

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT6861156

|                                                                                                                                                                                                 |                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <b>SUBMISSION TYPE:</b>                                                                                                                                                                         | NEW ASSIGNMENT                      |
| <b>NATURE OF CONVEYANCE:</b>                                                                                                                                                                    | ASSIGNMENT                          |
| <b>CONVEYING PARTY DATA</b>                                                                                                                                                                     |                                     |
| <b>Name</b>                                                                                                                                                                                     | <b>Execution Date</b>               |
| KARTHIK SUNDARESAN                                                                                                                                                                              | 12/06/2019                          |
| JINGJIE ZHU                                                                                                                                                                                     | 12/06/2019                          |
| <b>RECEIVING PARTY DATA</b>                                                                                                                                                                     |                                     |
| <b>Name:</b>                                                                                                                                                                                    | CABLE TELEVISION LABORATORIES, INC. |
| <b>Street Address:</b>                                                                                                                                                                          | 858 COAL CREEK CIRCLE               |
| <b>City:</b>                                                                                                                                                                                    | LOUISVILLE                          |
| <b>State/Country:</b>                                                                                                                                                                           | COLORADO                            |
| <b>Postal Code:</b>                                                                                                                                                                             | 80027                               |
| <b>PROPERTY NUMBERS Total: 1</b>                                                                                                                                                                |                                     |
| <b>Property Type</b>                                                                                                                                                                            | <b>Number</b>                       |
| <b>Application Number:</b>                                                                                                                                                                      | 17388419                            |
| <b>CORRESPONDENCE DATA</b>                                                                                                                                                                      |                                     |
| <b>Fax Number:</b>                                                                                                                                                                              | (303)661-9199                       |
| <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> |                                     |
| <b>Phone:</b>                                                                                                                                                                                   | 3036619100                          |
| <b>Email:</b>                                                                                                                                                                                   | p.calderwood@cablelabs.com          |
| <b>Correspondent Name:</b>                                                                                                                                                                      | CABLE TELEVISION LABORATORIES, INC. |
| <b>Address Line 1:</b>                                                                                                                                                                          | 858 COAL CREEK CIRCLE               |
| <b>Address Line 4:</b>                                                                                                                                                                          | LOUISVILLE, COLORADO 80027          |
| <b>ATTORNEY DOCKET NUMBER:</b>                                                                                                                                                                  | 61362CON                            |
| <b>NAME OF SUBMITTER:</b>                                                                                                                                                                       | PAMELA CALDERWOOD                   |
| <b>SIGNATURE:</b>                                                                                                                                                                               | /Pamela Calderwood/                 |
| <b>DATE SIGNED:</b>                                                                                                                                                                             | 08/12/2021                          |
| <b>Total Attachments: 3</b>                                                                                                                                                                     |                                     |
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**ASSIGNMENT**

WHEREAS, I/WE, **Karthik Sundaresan** of Boulder, Colorado, and **Jingjie Zhu** of Erie, Colorado (herein called individually an "ASSIGNOR" and collectively "ASSIGNORS"), in connection with the invention entitled:

**SYSTEMS AND METHODS FOR SELECTING A SPECTRAL SEGMENT FOR A  
DOWNLINK TRANSMISSION**

for which I/WE have filed, or are about to file a U.S. Patent Application, including U.S. Patent Application Serial No. 16/593,767 filed on October 4, 2019 (collectively, the "LISTED APPLICATION(S)"); and U.S. Provisional Application Serial No. 62/741,125, filed October 4, 2018;

AND WHEREAS, **CABLE TELEVISION LABORATORIES, INC.** (herein called "ASSIGNEE"), an entity with a principal place of business at 858 Coal Creek Circle, Louisville, Colorado 80027, is desirous of obtaining my/our entire right, title and interest in, to and under the said invention and the said LISTED APPLICATION(S);

NOW, THEREFORE, in consideration of my contractual and other legal obligations, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, a said ASSIGNOR, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, my entire right, title and interest in, to and under the invention(s) and discoveries disclosed in the LISTED APPLICATION(S), and the LISTED APPLICATION(S) and all divisions, renewals, continuations and subsequent applications thereof, and all Patents of the United States which may be granted thereon and all reissues, reexaminations, and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention(s) and discoveries in any country or countries foreign to the United States; together with the right to file such applications and the right to claim for the same the benefit of priority of said inventions, discoveries, and patent applications listed herein, including the LISTED APPLICATION(S) and applications thereof and therefrom under The International Union for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application and applications thereof and therefrom is/are filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention(s) in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and any and all claims, causes of action, and damages for past, present, and future infringement or other unauthorized use of the above items, along with the right to sue for and to collect damages and other relief;

AND I HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument;

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AND I HEREBY covenant and agree that I have full right to convey the entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith;

AND I HEREBY authorize the above-mentioned ASSIGNEE or its legal representative to insert in this instrument the filing date and serial number of said LISTED APPLICATION(s) or any other information that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office or countries foreign to the United States;

AND I HEREBY further covenant and agree that I will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to me respecting said invention(s) and discoveries, and testify in any legal proceeding, sign all lawful papers, execute all continuing and subsequent applications, including divisional, reissue and foreign applications, make all rightful oaths, and generally cooperate and do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain, maintain, and enforce proper protection for said invention(s) and discoveries in any and all countries;

AND I HEREBY further agree that this Assignment does not create any agency, employment, or partnership relationship between the parties;

AND I HEREBY further agree that this Assignment shall not be construed against any party on the ground that such party was responsible for the preparation of this Assignment, or on any related ground;

AND I HEREBY further agree that should any provision of this Assignment be determined to be void, unenforceable, or against public policy, such provision may be altered in time or scope in order to give effect to such provision. If such alteration is not possible, such provision shall be deemed severed from this Assignment and the balance of this Assignment shall remain in full force and effect, so long as the original intent of this Assignment remains substantially intact.

IN TESTIMONY WHEREOF, I hereunto set my hand and seal (if applicable) the day and year set opposite my signature.

[THIS SPACE LEFT BLANK]

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**ASSIGNOR 2:**

December 6, 2019 | 10:41 AM PST  
\_\_\_\_\_  
Date (Signature)

DocuSigned by:

*Karthik Sundaresan*

30A2360AC390403...

\_\_\_\_\_  
**Karthik Sundaresan**

**ASSIGNOR 1:**

December 6, 2019 | 11:29 AM MST  
\_\_\_\_\_  
Date (Signature)

DocuSigned by:

*Jingjie Zhu*

494977B4437349E...

\_\_\_\_\_  
**Jingjie Zhu**