506442842 01/11/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6489610

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JAMES WILDE	10/11/2019
ASHOK SONI	11/12/2019
HAWK MCGINTY	11/12/2019
JAMES SHULER	11/12/2019
LIXING ZHANG	01/11/2021
MICHAEL DISANTE	11/12/2019
NARAYANAN SEKHAR	11/12/2019
XIAOMEI SUN	01/11/2021
XINHUA YANG	11/12/2019

RECEIVING PARTY DATA

Name:	DISH NETWORK LLC	
Street Address:	9601 S. MERIDIAN BLVD.	
City:	ENGLEWOOD	
State/Country:	COLORADO	
Postal Code:	80112	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16655507

CORRESPONDENCE DATA

Fax Number: (480)385-5061

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: 480 385 5060 Email: IPDEPT@dish.com Correspondent Name: LKGLOBAL (DISH) Address Line 1: 7010 E. COCHISE ROAD

Address Line 4: SCOTTSDALE, ARIZONA 85253-1406

ATTORNEY DOCKET NUMBER: 066.0731US NAME OF SUBMITTER: ADITYA KRISHNAN

PATENT REEL: 054877 FRAME: 0206 506442842

SIGNATURE:	/ADITYA KRISHNAN/	
DATE SIGNED: 01/11/2021		
Total Attachments: 10		
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PATENT REEL: 054877 FRAME: 0207

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

WHEREAS, JAMES WILDE, ASHOK SONI, HAWK MCGINTY, JAMES SHULER, LIXING ZHANG, MICHAEL DISANTE, NARAYANAN SEKHAR, XIAOMEI SUN, and XINHUA YANG (hereinafter, singularly and collectively "Assignor") 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 Provisional application entitled "METHODS AND SYSTEMS FOR IMPLEMENTING AN ELASTIC CLOUD BASED VOICE SEARCH USING A THIRD-PARTY SEARCH PROVIDER" filed in and/or with the United States Patent and Trademark Office on October 17, 2019, and which has been assigned Application Serial Number 16/655,507 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 provisional, 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

Page 1 of 7

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.

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

Attn: Max S. Gratton, Director and Senior Corporate Counsel, IP DISH Network L.L.C.
9601 S. Meridian Blvd.
Englewood, CO 80112

	A STATE OF THE STA
Inventor (1): JAMES WILDE	
(Name)	Signature in Full)
	*
Out 11 1 Carmon one	
On this day of october , 2019, b	clore me a notary public in and for the county of
DOUCIAS in the State of COLONI	
personally known to me to be the same person instrument, and acknowledged that he signed, seals	w w
voluntary act for the use and purposes therein set for	
voluntary act for the use and purposes therein set for	naimy am Gramam
1/1 the constant	NOTARY PUBLIC STATE OF COLORADO
My Commission Expires: 374/2020	Notary ID 20124008498
My Commission Expires:	My Commique, Expires 02/14/2020
Notary Public	
TANER 775	
JOINT	
Inventor (2): ASHOK SONI	/Signature in Ev8\
§	(Signature in Full)
Inventor (2): <u>ASHOK SONI</u> (Name)	
Inventor (2): <u>ASHOK SONI</u> (Name)	
Inventor (2): <u>ASHOK SONI</u> (Name)	
Inventor (2): ASHOK SONI (Name) On this, 2019, be in the State of	efore me a notary public in and for the county of, appeared ASHOK SONI, who is
Inventor (2): <u>ASHOK SONI</u> (Name)	efore me a notary public in and for the county of appeared ASHOK SONI, who is whose name is subscribed to the foregoing
Inventor (2): ASHOK SONI (Name) On this day of, 2019, be in the State of personally known to me to be the same person	efore me a notary public in and for the county of appeared ASHOK SONI, who is whose name is subscribed to the foregoing and delivered the same instrument as a free and
Inventor (2): ASHOK SONI (Name) On this day of, 2019, be in the State of personally known to me to be the same person instrument, and acknowledged that he signed, seals	efore me a notary public in and for the county of appeared ASHOK SONI, who is whose name is subscribed to the foregoing and delivered the same instrument as a free and
Inventor (2): ASHOK SONI (Name) On this day of, 2019, be in the State of personally known to me to be the same person instrument, and acknowledged that he signed, seals	efore me a notary public in and for the county of appeared ASHOK SONI, who is whose name is subscribed to the foregoing and delivered the same instrument as a free and
Inventor (2): ASHOK SONI (Name) On this day of, 2019, be in the State of personally known to me to be the same person instrument, and acknowledged that he signed, seals	efore me a notary public in and for the county of appeared ASHOK SONI, who is whose name is subscribed to the foregoing and delivered the same instrument as a free and

