PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3025997

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
GUAN-MING SU	10/24/2013
QIAN CHEN	10/25/2013
PENG YIN	11/06/2013
SHENG QU	10/24/2013

RECEIVING PARTY DATA

Name:	DOLBY LABORATORIES LICENSING CORPORATION
Street Address:	100 Potrero Avenue
City:	San Francisco
State/Country:	CALIFORNIA
Postal Code:	94103-4813

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14488415

CORRESPONDENCE DATA

Fax Number: (415)645-4000

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: (415) 357-7052

Email: Cynthia.Severn@dolby.com

Correspondent Name: CYNTHIA SEVERN

475 BRANNAN STREET, SUITE 300 Address Line 1:

Address Line 4: SAN FRANCISCO, CALIFORNIA 94107-5420

ATTORNEY DOCKET NUMBER:	D13097US01
NAME OF SUBMITTER:	CYNTHIA SEVERN
SIGNATURE:	/Cynthia Severn/
DATE SIGNED:	09/17/2014
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 8

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PATENT REEL: 033756 FRAME: 0582 502979397

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PATENT REEL: 033756 FRAME: 0583

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGMENT FOR SINGLE ASSIGNEE Title of Invention Hardware Efficient Sparse FIR Filtering in Video Codec As the below named inventor, I hereby declare that: This declaration is directed to: The attached application, or United States application or PCT international application number: 61/885,377 filed on October 1, 2013. The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001

WHEREAS, DOLBY LABORATORIES LICENSING CORPORATION, a New York corporation, having a place of business at 100 Potrero Avenue, San Francisco, California, 94103, hereinafter referred to as ASSIGNEE, is desirous of acquiring the entire right, title and interest in and to said application and the invention to which said application is directed, in and to any and all improvements relating to said invention, and in and to all patents thereon, when granted in the United States and all foreign countries;

NOW, THEREFORE, in consideration of good and valuable consideration received by ASSIGNOR from ASSIGNEE, the receipt and sufficiency of which is hereby acknowledged by ASSIGNOR:

by fine or imprisonment of not more than (5) years, or both.

- ASSIGNOR hereby grants, sells, assigns, transfers and conveys unto ASSIGNEE, or to the
 extent ASSIGNOR has already done so, ASSIGNOR hereby confirms the grant, sale, assignment, transfer
 and conveyance unto ASSIGNEE of the entire right, title and interest:
- (a) in and to said application, invention, and improvements thereto, and each and every additional application filed anywhere in the world, whether or not the country, jurisdiction, or authority of filing is a member of the International Union for the Protection of Industrial Property (The Paris Convention), which additional application is a division of, substitution of, continuation-in-part of, or is a counterpart of, or is in any way based on, claims priority from, or relates to, said application, invention or improvements thereto;
- (b) all priority rights associated with the filing of each and every such application, for each country of The Paris Convention, for the Patent Cooperation Treaty, for the European Patent Convention, for all other treaties of like purposes, and for Taiwan; and
- (c) in and to each and every patent on said invention or improvements thereto that may be granted by any country, jurisdiction or authority, including each and every patent that may be granted on any of the applications referred to in sub-section (a), and in and to each and every reissue, reexamination certificate, or extension of each and every such patent.
- 2. ASSIGNOR hereby warrants, covenants and represents that he/she has not heretofore granted to anyone other than ASSIGNEE any license, right or privilege in respect to the said applications, patents, or said invention, nor in any other way encumbered the same, and that he/she has, or in the case of a previous assignment to ASSIGNEE, ASSIGNOR had the full right to convey, free of all licenses and encumbrances, the entire right, title and interest hereby assigned.

