504293186 03/28/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4339867

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------------|----------------|
| SHARP KABUSHIKI KAISHA | 07/01/2015 |

RECEIVING PARTY DATA

| Name: | DOLBY INTERNATIONAL AB |
|-------------------|------------------------|
| Street Address: | APOLLO BUILDING, 3E |
| Internal Address: | HERIKERBERGWEG 1-35 |
| City: | AMSTERDAM ZUIDOOST |
| State/Country: | NETHERLANDS |
| Postal Code: | 1101 CN |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 15254652 |

CORRESPONDENCE DATA

Fax Number: (877)769-7945

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: (202) 626-6428 **Email:** apsi@fr.com

Correspondent Name: AYAN ROY-CHOWDHURY Address Line 1: FISH & RICHARDSON P.C.

Address Line 2: P.O.BOX 1022

Address Line 4: MINNEAPOLIS, MINNESOTA 55440-1022

| ATTORNEY DOCKET NUMBER: | 40305-0008005 |
|-------------------------|-----------------------|
| NAME OF SUBMITTER: | KRISTINE M. MCGUIRK |
| SIGNATURE: | /Kristine M. McGuirk/ |
| DATE SIGNED: | 03/28/2017 |

Total Attachments: 3

source=Assign_Sharp_DIAB#page1.tif source=Assign_Sharp_DIAB#page2.tif source=Assign_Sharp_DIAB#page3.tif

PATENT 504293186 REEL: 041763 FRAME: 0099

PATENT ASSIGNMENT

Whereas, Sharp Kabushiki Kaisha, a corporation, existing and organized under the laws of Japan, having its headquarter at 22-22 Nagaike-Cho, Abeno-ku, Osaka Japan, 545-8522 (hereinafter "Seller") is the sole and exclusive owner of the following patents and patent applications (hereinafter "Assigned Patents"):

| Country | Application No. | Filing Date | Publication No. | Grant Date | Patent No. |
|---------|-----------------|-------------|--------------------------------|------------|---|
| US | 12/058301 | 2008/3/28 | 2009-0245349 | 2013/9/24 | 8542748 |
| US | 12/934938 | 2009/3/25 | 2011-0026604 | 2014/9/2 | 8824541 |
| US | 14/269755 | 2014/5/5 | 2014-0241438 | | |
| RU | 2010142914 | 2009/3/25 | 2010142914 | 2014/2/25 | 2514091 |
| RU | 2014105187 | 2014/2/12 | ****************************** | | *************************************** |
| ĴΡ | 2010-537070 | 2009/3/25 | 2011-515880 | 2012/8/31 | 5075988 |
| JF' | 2012-187048 | 2012/8/27 | 2012-257316 | 2014/4/25 | 5529937 |
| JP | 2014-085842 | 2014/4/17 | 2014-150576 | | ************* |
| M | 6312/CHENP/2010 | 2009/3/25 | 6312/CHENP/2010 | | |
| HK | 11102375 | 2011/3/9 | 1148406 | | ***************** |
| EP | 9725979 | 2009/3/25 | 2266319 | | |
| CN | 200980110928.2 | 2009/3/25 | 101981934 | 2014/11/5 | 200980110928 |
| CN | 201410508455.4 | 2014/9/28 | 104270645 | | |
| BR | PI0911141-7 | 2009/3/25 | 2009-0245349 | 2013/9/24 | 8542748 |

| NESTED ENTROPY ENCODING | | | | | |
|-------------------------|-----------------|-------------|--------------------------------------|------------|---|
| Country | Application No. | Filing Date | Publication No. | Grant Date | Patent No. |
| US | 12/896795 | 2010/10/1 | 2012-0082228 | | |
| JР | 2013-514448 | 2011/9/30 | 2013-543285 | | |
| MY | PI2013000942 | 2011/9/30 | | | |
| JP | 2015-125233 | 2015/6/23 | ************************************ | - | *************************************** |

| SYSTEM FOR NESTED ENTROPY ENCODING | | | | | | |
|------------------------------------|-----------------|-------------|-----------------|------------|------------|--|
| Country | Application No. | Filing Date | Publication No. | Grant Date | Patent No. | |
| US | 12/896800 | 2010/10/1 | 2012-0082229 | | | |
| JP | 2013-514449 | 2011/9/30 | 2013-543286 | | | |

| Country | Application No. | Filing Date | Publication No. | Grant Date | Patent No. |
|---------|-----------------|-------------|---|------------|---|
| US | 13/008658 | 2011/1/18 | 2012-0183046 | · | |
| US | 13/008676 | 2011/1/18 | 2012-0183047 | `` | *************************************** |
| AU | 2012207827 | 2012/1/18 | *************************************** | | |
| CA | 2824461 | 2012/1/18 | | | |
| JP . | 2013-528459 | 2012/1/18 | 2014-504046 | | |

