

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT7282775

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
KAN MAN WONG	04/08/2022
VISHAL NEERALIKE	04/07/2022
SHIQIANG CHU	04/07/2022
ARAM SEMERJYAN	04/08/2022
ANTHONY BOND	04/07/2022
MICHAEL SONG	04/07/2022
ANTHONY KALLAS	04/07/2022
DERICK WONG	04/07/2022
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	DISH NETWORK L.L.C.
<b>Street Address:</b>	9601 S. MERIDIAN BLVD.
<b>City:</b>	ENGLEWOOD
<b>State/Country:</b>	COLORADO
<b>Postal Code:</b>	80112
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16726094
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(303)291-2400
<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>	3034542955
<b>Email:</b>	patentprocurement@perkinscoie.com, sserrano@perkinscoie.com
<b>Correspondent Name:</b>	PERKINS COIE LLP
<b>Address Line 1:</b>	P.O. BOX 1247
<b>Address Line 4:</b>	SEATTLE, WASHINGTON 98111-1247
<b>ATTORNEY DOCKET NUMBER:</b>	120299-8014.US00
<b>NAME OF SUBMITTER:</b>	SHANNON SERRANO
<b>SIGNATURE:</b>	/Shannon Serrano/

<b>DATE SIGNED:</b>	04/15/2022
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**Total Attachments: 10**

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**ASSIGNMENT AND AGREEMENT IN AN APPLICATION FOR  
LETTERS PATENT OF THE UNITED STATES OF AMERICA**

WHEREAS, **Manuel Novoa III, Kan Man Wong, Vishal Neeralike, Shiqiang Chu, Aram Semerjyan, Anthony Bond, Michael Song, Anthony Kallas and Derick Wong** (hereinafter, singularly and collectively “Assignor”) has solely and/or have jointly (as appropriate) invented and/or discovered certain new and useful invention, process, machine, manufacture, or composition of matter, or any new and useful improvement in an invention as described in an application for Letters Patent entitled “**METHODS AND SYSTEMS FOR DISCOVERY OF A PROCESSING OFFLOADER**” filed in and/or with the United States Patent and Trademark Office on **December 23, 2019**, and which has been assigned Application Serial Number **16/726,094** and which is further identified by the DISH Docket No. set forth above (hereinafter, the “Invention”); and

WHEREAS, **DISH Network, L.L.C., a limited liability company organized and existing under the laws of the State of Colorado, United States of America and having a principal place of business of 9601 S. Meridian Blvd., Englewood, Colorado 80112** (hereinafter, the “Assignee”) desires to acquire all rights, title and interest in and to the Invention, including, but not limited to, all rights, title and interest in and to past, present and future damages, injunctive relief and to any and all other additional rights, title, interest, relief and/or remedies granted by any legislative, judicial, quasi-judicial, administrative or other body, or otherwise; and

WHEREAS, Assignor, to the extent they own any right, title and interest in and to the Invention are desirous of assigning any and all such rights, title and/or interest to Assignee.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignor hereby sells, assigns, transfers and sets over unto Assignee and its legal representatives, successor and assigns, the entire right, title and interest, including any all rights in and/or to past, present and future damages, injunctive relief and/or any other remedy and relief granted by a legislative, judicial, quasi-judicial or administrative body, in and to said Invention, said application, for any and all non-provisional, national, international, foreign, and regional applications corresponding and/or claiming priority thereto, any divisions, continuations, continuation-in-parts, reissues, reexaminations, renewals, and extensions thereof, and the Letters Patent, both foreign and domestic, that may or shall issue thereon, and does request the Commissioner of Patents to issue said Letters Patent to the Assignee, consistent with the terms of this agreement.

Assignor hereby authorizes Assignee to insert in this instrument the filing date and Application Serial Number in the above fields if not already present at the time of execution of this instrument.

