505419206 04/09/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
JONATHAN D. SHEAFFER	04/08/2019
JUHA O. MERIMAA	04/08/2019
JASON WUNG	04/08/2019
MARTIN E. JOHNSON	04/04/2019
PETER A. RAFFENSPERGER	04/04/2019
JOSHUA D. ATKINS	04/05/2019
SYMEON DELIKARIS MANIAS	04/03/2019
MEHREZ SOUDEN	04/02/2019

RECEIVING PARTY DATA

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Street Address:	ONE APPLE PARK WAY
City:	CUPERTINO
State/Country:	CALIFORNIA
Postal Code:	95014

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16378438

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	204860P37459US1	
NAME OF SUBMITTER:	FARZAD E. AMINI	
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DATE SIGNED:	04/09/2019	

PATENT REEL: 048836 FRAME: 0335

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Total Attachments: 9 source=P37459US1_ASSIGNMENT_040819#page1.tif source=P37459US1_ASSIGNMENT_040819#page2.tif source=P37459US1_ASSIGNMENT_040819#page3.tif source=P37459US1_ASSIGNMENT_040819#page4.tif source=P37459US1_ASSIGNMENT_040819#page5.tif source=P37459US1_ASSIGNMENT_040819#page6.tif source=P37459US1_ASSIGNMENT_040819#page7.tif source=P37459US1_ASSIGNMENT_040819#page8.tif source=P37459US1_ASSIGNMENT_040819#page9.tif

PATENT REEL: 048836 FRAME: 0336

ASSIGNMENT OF PATENT APPLICATION

Attorney Docket No.: 4860P37459US1

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I/we, the undersigned, Jonathan D. Sheaffer; Juha O. Merimaa; Jason Wung; Martin E. Johnson; Peter A. Raffensperger; Joshua D. Atkins; Symeon Delikaris Manias; Mehrez Souden

hereby sell, assign, and transfer to Apple Inc., a corporation of California

having a principal place of business at **One Apple Park Way, Cupertino, California 95014**, **United States**

("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all inventions or improvements that are disclosed in the application (provisional or non-provisional) for the United States patent which for the non-provisional application may have a declaration executed by the undersigned prior hereto or concurrently herewith and which application (provisional or non-provisional) is entitled

PROCESSING OF AUDIO SIGNALS FOR SPATIAL AUDIO

[I/we hereby authorize an attorney or agent for said Assignee to insert below the application number and filing date of said patent application when known.]

United States Patent Application Number	,
filed	

said patent application also identified as follows (when known):

and in and to said application (provisional or non-provisional) and all provisional applications, non-provisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said inventions or improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said inventions or improvements; and in and to all rights of priority resulting from the filing of said United States application;

agree that said Assignee may apply for and receive a patent or patents for said inventions or improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all provisional applications, non-provisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications on any and all said inventions or improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and legal representatives all facts known to the undersigned relating to said inventions or improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions or improvements and all applications for patents and all patents on said inventions or improvements, in said Assignee, its successors, assigns, and legal representatives; and

4/8/2019	01
Date	Name Jonathan D. Sheaffer
Date	Name: Juha O. Merimaa
Date	Name: Jason Wung
Date	Name: Martin E. Johnson
Date	Name: Peter A. Raffensperger
Date	Name: Joshua D. Atkins
Date	Name: Symeon Delikaris Manias
Date	Name: Mehrez Souden
Date	Name:

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned. Each Inventor: Please Sign and Date Below: Date Name: Jonathan D. Sheaffer Juha O. Merimaa Name! Date Name: Jason Wung Date Name: Martin E. Johnson Date Date Name: Peter A. Raffensperger Date Name: Joshua D. Atkins Name: Symeon Delikaris Manias Date Date Name: Mehrez Souden Name: Date Date Name: Name: Date Name: Date

Date	Name: Jonathan D. Sheaffer
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04/08/2019	may
Date	Name: Jason Wung
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Date	Name: Peter A. Raffensperger
Date	Name: Joshua D. Atkins
Date	Name: Symeon Delikaris Manias
Date	Name: Mehrez Souden
Date	Name:

Each Inventor: Please Sign and Date Below:

Date	Name:	Jonathan D. Sheaffer
Date	Name	Juha O. Merimaa
Date		Jason Wung
4th APOL 2019 Date	Name:	Martin E. Johnson
Date	Name:	Peter A. Raffensperger
Date	Name	Joshua D. Atkins
Date	Name:	Symeon Delikaris Manias
Date	Name:	Mehrez Souden
Date	Name:	

Each Inventor: Please Sign and Date Below: Date Name: Jonathan D. Sheaffer Date Name: Juha O. Merimaa Date Name: Jason Wung Date Name: Martin E. Johnson P105 79A Date Name: Joshua D. Atkins Date Name: Symeon Delikaris Manias Date Name: Mehrez Souden Date Name: Date Name: Name: Date Name: Date

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned. Each Inventor: Please Sign and Date Below: Date Name: Jonathan D. Sheaffer Date Name: Juha O. Merimaa Date Name: Jason Wung Name: Martin E. Johnson Date Date Name: Peter A. Raffensperger April 5, 2019 Date Name: Joshua D. Atkins Date Name: Symeon Delikaris Manias Date Name: Mehrez Souden Date Name: Date Name: Name: Date Name: Date

Each Inventor: Please Sign and Date Below:

Name: Jonathan D. Sheaffer Date Name: Juha O. Merimaa Date Date Name: Jason Wung Date Name: Martin E. Johnson Date Name: Peter A. Raffensperger Name: Joshua D. Atkins Date Name: Symeon Delikaris Manias Date Name: Mehrez Souden Date Name: Date Name: Name: Date Name: Date

is possessed by the undersigned. Each Inventor: Please Sign and Date Below: Name: Jonathan D. Sheaffer Date Name: Juha O. Merimaa Date Name: Jason Wung Date Name: Martin E. Johnson Date Name: Peter A. Raffensperger Date Name: Joshua D. Atkins Date Name: Symeon Delikaris Manias Date 02/2019 Name: Mehrez Souden Name: Date Name: Date Date Name: Name: Date