TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1 ETAS ID: TM607941

Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT NATURE OF CONVEYANCE: SECURITY INTEREST

CONVEYING PARTY DATA

Name	Formerly	Execution Date	Entity Type
HARMONIC INC.		10/30/2020	Corporation: DELAWARE

RECEIVING PARTY DATA

Name:	JPMORGAN CHASE BANK, N.A.
Street Address:	237 Park Avenue
Internal Address:	6th Floor
City:	New York
State/Country:	NEW YORK
Postal Code:	10017
Entity Type:	National Banking Association: UNITED STATES

PROPERTY NUMBERS Total: 2

Property Type	Number	Word Mark
Registration Number:	5944810	ELECTRA XOS
Registration Number:	4070977	IRIS

CORRESPONDENCE DATA

Fax Number: 2147455390

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: 2147455612

Email: ngraham@winstead.com

Nancy Graham c/o WINSTEAD PC **Correspondent Name:**

Address Line 1: 2728 N. Harwood Street

Address Line 2: Suite 500

Address Line 4: Dallas, TEXAS 75201

ATTORNEY DOCKET NUMBER:	13312-673
NAME OF SUBMITTER:	Nancy Graham
SIGNATURE:	/Nancy Graham/
DATE SIGNED:	11/10/2020

Total Attachments: 9

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INTELLECTUAL PROPERTY SECURITY AGREEMENT

This INTELLECTUAL PROPERTY SECURITY AGREEMENT (as it may be amended, restated, supplemented or otherwise modified from time to time, this "<u>Agreement</u>") is entered into as of October 30, 2020 by and among HARMONIC INC., a Delaware corporation (the "<u>Company</u>"), each of its undersigned Domestic Subsidiaries party hereto (together with the Company, collectively, the "<u>Grantors</u>", and each a "<u>Grantor</u>"), and JPMORGAN CHASE BANK, N.A. (the "<u>Lender</u>"), on behalf of the Lender and the other Secured Parties.

BACKGROUND

The Grantors, the other Loan Parties party thereto, and the Lender are entering into a Credit Agreement dated as of December 19, 2019 (as it may be amended, restated, supplemented or otherwise modified from time to time, the "Credit Agreement").

In connection with the Credit Agreement, the Grantors executed and delivered that certain Pledge and Security Agreement dated as of December 19, 2019 (as it may be amended, restated, supplemented or otherwise modified from time to time, the "Security Agreement") in favor of the Lender, on behalf of the Secured Parties, pursuant to which the Grantors are required to execute and deliver this Agreement.

Each Grantor is entering into this Agreement in order to induce the Lender to enter into and extend credit to the Borrower under the Credit Agreement and to secure the Secured Obligations that it has agreed to guarantee pursuant to Article IX of the Credit Agreement.

ACCORDINGLY, the Grantors and the Lender, on behalf of the Secured Parties, hereby agree as follows:

ARTICLE I DEFINITIONS; OTHER TERMS

- 1.1 <u>Terms Defined in Credit Agreement</u>. All capitalized terms used herein and not otherwise defined shall have the meanings assigned to such terms in the Credit Agreement.
- 1.2 <u>Terms Defined in UCC</u>. Capitalized terms used herein which are defined in the UCC and which are not otherwise defined in this Agreement are used herein as defined in the UCC.
- 1.3 <u>Definitions of Certain Terms Used Herein</u>. As used in this Agreement, in addition to the terms defined elsewhere herein, the following terms shall have the following meanings:

"Collateral" has the meaning assigned to it by Section 2.1 hereof.

"Copyrights" means, with respect to any Grantor, all of such Grantor's right, title, and interest in and to the following: (a) all copyrights, rights and interests in copyrights, works protectable by copyright, copyright registrations, and copyright applications; (b) all renewals of any of the foregoing; (c) all income, royalties, damages, and payments now or hereafter due and/or payable under any of the foregoing, including, without limitation, damages or payments for past or future infringements for any of the foregoing; (d) the right to sue for past, present, and future infringements of any of the foregoing; and (e) all rights corresponding to any of the foregoing throughout the world.

