502021820 08/10/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Alistair K. Chan	03/14/2012
Geoffrey F. Deane	03/16/2012
Aaron Fyke	04/19/2012
William Gross	04/19/2012
Roderick Hyde	03/12/2012
Edward K.Y. Jung	03/26/2012
Jordin T. Kare	03/26/2012
Nathan P. Myhrvold	04/02/2012
Clarence T. Tegreene	03/21/2012
Lowell L. Wood Jr.	03/24/2012

RECEIVING PARTY DATA

Name:	Elwha LLC
Street Address:	11235 S.E. 6th Street, Suite 200
City:	Bellevue
State/Country:	WASHINGTON
Postal Code:	98004

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13367195

CORRESPONDENCE DATA

Fax Number: 4142974900 **Phone**: 414-271-2400

Email: cepping@foley.com, ptomailmilwaukee@foley.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

via US Mail.

Correspondent Name: Moses A. Heyward

PATENT

REEL: 028767 FRAME: 0851

OP \$40,00 13367195

502021820

Address Line 1: Foley & Lardner LLP Address Line 2: 777 East Wisconsin Avenue Milwaukee, WISCONSIN 53202 Address Line 4: ATTORNEY DOCKET NUMBER: 103315-0112 NAME OF SUBMITTER: Moses A. Heyward Total Attachments: 14 source=103315_0112_Assignment#page1.tif source=103315_0112_Assignment#page2.tif source=103315_0112_Assignment#page3.tif source=103315_0112_Assignment#page4.tif source=103315_0112_Assignment#page5.tif source=103315_0112_Assignment#page6.tif source=103315_0112_Assignment#page7.tif source=103315_0112_Assignment#page8.tif source=103315 0112 Assignment#page9.tif source=103315_0112_Assignment#page10.tif source=103315_0112_Assignment#page11.tif source=103315_0112_Assignment#page12.tif source=103315_0112_Assignment#page13.tif source=103315_0112_Assignment#page14.tif

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ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

Elwha LLC 11235 S.E. 6th Street, Suite 200 Bellevue, WA 98004

(hereinafter referred to as "ASSIGNEE") its successors and assigns, the full and exclusive right, title and interest for the United States, its territories and possessions, and all foreign countries in and to this invention relating to

METHOD AND APPARATUS FOR REMOVAL OF HARMONIC NOISE

check one	[] executed concurrently herewith,
	[] executed on,
	[X] Serial No. 13/367 195 Filed February 6, 2012

as set forth in this United States Patent Application

as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified application and all other applications for Letters Patent of the United States and countries foreign thereto for above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the Patent Cooperation Treaty, the Paris Convention and any other international agreement; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors 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 ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY AUTHORIZES ASSIGNEE to file patent applications in any or all countries on the above-identified invention or inventions in the name of the undersigned or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable under the International Convention or otherwise.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

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4819-9381-4286.1

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States or a country foreign thereto; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, and declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the law firm of Foley & Lardner LLP the power and authority 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.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of Foley & Lardner LLP do not personally represent ASSIGNOR OR ASSIGNOR's legal interests, but instead represent the interests of ASSIGNEE; since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

Page 2 of 12

Executed this 14^{tk} day of March, 2012.

ALISTAIR K. CHAN

Executed this 16 day of Mark, 2012.

GEOFFREY F. DEANE

Executed this 19 day of April, 2012.

daron She AARON FYKE

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

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State of California)	
County of LOS Angeles		
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WILLIAM GROSS

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county of the first of the firs	
On 4/19/2012 before me, Susu	m Elizabeth Grand Dur Notany Public
personally appeared William Fros	5
	Name(s) of Signer(s)
SUSAN ELIZABETH GARRETT SAR Comm. #1895055 Notary Public- California A Los Angeles County Comm. Expires Jul 10, 2014	who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ips), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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.
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Executed this 12th day of March, 2012.

RODERICK A. HYDE

	Atty. Dkt. No. 1210-034-002 (088245-9910)
Executed this day of Mar 26, 2012	, 2012.
	/Edward June/
	EDWARD K.Y. JUNG
4819-9381-4286.1	Page 8 of 12
/Edward Jung/ e-Signed 2012-03-26 09:56AM PDT edward@intven.com	
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PATENT
REEL: 028767 FRAME: 0862

Executed this $\frac{26}{}$ day of $\frac{Mar}{}$, 2012.

JORDIN T. KARE

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Executed this 2 day of April , 2012.

Matter Myhrold
NATHAN P. MYHRVOLD

Page 10 of 12

Executed this $\frac{2\ell}{2}$ day of $\frac{2012}{2}$.

CLARENCE T. TEGREENE

Executed this 24th day of March, 2012.

LOWELL L. WOOD, JR.

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4819-9381-4286.1

RECORDED: 08/10/2012