

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT4902514

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
ROCKY CHAU-HSIUNG LIN	01/02/2017
THOMAS YAMASAKI	01/02/2017
KOICHIRO KANDA	01/02/2017
DIEGO RODRIGUEZ RISCO	01/03/2017
ALEXANDER JOSEPH RYAN	01/03/2017
RECEIVING PARTY DATA	
Name:	ALPINE ELECTRONICS OF SILICON VALLEY, INC.
Street Address:	3151 JAY STREET
Internal Address:	SUITE 101
City:	SANTA CLARA
State/Country:	CALIFORNIA
Postal Code:	95054
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15946678
CORRESPONDENCE DATA	
Fax Number:	(858)720-5799
<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>	
Phone:	8587205700
Email:	mbright@perkinscoie.com
Correspondent Name:	THOMAS MILLIKAN
Address Line 1:	PERKINS COIE LLP
Address Line 2:	PO BOX 1247
Address Line 4:	SEATTLE, WASHINGTON 98111-1247
ATTORNEY DOCKET NUMBER:	112432-8009.US04
NAME OF SUBMITTER:	MEGHAN BRIGHT
SIGNATURE:	/Meghan Bright/
DATE SIGNED:	04/05/2018
This document serves as an Oath/Declaration (37 CFR 1.63).	

PATENT

Total Attachments: 20

source=Executed Assign-Decs (from parent)#page1.tif
source=Executed Assign-Decs (from parent)#page2.tif
source=Executed Assign-Decs (from parent)#page3.tif
source=Executed Assign-Decs (from parent)#page4.tif
source=Executed Assign-Decs (from parent)#page5.tif
source=Executed Assign-Decs (from parent)#page6.tif
source=Executed Assign-Decs (from parent)#page7.tif
source=Executed Assign-Decs (from parent)#page8.tif
source=Executed Assign-Decs (from parent)#page9.tif
source=Executed Assign-Decs (from parent)#page10.tif
source=Executed Assign-Decs (from parent)#page11.tif
source=Executed Assign-Decs (from parent)#page12.tif
source=Executed Assign-Decs (from parent)#page13.tif
source=Executed Assign-Decs (from parent)#page14.tif
source=Executed Assign-Decs (from parent)#page15.tif
source=Executed Assign-Decs (from parent)#page16.tif
source=Executed Assign-Decs (from parent)#page17.tif
source=Executed Assign-Decs (from parent)#page18.tif
source=Executed Assign-Decs (from parent)#page19.tif
source=Executed Assign-Decs (from parent)#page20.tif

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Rocky Chau-Hsiung Lin et al.

Application No.: Not Yet Assigned

Filed: Herewith

For: NEURAL NETWORK APPLICATIONS IN
RESOURCE CONSTRAINED ENVIRONMENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION AND ASSIGNMENT BY THE INVENTOR

I, Rocky Chau-Hsiung Lin, hereby declare that:

I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

**NEURAL NETWORK APPLICATIONS IN RESOURCE
CONSTRAINED ENVIRONMENTS**

the specification of which was filed on January 3, 2017, as Application No. 15/397,715, which claims the benefit of priority of U.S. Provisional Patent Application No. 62/365,629, filed on July 22, 2016. I authorize and request an attorney appointed in said application to hereafter insert above the filing date and application number of said application when known.

I believe the following persons are additional original joint inventors of the above-identified patent application:

Thomas Yamasaki;

Diego Rodriguez Risco;

Alexander Joseph Ryan; and

Koichiro Kanda.

Inventor : Rocky Chau-Hsiung Lin et al.
Appl. No. : Not Yet Assigned
Filed : Herewith
Page : 2 of 4

Docket No.: 112432-8009.US01

The above-identified application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified patent application including the claims.

I am aware of the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

I hereby acknowledge that any willful false statement made in the above declaration is punishable under 18 USC §1001 by fine or imprisonment of not more than five (5) years, or both.

ASSIGNMENT

I hereby assign to Alpine Electronics of Silicon Valley, Inc., a corporation having a place of business at 3151 Jay Street, Suite 101, Santa Clara, California, 95054, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent filed by me, entitled *NEURAL NETWORK APPLICATIONS IN RESOURCE CONSTRAINED ENVIRONMENTS*, filed on January 3, 2017, and assigned U.S. Application Number 15/397,715. I authorize and request an attorney appointed in said application to hereafter insert above the filing date and application number of said application when known.

