#### 506150834 07/13/2020

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6197566

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

#### **CONVEYING PARTY DATA**

| Name                 | Execution Date |
|----------------------|----------------|
| SORENSON MEDIA, INC. | 02/13/2019     |

#### **RECEIVING PARTY DATA**

| Name:           | THE NIELSEN COMPANY (US), LLC |  |
|-----------------|-------------------------------|--|
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| City:           | NEW YORK                      |  |
| State/Country:  | NEW YORK                      |  |
| Postal Code:    | 10004                         |  |

### **PROPERTY NUMBERS Total: 1**

| Property Type       | Number   |
|---------------------|----------|
| Application Number: | 16925552 |

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| ATTORNEY DOCKET NUMBER: | 19-248-US-CON    |
|-------------------------|------------------|
| NAME OF SUBMITTER:      | CHAD A. KAMLER   |
| SIGNATURE:              | /Chad A. Kamler/ |
| DATE SIGNED:            | 07/13/2020       |

#### **Total Attachments: 7**

source=19-248-US-CON Assignment - Sorenson Media, Inc to The Nielsen Company (US), LLC#page1.tif source=19-248-US-CON Assignment - Sorenson Media, Inc to The Nielsen Company (US), LLC#page2.tif source=19-248-US-CON Assignment - Sorenson Media, Inc to The Nielsen Company (US), LLC#page3.tif source=19-248-US-CON Assignment - Sorenson Media, Inc to The Nielsen Company (US), LLC#page4.tif source=19-248-US-CON Assignment - Sorenson Media, Inc to The Nielsen Company (US), LLC#page5.tif

**PATENT REEL: 053193 FRAME: 0448** 506150834

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PATENT REEL: 053193 FRAME: 0449

#### PATENT ASSIGNMENT

This Patent Assignment is delivered pursuant to the Closing under that certain Asset Purchase Agreement (the "Purchase Agreement") dated as of February 13, 2019, between Sorenson Media, Inc., a Delaware corporation, as the "Seller," and The Nielsen Company (US), LLC, a Delaware limited liability company, as the "Purchaser." Capitalized terms used in this Patent Assignment without definition have the respective meanings given to them in the Purchase Agreement

The Seller has delivered this instrument signed by the Seller to enable the Purchaser to file it with any appropriate Governmental Authority to indicate ownership of Intellectual Property described below and for the other purposes set forth in this instrument. This instrument supplements and is in addition to all other rights of the Purchaser under the Purchase Agreement and other instruments of transfer delivered in connection with the Purchase Agreement.

NOW, THEREFORE, for good and valuable consideration, receipt of which the Seller acknowledges, and by signing and delivering this instrument, the Seller sells, assigns, transfers, conveys, and delivers to the Purchaser all of the Seller's right, title, and interest in and to:

- (a) the patents, patent applications and invention disclosures specifically listed in Annex A to this Patent Assignment; and
- (b) the following properties and rights with respect to all patents and patent applications so listed in Annex A:
  - (i) the inventions claimed or described in the patents or applications;
  - (ii) any patents in the United States and anywhere else in the world and patent applications that have been or may be granted or filed, respectively, with respect to those inventions, including without limitation all foreign patents that may claim priority based on and correspond to the patents listed in Annex A and all rights to file applications, including the right to claim priority under all applicable international treaties, arrangements and agreements (including without limitation the Paris Convention, the Patent Cooperation Treaty (PCT) and TRIPs) to the patents and/or applications listed in Annex A;
  - (iii) all divisions, renewals, reissues, continuations, extensions and continuations-inpart of the foregoing patents;
  - (iv) all income, royalties, damages and payments due or payable to the Seller with respect to the patents, including without limitation unpaid damages and payments for past, present and future infringements of any patent; and
  - (v) all rights to sue and recover damages and payments for past, present and future infringements of any of the patents, including the right to fully and entirely replace the Seller in all related matters.

