## 504390763 05/31/2017

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4437460

SUBMISSION TYPE:		NEW A	SSIGNMENT		
NATURE OF CONVEYA	ASSIG	ASSIGNMENT			
CONVEYING PARTY D	ΑΤΑ				
		Name			Execution D
JOHN MACLAREN					05/26/2017
RECEIVING PARTY DA	TA				
Name:	CADENCE DESIGN SYSTEMS, INC.				
Street Address:	2655 SE	ELY AVENU	JE		
City:	SAN JOS	SAN JOSE			
State/Country:	CALIFOF	CALIFORNIA			
Postal Code:	95134	95134			
	I				
CORRESPONDENCE D	ATA				
Fax Number:	(4	410)461-306			
Fax Number: <i>Correspondence will b</i> e	(4 e sent to t	the e-mail a	ddress first; if that is		
Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i>	4) e sent to t provided;	the e-mail a	ddress first; if that is nsuccessful, it will be		
Fax Number: <i>Correspondence will b</i> <i>using a fax number, if µ</i> Phone:	4) e sent to t provided; 4	the e-mail a if that is ur	ddress first; if that is nsuccessful, it will be 3		
Fax Number: <i>Correspondence will be using a fax number, if j</i> Phone:	(4 <b>e sent to t</b> provided; 4 <sup>:</sup> rk R	the e-mail a if that is ur 10-465-6678 kl@rklpatlaw COSENBER(	ddress first; if that is asuccessful, it will be 3 v.com G, KLEIN & LEE	e sent	via US Mail.
Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1:	4) e sent to t provided; 4 rk R 34	the e-mail a if that is ur 10-465-6678 (I@rklpatlaw COSENBER 458 ELLICC	<i>ddress first; if that is successful, it will be</i> 3 2.com G, KLEIN & LEE 0TT CENTER DRIVE,	e <i>sent</i> SUITE	via US Mail.
Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1:	4) e sent to t provided; 4 rk R 34	the e-mail a if that is ur 10-465-6678 (I@rklpatlaw COSENBER 458 ELLICC	ddress first; if that is asuccessful, it will be 3 v.com G, KLEIN & LEE	e <i>sent</i> SUITE	via US Mail.
Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4:	(4 <b>e sent to t</b> provided; 4 rk R 34 E	the e-mail a if that is un 10-465-6678 (I@rklpatlaw COSENBERC 458 ELLICC	ddress first; if that is asuccessful, it will be c.com G, KLEIN & LEE DTT CENTER DRIVE, ITY, MARYLAND 2104	e <i>sent</i> SUITE	via US Mail.
using a fax number, if p Phone: Email: Correspondent Name: Address Line 1: Address Line 4:	(4 <b>e sent to t</b> provided; 4 rk R 34 E	the e-mail a if that is ur 10-465-6678 (I@rklpatlaw OSENBERC 458 ELLICO LLICOTT C MR352	ddress first; if that is asuccessful, it will be c.com G, KLEIN & LEE DTT CENTER DRIVE, ITY, MARYLAND 2104	e <i>sent</i> SUITE	via US Mail.
Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUNAME OF SUBMITTER:	(4 <b>e sent to t</b> provided; 4 rk R 34 E	the e-mail a if that is un 10-465-6678 (I@rklpatlaw COSENBERC 458 ELLICO LLICOTT C MR352 MORTC	ddress first; if that is asuccessful, it will be c.com G, KLEIN & LEE DTT CENTER DRIVE, ITY, MARYLAND 2104	e <i>sent</i> SUITE	via US Mail.
Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1:	(4 <b>e sent to t</b> provided; 4 rk R 34 E	the e-mail a if that is un 10-465-6678 (I@rklpatlaw COSENBERC 458 ELLICO LLICOTT C MR352 MORTC	ddress first; if that is asuccessful, it will be a v.com G, KLEIN & LEE DTT CENTER DRIVE, ITY, MARYLAND 2104 9-129 ON J. ROSENBERG In J. Rosenberg/	e <i>sent</i> SUITE	via US Mail.

## ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor hereby sells, assigns, transfers to CADENCE DESIGN SYSTEMS, INC., a Delaware corporation having a principal place of business at 2655 SEELY AVENUE, SAN JOSE, CALIFORNIA 95134 ("ASSIGNEE"), and its successors, assigns, and legal representatives, all rights, title and interest in and to his/her invention relating to:

## SYSTEM AND METHOD FOR MEMORY CONTROL HAVING ADDRESS INTEGRITY PROTECTION FOR ERROR-PROTECTED DATA WORDS OF MEMORY TRANSACTIONS

in any form or embodiment thereof, in the United States and all other countries, including applications for patents in all countries throughout the world, as set forth in his/her United States Patent Application (check one):

5	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
- 1		
1		
- 1	77	
- ;	XE	
- 6		
- 1		
- 1		

executed concurrently herewith, 15/609,539 executed on <u>5/26/2017</u>, Serial No. \_\_\_, filed on <u>5/31/2017</u> PCT International Application No.: \_\_\_\_\_, filed on \_\_\_\_\_

including any and all applications claiming priority to said applications, and to any provisional from which priority is claimed, divisions, continuations, renewal, substitute or reissue thereof and to any and all Letters Patent of the United States and all other countries, including any and all utility models, and design registrations, which may issue on any such application or for said invention, including any and all reissues or extensions thereof, to be held and enjoyed by said ASSIGNEE, its successors, legal representatives and assigns to the full end of the term or terms for which any and all such Letters patent may be granted as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made;

Each of the undersigned hereby authorizes and requests the issuing authority to issue any and all such Letters patent to said ASSIGNEE, its successors or assigns in accordance herewith;

Each of the undersigned warrants and covenants that he has the full and unencumbered right to sell, assign, and transfer the interests herein sold, assigned, and transferred and that he has not executed and will not execute any document or instrument in conflict herewith;

Each of the undersigned further covenants and agrees he will communicate to said ASSIGNEE, its successors, legal representatives or assigns all information known to him relating to said invention or patent application and that, without further remuneration, he will execute and deliver any papers, make all rightful oaths, testify in any legal proceedings and perform all other lawful acts deemed necessary or desirable by said ASSIGNEE, its successors, legal representatives or assigns to perfect title to said invention, to said application including divisions and continuations thereof and to any and all Letters Patent which may be granted therefor or thereon, including reissues or extensions, in said ASSIGNEE, its successors, or assigns or to assist said ASSIGNEE, its successors, legal representatives or assigns or to assist said ASSIGNEE, its successors, legal representatives or assigns in obtaining, reissuing or enforcing Letters Patent of the United States or other countries for said invention; and

Each of the undersigned hereby grants the attorneys associated with Customer Number 86163 the power to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment, including the power to insert on this assignment the application number and filing date of said application when known.

Full Name of First Inventor: (given name, middle initial, family name)		JOHN MACLAREN		
Inventor's Signature	<u>John M. MacLayen</u> Juhn MacLaren (May 38, 2013)		Execution Date	May 26, 2017

Full Name of Second Inventor: (given name, middle initial, family name)		
Inventor's Signature	Execution Date	

**RECORDED: 05/31/2017**