504740656 01/22/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4787384

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ALI MIRKAMALI	01/22/2018
TZUNG-I LEE	01/11/2018
OMAR FAWAZHASHIM ZAKARIA	01/11/2018
KALYAN TEJA POSANI	01/12/2018
IN CHUL HYUN	01/15/2018
CHEOL SU KIM	01/11/2018

RECEIVING PARTY DATA

Name:	AMAZON TECHNOLOGIES, INC.
Street Address:	PO BOX 81226
City:	SEATTLE
State/Country:	WASHINGTON
Postal Code:	98108-1226

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15877038

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.

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Correspondent Name: LOWENSTEIN SANDLER LLP PATENT DOCKET ADM

Address Line 1: ONE LOWENSTEIN DRIVE

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ATTORNEY DOCKET NUMBER:	33350.180 (L0180)
NAME OF SUBMITTER:	PAUL M. KRUEGER, REG NO. 64944
SIGNATURE:	/Paul M. Krueger/
DATE SIGNED:	01/22/2018

Total Attachments: 9

PATENT REEL: 044692 FRAME: 0609

504740656

PATENT REEL: 044692 FRAME: 0610

U.S. Patent Appln. No. 15/877,038 Attorney Docket No. 33350.180 (L0180) Filing Date January 22, 2018 Client Docket No. P43417-US PARTIES TO THE ASSIGNMENT Assignor(s): Ali Mirkamali Kalyan Teja Posani 410 Terry Avenue North 410 Terry Avenue North Seattle, WA 98109-5210 Seattle, WA 98109-5210 Tzung-I Lee In Chul Hyun 410 Terry Avenue North 410 Terry Avenue North Seattle, WA 98109-5210 Seattle, WA 98109-5210 Omar Fawazhashim Zakaria Cheol Su Kim

410 Terry Avenue North

Seattle, WA 98109-5210

Assignee:

Amazon Technologies, Inc. PO Box 81226 Seattle, WA 98108-1226

410 Terry Avenue North

Seattle, WA 98109-5210

AGREEMENT

WHEREAS, ASSIGNOR(S) (listed above) are inventor(s) of an invention entitled

"INTELLIGENTLY-SWITCHED, CONCURRENTLY-OPERATED OMNDIRECTIONAL AND DIRECTIONAL

ANTENNAS" (Invention) for which a non-provisional application for United States Letters Patent

(Application):

was filed on ______ and accorded U.S. Application No. ______; or

will be filed concurrently with the submission of this executed PATENT ASSIGNMENT for recordation.

ASSIGNOR(S) hereby authorizes and requests ASSIGNEE'S legal representatives, of Lowenstein Sandler LLP, associated with Customer No. 14432, to insert in the header above and here in parentheses (U.S. Patent Application No. 15/877.038 filed Jan. 22, 2018) this application's U.S. application number and filing date, when known.

Page 1 of 9

U.S. Patent Appln. No. 15/877,038

Attorney Docket No. 33350.180 (L0180)

Filing Date January 22, 2018

Client Docket No. P43417-US

Title of Invention: INTELLIGENTLY-SWITCHED, CONCURRENTLY-OPERATED OMNDIRECTIONAL AND

DIRECTIONAL ANTENNAS

Inventors: Ali Mirkamali, Tzung-I Lee, Omar Fawazhashim Zakaria, Kalyan Teja Posani, In Chul

Hyun, Cheol Su Kim

WHEREAS, ASSIGNEE, a corporation of the State of Nevada, is desirous of acquiring the

entire right, title and interest in and to the Invention and in and to any letters patent that may

be granted therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt of

which is hereby acknowledged, ASSIGNOR(S) hereby sell, assign and transfer unto ASSIGNEE its

successors and assigns, the entire right, title and interest in and to said Invention and any

improvements thereto, said Application and any and all letters patent which may be granted for

said Invention in the United States of America and its territorial possessions and in any and all

foreign countries, and in any and all provisional, divisions, reissues, re-examinations and

continuations thereof, including the right to file foreign applications directly in the name of