The foregoing rights in and under the patents shall apply to the full end of their terms as fully as the Seller would have held the same in the absence of this assignment. As of the date set forth below, the Purchaser has succeeded to all right, title and standing of the Seller to (a) receive all rights and benefits pertaining to the patents described above and (b) commence, prosecute, defend and settle all claims and take all actions that the Purchaser, in its sole discretion, may elect in relation to the patents and rights described above. This Patent Assignment (a) is irrevocable and effective upon the Seller's signature to

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and delivery of a manually signed copy of this instrument or facsimile or email transmission of the signature to this instrument in connection with the Closing, if and only if the Closing is completed, (b) benefits and binds the parties to the Purchase Agreement and their respective successors and assigns, (c) does not modify or affect, and is subject to, the provisions of the Purchase Agreement and (d) may be signed in counterparts as provided in Article 12 of the Purchase Agreement.

The undersigned has signed this Patent Assignment on February 3, 2019.

Sorenson Media, Inc.

By:

Name: Scott Klossner

Title: Chief Financial Officer

Acknowledgement of Sorenson Media, Inc.

STATE OF UTAH

) ) ss

COUNTY OF SALT LAKE

The foregoing instrument was acknowledged before me this 15th day of February, 2019 by Scott Klossner, as Chief Financial Officer of Sorenson Media, Inc., a Delaware corporation, on behalf of said corporation.

Witness my hand and official seal.

My commission expires:

Notary Public

9/27/2020

Notery Public NANCY B. LAKEY Commission #89128 My Commission Explain Section 27, 2020

## ANNEX A TO PATENT ASSIGNMENT

# **Registered Patents**

| Patent   | Registration No. and Country | Registration Date |
|--|------------------------------|-------------------|
| Content Management of a Content<br>Feed  | US 9641870                   | 5/2/2017          |
| Automatic Content Recognition (ACR) Fingerprinting and Video Encoding          | US 9628830                   | 4/18/2017         |
| Content Replacement with Onscreen Displays                                     | US 9743153                   | 8/22/2017         |
| Content Replacement with Onscreen Displays                                     | US 10057657                  | 8/21/2018         |
| Detecting Channel Change in Automatic Content Recognition Fingerprint Matching | US 9516377                   | 12/6/2016         |
| Detecting Channel Change in Automatic Content Recognition Fingerprint Matching | US 9706261                   | 7/11/2017         |
| Detecting Channel Change in Automatic Content Recognition Fingerprint Matching | US 9877085                   | 1/23/2018         |
| Overlay Content and Aggregation of Viewing Data                                | US 9380325                   | 6/28/2016         |
| Overlay Content and Aggregation of Viewing Data                                | US 9661385                   | 5/23/2017         |
| Overlay Content and Aggregation of Viewing Data                                | US 9912991                   | 3/6/2018          |
| Sequentially Overlaying Media Content  | US 9848214                   | 12/19/2017        |
| Frequency Capping for Media Content  | US 9723347                   | 8/1/2017          |
| Frequency Capping for Media Content  | US 10187682                  | 1/22/2019         |
| Dynamic Video Advertisement Replacement  | US 9743154                   | 8/22/2017         |
| Dynamic Video Advertisement Replacement  | US 10110969                  | 10/23/2018        |
| Creating and Fulfilling Dynamic Advertisement Replacement Inventory            | US 9854326                   | 12/26/2017        |
| Media Content Matching and<br>Indexing   | US 9813781                   | 11/7/2017         |
| Media Content Matching and Indexing  | US 10187705                  | 1/22/2019         |
| Digital Overlay Offers on Connected Media Devices                              | US 10075755                  | 9/11/2018         |
| Video Fingerprinting Based on<br>Fourier Transform of Histogram                | US 9848235                   | 12/19/2017        |
| Fingerprinting Media Content Using Hashing                                     | US 9906831                   | 2/27/2018         |
| Fingerprinting Media Content Using   | US 10116987                  | 10/30/2018        |

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# **Pending Patent Applications**

| Patent   | Application Number and Country | Application Date |
|--|--------------------------------|------------------|
| Detecting Channel Change in Automatic Content Recognition                      | CN 201680043941.0              | 5/26/2016        |
| Fingerprint Matching   |                                |                  |
| Detecting Channel Change in Automatic Content Recognition Fingerprint Matching | EP 16808025.7                  | 5/26/2016        |
| Detecting Channel Change in Automatic Content Recognition Fingerprint Matching | JP P2018-517124                | 5/26/2016        |
| Detecting Channel Change in Automatic Content Recognition Fingerprint Matching | KR 10-2018-7001098             | 5/26/2016        |
| Detecting Channel Change in Automatic Content Recognition Fingerprint Matching | WO PCT/US2016/034401           | 5/26/2016        |
| Overlay Content and Aggregation of Viewing Data                                | US 15/895775                   | 2/13/2018        |
| Sequentially Overlaying Media<br>Content                                       | CN 201680063089.3              | 9/27/2016        |
| Sequentially Overlaying Media<br>Content                                       | GB 1805115.1                   | 9/27/2016        |
| Media Content Overlaid<br>Sequentially   | KR 10-2018-7012371             | 9/27/2016        |
| Sequentially Overlaying Media<br>Content                                       | MX MX/a/2018/003808            | 9/27/2016        |

