505881679 01/24/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

ersion v1.1 EPAS ID: PAT5928504

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JAMES JEHONG JONG	08/03/2018
SANTHARAM GURUMANI	11/01/2019
CHANNASANDRA RAVISHANKAR	06/22/2018

RECEIVING PARTY DATA

Name:	HUGHES NETWORK SYSTEMS, LLC	
Street Address:	11717 EXPLORATION LANE	
City:	GERMANTOWN	
State/Country:	MARYLAND	
Postal Code:	20876	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15992154

CORRESPONDENCE DATA

Fax Number:

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: 202-559-9159

Email: docketing@novotechip.com, shiflett@novotechip.com

Correspondent Name: NOVOTECHIP INTERNATIONAL PLLC Address Line 1: 1717 PENNSYLVANIA AVENUE NW

Address Line 2: SUITE #1025

Address Line 4: WASHINGTON, D.C. 20006

ATTORNEY DOCKET NUMBER:	080115-024	
NAME OF SUBMITTER:	UBMITTER: BABAK AKHLAGHI	
SIGNATURE:	/Babak Akhlaghi/	
DATE SIGNED:	01/24/2020	

Total Attachments: 5

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PATENT 505881679 REEL: 051614 FRAME: 0520

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PATENT REEL: 051614 FRAME: 0521 the "Invention"); and

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

WHEREAS, James Jehong Jong, residing at 11809 Riding Loop Ter., North Potomac, MD, 20878, USA; Santharam Gurumani, residing at 9433 Dunraven Street, Frederick, MD 21704, USA; and Channasandra Ravishankar, residing at 23604 Lefty Lane, Clarksburg, MD, 20871, USA (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 "SYSTEM AND METHOD FOR EXTRACTING SATELLITE TO GROUND LINK QUALITY USING SATELLITE TELEMETRY SIGNAL AND LOW COMPLEXITY RECEIVER" being or having been filed in and/or with the United States Patent and Trademark Office on May 29, 2018, and which has been assigned Application Serial Number 15/992,154 and which is further identified by the EchoStar Docket No. set forth above (hereinafter,

WHEREAS, Hughes Network Systems, LLC, a limited liability company organized and existing under the laws of the State of Delaware, United States of America and having a principal place of business of 11717 Exploration Lane, Germantown, Maryland 20876 (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, iudicial, guasi-iudicial, 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

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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 consents that a copy of this Assignment shall be deemed a full legal and formal equivalent of any assignment, consents to file the same 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.

After this Assignment has been recorded, please return it to:

Attn: Cory Myers Legal Department

Hughes Network Systems, LLC

11717 Exploration Lane

Germantown, Maryland 20876

JOINT		^
Inventor (1):	James Jehong Jong (Name)	(Signature in Full)
Representation of the Control of the		(Date)

Assignee: Cory Lamont Myers (Name)

(Signature in Full)

(Date)

Cory Lamont Myers, Intellectual Property Counsel, of Hughes Network Systems, LLC a Delaware limited liability company, on behalf of the limited liability company.

JOINT				v.#	
Inventor (2):	Santharam Gurumani	Gsown	مممم	~	
	(Name)	(Signature in Full)		
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		(Date)			
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Assignee: <u>Cory Lamont Myers</u>
(Name)

(Signature in Full)

(Dates)

Cory Lamont Myers, Intellectual Property Counsel, of Hughes Network Systems, LLC a Delaware limited liability company, on behalf of the limited liability company.

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JOINT	0°52	ce kny afanjart
Inventor (3):	<u>Channasandra Ravishankar</u> (Name)	(Signature in Full)
		June 22, 2018
		(Date)

Assignee: Cory Lamont Myers
(Name)

(Name)

(Signature in Fulf)

(Date)

Cory Lamont Myers, Intellectual Property Counsel, of Hughes Network Systems, LLC a Delaware limited liability company, on behalf of the limited liability company.