This assignment includes the entire right, title and interest in said application, all legal equivalents thereof in any country, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions and improvements, including, but not limited to, all divisions, continuations, reissues, reexamination certificates, any and all certificates issued in any post-grant proceeding, and extensions of said applications and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes, and the right to seek relief and recover all damages, including, but not limited to, a reasonable royalty, by reason of infringement or any

Inventor : Rocky Chau-Hsiung Lin et al.
Appl. No. : Not Yet Assigned
Filed : Herewith
Page : 3 of 4

Docket No.: 112432-8009.US01

other violation of patent or patent application rights. I authorize the Assignee to apply in all countries in my name or in the name of the Assignee for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements.

In addition, I hereby confirm the sale, assignment, and transfer to the Assignee of the entire right, title and interest throughout the world in said inventions and improvements that occurred by operation of an employment agreement between me and the Assignee existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer any right, title and interest I may have in said inventions and improvements anywhere in the world to the Assignee.

The foregoing assignments, sale and transfer have been made for good and valuable consideration in accordance with the aforementioned employment agreement.

I hereby represent and covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with the assignment of said inventions and improvements to the Assignee.

I further covenant for myself and my respective heirs, legal representatives and assigns, to assist the Assignee in handling various procedures, tasks and documentation in connection with this assignment, including, but not limited to, providing to the Assignee promptly upon the request of the Assignee all pertinent facts and documents relating to said invention and improvements, and said patents, said legal equivalents or other legal instrument as may be known and accessible to me and testifying as to the same in any interference, litigation, or proceeding relating thereto, and promptly executing and delivering to the Assignee or its legal representative any and all papers, documents, instruments or affidavits in connection with obtaining, maintaining, issuing or enforcing said application, said inventions and improvements, and said patents, said equivalents and other legal instrument which may be necessary or desirable to carry out the purposes thereof.

I hereby authorize and request the Commissioner of Patents and Trademarks to issue one or more patents in the United States for said inventions and improvements to Alpine Electronics

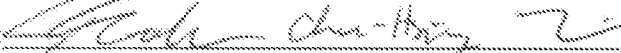
Inventor : Rocky Chau-Hsiung Lin et al.
Appl. No. : Not Yet Assigned
Filed : Herewith
Page : 4 of 4

Docket No: 112432-8009.US01

of Silicon Valley, Inc., as assignee of the entire interest, for the sole use and benefit of Assignee,
its successors and assigns.

I am competent to execute the above declaration and assignment. I hereby have duly
executed the declaration and assignment below with my name.

Full name of inventor: Rocky Chau-Hsiung Lin

Inventor's signature: 

Date: 1/2/2017

Perkins Coie LLP
P.O. Box 1247
Seattle, Washington 98111-1247
Telephone: (858) 720-5700
Facsimile: (206) 359-7198

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Rocky Chau-Hsiung Lin et al.

Application No.: Not Yet Assigned

Filed: Herewith

For: NEURAL NETWORK APPLICATIONS IN
RESOURCE CONSTRAINED ENVIRONMENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION AND ASSIGNMENT BY THE INVENTOR

I, Thomas Yamasaki, hereby declare that:

I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

**NEURAL NETWORK APPLICATIONS IN RESOURCE
CONSTRAINED ENVIRONMENTS**

the specification of which was filed on January 3, 2017, as Application No. 15/397,715, which claims the benefit of priority of U.S. Provisional Patent Application No. 62/365,629, filed on July 22, 2016. I authorize and request an attorney appointed in said application to hereafter insert above the filing date and application number of said application when known.

I believe the following persons are additional original joint inventors of the above-identified patent application:

Rocky Chau-Hsiung Lin;

Diego Rodriguez Risco;

Alexander Joseph Ryan; and

Koichiro Kanda.

Inventor : Rocky Chau-Hsiung Lin et al.
Appl. No. : Not Yet Assigned
Filed : Herewith
Page : 2 of 4

Docket No.: 112432-8009.US01

The above-identified application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified patent application including the claims.

I am aware of the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

I hereby acknowledge that any willful false statement made in the above declaration is punishable under 18 USC §1001 by fine or imprisonment of not more than five (5) years, or both.