- 3. ASSIGNOR covenants and agrees that at the request and expense of ASSIGNEE he/she will promptly execute all papers deemed necessary or desirable by ASSIGNEE to perfect ownership of said invention, applications, and patents to ASSIGNEE, and execute all oaths, declarations and other papers deemed necessary or desirable by ASSIGNEE for prosecuting said applications and patents, for use in interference proceedings involving said invention, applications and patents, for use in opposition proceedings involving said invention, applications and patents, for refiling said applications, for filing of divisional, substitution, continuation or continuation-in-part applications deemed necessary or desirable by ASSIGNEE, for reissuance or reexamination of said patents, or for the filing in foreign countries of applications for patents counterpart to or in any way based on or relates to said application or to an application which is a division of, substitution of, continuation of, continuation-in-part of, said application or which application claims priority from or relates to said invention or improvements thereto. ASSIGNOR further covenants and agrees that at the expense and request of ASSIGNEE, he/she will promptly assist ASSIGNEE in interference, opposition and reexamination proceedings involving said invention, applications and patents, and in litigation involving said invention, applications and patents, and will assist in the ascertainment of facts and the production of evidence relating to said invention, applications and patents.
- 4. The terms, covenants and provisions of this ASSIGNMENT shall inure to the benefit of ASSIGNEE, its successors, assigns and other legal representatives, and shall be binding upon ASSIGNOR, his/her heirs, legal representatives and assigns.

LEGAL NAME OF INVENTOR

Inventor: Guan-Ming Su

Signature:

Notarial Acknowledgement

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COUNTY OF SKNTA CLARA-

the person acted, executed the instrument.

On October 21, 2013, before me. Coustanting Von Tantinitis Fetary Public, personally appeared Guan-Ming Su, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

KONSTANTINOS KONSTANTINICES Commission # 2037221 Notary Public - California Santa Clara County My Comm. Expires

Signature of Notary Public

My Commission Expires: AUQ. 16, 2017

	ED DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN LICATION DATA SHEET (37 CFR 1.76) AND ASSIGMENT FOR SINGLE ASSIGNEE
Title of Hardware Efficient Sparse FIR Filtering in Video Codec	
As the below	v named inventor, I hereby declare that:
This declarat	tion is directed to:
The	e attached application, or
⊠ Uni	ited States application or PCT international application number: 61/885,377
filed	on <u>October 1, 2013</u> .
The above-ide	entified application was made or authorized to be made by me.
I believe that	I am the original inventor or an original joint inventor of a claimed invention in the application.

by fine or imprisonment of not more than (5) years, or both.

WHEREAS, DOLBY LABORATORIES LICENSING CORPORATION, a New York corporation, having a place of business at 100 Potrero Avenue, San Francisco, California, 94103, hereinafter referred to as ASSIGNEE, is desirous of acquiring the entire right, title and interest in and to said application and the invention to which said application is directed, in and to any and all

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001

improvements relating to said invention, and in and to all patents thereon, when granted in the United States and all foreign countries:

NOW, THEREFORE, in consideration of good and valuable consideration received by ASSIGNOR from ASSIGNEE, the receipt and sufficiency of which is hereby acknowledged by ASSIGNOR:

- 1. ASSIGNOR hereby grants, sells, assigns, transfers and conveys unto ASSIGNEE, or to the extent ASSIGNOR has already done so, ASSIGNOR hereby confirms the grant, sale, assignment, transfer and conveyance unto ASSIGNEE of the entire right, title and interest:
- (a) in and to said application, invention, and improvements thereto, and each and every additional application filed anywhere in the world, whether or not the country, jurisdiction, or authority of filing is a member of the International Union for the Protection of Industrial Property (The Paris Convention), which additional application is a division of, substitution of, continuation-in-part of, or is a counterpart of, or is in any way based on, claims priority from, or relates to, said application, invention or improvements thereto;
- (b) all priority rights associated with the filing of each and every such application, for each country of The Paris Convention, for the Patent Cooperation Treaty, for the European Patent Convention, for all other treaties of like purposes, and for Taiwan; and
- (c) in and to each and every patent on said invention or improvements thereto that may be granted by any country, jurisdiction or authority, including each and every patent that may be granted on any of the applications referred to in sub-section (a), and in and to each and every reissue, reexamination certificate, or extension of each and every such patent.
- 2. ASSIGNOR hereby warrants, covenants and represents that he/she has not heretofore granted to anyone other than ASSIGNEE any license, right or privilege in respect to the said applications, patents, or said invention, nor in any other way encumbered the same, and that he/she has, or in the case of a previous assignment to ASSIGNEE, ASSIGNOR had the full right to convey, free of all licenses and encumbrances, the entire right, title and interest hereby assigned.