| Sequentially Overlaying Media Content                               | US 15/842750         | 12/14/2017 |
|---|----------------------|------------|
| Sequentially Overlaying Media<br>Content                            | WO PCT/US2016/053996 | 2/26/2016  |
| Frequency Capping for Multimedia<br>Content                         | CN 201680062705.3    | 9/27/2016  |
| Frequency Capping for Multimedia<br>Content                         | GB 1805116.9         | 9/27/2016  |
| Frequency Capping for Media<br>Content                              | KR 10-2018-7012363   | 9/27/2016  |
| Frequency Capping for Multimedia<br>Content                         | MX MX/a/2018/003807  | 9/27/2016  |
| Frequency Capping for Multimedia<br>Content                         | WO PCT/US2016/053997 | 9/27/2016  |
| Dynamic Video Advertisement<br>Replacement                          | CN 201680057676.1    | 8/16/2016  |
| Dynamic Video Advertisement<br>Replacement                          | GB 1805117.7         | 8/16/2016  |
| Replace Dynamic Video Ads   | KR 10-2018-7009915   | 8/16/2016  |
| Dynamic Video Advertisement<br>Replacement                          | MX MX/a/2018/002966  | 8/16/2016  |
| Dynamic Video Advertisement<br>Replacement                          | US 16/144361         | 9/27/2018  |
| Dynamic Video Advertisement<br>Replacement                          | WO PCT/US2016/047203 | 8/16/2016  |
| Creating and Fulfilling Dynamic Advertisement Replacement Inventory | US 15/831838         | 12/5/2017  |
| Media Content Matching and Indexing                                 | CN 201680062405.5    | 9/27/2016  |
| Media Content Matching and Indexing                                 | GB 1085125.0         | 9/27/2016  |
| Media Content Matching and Indexing                                 | KR 10-2018-7014587   | 9/27/2016  |
| Media Content Matching and Indexing                                 | MX MX/a/2018/003806  | 9/27/2016  |
| Media Content Matching and Indexing                                 | US 16/217980         | 12/12/2018 |
| Media Content Matching and Indexing                                 | WO PCT/US2016/053998 | 9/27/2016  |
| Digital Overlay Offers on Connected Media Devices                   | CN 201680054373.4    | 9/13/2016  |
| Digital Overlay Offers on Connected Media Devices                   | GB 1805114.4         | 9/13/2016  |
| Digital Overlay Offers on Connected Media Devices                   | KR 10-2018-7010846   | 9/13/2016  |
| Digital Overlay Offers on Connected Media Devices                   | MX MX/a/2018/003399  | 9/13/2016  |
| Digital Overlay Offers on Connected Media Devices                   | US 15/418439         | 1/27/2017  |
| Digital Overlay Offers on Connected Media Devices                   | US 16/052267         | 8/1/2018   |
| Digital Overlay Offers on Connected Media Devices                   | WO PCT/US2016/051532 | 9/13/2016  |
| Video Fingerprinting Based on                                       | US 15/826044         | 11/29/2017 |