ASSIGNMENT

I hereby assign to Alpine Electronics of Silicon Valley, Inc., a corporation having a place of business at 3151 Jay Street, Suite 101, Santa Clara, California, 95054, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent filed by me, entitled *NEURAL NETWORK APPLICATIONS IN RESOURCE CONSTRAINED ENVIRONMENTS*, filed on January 3, 2017, and assigned U.S. Application Number 15/397,715. I authorize and request an attorney appointed in said application to hereafter insert above the filing date and application number of said application when known.

This assignment includes the entire right, title and interest in said application, all legal equivalents thereof in any country, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions and improvements, including, but not limited to, all divisions, continuations, reissues, reexamination certificates, any and all certificates issued in any post-grant proceeding, and extensions of said applications and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes, and the right to seek relief and recover all damages, including, but not limited to, a reasonable royalty, by reason of infringement or any

other violation of patent or patent application rights. I authorize the Assignee to apply in all countries in my name or in the name of the Assignee for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements.

In addition, I hereby confirm the sale, assignment, and transfer to the Assignee of the entire right, title and interest throughout the world in said inventions and improvements that occurred by operation of an employment agreement between me and the Assignee existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer any right, title and interest I may have in said inventions and improvements anywhere in the world to the Assignee.

The foregoing assignments, sale and transfer have been made for good and valuable consideration in accordance with the aforementioned employment agreement.

I hereby represent and covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with the assignment of said inventions and improvements to the Assignee.

I further covenant for myself and my respective heirs, legal representatives and assigns, to assist the Assignee in handling various procedures, tasks and documentation in connection with this assignment, including, but not limited to, providing to the Assignee promptly upon the request of the Assignee all pertinent facts and documents relating to said invention and improvements, and said patents, said legal equivalents or other legal instrument as may be known and accessible to me and testifying as to the same in any interference, litigation, or proceeding relating thereto, and promptly executing and delivering to the Assignee or its legal representative any and all papers, documents, instruments or affidavits in connection with obtaining, maintaining, issuing or enforcing said application, said inventions and improvements, and said patents, said equivalents and other legal instrument which may be necessary or desirable to carry out the purposes thereof.

I hereby authorize and request the Commissioner of Patents and Trademarks to issue one or more patents in the United States for said inventions and improvements to Alpine Electronics

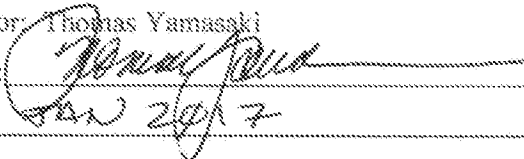
Inventor : Rocky Chau-Hsiung Lin et al.
Appl. No. : Not Yet Assigned
Filed : Herewith
Page : 4 of 4

Docket No.: 112432-8009.US01

of Silicon Valley, Inc., as assignee of the entire interest, for the sole use and benefit of Assignee,
its successors and assigns.

I am competent to execute the above declaration and assignment. I hereby have duly
executed the declaration and assignment below with my name.

Full name of inventor: Thomas Yamasaki

Inventor's signature: 

Date: 02 JAN 2017

Perkins Cole LLP
P.O. Box 1247
Seattle, Washington 98111-1247
Telephone: (858) 720-5700
Facsimile: (206) 359-7198

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Rocky Chau-Hsiung Lin et al.

Application No.: Not Yet Assigned

Filed: Herewith

For: NEURAL NETWORK APPLICATIONS IN
RESOURCE CONSTRAINED ENVIRONMENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION AND ASSIGNMENT BY THE INVENTOR

I, Koichiro Kanda, hereby declare that:

I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

**NEURAL NETWORK APPLICATIONS IN RESOURCE
CONSTRAINED ENVIRONMENTS**

the specification of which was filed on January 3, 2017, as Application No. 15/397,715, which claims the benefit of priority of U.S. Provisional Patent Application No. 62/365,629, filed on July 22, 2016. I authorize and request an attorney appointed in said application to hereafter insert above the filing date and application number of said application when known.

I believe the following persons are additional original joint inventors of the above-identified patent application:

Rocky Chau-Hsiung Lin;

Diego Rodriguez Risco;

Alexander Joseph Ryan; and

Thomas Yamasaki.