- 3. ASSIGNOR covenants and agrees that at the request and expense of ASSIGNEE he/she will promptly execute all papers deemed necessary or desirable by ASSIGNEE to perfect ownership of said invention, applications, and patents to ASSIGNEE, and execute all oaths, declarations and other papers deemed necessary or desirable by ASSIGNEE for prosecuting said applications and patents, for use in interference proceedings involving said invention, applications and patents, for use in opposition proceedings involving said invention, applications and patents, for refiling said applications, for filing of divisional, substitution, continuation or continuation-in-part applications deemed necessary or desirable by ASSIGNEE, for reissuance or reexamination of said patents, or for the filing in foreign countries of applications for patents counterpart to or in any way based on or relates to said application or to an application which is a division of, substitution of, continuation of, continuation-in-part of, said application or which application claims priority from or relates to said invention or improvements thereto. ASSIGNOR further covenants and agrees that at the expense and request of ASSIGNEE, he/she will promptly assist ASSIGNEE in interference, opposition and reexamination proceedings involving said invention, applications and patents, and in litigation involving said invention, applications and patents, and will assist in the ascertainment of facts and the production of evidence relating to said invention, applications and patents.
- 4. The terms, covenants and provisions of this ASSIGNMENT shall inure to the benefit of ASSIGNEE, its successors, assigns and other legal representatives, and shall be binding upon ASSIGNOR, his/her heirs, legal representatives and assigns.

LEGAL N	AME OF IN	VENTOR		
inventor:	Qian Chen	<i>^ /</i>	Date: $\frac{10/25/20/3}{}$	
Signature:		11112	in a superior and the superior and superior and superior and superior and superior and superior and superior a	

Notarial Acknowledgement

The state of the s	
COUNTY OF SAMPA CLAPA) SSS:	,
on October 25, 2013, before me, Konstan	tinos Konstautinide SNotary Public
personally appeared Qian'Chen , who proved to me on the basis of	f satisfactory evidence to be the person whose
name is subscribed to the within instrument and acknowledged to	me that he/she executed the same in his/her
authorized capacity, and that by his/her signature on the instrumen	it the person, or the entity upon behalf of which
the person acted, executed the instrument.	

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal,

STATE of CALIFORNIA

KONSTANTINGS KONSTANTINGES
Commission # 2037221
Housey Public - California
Same Claim County
My Comm. Expires Aug 18, 2017

Signature of Notary Public

My Commission Expires: Avg. 16, 2017

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGMENT FOR SINGLE ASSIGNEE Title of Hardware Efficient Sparse FIR Filtering in Video Codec As the below named inventor, I hereby declare that: This declaration is directed to: The attached application, or United States application or PCT international application number: 61/885,377 filed on October 1, 2013. The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001

WHEREAS, DOLBY LABORATORIES LICENSING CORPORATION, a New York corporation, having a place of business at 100 Potrero Avenue, San Francisco, California, 94103, hereinafter referred to as ASSIGNEE, is desirous of acquiring the entire right, title and interest in and to said application and the invention to which said application is directed, in and to any and all improvements relating to said invention, and in and to all patents thereon, when granted in the United States and all foreign countries;

NOW, THEREFORE, in consideration of good and valuable consideration received by ASSIGNOR from ASSIGNEE, the receipt and sufficiency of which is hereby acknowledged by ASSIGNOR:

by fine or imprisonment of not more than (5) years, or both.