| Fourier Transform of Histogram                       |                                    |                 |
|--|------------------------------------|-----------------|
| Video Fingerprinting Based on                        |                                    |                 |
| Fourier Transform of Histogram                       | WO PCT/US2017/017797               | 2/14/2017       |
| Fingerprinting Media Content Using                   | WO DOT/US2017/018180               | 2/17/2017       |
| Hashing  | WO PCT/US2017/018189               | 2/16/2017       |
| Fingerprint Layouts for Content                      | US 16/035051                       | 7/13/2018       |
| Fingerprinting                                       | 03 10/033031                       | //13/2016       |
| Fingerprint Layouts for Content                      | WO PCT/US2017/021690               | 3/9/2017        |
| Fingerprinting                                       |                                    |                 |
| Interweaving Media Content                           | US 16/217852                       | 12/12/2018      |
| Automatic Content Recognition                        | US 14/736158                       | 6/10/2015       |
| Search Optimization                                  |                                    | 0,10,2015       |
| Automatic Content Recognition                        | CN 201680023388.4                  | 4/21/2016       |
| Sequence Matching                                    |                                    |                 |
| Automatic Content Recognition                        | EP 16783829.1                      | 4/21/2016       |
| Sequence Matching                                    |                                    |                 |
| Automatic Content Recognition                        | KR 10-2017-7033908                 | 4/21/2016       |
| Sequence Matching Automatic Content Recognition with |                                    |                 |
| Local Matching                                       | US 14/813416                       | 7/30/2015       |
| Automatic Content Recognition                        |                                    |                 |
| Fingerprint Sequence Matching                        | WO PCT/US2016/028583               | 4/21/2016       |
| Automatic Content Recognition                        |                                    |                 |
| Fingerprint Sequence Matching                        | CN 201680023473.0                  | 4/25/2016       |
| Automatic Content Recognition                        | FD 16504001 5                      | 4 (0 7 10 0 4 6 |
| Fingerprint Sequence Matching                        | EP 16784091.7                      | 4/25/2016       |
| Automatic Content Recognition                        | W.O. DCT/I ICOO1 (/000001          | 4/05/0016       |
| Fingerprint Sequence Matching                        | WO PCT/US2016/029221               | 4/25/2016       |
| Content Comparison Testing on                        | US 15/164714                       | 5/25/2016       |
| Linear Media Streams                                 | 03 13/104/14                       | 3/23/2010       |
| Content Comparison Testing on                        | WO PCT/US2017/016666               | 2/6/2017        |
| Linear Media Streams                                 | W G 1 C 17 G 32 G 1 77 G 1 G G G G | 2/0/2017        |
| Interactive Overlays to Determine                    | US 15/164714                       | 5/25/2016       |
| Viewer Data  |                                    | 3,20,2010       |
| Interactive Overlays to Determine                    | WO PCT/US2018/024740               | 3/28/2018       |
| Viewer Data  |                                    | 0,20,20         |
| Targeted Content Placement Using                     | US 15/938049                       | 3/28/2018       |
| Overlays   |                                    |                 |
| Targeted Content Placement Using                     | WO PCT/US2018/024756               | 3/28/2018       |
| Overlays Employing Automatic Content                 |                                    |                 |
| Recognition to Allow Resumption of                   |                                    |                 |
| Watching Interrupted Media                           | US 15/933899                       | 3/23/2018       |
| Program from Television Broadcast                    |                                    |                 |
| Employing Automatic Content                          |                                    |                 |
| Recognition to Allow Resumption of                   | W.O. D.G.M.// (200.10/102.102.1    | 0/00/0010       |
| Watching Interrupted Media                           | WO PCT/US2018/024035               | 3/23/2018       |
| Program from Television Broadcast                    |                                    |                 |
| Enabling Interactive control of Live                 | WO DOT/US2019/02/165               | 2/22/2019       |
| Television Broadcast Streams                         | WO PCT/US2018/024165               | 3/23/2018       |
| Obtaining Viewer Demographics                        | US 15/725260                       | 10/4/2017       |
| Through Advertisement Selections                     | 05 15/725200                       | 10/4/2017       |
| Cold Matching by Automatic                           | US 15/703684                       | 9/13/2017       |
| Content Recognition                                  |                                    |                 |
| Cold Matching by Automatic                           | WO PCT/US2018/050230               | 9/10/2018       |

| Content Recognition   |                      |           |
|---|----------------------|-----------|
| Flagging Advertisement Frames for Automatic Content Recognition | US 15/703391         | 9/13/2017 |
| Flagging Advertisement Frames for Automatic Content Recognition | WO PCT/US2018/050184 | 9/18/2018 |
| Frame Certainty for Automatic Content Recognition               | US 16/023555         | 6/29/2018 |
| Frame Certainty for Automatic Content Recognition               | WO PCT/US2018/040371 | 6/29/2018 |
| Scene Frame Certainty for Automatic Content Recognition         | US 15/726987         | 10/6/2017 |