JOINT		
Inventor (1):	JAMES WILDE	
	(Name)	(Signature in Full)
On this	day of	, 2019, before me a notary public in and for the county , appeared JAMES WILDE, who
of	in the State of _	, appeared JAMES WILDE, who
is personally	known to me to be the sau	ne person whose name is subscribed to the foregoing
:	**	ed, seals and delivered the same instrument as a free and
voluntary act i	for the use and purposes there	sin set forth.
My Commissi	on Expires:	(Seal)
Notary Public		\\\
£		
JOINT		ARA . NO
Inventor (2):	ASHOK SONI	
	(Name)	(Signature in Full)
		,
On this 12th	aby of November	, 2019, before me a notary public in and for the county <i>Colorado</i> , appeared ASHOK SONI, who
of Qras	in the State of	Colorado, appeared ASHOK SONI, who
is personally	known to me to be the sar	ne person whose name is subscribed to the foregoing
instrument, an	d acknowledged that he sign	ed, seals and delivered the same instrument as a free and
voluntary act i	for the use and purposes there	in set forth. 👊 👊 🕯 🕯 🕯 🕯 🕯 🕯 🕯 🕯 🕯 🕯 🕯 🕯 🕯
		ANTHONY MEDINA NOYANY PUBLIC
	-11- Media	STATE OF COLORADO NOTARY ID 20064048173
Mx: Commissi	athony Medona on Explies: 12/14/21	
s iva v rasialaliansi		
Notary Public		(Ocsa)

JOINT		1/ Manager
inventor (3):	HAWK MCGINTY	4.7/2
	(Name)	(Signature in Full)
	la a sudda a a a a a a a a a a a a a a a a a a	
On this /@'	day of <i>Thorryles</i> , 201	9, before me a notary public in and for the county
		lorado appeared HAWK MCGINTY,
		person whose name is subscribed to the foregoing
		als and delivered the same instrument as a free and
voiumary act i	or the use and purposes therein set	IOFIR.
		Managaman and a same same same same same same same sa
\mathcal{A}	ntton Melme on Expires: 12/14/21	ANTRONY MEDINA MOTANY PUBLIC
	on Exhites: 12/14/21	NOTA 10 2004 (4817)
Notary Public		2
JOINT	F & B 63555 713 XX 13' X113	Needle X L
Inventor (4):	JAMES SHULER	
	(Name)	(Signature in Full)
		¥
On this 10	Agricof Morrow has 201	0 hafare me a notary nublic in and for the country
of Mass	in the State of	9, before me a notary public in and for the county <u>めわるし</u> , appeared JAMES SHULER,
who is nerson	ally known to me to be the came:	person whose name is subscribed to the foregoing
••	·	als and delivered the same instrument as a free and
	or the use and purposes therein set	
, ramanna, men a	va mee maa ge mg. caate meeraan ove	
<i>p</i> ~~	1 de Nove 8 **	ANTHONY MEDINA
<u> </u>	resons I resons	STATE OF COLORADO
My Commission	on expres:	MY COMMISSION ED 1988 DECEMBER 16, 2001
Notary Public		

JOINT		
Inventor (5):	LIXING ZHANG	/ LIXING ZHANG /
	(Name)	(Signature in Full)
On this	day of	, 2019, before me a notary public in and for the county of, appeared LIXING ZHANG, who is a person whose name is subscribed to the foregoing instrument,
	in the State of	appeared LIXING ZHANG, who is
personally kn	own to me to be the same	e person whose name is subscribed to the foregoing instrument,
and acknowle	edged that he signed, seal	s and delivered the same instrument as a free and voluntary act
for the use an	d purposes therein set for	rth.
My Commiss	ion Expires:	(Seal)
Notary Public		(550)
JOINT Inventor (6):	MICHAEI DIÇANTE	
mvemor (o).	MICHAEL DISANTE (Name)	(Signature in Full)
	(ivanic)	(Signature in Pun)
On this	day of	, 2019, before me a notary public in and for the county of, appeared MICHAEL DISANTE,
	in the State o	of appeared MICHAEL DISANTE,
who is person	nally known to me to be	the same person whose name is subscribed to the foregoing
instrument, ar	nd acknowledged that he	signed, seals and delivered the same instrument as a free and
voluntary act	for the use and purposes	therein set forth.
THE PROPERTY OF THE PROPERTY O		
My Commiss	ion Expires:	(Seal)
Notary Public	<u>,</u>	