- I. ASSIGNOR hereby grants, sells, assigns, transfers and conveys unto ASSIGNEE, or to the extent ASSIGNOR has already done so, ASSIGNOR hereby confirms the grant, sale, assignment, transfer and conveyance unto ASSIGNEE of the entire right, title and interest:
- (a) in and to said application, invention, and improvements thereto, and each and every additional application filed anywhere in the world, whether or not the country, jurisdiction, or authority of filing is a member of the International Union for the Protection of Industrial Property (The Paris Convention), which additional application is a division of, substitution of, continuation-in-part of, or is a counterpart of, or is in any way based on, claims priority from, or relates to, said application, invention or improvements thereto;
- (b) all priority rights associated with the filing of each and every such application, for each country of The Paris Convention, for the Patent Cooperation Treaty, for the European Patent Convention, for all other treaties of like purposes, and for Taiwan; and
- (c) in and to each and every patent on said invention or improvements thereto that may be granted by any country, jurisdiction or authority, including each and every patent that may be granted on any of the applications referred to in sub-section (a), and in and to each and every reissue, reexamination certificate, or extension of each and every such patent.
- 2. ASSIGNOR hereby warrants, covenants and represents that he/she has not heretofore granted to anyone other than ASSIGNEE any license, right or privilege in respect to the said applications, patents, or said invention, nor in any other way encumbered the same, and that he/she has, or in the case of a previous assignment to ASSIGNEE, ASSIGNOR had the full right to convey, free of all licenses and encumbrances, the entire right, title and interest hereby assigned.

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Docket: D13097USP1

LEGAL NAME OF INVENTOR	
Inventor: Peng Yin	Date: 11 06 2013
Signature:	
•	Notarial Acknowledgement
STATE OF <u>New York</u>	
COUNTY OF COMOYS AS) ss: (To Trang & Smith
is subscribed to the within instrumer capacity, and that by his/her signatu acted, executed the instrument.	before me, Notary Public, proved to me on the basis of satisfactory evidence to be the person whose name and acknowledged to me that he/she executed the same in his/her authorized re on the instrument the person, or the entity upon behalf of which the person
I certify under PhNALTY OF PERJ paragraph is true and correct.	URY under the laws of the State of Asolfo (that the foregoing
WITNESS my hand and official sea	1 Male Charles
	Signature of Notary Public
[Seal]	My Commission Expires: CAOQUION
	TO A CANAL SECTION OF THE CONTRACT OF THE CONT
Docket: D13097USP1	Notery Paul C. 20th of Mew York Co. C. Sarin Bank

PATENT REEL: 033756 FRAME: 0589

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COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN

APP	LICATION DATA SHEET (37 CFR 1.76) AND ASSIGMENT FOR SINGLE ASSIGNEE
Title of Invention	Hardware Efficient Sparse FIR Filtering in Video Codec
As the below	v named inventor, I hereby declare that:
This declara	tion is directed to:
The	e attached application, or
⊠ Un	ited States application or PCT international application number: 61/885,377
filed	I on October 1, 2013.
The above-id	entified application was made or authorized to be made by me.
I believe that	I am the original inventor or an original joint inventor of a claimed invention in the application.
•	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001

WHEREAS, DOLBY LABORATORIES LICENSING CORPORATION, a New York corporation, having a place of business at 100 Potrero Avenue, San Francisco, California, 94103, hereinafter referred to as ASSIGNEE, is desirous of acquiring the entire right, title and interest in and to said application and the invention to which said application is directed, in and to any and all improvements relating to said invention, and in and to all patents thereon, when granted in the United States and all foreign countries;

NOW, THEREFORE, in consideration of good and valuable consideration received by ASSIGNOR from ASSIGNEE, the receipt and sufficiency of which is hereby acknowledged by ASSIGNOR:

