENT RIGHTS**

For and in consideration of agreement(s) duly entered into with my employer, MOSAID Technologies Incorporated ("Assignee"), an Ontario corporation, and/or other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, on this <a href="https://www.nc.em.nc.e

- 1. The provisional patent applications, patent applications and/or patents listed in the attached Exhibit 'A' (the "Patents");
- 2. All inventions claimed or described in any or all of the Patents (collectively, the "Inventions");
- 3. All rights with respect to the Inventions, including all U.S. patents or other governmental grants or issuances that may be granted with respect to the Inventions or from any direct or indirect divisionals, continuations, continuations-in-part, or other patent applications claiming priority rights from the Patents ("Potential Patents");
- 4. All reissues, reexaminations, extensions, or registrations of the Patents or Potential Patents;
- 5. All non-United States patents, patent applications, and counterparts relating to any or all of the Inventions, the Patents, or Potential Patents, including, without limitation, certificates of invention, utility models, industrial design protection, design patent protection, and other governmental grants or issuances ("Foreign Rights"), and including the right to file foreign applications directly in the name of Assignee, its successors and assigns;
- 6. The right to claim priority rights deriving from the Patents;
- 7. All causes of action and remedies related to any or all of the Patents, the Inventions, Potential Patents, or Foreign Rights (including, without limitation, the right to sue for past, present, or future infringement, misappropriation or violation of rights related to any of the foregoing and the right to collect royalties and other payments under or on account of any of the foregoing); and
- 8. Any and all other rights and interests arising out of, in connection with, or in relation to the Patents, the Inventions, Potential Patents, or Foreign Rights.
- 9. Assignor will not sign any writing or do any act conflicting with this Assignment, and, will sign all documents and do such additional acts as Assignee, their successors, legal representatives, and assigns deem necessary or desirable to perfect enjoyment of the Rights, conduct proceedings regarding the Rights (including any litigation or interference proceedings), or perfect or defend title to the Rights. Assignee shall compensate Assignor for any reasonable, documented disbursements provided that Assignor shall have furnished Assignee an advance, written estimate of the fees and costs for such assistance and Assignee shall have agreed in writing to pay such fees and costs. Assignor requests the respective patent office or governmental agency in each jurisdiction to issue any and all patents, certificates of invention,

utility models, or other governmental grants or issuances that may be granted upon any of the Rights in the name of the Assignee, as the assignee to the entire interest therein.

- Assignor authorizes the firm, where applicable, MOSAID Technologies Incorporated 10. and its agents to insert any further identification necessary to make this assignment suitable for recordation in the Patent Offices of any country as may be required.
- The terms and conditions of this Assignment will inure to the benefit of Assignee, its 11. successors, legal representatives, and assigns and will be binding upon Assignor, his successors, legal representatives and assigns.

By:

Hong-Beem Pyeon

Mosaid Technologies Incorporated

### **ATTESTATION**

The undersigned witnessed the signature of Hong-Boem Pyeon to this document and makes t following statements:

- Hong-Boem Pyeon is personally known to me (or proved to me on the basis of satisfactory evidence) and appeared before me on Jove 24, 2008, to execute this document.
- 2. Hong-Boem Pyeon subscribed to this document.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