ASSIGNEE and to claim priority rights deriving from said Application to which said foreign

applications are entitled by virtue of international convention, treaty or otherwise, said

Invention, Application and all letters patent on said Invention to be held and enjoyed by

ASSIGNEE and its successors and assigns for their use and benefit and of their successors and

assigns as fully and entirely as the same would have been held and enjoyed by ASSIGNOR(S) had

this assignment, transfer and sale not been made. ASSIGNOR(S) hereby authorize and request

the Commissioner of Patents and Trademarks, as well as all other applicable patent offices

throughout the world, to issue all letters patent on said Invention to ASSIGNEE. ASSIGNOR(S)

agree to execute all instruments and documents required for the making and prosecution of

applications for United States and foreign letters patent on said Invention, for litigation

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PATENT REEL: 044692 FRAME: 0612

U.S. Patent Appln. No. 15/877,038

Attorney Docket No. 33350.180 (L0180)

Filing Date January 22, 2018

Client Docket No. P43417-US

Title of Invention: INTELLIGENTLY-SWITCHED, CONCURRENTLY-OPERATED OMNDIRECTIONAL AND

DIRECTIONAL ANTENNAS

Inventors: Ali Mirkamali, Tzung-I Lee, Omar Fawazhashim Zakaria, Kalyan Teja Posani, In Chul

Hyun, Cheol Su Kim

regarding said letters patent, or for the purpose of protecting title to said Invention or letters

patent therefor.

AND ASSIGNOR(S) DOES HEREBY sell, assign, transfer, and convey to ASSIGNEE, its

successors, legal representatives, and assigns all claims for damages and all remedies arising out

of any violation of the rights assigned hereby that may have accrued prior to the date of

assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue

for, collect, and retain damages for past infringements of said letters patent before or after

issuance.

AND ASSIGNOR(S) DOES HEREBY covenant and agree that ASSIGNOR(S) will

communicate to ASSIGNEE, its successors, legal representatives and assigns, any facts known to

ASSIGNOR respecting the Invention or said Application, and testify in any legal proceeding, assist

in the preparation of any other patent property relating to the Application and the Invention or

any improvements made thereto, sign/execute all lawful papers, provide all requested

documents, execute and make all rightful oaths and/or declarations in connection with the

Application and the Invention including any improvements made thereto, any patent

applications filed therefrom, and any continuing application filed from any of the

aforementioned applications, and generally do everything possible to aid ASSIGNEE, its

successors, legal representatives and assigns, to obtain and enforce proper patent protection for

the Invention in all countries. These provisions are binding upon ASSIGNOR's heirs, legal

representatives, administrators, and assigns.

Page 3 of 9

PATENT

REEL: 044692 FRAME: 0613

U.S. Patent Appln. No. 15/8	877,038	Attorney Docket No. 33350.180 (L0180)
Filing Date January 22, 201	18	Client Docket No. <u>P43417-US</u>
Title of Invention: <u>INTELLIGE</u> <u>DIRECTIONAL ANTENNAS</u>	ENTLY-SWITCH	ED, CONCURRENTLY-OPERATED OMNDIRECTIONAL AND
Inventors: Ali Mirkamali, Tz Hyun, Cheol Su Kim	zung-l Lee, On	nar Fawazhashim Zakaria, Kalyan Teja Posani, In Chul
DECLARATION As a below named inventor,	r, I hereby decl	are that:
This declaration is directed	to:	
igstyle igytyle igstyle igytyle	pplication; or	
United States Pa	atent Applicati	on number filed on; or
PCT Internation	al Application	number filed on
The above-identified applica	cation was mad	le or authorized to be made by me.
I believe that I am the originapplication.	nal inventor or	an original joint inventor of a claimed Invention in the
I have reviewed and unders	stand the cont	ents of the above-identified application, and
acknowledge the duty to dis	isclose to the U	JS Patent & Trademark Office all information known to
me to be material to the pa	atentability as	defined in 37 CFR 1.56.
I hereby acknowledge that a	any willful fals	e statement made in this declaration is punishable
under 18 USC 1001 by fine of	or imprisonme	ent of not more than five (5) years, or both.
Docusigned by: / Ili Mirkamali/ 10CA222EBDE3445		
***************************************	***************************************	
Ali Mirkamali		
January 22, 2018	***************************************	
Date		