- 1. ASSIGNOR hereby grants, sells, assigns, transfers and conveys unto ASSIGNEE, or to the extent ASSIGNOR has already done so, ASSIGNOR hereby confirms the grant, sale, assignment, transfer and conveyance unto ASSIGNEE of the entire right, title and interest:
- (a) in and to said application, invention, and improvements thereto, and each and every additional application filed anywhere in the world, whether or not the country, jurisdiction, or authority of filing is a member of the International Union for the Protection of Industrial Property (The Paris Convention), which additional application is a division of, substitution of, continuation of, continuationin-part of, or is a counterpart of, or is in any way based on, claims priority from, or relates to, said application, invention or improvements thereto;
- (b) all priority rights associated with the filing of each and every such application, for each country of The Paris Convention, for the Patent Cooperation Treaty, for the European Patent Convention, for all other treaties of like purposes, and for Taiwan; and
- (c) in and to each and every patent on said invention or improvements thereto that may be granted by any country, jurisdiction or authority, including each and every patent that may be granted on any of the applications referred to in sub-section (a), and in and to each and every reissue, reexamination certificate, or extension of each and every such patent.
- 2. ASSIGNOR hereby warrants, covenants and represents that he/she has not heretofore granted to anyone other than ASSIGNEE any license, right or privilege in respect to the said applications, patents, or said invention, nor in any other way encumbered the same, and that he/she has, or in the case of a previous assignment to ASSIGNEE, ASSIGNOR had the full right to convey, free of all licenses and encumbrances, the entire right, title and interest hereby assigned.

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- 3. ASSIGNOR covenants and agrees that at the request and expense of ASSIGNEE he/she will promptly execute all papers deemed necessary or desirable by ASSIGNEE to perfect ownership of said invention, applications, and patents to ASSIGNEE, and execute all oaths, declarations and other papers deemed necessary or desirable by ASSIGNEE for prosecuting said applications and patents, for use in interference proceedings involving said invention, applications and patents, for use in opposition proceedings involving said invention, applications and patents, for refiling said applications, for filing of divisional, substitution, continuation or continuation-in-part applications deemed necessary or desirable by ASSIGNEE, for reissuance or reexamination of said patents, or for the filing in foreign countries of applications for patents counterpart to or in any way based on or relates to said application or to an application which is a division of, substitution of, continuation of, continuation-in-part of, said application or which application claims priority from or relates to said invention or improvements thereto. ASSIGNOR further covenants and agrees that at the expense and request of ASSIGNEE, he/she will promptly assist ASSIGNEE in interference, opposition and reexamination proceedings involving said invention, applications and patents, and in litigation involving said invention, applications and patents, and will assist in the ascertainment of facts and the production of evidence relating to said invention, applications and patents.
- 4. The terms, covenants and provisions of this ASSIGNMENT shall inure to the benefit of ASSIGNEE, its successors, assigns and other legal representatives, and shall be binding upon ASSIGNOR, his/her heirs, legal representatives and assigns.

LEGAL NAME OF INVENTOR	
Inventor: Sheng Qu	Date: $\frac{10/24/13}{}$
Signature:	

Notarial Acknowledgement

STATE of CALIFORNIA)
COUNTY OF SAUTA CLARA	} ss: .
on October 24, 2013	, before me, KONSTANTINUS KONSTANTINI
personally appeared Sheng Ou, who pro	oved to me on the basis of satisfactory evidence to be the

on UCOON DY DY DO he before me, CONS (AN 1005) Los Simo Well Sotary Public, personally appeared Sheng Ou, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal,

KONSTANTINOS KONSTANTINOSS Commission # 2037221 Notary Publiq - California Santa Clara County My Comm. Expires Aug 16, 2017

My Commission Expires:

Signature of Notary Public

Docket: D13097USP1

RECORDED: 09/17/2014