# Exhibit 'A'

2,627,663 C. PCT/CA2006/001606 C. 2.0068E+11 C. 200680036482.X C.	country ID  A  CA  CN  CN  CN	9/29/2006 9/29/2006 9/29/2006 9/29/2006 8/18/2006	Daisy Chain Cascading Devices  Multiple Independent Serial Link Memory  Multiple Independent Serial Link Memory  Daisy Chain Cascading Devices
2.0068E+11 C 200680036482.X C PCT/CA2006/001364 C	N N	9/29/2006 9/29/2006	Multiple Independent Serial Link Memory
2.0068E+11 C 200680036482.X C PCT/CA2006/001364 C	N	9/29/2006	Multiple Independent Serial Link Memory
PCT/CA2006/001364 C			Doiny Chain Conneding Davison
PCT/CA2006/001364 C	N	8/18/2006	Daisy Chain Cascading Devices
6775132.1 E		0/10/2000	Power Up Circuit With Low Power Sleep
6775132.1 E			Mode Operation
	P	8/18/2006	Power Up Circuit With Low Power Sleep
			Mode Operation
6790773.3 E	P	9/29/2006	Memory With Output Control
8006223.5 E	P	9/29/2006	Daisy Chain Cascading Devices
8006224.3 E	P	9/29/2006	Daisy Chain Cascading Devices
8006225 E		9/29/2006	Daisy Chain Cascading Devices
6761198.8 E		7/31/2006	Voltage Down Converter For High Speed
			Memory
6790770.9 E	Р	9/29/2006	Multiple Independent Serial Link Memory
6790771.7 E		9/29/2006	Daisy Chain Cascading Devices
751/MUMNP/2008 IN		9/29/2006	Daisy Chain Cascading Devices
PCT/CA2006/001606 IN		9/29/2006	Multiple Independent Serial Link Memory
PCT/CA2006/001252 JF		7/31/2006	Voltage Down Converter For High Speed
01/0/12000/001202   0.			Memory
PCT/CA2006/001364 JF	P	8/18/2006	Power Up Circuit With Low Power Sleep
0,707,2000,001001		5, v 5, <b>2</b> 5 5 5	Mode Operation
PCT/CA2006/001606 JF	P	9/29/2006	Multiple Independent Serial Link Memory
PCT/CA2006/001607 JF	Р	9/29/2006	Daisy Chain Cascading Devices
PCT/CA2006/001609 JF	P	9/29/2006	Memory With Output Control
	R	8/18/2006	Power Up Circuit With Low Power Sleep
			Mode Operation
10-2008-7010546 K	R	9/29/2006	Multiple Independent Serial Link Memory
	R	9/29/2006	Daisy Chain Cascading Devices
	R	9/29/2006	Memory With Output Control
	R	7/31/2006	Voltage Down Converter For High Speed
			Memory
95128339 T	W	8/2/2006	Voltage Down Converter For High Speed
			Memory
95136434 T	w	9/29/2006	Daisy Chain Cascading Devices
	w	9/29/2006	Multiple Independent Serial Link Memory
	w	5/22/2007	Apparatus And Method For Establishing
-			Device Identifiers For Serially Interconnected
			Devices
96125723 T	W	7/13/2007	Pulse Counter With Clock Edge Recover
	w	8/21/2007	Modular Command Structure For Memory
			And Memory System
96131131 T	w	8/22/2007	Scalable Memory System
	W	9/18/2007	Packet Based Id Generation For Serially
			Interconnected Devices

2	1 77	11/29/2007	Circuit And Method For Testing Multi-Device
6			Systems
1 <sup>4</sup> 76		12/3/2007	Apparatus And Method For Producing Device Identifiers For Serially Interconnected Devices Of Mixed Type
96, 6	<del>-   TW</del>	12/5/2007	Apparatus And Method For Producing
9 88	"	12,0,200.	Device Identifiers For Serially Interconnected Devices Of Mixed Type
96 46 <sup>4</sup> 2 9 4 8	TW	12/5/2007	Apparatus And Method For Producing Identifiers Regardless Of Mixed Device Type In A Serial Interconnection
6 6 9 14 23	TW	12/6/2007	Address Assignment And Type Recognition Of Serially Interconnected Memory Devices Of Mixed Type
6 6 9 4 0 <sub>3</sub>	TW	12/6/2007	System And Method Of Operating Memory Devices Of Mixed Typed
6 47	TW	12/6/2007	Apparatus And Method For Capturing Serial Input Data
9 14 0	TW	12/11/2007	Memory System And Method With Serial And Parallel Modes
9 43 8 1 <sub>0.53</sub> 7	TW	12/19/2007	ID Generation Apparatus And Method For Serially Interconnected Devices
96, 9	TW	12/21/2007	Independent Link And Bank Selection
51	TW	1/28/2008	Semiconductor Device And Method For Reducing Power Consumption In A System Having Interconnected Devices
1 0 6	TW	2/13/2008	Semiconductor Device And Method For Selection And De-Selection Of Memory Devices Interconnected In Series
97 9 971 5 0		2/15/2008	Apparatus And Method For Using A Page Buffer Of A Memory Device As A Temporary Cache
0 4	TW	2/15/2008	Apparatus And Method Of Page Program Operation For Memory Devices With Mirror Back-Up Of Data
9/1 5 / 5 0 0	TW TW	2/18/2008	System Having One Or More Memory Devices
971 61 <sup>2</sup> 8 /A	TW	2/21/2008	System And Method Of Page Buffer Operation For Memory Devices
N	IVV	11/21/2007	Apparatus And Method For Processing Data In Serial Interconnection Configuration Of Memory Devices
N/A .	TW TW	5/1/2008	Mlc (Multi-Level Cell) Page Buffer With Dual Functions
N/A 951396 <sup>-7</sup> 4	TW	2/19/2008	Decoding Control With Address Transition Detection In Page Erase Function
<del>50 1200 4</del> 50 7		8/21/2006	Power Up Circuit With Low Power Sleep Mode Operation
95136448	TW	9/29/2006	Memory With Output Control