JOINT			
Inventor (5):	LIXING ZH	IANG	
	(Name)		(Signature in Full)
On this	day of	, 2	2019, before me a notary public in and for the county
of		in the State of	2019, before me a notary public in and for the county appeared LIXING ZHANG,
who is person	ally known t	o me to be the san	ne person whose name is subscribed to the foregoing
instrument, an	d acknowled;	ged that he signed,	, scals and delivered the same instrument as a free and
voluntary act f	or the use and	d purposes therein:	set forth.
***************************************	***************************************		
My Commissi	on Expires: [~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	(Scal)
Notary Public			
JOINT	MYCH A FT	DISANTE	Man 11/2
myama (v).	(Name)	DIOMINIE	(Signaturé in Full)
	(, manny)		(negament as a max)
of Qray	ahol	in the State of	2019, before me a notary public in and for the county of, appeared _MICHAEL to be the same person whose name is subscribed to the
			he signed, seals and delivered the same instrument as
a free and volu	intary act for	-	cs therein se White ANTACAY MEDINA
My Commission	on Horires;	12/16/2)	(Seal)

JOINT			7 8 /
Inventor (7):	NARAYANAI	SEKHAR	& Varyan
	(Name)		(Signature in Full)
On this 11	An an of Ma	ere la e	2010 before me a value; willing in and for the acceptant
of Ann		the State (, 2019, before me a notary public in and for the county of
SEKHAR, w	ho is personally	known to me	to be the same person whose name is subscribed to the
1	••		at he signed, seals and delivered the same instrument as
a free and vol	untary act for the	use and purp	oses therein set forth.
	_		ANTENCHY SETTING
l Ox	<u>Um Medria.</u> ion Edpires:	•	NOTARY PUBLIC STATE OF COLORADO
My Commiss	on Expires:	12/14/21	NOTARY ID 20054048173 847 CX88550N 507858181284827 15, 201
Notary Public		•	
JOINT			
Inventor (8):	XIAOMEI SUI	<u> </u>	
	(Name)		(Signature in Full)
On this	day of		, 2019, before me a notary public in and for the county
of and	in t	be State of	anneared XIACINEE SUN who
is personally	known to me to	be the sam	e person whose name is subscribed to the foregoing
			d, seals and delivered the same instrument as a free and
	for the use and pr		
My Commissi	on Expires:		(Seal)
Notary Public			

JOINT		
Inventor (7):	<u>NARAYANAN SEK</u>	<u>HAR</u>
	(Name)	(Signature in Full)
	3 <i> </i>	2010 before me a notary public in and for the county of
On this	day or in the St	, 2019, before me a notary public in and for the county of ate of, appeared NARAYANAN
SEKHAR. W	ho is personally known	I to me to be the same betson whose name is subscribed to the
foregoing inst	trument, and acknowled	iged that he signed, seals and delivered the same instrument as
a free and vol	untary act for the use ar	nd purposes therein set forth.
My Commiss	ion Expires:	(Seal)
Notary Public		
JOINT		Jaonei -
Inventor (8):		The state of the s
	(Name)	(Signature in Full)
On this	day of	, 2019, before me a notary public in and for the county of of, appeared XIAOMEI SUN, who is
	in the State	of, appeared XIAOMEI SUN, who is
personally ki	nown to me to be the	e same person whose name is subscribed to the foregoing
instrument, a	nd acknowledged that h	ne signed, seals and delivered the same instrument as a free and
voluntary act	for the use and purpose	es therein set forth.
My Commiss	sion Expires:	(Seal)
Notary Public		

JOINT)
Inventor (9):	XINHUA YANG	<u> </u>
	(Name)	(Signature in Full)
On this 12th day of 10 versies, 2019, before me a notary public in and for the county of 0,000 appeared XINHUA YANG, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he signed, seals and delivered the same instrument as a free and		
	for the use and purpo **ConX**/Nedria** on Expires:	ANOTARY AVELUA STATE OF COLONADO