Inventor : Rocky Chau-Hsiung Lin et al.
Appl. No. : Not Yet Assigned
Filed : Herewith
Page : 2 of 4

Docket No.: 112432-8009.US01

The above-identified application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified patent application including the claims.

I am aware of the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

I hereby acknowledge that any willful false statement made in the above declaration is punishable under 18 USC §1001 by fine or imprisonment of not more than five (5) years, or both.

ASSIGNMENT

I hereby assign to Alpine Electronics of Silicon Valley, Inc., a corporation having a place of business at 3151 Jay Street, Suite 101, Santa Clara, California, 95054, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent filed by me, entitled *NEURAL NETWORK APPLICATIONS IN RESOURCE CONSTRAINED ENVIRONMENTS*, filed on January 3, 2017, and assigned U.S. Application Number 15/397,715. I authorize and request an attorney appointed in said application to hereafter insert above the filing date and application number of said application when known.

This assignment includes the entire right, title and interest in said application, all legal equivalents thereof in any country, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions and improvements, including, but not limited to, all divisions, continuations, reissues, reexamination certificates, any and all certificates issued in any post-grant proceeding, and extensions of said applications and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes, and the right to seek relief and recover all damages, including, but not limited to, a reasonable royalty, by reason of infringement or any

Inventor : Rocky Chau-Hsiung Lin et al.
Appl. No. : Not Yet Assigned
Filed : Herewith
Page : 3 of 4

Docket No.: 112432-8009.US01

other violation of patent or patent application rights. I authorize the Assignee to apply in all countries in my name or in the name of the Assignee for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements.

In addition, I hereby confirm the sale, assignment, and transfer to the Assignee of the entire right, title and interest throughout the world in said inventions and improvements that occurred by operation of an employment agreement between me and the Assignee existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer any right, title and interest I may have in said inventions and improvements anywhere in the world to the Assignee.

The foregoing assignments, sale and transfer have been made for good and valuable consideration in accordance with the aforementioned employment agreement.

I hereby represent and covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with the assignment of said inventions and improvements to the Assignee.

I further covenant for myself and my respective heirs, legal representatives and assigns, to assist the Assignee in handling various procedures, tasks and documentation in connection with this assignment, including, but not limited to, providing to the Assignee promptly upon the request of the Assignee all pertinent facts and documents relating to said invention and improvements, and said patents, said legal equivalents or other legal instrument as may be known and accessible to me and testifying as to the same in any interference, litigation, or proceeding relating thereto, and promptly executing and delivering to the Assignee or its legal representative any and all papers, documents, instruments or affidavits in connection with obtaining, maintaining, issuing or enforcing said application, said inventions and improvements, and said patents, said equivalents and other legal instrument which may be necessary or desirable to carry out the purposes thereof.

I hereby authorize and request the Commissioner of Patents and Trademarks to issue one or more patents in the United States for said inventions and improvements to Alpine Electronics

Inventor : Rocky Chau-Hsiung Lin et al.
Appl. No. : Not Yet Assigned
Filed : Herewith
Page : 4 of 4

Docket No.: 112432-8009.US01

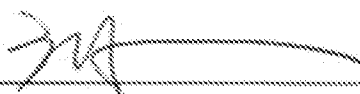
of Silicon Valley, Inc., as assignee of the entire interest, for the sole use and benefit of Assignee,
its successors and assigns.

I am competent to execute the above declaration and assignment. I hereby have duly
executed the declaration and assignment below with my name.

Full name of inventor: Koichiro Kanda

Inventor's signature: _____

Date: _____



January 2nd, 2017

Perkins Coie LLP
P.O. Box 1247
Seattle, Washington 98111-1247
Telephone: (858) 720-5700
Facsimile: (206) 359-7198

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Rocky Chau-Hsiung Lin et al.

Application No.: Not Yet Assigned

Filed: Herewith

For: NEURAL NETWORK APPLICATIONS IN
RESOURCE CONSTRAINED ENVIRONMENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION AND ASSIGNMENT BY THE INVENTOR

I, Diego Rodriguez Risco, hereby declare that:

I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

**NEURAL NETWORK APPLICATIONS IN RESOURCE
CONSTRAINED ENVIRONMENTS**

the specification of which was filed on January 3, 2017, as Application No. 15/397,715, which claims the benefit of priority of U.S. Provisional Patent Application No. 62/365,629, filed on July 22, 2016. I authorize and request an attorney appointed in said application to hereafter insert above the filing date and application number of said application when known.