1 6.	l TW	2/13/2007	Dynamic Random Access Memory Device
961 27		2110/2001	And Method For Self-Refreshing Memory Cells With Temperature Compensated Self-
9 07 87			Refresh
6,07 3	TW	3/2/2007	Asynchronous Id Generation
9 64	TW	3/2/2007	Daisy Chain Cascade Configuration Recognition Technique
235	TW	6/29/2007	Method Of Configuring Non-Volatile Memory For A Hybrid Disk Drive
4 2	US	8/3/2005	Voltage Down Converter For High Speed Memory
1 6 11 5 ,55	US	4/28/2006	Dynamic Random Access Memory Device And Method For Self-Refreshing Memory Cells With Temperature Compensated Self- Refresh
11 6 56 <sup>3</sup>	US	12/6/2006	Apparatus And Method For Capturing Serial Input Data
1 / 13 82 82	US	12/20/2006	ID Generation Apparatus And Method For Serially Interconnected Devices
1/924'	US	1/12/2007	Apparatus And Method For Producing Ids For Interconnected Devices Of Mixed Type
; ,637 _	US	1/19/2007	Apparatus And Method For Producing Device Identifiers For Serially Interconnected Devices Of Mixed Type
11,44	US	12/12/2006	Memory System And Method With Serial And Parallel Modes
/ 6 / 6 11 ,452	US	3/28/2007	Apparatus And Method For Producing Identifiers Regardless Of Mixed Device Type In A Serial Interconnection
692 /7	US	3/28/2007	Apparatus And Method For Producing Device Identifiers For Serially Interconnected Devices Of Mixed Type
11 11,043 /771	US	2/27/2007	Decoding Control With Address Transition Detection In Page Erase Function
11 ,023 1 '2	US	6/29/2007	Address Assignment And Type Recognition Of Serially Interconnected Memory Devices Of Mixed Type
1,777	US	6/29/2007	System And Method Of Operating Memory Devices Of Mixed Type
1/882 1 1 , 96	US	7/23/2007	Voltage Down Converter For High Speed Memory
/855	US	7/6/2007	System And Method Of Page Buffer Operation For Memory Devices
1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	US	9/14/2007	Dynamic Random Access Memory And Boosted Voltage Producer Therefor
1 1/942 173	US	11/19/2007	Apparatus And Method For Processing Data In Serial Interconnection Configuration Of Memory Devices
11/966,152	US	12/28/2007	Mlc (Multi-Level Cell) Page Buffer With Dual Functions

