PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
NAVIN CHATLANI	12/14/2018
KRISHNA KAMATH KOTESHWARA	12/14/2018
TRAUSTI THOR KRISTJANSSON	12/14/2018
INSEOK HEO	12/17/2018
ROBERT AYRAPETIAN	12/16/2018

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:	16240294

CORRESPONDENCE DATA

Fax Number:

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ATTORNEY DOCKET NUMBER:	P62105-US01
NAME OF SUBMITTER:	ILAN N. BARZILAY
SIGNATURE:	/llan N. Barzilay/
DATE SIGNED:	01/04/2019
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 8 source=P62105_US01_Assignment#page1.tif source=P62105_US01_Assignment#page2.tif source=P62105_US01_Assignment#page3.tif source=P62105_US01_Assignment#page4.tif source=P62105_US01_Assignment#page5.tif source=P62105_US01_Assignment#page6.tif source=P62105_US01_Assignment#page7.tif source=P62105_US01_Assignment#page8.tif

U.S. Patent Appln. No	Attorney Docket No. <u>34703-4765</u>
Filing Date	Client Docket No. <u>P62105-US01</u>
PARTIES TO THE ASSIGNMENT	
Assignor(s):	
Navin Chatlani	Inseok Heo
410 Terry Avenue North	410 Terry Avenue North
Seattle, WA 98109-5210	Seattle, WA 98109-5210
Krishna Kamath Koteshwara	Robert Ayrapetian
410 Terry Avenue North	410 Terry Avenue North
Seattle, WA 98109-5210	Seattle, WA 98109-5210
Trausti Thor Kristjansson 410 Terry Avenue North Seattle, WA 98109-5210	
Assignee: Amazon Technologies, Inc. PO Box 81226 Seattle, WA 98108-1226	
AGREEMENT	
WHEREAS, ASSIGNOR(S) (listed above) are i	inventor(s) of an invention entitled
"ECHO CANCELLATION BY ACOUSTIC PLAYBACK I	ESTIMATION" (Invention) for which a non-
provisional application for United States Letters Pat	tent (Application):
was filed on and accorded	U.S. Application No; or
will be filed concurrently with the subn	nission of this executed PATENT ASSIGNMENT
for recordation.	
ASSIGNOR(S) hereby authorizes and requests A	SSIGNEE'S legal representatives, of
<u>Pierce Atwood LLP</u> , associated with Customer No. <u>1</u>	36714, to insert in the header above and here
in parentheses (U.S. Patent Application No	, filed) this application's U.S.
application number and filing date, when known.	

Page 1 of 8

U.S. Patent Appln. No	Attorney Docket No. <u>34703-4765</u>
Filing Date	Client Docket No. P62105-US01

Title of Invention: ECHO CANCELLATION BY ACOUSTIC PLAYBACK ESTIMATION

Inventors: Navin Chatlani, Krishna Kamath Koteshwara, Trausti Thor Kristjansson, Inseok Heo, Robert Ayrapetian

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

Page 2 of 8

U.S. Patent Appln. No.

PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)

Attorney Docket No. 34703-4765

Filing Date _____ Client Docket No. <u>P62105-US01</u>

Title of Invention: ECHO CANCELLATION BY ACOUSTIC PLAYBACK ESTIMATION

Inventors: Navin Chatlani, Krishna Kamath Koteshwara, Trausti Thor Kristjansson, Inseok Heo,

Robert Ayrapetian

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 8

U.S. Patent Appln. No		Attorney Docket	No. <u>34703-4765</u>
Filing Date		Client Docket N	o. <u>P62105-US01</u>
Title of Invention: <u>ECHO CANCELLATION BY AC</u>	OUSTIC PLAY	BACK ESTIMATION	
Inventors: Navin Chatlani, Krishna Kamath Ko Robert Ayrapetian	oteshwara, 1	rausti Thor Kristjansso	n, Inseok Heo,
DECLARATION As a below named inventor, I hereby declare t	that:		
This declaration is directed to:			
$igstyle{igstyle}$ the attached application; or			
United States Patent Application r	number	filed on	; or
PCT International Application num	nber	filed on	<u></u> ·
The above-identified application was made or	authorized	to be made by me.	
I believe that I am the original inventor or an or a polication.	original joint	inventor of a claimed I	nvention in the
I have reviewed and understand the contents	of the above	e-identified application	, and
acknowledge the duty to disclose to the US Pa	atent & Trad	emark Office all inform	ation known to
me to be material to the patentability as defir	ned in 37 CFF	R 1.56.	
I hereby acknowledge that any willful false sta	atement mad	de in this declaration is	punishable
under 18 USC 1001 by fine or imprisonment o	of not more t	han five (5) years, or bo	oth.
Docusigned by: /Navin Chatlani/ DD8ECCB4D6DA4E5			
Navin Chatlani			
December 14, 2018			
Date			