Assignor hereby declares that he/she is the sole inventor (if only one inventor is named herein) or an original, first and joint inventor (if plural inventors are named herein) of the Invention. UPON SAID CONSIDERATION, Assignor hereby covenants and agrees with Assignee that they will not execute any writing or do any act whatsoever conflicting with these presents, and agrees that, when requested, he/she will, without charge to Assignee but at its expense, execute such additional assignments, declarations and other writings and do such additional acts as said

Assignee may deem necessary or desirable to perfect the Assignee's enjoyment of this grant, and render all necessary assistance in making application for and obtaining original, continuation, continuation-in-part, divisional, renewal, reissued or extended Letters Patent of the United States, or of any and all foreign countries, on said invention, and in enforcing any rights or chooses in action accruing as a result of such applications or patents, by giving testimony in any proceedings or transactions involving such applications or patents, and by executing preliminary statements and other affidavits, it being understood that the foregoing covenant and agreement shall bind, and inure to the benefit of, the assigns and legal representatives of both parties.

Assignor agrees that he/she will communicate to Assignee or its representatives any facts known to Assignor respecting said inventions within a reasonable time of discovering or coming into possession of the same.

Assignor authorizes and empowers Assignee, its successors, assigns or nominees, to make application for patent or other form of protection for said inventions in its or their own name, or in Assignor's name, in any and all countries to invoke and claim for any application for patent or other form of protection for said inventions filed by it or them, the benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it, and to invoke and claim such right of priority without further written or oral authorization from me.

Assignor hereby consent that a copy of this Assignment shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document which may be required in any country for any purpose and more particularly in proof of the right of Assignee or its successors, assigns or nominees to apply for patent or other proper protection for said inventions, and to claim the aforesaid benefits of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it.

Assignor covenants with Assignee, its successors, assigns, legal representatives, and nominees, that to the best of Assignor's knowledge the right, title and interest herein conveyed are free and clear of any encumbrance, and that Assignor has the full right to convey the same as herein expressed.

This Agreement and Assignment supersedes all other assignments, agreements and addendums related to the above-identified application.

**JOINT**


Inventor (1): Manuel Novoa III  
Name of inventor

\_\_\_\_\_  
(Signature in Full)

\_\_\_\_\_  
Date

**JOINT**

Inventor (2): Kan Man Wong  
Name of inventor

  
\_\_\_\_\_  
(Signature in Full)

Apr 8, 2022  
Date

**JOINT**

Inventor (3): Vishal Neeralike  
Name of inventor

\_\_\_\_\_  
(Signature in Full)

\_\_\_\_\_  
Date

**JOINT**

Inventor (4): Shiqiang Chu  
Name of inventor

\_\_\_\_\_  
(Signature in Full)

\_\_\_\_\_  
Date

**JOINT**

Inventor (5): Aram Semerjyan  
Name of inventor

  
\_\_\_\_\_  
(Signature in Full)

04.08.22  
Date

**JOINT**  
Inventor (1): Manuel Novoa III \_\_\_\_\_  
Name of inventor (Signature in Full)  
  
\_\_\_\_\_  
Date

**JOINT**  
Inventor (2): Kan Man Wong \_\_\_\_\_  
Name of inventor (Signature in Full)  
  
\_\_\_\_\_  
Date

**JOINT**  
Inventor (3): Vishal Neeralike \_\_\_\_\_  
Name of inventor (Signature in Full)  
  
04/07/2022  
Date

**JOINT**  
Inventor (4): Shiqiang Chu \_\_\_\_\_  
Name of inventor (Signature in Full)  
  
\_\_\_\_\_  
Date

**JOINT**  
Inventor (5): Aram Semerjyan \_\_\_\_\_  
Name of inventor (Signature in Full)  
  
\_\_\_\_\_  
Date

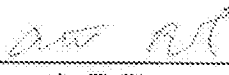
**JOINT**  
Inventor (1): Manuel Novoa III  
Name of inventor (Signature in Full)  
  
Date

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Inventor (2): Kan Man Wong  
Name of inventor (Signature in Full)  
  