2 2		1 2 2008	Semiconductor Device And Method For
$\frac{1}{2}$ $\frac{2}{8}$ $\frac{8}{8}$ $\frac{5}{8}$	_	4/2008	Reducing Power Consumption In A System
28 83 <sub>5</sub>	US	1	Having Interconnected Devices
/ <sup>0</sup> 9 <sup>3</sup>		2′	Apparatus And Method For Identifying
/ 29. 3	US	5/2	Device Types Of Series-Connected Devices
1202 64		2 <sup>5/2</sup> 008	Of Mixed Type
1 / 2 6	u <sup>S</sup>	1	Semiconductor Device And Method For
12 0 0'	U	/	Selection And De-Selection Of Memory
3 3		6/2 <sub>008</sub>	Devices Interconnected In Series
62		27000	Nonvolatile Semiconductor Memory
12/	US	2 008	Data Channel Test Apparatus And Method
0 3' -		', 0"	Thereof
3 _ 7		2 12 2	Apparatus And Method For Using A Page
1 / 4 5	S		Buffer Of A Memory Device As A Temporary
1 7 4, 8	US	2/13.20.8	Cache
2		13/	Apparatus And Method Of Page Program
2/ 35	US		Operation For Memory Devices With Mirror
1 <sup>2/35</sup> , <sub>7</sub> 84	0	2/ /20 8	Back-Up Of Data
. 2		19 0	System Having One Or More Memory
12 <sup>1 39</sup> 70	u <sup>S</sup>	,	Devices
1 6 6		2/21 2008	Serial Data Flow Control In Multiple
60/ 3	US	, / 0	Independent Serial Port
1 9 ,_84	10	1 62 8	Power Supplies In Flash Memory Devices
8 /		23/207	And Systems
<sup>6</sup> 9 <sup>/</sup> 0 <sub>1</sub> <sup>5</sup> , 45	US	1 1/1 /	Input/Output Buffer Path Test Circuit And
9 <sup>'0</sup> 1 <sup>5</sup> , <sub>3</sub> 45	0	12, 0	Method Thereof
6.1	9	1 2 7	Memory Controller With Flexible Data
6 / <sub>015</sub> ,	US	1 10	Alignment To Clock
1 15 09		12 <sup>1</sup> 20 0	Method For Stacking Serially-Connected
9 9 9			Integrated Circuits And Multi-Chip Device
6 / 9	ı,s	10, 100	Made From Same
1'81; <sub>9</sub> 07	+∪	12 1 07	Hierarchical Csl (Common Source Line)
2 2	U	/ /	Structure In Nand Flash Memory
6 / 2	Us	1/9 200	Timing And Clocking Method In A System
1/812;92	US	1,2,08	Having A Plurality Of Devices
6, 5 3	S	3/2 0	Id (Identification) Number Based Sleep
1/0 20	S	$\frac{1}{2},0$	Mode Control In Serial Connected Memory
6 <sub>1/0</sub> 2 03	us	1/31/	Power Supply Configuration For Nand Flash
6, 5 6			Memory
6 5 6 1/0 ,91	US	7/4/2008	Selective-Broadcast Function For Serial-
	١٠	2,	Connected Devices
1/03 6	9	28208	Packaging Method For Serially
1/09 ,6 -	ῡs	/2 , 0 8	Interconnected Memory Chips
6 - 9 05	-	620	Memory Controller With Flexible Data
1,/238,973	l s		Alignment To Clock
1 -	+∪	9/30/2005	Power Up Circuit With Low Power Sleep
		• '	Mode Operation
1,/324,023	US	12/30/2005	Multiple Independent Serial Link Memory
11/428,050	US	6/30/2006	Method Of Configuring Non-Volatile Memory
1 1/720,000	-	0,00,200	For A Hybrid Disk Drive
<u> </u>		I	1. O. A. Hybrid Diok Dilito

11/495,609	lus	7/31/2006	Pulse Counter With Clock Edge Recover
11/496,278	US	7/31/2006	Daisy Chain Cascading Device
11/521,734	US	9/15/2006	Asynchronous Id Generation
11/529,293	US	9/29/2006	Packet Based Id Generation For Serially
. 1,020,200		0.20,200	Interconnected Devices
11/565,327	US	11/30/2006	Circuit And Method For Testing Multi-Device
11,000,027			Systems
11/583,354	US	10/19/2006	Memory With Output Control
11/594,564	US	11/8/2006	Daisy Chain Cascading Devices
11/606,407	US	11/29/2006	Daisy Chain Cascade Configuration
117000,407		1 1/20/2000	Recognition Technique
11/643,850	US	12/22/2006	Independent Link And Bank Selection
11/750,649	US	5/18/2007	Apparatus And Method For Establishing
11/100,010		0,10,200	Device Identifiers For Serially Interconnected
			Devices
11/835,663	US	8/8/2007	Dynamic Random Access Memory Device
11,000,000			And Method For Self-Refreshing Memory
			Cells With Temperature Compensated Self-
			Refresh
11/840,692	US	8/17/2007	Modular Command Structure For Memory
, ,			And Memory System
11/843,440	US	8/22/2007	Scalable Memory System
PCT/CA2007/002092	WO	11/20/2007	Apparatus And Method For Processing Data
	]		In Serial Interconnection Configuration Of
			Memory Devices
PCT/CA2007/002147	WO	11/29/2007	Apparatus And Method For Producing
			Device Identifiers For Serially Interconnected
			Devices Of Mixed Type
PCT/CA2007/002148	WO	11/29/2007	Circuit And Method For Testing Multi-Device
			Systems
PCT/CA2007/002167	WO	12/3/2007	ID Generation Apparatus And Method For
			Serially Interconnected Devices
PCT/CA2007/002171	WO	12/4/2007	Apparatus And Method For Producing
			Device Identifiers For Serially Interconnected
			Devices Of Mixed Type
PCT/CA2007/002173	WO	12/4/2007	Address Assignment And Type Recognition
			Of Serially Interconnected Memory Devices
			Of Mixed Type
PCT/CA2007/002182	WO	12/4/2007	System And Method Of Operating Memory
			Devices Of Mixed Typed
PCT/CA2007/002183	WO	12/4/2007	Apparatus And Method For Capturing Serial
			Input Data
PCT/CA2007/002193	WO	12/4/2007	Apparatus And Method For Producing
			Identifiers Regardless Of Mixed Device Type
			In A Serial Interconnection
PCT/CA2007/002222	WO	12/10/2007	Memory System And Method With Serial
			And Parallel Modes
PCT/CA2007/002320	WO	12/21/2007	Independent Link And Bank Selection