| Country | Application No. | Filing Date | Publication No. | Grant Date | Patent No. |
|---------|-----------------|-------------|-----------------|------------|--------------|
| US | 13/273191 | 2011/10/13 | 2013-0094585 | 2014/7/1 | 8768079 |
| US | 13/287015 | 2011/11/1 | 2013-0094772 | 2014/10/7 | 8855433 |
| US | 13/291961 | 2011/11/8 | 2013-0094773 | 2014/7/22 | 8787688 |
| CN | 201280050538.2 | 2012/10/12 | 103918266 | | |
| EP | 12839718.9 | 2012/10/12 | 2767090 | | *********** |
| JP | 2014-516128 | 2012/10/12 | 2014-529204 | 7 | ************ |

| METHOD FOR SIGNALING A STEP-WISE TEMPORAL SUB-LAYER ACCESS SAMPLE | | | | | | |
|---|-------------------|-------------|-----------------|------------|-------------------------|--|
| Country | Application No. | Filing Date | Publication No. | Grant Date | Patent No. | |
| US | 13/633784 | 2012/10/2 | 2014-0092953 | | *********************** | |
| WO | PCT/JP2013/005888 | 2013/10/2 | WO2014/054285 | | | |

| GOLOMB-RICE/EG CODING TECHNIQUE FOR CABAC IN HEVC | | | | | |
|---|-----------------|-------------|-----------------|------------|------------|
| Country | Application No. | Filing Date | Publication No. | Grant Date | Patent No. |
| CN | 201380019086.6 | 2013/4/11 | 104205831 | | |
| US | 14/391422 | 2013/4/11 | 2015-0110198 | | |

| IMAGE DECODING DEVICE AND IMAGE CODING DEVICE | | | | | |
|---|-----------------|-------------|-----------------|---|------------|
| Country | Application No. | Filing Date | Publication No. | Grant Date | Patent No. |
| CN | 201380045488.3 | 2013/9/26 | 104604233 | *************************************** | |
| JР | 2014-538597 | 2013/9/26 | | | |
| US | 14/430249 | 2013/9/26 | | | |

; and

Whereas Dolby International AB, a Swedish corporation resident in the Netherlands, having its headquarter at Apollo Building, 3E, Herikerbergweg 1-35, 1101 CN Amsterdam Zuidoost, The Netherlands (hereinafter "Buyer") is desirous of acquiring the entire right, title and interest in, to and under the Assigned Patents.

Now, therefore, for good and valuable consideration, the receipt of which is hereby acknowledged, as of June 30, 2015, Seller hereby irrevocably sells, conveys, transfers, assigns and delivers to Buyer, and Buyer acquires from Seller, all right, title and interest in and to (i) all Assigned Patents, (ii) all claims, causes of action and enforcement rights of any kind, and all rights to sue for past, present or future infringement of any of the Assigned Patents and to collect and retain any and all damages, costs, profits, injunctive relief and other remedies for or relating to any such past, present or future infringement of the Assigned Patents or any and all claims relating thereto, (iii) all rights to collect royalties, license fees or other amounts with respect to the Assigned Patents, and (iv) all rights (but no obligation) to apply for, file, register, maintain, prosecute, extend, renew, enforce, license and otherwise exploit in any or all countries of the world patents, patent applications, certificates of invention, utility models, industrial

PATENT REEL: 041763 FRAME: 0101 design protection, design patent protection and other governmental grants or issuances of any kind related to any and all of the Assigned Patents (including, without limitation, all reissues, reexaminations, extensions, continuations, continuations in part, continuing prosecution applications, substitutions, requests for continuing examinations, divisions, divisionals, counterparts and other applications, worldwide, based in whole or in part thereon) and any and all of the inventions, invention disclosures, designs and discoveries described or disclosed therein, in each case, without any requirement for Buyer to seek or obtain any consent or other approval from or otherwise inform Seller.

Seller does hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America or equivalent authority elsewhere in the world to issue Letters Patent, as shall be granted based upon the Assigned Patents (including, without limitation, any divisional, continuing, reissue or other application based in whole or in part thereon), to the Buyer, its successors and assigns.

This assignment may be executed in one or more counterparts, each of which shall be deemed an original, and all of which shall constitute one and the same agreement. Copies of executed counterparts transmitted by facsimile, email or other electronic transmission shall be considered original executed counterparts, provided that receipt of copies of such counterparts is confirmed.

IN WITNESS WHEREOF, THE PARTIES, BY THEIR DULY AUTHORIZED REPRESENTATIVES, HAVE EXECUTED THIS ASSIGNMENT.

Sharp Kabushiki Kaisha

By Kiyoshi Yonetsu

Name Kiyoshi Yonetsu

Title Onision Populy Govern Manager, RAD Oniton

Date July 1, 2015

Dolbx International AB

3.T.....

ne <u>SEGRUED</u> S

Title URECTOR

Date 3 July 2015

PATENT REEL: 041763 FRAME: 0102

RECORDED: 03/28/2017