Date

**JOINT**  
Inventor (3): Vishal Neeralike  
Name of inventor (Signature in Full)  
  
Date

**JOINT**  
Inventor (4): Shiqiang Chu  
Name of inventor (Signature in Full)  
  
4/7/2022  
Date

**JOINT**  
Inventor (5): Aram Semerjyan  
Name of inventor (Signature in Full)  
  
Date

**JOINT**  
Inventor (6): Anthony Bond   
Name of inventor (Signature in Full)  
4/7/22  
Date

**JOINT**  
Inventor (7): Michael Song \_\_\_\_\_  
Name of inventor (Signature in Full)  
\_\_\_\_\_  
Date

**JOINT**  
Inventor (8): Anthony Kallas \_\_\_\_\_  
Name of inventor (Signature in Full)  
\_\_\_\_\_  
Date

**JOINT**  
Inventor (9): Derick Wong \_\_\_\_\_  
Name of inventor (Signature in Full)  
\_\_\_\_\_  
Date

**ASSIGNEE:**  
DISH Network L.L.C. \_\_\_\_\_  
Name of Assignee Max Gratton  
Director & Senior Corporate Counsel, IP  
\_\_\_\_\_  
Date

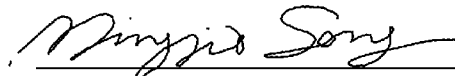


**JOINT**

Inventor (6): Anthony Bond \_\_\_\_\_  
Name of inventor (Signature in Full)  
  
\_\_\_\_\_  
Date

**JOINT**

Inventor (7): Michael Song \_\_\_\_\_  
Name of inventor (Signature in Full)  
  
04/07/2022  
Date



**JOINT**

Inventor (8): Anthony Kallas \_\_\_\_\_  
Name of inventor (Signature in Full)  
  
\_\_\_\_\_  
Date

**JOINT**

Inventor (9): Derick Wong \_\_\_\_\_  
Name of inventor (Signature in Full)  
  
\_\_\_\_\_  
Date

**ASSIGNEE:**

DISH Network L.L.C. \_\_\_\_\_  
Name of Assignee Max Gratton  
Director & Senior Corporate Counsel, IP  
  
\_\_\_\_\_  
Date

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Inventor (6): Anthony Bond \_\_\_\_\_  
Name of inventor (Signature in Full)  
  
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Date

**JOINT**

Inventor (7): Michael Song \_\_\_\_\_  
Name of inventor (Signature in Full)  
  
\_\_\_\_\_  
Date

**JOINT**

Inventor (8): Anthony Kallas \_\_\_\_\_  
Name of inventor (Signature in Full) *Anthony Kallas*  
  
04/07/2022  
Date

**JOINT**

Inventor (9): Derick Wong \_\_\_\_\_  
Name of inventor (Signature in Full)  
  
\_\_\_\_\_  
Date

**ASSIGNEE:**

DISH Network L.L.C. \_\_\_\_\_  
Name of Assignee Max Gratton  
Director & Senior Corporate Counsel, IP  
  
\_\_\_\_\_  
Date

**JOINT**  
Inventor (6): Anthony Bond \_\_\_\_\_  
Name of inventor (Signature in Full)  
  
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Inventor (7): Michael Song \_\_\_\_\_  
Name of inventor (Signature in Full)  
  
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Name of inventor (Signature in Full)  
  
\_\_\_\_\_  
Date

**JOINT**  
Inventor (9): Derick Wong \_\_\_\_\_  
Name of inventor (Signature in Full)  
4/7/2022  
Date

**ASSIGNEE:**  
DISH Network L.L.C. \_\_\_\_\_  
Name of Assignee Max Gratton  
Director & Senior Corporate Counsel, IP  
  
\_\_\_\_\_  
Date

**JOINT**

Inventor (6): Anthony Bond \_\_\_\_\_  
Name of inventor (Signature in Full)

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Inventor (9): Derick Wong \_\_\_\_\_  
Name of inventor (Signature in Full)

\_\_\_\_\_  
Date

**ASSIGNEE:**

DISH Network L.L.C. \_\_\_\_\_  
Name of Assignee  
Max Gratton  
Director & Senior Corporate Counsel, IP

4/11/2022  
Date