CA 00 00022	l o	۱ 1	Semiconductor Device And Method For
P 2 8/0 0 59	l w	2/ 2	Reducing Power Consumption In A System
P <sub>C</sub> 2 08/0 0 59	w <sub>o</sub>	2/ 2 2/5/2 /2008	Having Interconnected Devices
T A20 /00 1		/2005	Semiconductor Device And Method For
C <sub>A2 0</sub> /0 2		1 0	Selection And De-Selection Of Memory
P <sub>6</sub> A 8 <sub>0</sub> 0 50	wo	U	Devices Interconnected In Series
<u>e</u> 20 / 3		8	Apparatus And Method For Using A Page
T CAO 0/0 027	1	2/ 3/2 8	Buffer Of A Memory Device As A Temporary
P /CA2 08/0 0 <sup>2</sup> 7	WO	2/9 /2 0	Cache
et	-VV -	1/2008	Decoding Control With Address Transition
	w_	, 0 。	Detection In Page Erase Function
P T 8 00 87	WO	/ 3/2	Apparatus And Method Of Page Program
A'		) 2 U	Operation For Memory Devices With Mirror
P T/ 2°08/0	WO	<sup>4</sup> /18, 0 8	Back-Up Of Data
C <sup>T</sup> / 0 <sup>0</sup> 5 <sup>0</sup> 3 <sup>9</sup> 7		2 /2 <sup>0</sup> 0	System And Method Of Page Buffer
P /CA2 07/0	l w	2, 0	Operation For Memory Devices
	w <sub>o</sub>	/ 9/20 8	Multi-Level Cell Access Buffer With Dual
PC /CA2 07/0 <sup>044</sup> 06	Wo	0 1 20	Functions
1 05 047	0	31 0 7/26 7 3/26 07	System Having One Or More Memory
PcT/CA2 07/0 8	\^/	3 /200	Devices
	W <sub>O</sub>	726,207	Asynchronous Id Generation
C <sub>T</sub> 0 005 9		<b>72</b> 0	Daisy Chain Cascade Configuration
2		3 <sub>/30</sub> 07	Recognition Technique
0 0 2		2	Dynamic Random Access Memory Device
P T/CA2007/0	l w	0.0	And Method For Self-Refreshing Memory
9 89		2 0	Cells With Temperature Compensated Self-
0 1		5 0	Refresh
P <sub>C</sub> T/C 2007/0 1 67	w8	5/18/ 7	Apparatus And Method For Establishing
C1/C 2007/00 67	WO	/ 9/2 07	Device Identifiers For Serially Interconnected
1			Devices
P_T/CA2007/0_1 93	wo	62 0	Method Of Configuring Non-Volatile Memory
C 7072007700 93			For A Hybrid Disk Drive
P T/CA2007/0 <sub>0</sub> 14 g	WO	8 1 <i>1</i> 90 1 <u>2</u> 0007	Pulse Counter With Clock Edge Recover
C 2°	_	, ~	Modular Command Structure For Memory
PCT/CA2007/0 1/6	wo	8/ 2/2007	And Memory System
1 01/0/2007/001409	11.0	2 2	Scalable Memory System
PCT/CA2007/001661	WO	9/18/2007	Packet Based Id Generation For Serially
<u> </u>			Interconnected Devices

**RECORDED: 07/31/2008**