Page 4 of 9

U.S. Patent Appln. No. 15/877,038	Attorney Docket No. <u>33350.180 (L0180)</u>
Filing Date January 22, 2018	Client Docket No. <u>P43417-US</u>
Title of Invention: <u>INTELLIGENTLY-SWITC</u> DIRECTIONAL ANTENNAS	HED, CONCURRENTLY-OPERATED OMNDIRECTIONAL AND
Inventors: Ali Mirkamali, Tzung-I Lee, O Hyun, Cheol Su Kim	mar Fawazhashim Zakaria, Kalyan Teja Posani, In Chul
DECLARATION	
As a below named inventor, I hereby dec	lare that:
This declaration is directed to:	
igstyle igstyle igstyle the attached application; or	
United States Patent Applica	tion number filed on; or
PCT International Application	numberfiled on
The above-identified application was ma	de or authorized to be made by me.
I believe that I am the original inventor of application.	or an original joint inventor of a claimed Invention in the
I have reviewed and understand the con	tents of the above-identified application, and
acknowledge the duty to disclose to the	US Patent & Trademark Office all information known to
me to be material to the patentability as	defined in 37 CFR 1.56.
I hereby acknowledge that any willful fal	se statement made in this declaration is punishable
under 18 USC 1001 by fine or imprisonm	ent of not more than five (5) years, or both.
Docusigned by: 17344-1 Leu	
Tzung-I Lee	
January 11, 2018	_
Date	

Page 5 of 9

U.S. Patent Appln. No. 15/877,038	Α	ittorney Docket No. <u>333</u>	350.180 (L0180)
Filing Date January 22, 2018		Client Docket	No. <u>P43417-US</u>
Title of Invention: <u>INTELLIGENTLY-SWITCH</u> DIRECTIONAL ANTENNAS	ED, CONCURREN	TLY-OPERATED OMNDIF	RECTIONAL AND
Inventors: Ali Mirkamali, Tzung-I Lee, Om Hyun, Cheol Su Kim	ar Fawazhashim	ı Zakaria, Kalyan Teja P	osani, In Chul
<u>DECLARATION</u>			
As a below named inventor, I hereby decla	are that:		
This declaration is directed to:			
igotimes the attached application; or			
United States Patent Applicati	on number	filed on	; or
PCT International Application	number	filed on	
The above-identified application was mad	e or authorized	to be made by me.	
I believe that I am the original inventor or application.	an original joint	inventor of a claimed l	nvention in the
I have reviewed and understand the conte	ents of the above	e-identified application,	and
acknowledge the duty to disclose to the ${\sf U}$	IS Patent & Trade	emark Office all inform	ation known to
me to be material to the patentability as o	defined in 37 CFF	1.56.	
I hereby acknowledge that any willful false	e statement mac	le in this declaration is	punishable
under 18 USC 1001 by fine or imprisonme	nt of not more t	han five (5) years, or bo	th.
Docusigned by: 10-mar Fawazlıaslı'ın Eakaria11F4D1B5746E446F			
Omar Fawazhashim Zakaria			
January 11, 2018			
Date			

