504089484 11/09/2016

EPAS ID: PAT4136152

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

 SUBMISSION TYPE:
 NEW ASSIGNMENT

 NATURE OF CONVEYANCE:
 ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YONGQIANG CAO	10/26/2016
PRAVEEN K. PILLY	11/07/2016
NARAYAN SRINIVASA	11/07/2016

RECEIVING PARTY DATA

Name:	HRL LABORATORIES, LLC
Street Address:	3011 MALIBU CANYON ROAD
City:	MALIBU
State/Country:	CALIFORNIA
Postal Code:	90265

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15249849

CORRESPONDENCE DATA

Fax Number: (310)943-2736

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.

Phone: 310-589-8158

Email: officeactions@topemckay.com
Correspondent Name: TOPE-MCKAY & ASSOCIATES

Address Line 1: 30745 PACIFIC COAST HIGHWAY #420

Address Line 4: MALIBU, CALIFORNIA 90265

ATTORNEY DOCKET NUMBER:	HRL449
NAME OF SUBMITTER:	RACHEL HERRERA
SIGNATURE:	/Rachel Herrera/
DATE SIGNED:	11/09/2016

Total Attachments: 3

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PATENT 504089484 REEL: 040273 FRAME: 0713

Attorney Docket: HRL449 HRL docket No.: 141010

Invention Title: SYSTEM AND METHOD FOR ONLINE DEEP LEARNING IN AN ULTRA-LOW

POWER CONSUMPTION STATE

ASSIGNMENT

WHEREAS, I, Yongqiang Cao of 124 Boyd Street, Newton, MA 02458, United States of America (hereinafter "Assignor") have invented certain new and useful improvements in SYSTEM AND METHOD FOR ONLINE DEEP LEARNING IN AN ULTRA-LOW POWER CONSUMPTION STATE (hereinafter "Invention") for which a United States patent application was filed on August 29, 2016, Application Serial No. 15/249,849.

AND

WHEREAS, HRL Laboratories, LLC, a limited liability company organized and existing under the laws of the State of Delaware, United States of America and having a place of business at 3011 Malibu Canyon Road, Malibu, California, United States of America, (hereinafter "Assignee"), is desirous of acquiring the entire right, title, and interest in the Invention within the United States of America and its territorial possessions, and in all foreign countries and jurisdictions in which intellectual or industrial property protection may be granted therefor.

NOW, THEREFORE, for good and valuable consideration, the receipt whereof I hereby acknowledge, I, the Assignor desire to and do hereby assign, sell, and transfer unto Assignee the full and exclusive right to the Invention in the United States of America and its territorial possessions and in all foreign countries and jurisdictions, as well as, the entire right, title and interest in and to any and all intellectual or industrial property rights including, but not limited to, patents, designs, utility models, and inventor certificates which may be granted therefor in the United States of America and its territorial possessions and in all foreign countries and jurisdictions. I hereby authorize and request the U.S. Patent and Trademark Office and the equivalent offices of foreign countries and jurisdictions, to issue to the Assignee, any and all applicable intellectual or industrial property rights in the Invention, for the Assignee's sole use and benefit, for the full extent of the term for which United States and foreign patents and the like may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.

I further covenant and agree with the Assignee that I have full and unencumbered title to the invention hereby assigned, which title I warrant unto the Assignee, and I further agree that I will, without demanding any further consideration therefor, and at the request and at the expense of the Assignee, do all lawful and just acts, including the execution and acknowledgment of instruments, that may be or become necessary for obtaining, sustaining, extending, reissuing, or reexamining United States and foreign patents or the like for the Invention, and for maintaining and perfecting the Assignee's right to the Invention and any and all intellectual or industrial property rights therein, particularly in cases of interference, conflict, opposition, and litigation.

IN TESTIMONY WHEREOF, I have hereunto set my hand,

Executed this 26th day of 00 to bey ,2016,	
at portland (city).	Tae
	(Signature)

PATENT REEL: 040273 FRAME: 0714 Attorney Docket: HRL449 HRL docket No.: 141010

Invention Title: SYSTEM AND METHOD FOR ONLINE DEEP LEARNING IN AN ULTRA-LOW

POWER CONSUMPTION STATE

ASSIGNMENT

WHEREAS, I, Praveen K. Pilly of 23058 Enadia Way, West Hills, CA 91307, United States of America (hereinafter "Assignor") have invented certain new and useful improvements in SYSTEM AND METHOD FOR ONLINE DEEP LEARNING IN AN ULTRA-LOW POWER CONSUMPTION STATE (hereinafter "Invention") for which a United States patent application was filed on August 29, 2016, Application Serial No. 15/249,849.