I believe the following persons are additional original joint inventors of the above-identified patent application:

Rocky Chau-Hsiung Lin;

Thomas Yamasaki;

Alexander Joseph Ryan; and

Koichiro Kanda.

Inventor : Rocky Chau-Hsiung Lin et al.
Appl. No. : Not Yet Assigned
Filed : Herewith
Page : 2 of 4

Docket No.: 112432-8009.US01

The above-identified application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified patent application including the claims.

I am aware of the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

I hereby acknowledge that any willful false statement made in the above declaration is punishable under 18 USC §1001 by fine or imprisonment of not more than five (5) years, or both.

ASSIGNMENT

I hereby assign to Alpine Electronics of Silicon Valley, Inc., a corporation having a place of business at 3151 Jay Street, Suite 101, Santa Clara, California, 95054, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent filed by me, entitled *NEURAL NETWORK APPLICATIONS IN RESOURCE CONSTRAINED ENVIRONMENTS*, filed on January 3, 2017, and assigned U.S. Application Number 15/397,715. I authorize and request an attorney appointed in said application to hereafter insert above the filing date and application number of said application when known.

This assignment includes the entire right, title and interest in said application, all legal equivalents thereof in any country, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions and improvements, including, but not limited to, all divisions, continuations, reissues, reexamination certificates, any and all certificates issued in any post-grant proceeding, and extensions of said applications and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes, and the right to seek relief and recover all damages, including, but not limited to, a reasonable royalty, by reason of infringement or any

Inventor : Rocky Chau-Hsiung Lin et al.
Appl. No. : Not Yet Assigned
Filed : Herewith
Page : 3 of 4

Docket No.: 112432-8009.US01

other violation of patent or patent application rights. I authorize the Assignee to apply in all countries in my name or in the name of the Assignee for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements.

In addition, I hereby confirm the sale, assignment, and transfer to the Assignee of the entire right, title and interest throughout the world in said inventions and improvements that occurred by operation of an employment agreement between me and the Assignee existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer any right, title and interest I may have in said inventions and improvements anywhere in the world to the Assignee.

The foregoing assignments, sale and transfer have been made for good and valuable consideration in accordance with the aforementioned employment agreement.

I hereby represent and covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with the assignment of said inventions and improvements to the Assignee.

I further covenant for myself and my respective heirs, legal representatives and assigns, to assist the Assignee in handling various procedures, tasks and documentation in connection with this assignment, including, but not limited to, providing to the Assignee promptly upon the request of the Assignee all pertinent facts and documents relating to said invention and improvements, and said patents, said legal equivalents or other legal instrument as may be known and accessible to me and testifying as to the same in any interference, litigation, or proceeding relating thereto, and promptly executing and delivering to the Assignee or its legal representative any and all papers, documents, instruments or affidavits in connection with obtaining, maintaining, issuing or enforcing said application, said inventions and improvements, and said patents, said equivalents and other legal instrument which may be necessary or desirable to carry out the purposes thereof.

I hereby authorize and request the Commissioner of Patents and Trademarks to issue one or more patents in the United States for said inventions and improvements to Alpine Electronics

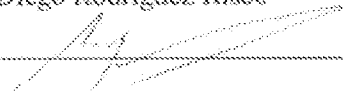
Inventor : Rocky Chau-Hsiung Liu et al.
Appl. No. : Not Yet Assigned
Filed : Herewith
Page : 4 of 4

Docket No.: 112432-8009.1/501

of Silicon Valley, Inc. as assignee of the entire interest, for the sole use and benefit of Assignee,
its successors and assigns.

I am competent to execute the above declaration and assignment. I hereby have duly
executed the declaration and assignment below with my name.

Full name of inventor: Diego Rodriguez Risco

Inventor's signature: 

Date: 1/31/2007

Perkins Coie LLP
P.O. Box 1247
Seattle, Washington 98111-1247
Telephone: (858) 720-5700
Facsimile: (206) 359-7198

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Rocky Chau-Hsiung Lin et al.