Page 6 of 9

U.S. Patent Appln. No. 15/877,038	Attorney Docket No. <u>33350.180 (L0180)</u>
Filing Date January 22, 2018	Client Docket No. <u>P43417-US</u>
Title of Invention: <u>INTELLIGENTLY-SWITCHED, CON</u> <u>DIRECTIONAL ANTENNAS</u>	CURRENTLY-OPERATED OMNDIRECTIONAL AND
Inventors: Ali Mirkamali, Tzung-I Lee, Omar Fawa Hyun, Cheol Su Kim	zhashim Zakaria, Kalyan Teja Posani, In Chul
<u>DECLARATION</u>	
As a below named inventor, I hereby declare that	:
This declaration is directed to:	
igstyle the attached application; or	
United States Patent Application num	ber filed on; or
PCT International Application number	filed on
The above-identified application was made or aut	horized to be made by me.
I believe that I am the original inventor or an origi	nal joint inventor of a claimed Invention in the
I have reviewed and understand the contents of t	he above-identified application, and
acknowledge the duty to disclose to the US Paten	t & Trademark Office all information known to
me to be material to the patentability as defined i	n 37 CFR 1.56.
I hereby acknowledge that any willful false statem	nent made in this declaration is punishable
under 18 USC 1001 by fine or imprisonment of no	t more than five (5) years, or both.
DocuSigned by:	
/Kalyan Téja Posani/ 6516E4268F0F4F1	
Kalyan Teja Posani	
January 12, 2018	
Date	

U.S. Patent Appln. No. 15/877,038	Attorney Docket No. <u>33350.180 (L0180)</u>
Filing Date January 22, 2018	Client Docket No. <u>P43417-US</u>
Title of Invention: <u>INTELLIGENTLY-SWITC</u> <u>DIRECTIONAL ANTENNAS</u>	HED, CONCURRENTLY-OPERATED OMNDIRECTIONAL AND
Inventors: Ali Mirkamali, Tzung-I Lee, O Hyun, Cheol Su Kim	mar Fawazhashim Zakaria, Kalyan Teja Posani, In Chul
DECLARATION	
As a below named inventor, I hereby de	clare that:
This declaration is directed to:	
igstyle igy igstyle igy igstyle igy igstyle igy igstyle igy igy igy igy igy igy igy igy	
United States Patent Applica	ition number filed on; or
PCT International Applicatio	n number filed on
The above-identified application was ma	ade or authorized to be made by me.
I believe that I am the original inventor application.	or an original joint inventor of a claimed Invention in the
I have reviewed and understand the cor	itents of the above-identified application, and
acknowledge the duty to disclose to the	US Patent & Trademark Office all information known to
me to be material to the patentability a	s defined in 37 CFR 1.56.
I hereby acknowledge that any willful fa	lse statement made in this declaration is punishable
under 18 USC 1001 by fine or imprisonn	nent of not more than five (5) years, or both.
Docusigned by: In Chul Hyun/ 4E6E916AE6C644B	
In Chul Hyun	-
January 15, 2018	
Date	

Page 8 of 9

U.S. Patent Appin. No15/877,038	Attorney Docket No. <u>33350.180 (L0180)</u>
Filing Date January 22, 2018	Client Docket No. P43417-US
Title of Invention: <u>INTELLIGENTLY-SWITCHED, CONC</u> <u>DIRECTIONAL ANTENNAS</u>	URRENTLY-OPERATED OMNDIRECTIONAL AND
Inventors: Ali Mirkamali, Tzung-I Lee, Omar Fawaz Hyun, Cheol Su Kim	hashim Zakaria, Kalyan Teja Posani, In Chul
DECLARATION	
As a below named inventor, I hereby declare that:	
This declaration is directed to:	
the attached application; or	
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The above-identified application was made or auth	orized to be made by me.
I believe that I am the original inventor or an origin application.	al joint inventor of a claimed Invention in the
I have reviewed and understand the contents of th	e above-identified application, and
acknowledge the duty to disclose to the US Patent	& Trademark Office all information known to
me to be material to the patentability as defined in	37 CFR 1.56.
I hereby acknowledge that any willful false stateme	ent made in this declaration is punishable
under 18 USC 1001 by fine or imprisonment of not	more than five (5) years, or both.
Docusigned by: // Check Su kim/ 08955BD98F9D41F	
Cheol Su Kim	
January 11, 2018	
Date	

Page 9 of 9

PATENT REEL: 044692 FRAME: 0619