"<u>Licenses</u>" means, with respect to any Grantor, all of such Grantor's right, title, and interest in and to the following: (a) any and all licensing agreements or similar arrangements in and to its Patents,

Copyrights, or Trademarks, (b) all income, royalties, damages, claims, and payments now or hereafter due or payable under and with respect thereto, including, without limitation, damages and payments for past and future breaches thereof, and (c) all rights to sue for past, present, and future breaches thereof.

"Patents" means, with respect to any Grantor, all of such Grantor's right, title, and interest in and to the following: (a) any and all patents and patent applications; (b) all inventions and improvements described and claimed therein; (c) all reissues, divisions, continuations, renewals, extensions, and continuations-in-part thereof; (d) all income, royalties, damages, claims, and payments now or hereafter due or payable under and with respect thereto, including, without limitation, damages and payments for past and future infringements thereof; (e) all rights to sue for past, present, and future infringements thereof; and (f) all rights corresponding to any of the foregoing throughout the world.

"Section" means a numbered section of this Agreement, unless another document is specifically referenced.

"Trademarks" means, with respect to any Grantor, all of such Grantor's right, title, and interest in and to the following: (a) all trademarks (including service marks), trade names, trade dress, and trade styles and the registrations and applications for registration thereof and the goodwill of the business symbolized by the foregoing; (b) all licenses of the foregoing, whether as licensee or licensor; (c) all renewals of the foregoing; (d) all income, royalties, damages, and payments now or hereafter due or payable with respect thereto, including, without limitation, damages, claims, and payments for past and future infringements thereof; (e) all rights to sue for past, present, and future infringements of the foregoing, including the right to settle suits involving claims and demands for royalties owing; and (f) all rights corresponding to any of the foregoing throughout the world.

"<u>UCC</u>" means the Uniform Commercial Code, as in effect from time to time, of the State of New York or of any other state the laws of which are required as a result thereof to be applied in connection with the attachment, perfection or priority of, or remedies with respect to, Lender's Lien on any Collateral.

ARTICLE II GRANT OF SECURITY INTEREST

- 2.1 <u>Grant of Security Interest</u>. Each Grantor hereby pledges and grants to the Lender, on behalf of and for the benefit of the Secured Parties, a security interest in all of its right, title and interest in, to and under all of its now owned or existing and hereafter acquired or arising property described as follows (collectively, the "<u>Collateral</u>") to secure the prompt and complete payment and performance of the Secured Obligations:
 - (a) all Copyrights, including, without limitation, those listed on Exhibit A hereto;
 - (b) all Trademarks, including, without limitation, those listed on Exhibit B hereto;
 - (c) all Licenses;
 - (d) all Patents, including, without limitation, those listed on Exhibit C hereto; and
 - (e) all accessions to, substitutions for and replacements, proceeds, insurance proceeds and products of the foregoing, together with all books and records, customer lists, credit files, computer files, programs, printouts and other computer materials and records related thereto and any general intangibles at any time evidencing or relating to any of the foregoing.

Notwithstanding anything herein to the contrary, in no event shall the Collateral include, and no Grantor shall be deemed to have granted a security interest in the Excluded Assets.

2.2 <u>Security Agreement</u>. The security interest granted pursuant to this Agreement is granted in conjunction with the Lien granted to the Lender, on behalf of the Secured Parties, pursuant to the Security Agreement, and each Grantor hereby acknowledges and affirms that the rights and remedies of the Lender with respect to the Lien on the Collateral made and granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein. In the event that any provision of this Agreement is deemed to conflict with the Security Agreement, the provisions of the Security Agreement shall control; <u>provided</u>, <u>however</u>, a more expansive or explanatory term or provision shall not be deemed a conflict.