U.S. Patent Appin. No	Attorney Docket No. <u>34/03-4/6</u>
Filing Date	Client Docket No. <u>P62105-US0</u>
Title of Invention: <u>ECHO CANCELLATION E</u>	BY ACOUSTIC PLAYBACK ESTIMATION
Inventors: Navin Chatlani, Krishna Kama Robert Ayrapetian	ath Koteshwara, Trausti Thor Kristjansson, Inseok Heo,
<u>DECLARATION</u>	
As a below named inventor, I hereby dec	clare that:
This declaration is directed to:	
igotimes the attached application; or	
United States Patent Applicat	ation number filed on; or
PCT International Application	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 o application.	or an original joint inventor of a claimed Invention in the
I have reviewed and understand the con-	ntents 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	s defined in 37 CFR 1.56.
I hereby acknowledge that any willful fals	llse statement made in this declaration is punishable
under 18 USC 1001 by fine or imprisonm	nent of not more than five (5) years, or both.
Docusigned by: /krishna kamath koteshwara/	_
Krishna Kamath Koteshwara	
December 14, 2018	_
Date	

U.S. Patent Appln. No	Attorney Docket No. <u>34703-4765</u>
Filing Date	Client Docket No. <u>P62105-US01</u>
Title of Invention: ECHO CANCELLATION BY ACO	USTIC PLAYBACK ESTIMATION
Inventors: Navin Chatlani, Krishna Kamath Koto Robert Ayrapetian	eshwara, Trausti Thor Kristjansson, Inseok Heo,
<u>DECLARATION</u>	
As a below named inventor, I hereby declare th	at:
This declaration is directed to:	
igstyle igstyle igstyle the attached application; or	
United States Patent Application nu	mber; or
PCT International Application numb	er filed on
The above-identified application was made or a	uthorized to be made by me.
I believe that I am the original inventor or an or application.	iginal joint inventor of a claimed Invention in the
I have reviewed and understand the contents or	f the above-identified application, and
acknowledge the duty to disclose to the US Pate	ent & Trademark Office all information known to
me to be material to the patentability as define	d in 37 CFR 1.56.
I hereby acknowledge that any willful false state	ement made in this declaration is punishable
under 18 USC 1001 by fine or imprisonment of r	not more than five (5) years, or both.
Docusigned by: Trausti thor knistjansson/ 2CE42ASD597E48F	
Trausti Thor Kristjansson	
December 14, 2018	
Date	

U.S. Patent Appln. No	Attorney Docket No. <u>34703-4765</u>
Filing Date	Client Docket No. <u>P62105-US01</u>
Title of Invention: <u>ECHO CANCELLATION E</u>	BY ACOUSTIC PLAYBACK ESTIMATION
Inventors: Navin Chatlani, Krishna Kama Robert Ayrapetian	th Koteshwara, Trausti Thor Kristjansson, Inseok Heo,
<u>DECLARATION</u>	
As a below named inventor, I hereby dec	lare that:
This declaration is directed to:	
igotimes the attached application; or	
United States Patent Applicat	tion number filed on; or
PCT International Application	number filed on
The above-identified application was ma	de or authorized to be made by me.
I believe that I am the original inventor o application.	r 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 fals	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: // USEOK HEO/CA9E465699FC485	
Inseok Heo	
December 17, 2018	
Date	

U.S. Patent Appln. No	Attorney Docket No. <u>34703-4765</u>
Filing Date	Client Docket No. <u>P62105-US01</u>
Title of Invention: <u>ECHO CANCELLATION E</u>	BY ACOUSTIC PLAYBACK ESTIMATION
Inventors: Navin Chatlani, Krishna Kama Robert Ayrapetian	nth Koteshwara, Trausti Thor Kristjansson, Inseok Heo,
<u>DECLARATION</u>	
As a below named inventor, I hereby dec	clare that:
This declaration is directed to:	
igotimes the attached application; or	
United States Patent Applicat	tion number filed on; or
PCT International Application	n number filed on
The above-identified application was made	de or authorized to be made by me.
I believe that I am the original inventor o application.	or an original joint inventor of a claimed Invention in the
I have reviewed and understand the cont	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 fals	se statement made in this declaration is punishable
under 18 USC 1001 by fine or imprisonme	ent of not more than five (5) years, or both.
Pocusigned by: /Kobert lyrapetian/ A99BF068EDB149E	
Robert Ayrapetian	
December 16, 2018	-
Date	

Page 8 of 8