AND

WHEREAS, HRL Laboratories, LLC, a limited liability company organized and existing under the laws of the State of Delaware, United States of America and having a place of business at 3011 Malibu Canyon Road, Malibu, California, United States of America, (hereinafter "Assignee"), is desirous of acquiring the entire right, title, and interest in the Invention within the United States of America and its territorial possessions, and in all foreign countries and jurisdictions in which intellectual or industrial property protection may be granted therefor.

NOW, THEREFORE, for good and valuable consideration, the receipt whereof I hereby acknowledge, I, the Assignor desire to and do hereby assign, sell, and transfer unto Assignee the full and exclusive right to the Invention in the United States of America and its territorial possessions and in all foreign countries and jurisdictions, as well as, the entire right, title and interest in and to any and all intellectual or industrial property rights including, but not limited to, patents, designs, utility models, and inventor certificates which may be granted therefor in the United States of America and its territorial possessions and in all foreign countries and jurisdictions. I hereby authorize and request the U.S. Patent and Trademark Office and the equivalent offices of foreign countries and jurisdictions, to issue to the Assignee, any and all applicable intellectual or industrial property rights in the Invention, for the Assignee's sole use and benefit, for the full extent of the term for which United States and foreign patents and the like may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.

I further covenant and agree with the Assignee that I have full and unencumbered title to the invention hereby assigned, which title I warrant unto the Assignee, and I further agree that I will, without demanding any further consideration therefor, and at the request and at the expense of the Assignee, do all lawful and just acts, including the execution and acknowledgment of instruments, that may be or become necessary for obtaining, sustaining, extending, reissuing, or reexamining United States and foreign patents or the like for the Invention, and for maintaining and perfecting the Assignee's right to the Invention and any and all intellectual or industrial property rights therein, particularly in cases of interference, conflict, opposition, and litigation.

IN TESTIMONY WHEREOF, I have hereunto set my hand.

Executed this day of	November, 2016,		
at <u>Malibu</u>	(city)CA	Profess Kur (Signature)	ner,

PATENT REEL: 040273 FRAME: 0715 Attorney Docket: HRL449 HRL docket No.: 141010

Invention Title: SYSTEM AND METHOD FOR ONLINE DEEP LEARNING IN AN ULTRA-LOW

POWER CONSUMPTION STATE

ASSIGNMENT

WHEREAS, I, Narayan Srinivasa of 5626 N.W. Primino Ave., Portland, OR 97229, United States of America (hereinafter "Assignor") have invented certain new and useful improvements in SYSTEM AND METHOD FOR ONLINE DEEP LEARNING IN AN ULTRA-LOW POWER CONSUMPTION STATE (hereinafter "Invention") for which a United States patent application was filed on August 39, 2016, Application Serial No. 15/249,849.

AND

WHEREAS, HRL Laboratories, LLC, a limited liability company organized and existing under the laws of the State of Delaware, United States of America and having a place of business at 3011 Malibu Canyon Road, Malibu, California, United States of America, (hereinafter "Assignee"), is desirous of acquiring the entire right, title, and interest in the Invention within the United States of America and its territorial possessions, and in all foreign countries and jurisdictions in which intellectual or industrial property protection may be granted therefor.

NOW, THEREFORE, for good and valuable consideration, the receipt whereof I hereby acknowledge, I, the Assignor desire to and do hereby assign, sell, and transfer unto Assignee the full and exclusive right to the Invention in the United States of America and its territorial possessions and in all foreign countries and jurisdictions, as well as, the entire right, title and interest in and to any and all intellectual or industrial property rights including, but not limited to, patents, designs, utility models, and inventor certificates which may be granted therefor in the United States of America and its territorial possessions and in all foreign countries and jurisdictions. I hereby authorize and request the U.S. Patent and Trademark Office and the equivalent offices of foreign countries and jurisdictions, to issue to the Assignee, any and all applicable intellectual or industrial property rights in the Invention, for the Assignee's sole use and benefit, for the full extent of the term for which United States and foreign patents and the tike may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.

I further covenant and agree with the Assignee that I have full and unencumbered title to the invention hereby assigned, which title I warrant unto the Assignee, and I further agree that I will, without demanding any further consideration therefor, and at the request and at the expense of the Assignee, do all lawful and just acts, including the execution and acknowledgment of instruments, that may be or become necessary for obtaining, sustaining, extending, reissuing, or reexamining United States and foreign patents or the like for the Invention, and for maintaining and perfecting the Assignee's right to the Invention and any and all intellectual or industrial property rights therein, particularly in cases of interference, conflict, opposition, and litigation.

IN TESTIMONY WHEREOF, I have hereunto set my hand,

Executed this 7th day of November 2016, at Portland (city)

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PATENT REEL: 040273 FRAME: 0716

RECORDED: 11/09/2016