Application No.: Not Yet Assigned

Filed: Herewith

For: NEURAL NETWORK APPLICATIONS IN
RESOURCE CONSTRAINED ENVIRONMENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION AND ASSIGNMENT BY THE INVENTOR

I, Alexander Joseph Ryan, hereby declare that:

I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

**NEURAL NETWORK APPLICATIONS IN RESOURCE
CONSTRAINED ENVIRONMENTS**

the specification of which was filed on January 3, 2017, as Application No. 15/397,715, which claims the benefit of priority of U.S. Provisional Patent Application No. 62/365,629, filed on July 22, 2016. I authorize and request an attorney appointed in said application to hereafter insert above the filing date and application number of said application when known.

I believe the following persons are additional original joint inventors of the above-identified patent application:

Rocky Chau-Hsiung Lin;

Thomas Yamasaki;

Diego Rodriguez Risco; and

Koichiro Kanda.

Inventor : Rocky Chau-Hsiung Lin et al.
Appl. No. : Not Yet Assigned
Filed : Herewith
Page : 2 of 4

Docket No.: 112432-8009.US01

The above-identified application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified patent application including the claims.

I am aware of the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

I hereby acknowledge that any willful false statement made in the above declaration is punishable under 18 USC §1001 by fine or imprisonment of not more than five (5) years, or both.

ASSIGNMENT

I hereby assign to Alpine Electronics of Silicon Valley, Inc., a corporation having a place of business at 3151 Jay Street, Suite 101, Santa Clara, California, 95054, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent filed by me, entitled *NEURAL NETWORK APPLICATIONS IN RESOURCE CONSTRAINED ENVIRONMENTS*, filed on January 3, 2017, and assigned U.S. Application Number 15/397,715. I authorize and request an attorney appointed in said application to hereafter insert above the filing date and application number of said application when known.

This assignment includes the entire right, title and interest in said application, all legal equivalents thereof in any country, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions and improvements, including, but not limited to, all divisions, continuations, reissues, reexamination certificates, any and all certificates issued in any post-grant proceeding, and extensions of said applications and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes, and the right to seek relief and recover all damages, including, but not limited to, a reasonable royalty, by reason of infringement or any

Inventor : Rocky Chau-Hsiung Lin et al.
Appl. No. : Not Yet Assigned
Filed : Herewith
Page : 3 of 4

Docket No.: 112432-8009.US01

other violation of patent or patent application rights. I authorize the Assignee to apply in all countries in my name or in the name of the Assignee for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements.

In addition, I hereby confirm the sale, assignment, and transfer to the Assignee of the entire right, title and interest throughout the world in said inventions and improvements that occurred by operation of an employment agreement between me and the Assignee existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer any right, title and interest I may have in said inventions and improvements anywhere in the world to the Assignee.

The foregoing assignments, sale and transfer have been made for good and valuable consideration in accordance with the aforementioned employment agreement.

I hereby represent and covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with the assignment of said inventions and improvements to the Assignee.

I further covenant for myself and my respective heirs, legal representatives and assigns, to assist the Assignee in handling various procedures, tasks and documentation in connection with this assignment, including, but not limited to, providing to the Assignee promptly upon the request of the Assignee all pertinent facts and documents relating to said invention and improvements, and said patents, said legal equivalents or other legal instrument as may be known and accessible to me and testifying as to the same in any interference, litigation, or proceeding relating thereto, and promptly executing and delivering to the Assignee or its legal representative any and all papers, documents, instruments or affidavits in connection with obtaining, maintaining, issuing or enforcing said application, said inventions and improvements, and said patents, said equivalents and other legal instrument which may be necessary or desirable to carry out the purposes thereof.

I hereby authorize and request the Commissioner of Patents and Trademarks to issue one or more patents in the United States for said inventions and improvements to Alpine Electronics

Inventor : Rocky Chau-Haiming Lin et al.
Appl. No. : Not Yet Assigned
Filed : Herewith
Page : 4 of 4

Docket No.: 112432-8009.US01

of Silicon Valley, Inc. as assignee of the entire interest, for the sole use and benefit of Assignee, its successors and assigns.

I am competent to execute the above declaration and assignment. I hereby have duly executed the declaration and assignment below with my name.

Full name of inventor: Alexander Joseph Ryan
Inventor's signature: Alexander Ryan
Date: Jan 3, 2017

Perkins Coie LLP
P.O. Box 1247
Seattle, Washington 98111-1247
Telephone: (858) 720-5700
Facsimile: (206) 359-7198

134031958.1