ARTICLE III MISCELLANEOUS

- 3.1 <u>Benefit of Agreement</u>. The terms and provisions of this Agreement shall be binding upon and inure to the benefit of the Grantors, the Lender, the other Secured Parties and their respective successors and assigns, except that no Grantor shall have the right to assign its rights or delegate its obligations under this Agreement or any interest herein, without the prior written consent of the Lender. No sales of participations, assignments, transfers, or other dispositions of any agreement governing the Secured Obligations or any portion thereof or interest therein shall in any manner impair the Lien granted to the Lender, for the benefit of the Lender and the other Secured Parties, hereunder.
- 3.2 <u>Survival of Representations</u>. All representations and warranties of the Grantors contained in this Agreement shall survive the execution and delivery of this Agreement.
- 3.3 <u>Headings</u>. The title of and section headings in this Agreement are for convenience of reference only, and shall not govern the interpretation of any of the terms and provisions of this Agreement.
- 3.4 <u>Entire Agreement</u>. This Agreement and the other Loan Documents embody the entire agreement and understanding between the Grantors and the Lender relating to the Collateral and supersedes all prior agreements and understandings between the Grantors and the Lender relating to the Collateral.
- 3.5 <u>Counterparts.</u> This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one agreement, and any of the parties hereto may execute this Agreement by signing any such counterpart. Delivery of an executed counterpart of a signature page of this Agreement by facsimile or other electronic transmission shall be effective as delivery of a manually executed counterpart of this Agreement.
- 3.6 <u>CHOICE OF LAW</u>. THIS AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE INTERNAL LAWS OF THE STATE OF NEW YORK, BUT GIVING EFFECT TO FEDERAL LAWS APPLICABLE TO NATIONAL BANKS.

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IN WITNESS WHEREOF, the undersigned have caused this Agreement to be executed by their respective duly authorized representatives as of the date first set forth above.

GRANTORS:

HARMONIC INC.

By:

Name: Sanjay Kalra

Title: Chief Financial Officer

LENDER:

JPMORGAN CHASE BANK, N.A.

By:

Name: Eleftherios Karsos Title: Authorized Officer

EXHIBIT A

COPYRIGHTS

None.

EXHIBIT B

TRADEMARKS

Registered Trademark	Registration Number
ELECTRA XOS	5944810
IRIS	4070977

EXHIBIT C

PATENTS

Title	Patent No.	Issue Date
Transcoding on-the-fly (totf)	10,491,911	11/26/2019
Statistical multiplexing using a plurality of encoders		
operating upon different sets of unique and shared digital		
content	10,491,649	11/26/2019
Dynamically Adjusting Load on an Over-The-Top (OTT)		
Delivery Network	10,498,655	12/3/2019
Resource aware video processor	10,506,266	12/10/2019
Smart small form-factor pluggable (SFP) transceiver	10,504,482	12/10/2019
Power Saving by Configurable Adjustment of Power		
Amplifier	10,505,499	12/10/2019
Namespace routing	10,530,677	1/7/2020
Adaptive pre-filtering based on video complexity and output		
bit rate	10,554,972	2/4/2020
Digital Compensation for RF Imperfections of a System		
Composed of Multiple Modules	10,560,305	2/11/2020
Encoding/transcoding based on subjective video quality		
preferences	10,595,028	3/17/2020
Detecting Imminent Failure in a Power Supply	10,599,201	3/24/2020
Virtual converged cable access platform (CCAP) core	10,616,000	4/7/2020
Virtual CCAP downstream traffic scheduling	10,616,126	4/7/2020
CATV Equipment Fast Boot After Power Interruption	10,623,814	4/14/2020
Feedback based traffic management	10,700,983	6/30/2020
Increasing the Dynamic Range of a Digital to Analog		
Converter (DAC)	10,715,170	7/14/2020
Dynamically Adjusting DOCSIS Port Utilization	10,715,346	7/14/2020
Browsing and viewing video assets using tv set-top box	10,750,241	8/18/2020
Virtual Cable Hub	10,802,856	10/13/2020

Patent Application No.	File Date
62/930,201	11/4/19
. 62/933,183	11/8/19
62/944,651	12/6/19
16/747,188	1/20/20
16/748,124	1/21/20
16/780,147	2/3/20
16/786,464	2/10/20
16/787,718	2/11/20
16/798,940	2/24/20
16/809,436	3/4/20
16/883,121	3/27/20
16/847,624	4/13/20

Patent Application No.	File Date
16/897,224	6/9/20
16/937,020	7/23/20
16/995,541	8/17/20
63/071,025	8/27/20
17/068,349	10/12/20

RECORDED: 11/10/2020