

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5758042

<b>SUBMISSION TYPE:</b>	CORRECTIVE ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	Corrective Assignment to correct the EXECUTION DATE OF MICHAEL FISCHER previously recorded on Reel 050565 Frame 0526. Assignor(s) hereby confirms the EXECUTION DATE OF MICHAEL FISCHER TO BE 10/25/2016.
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
CHRISTIAN BORSS	09/19/2016
CHRISTIAN ERTEL	09/26/2016
JOHANNES HILPERT	09/26/2016
ACHIM KUNTZ	09/26/2016
MICHAEL FISCHER	10/25/2016
FLORIAN SCHUH	09/26/2016
BERNHARD GRILL	10/20/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.
<b>Street Address:</b>	HANSASTRASSE 27C
<b>City:</b>	MUNICH
<b>State/Country:</b>	GERMANY
<b>Postal Code:</b>	80686
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16154502
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(206)359-9000
<i>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.</i>	
<b>Phone:</b>	2063598000
<b>Email:</b>	patentprocurement@perkinscoie.com
<b>Correspondent Name:</b>	PERKINS COIE LLP- PAO GENERAL
<b>Address Line 1:</b>	P.O. BOX 1247
<b>Address Line 2:</b>	PATENT PROCUREMENT
<b>Address Line 4:</b>	SEATTLE, WASHINGTON 98111-1247
<b>ATTORNEY DOCKET NUMBER:</b>	110971-9091.US03

<b>NAME OF SUBMITTER:</b>	SOOJIN LEE
<b>SIGNATURE:</b>	/Soojin Lee/
<b>DATE SIGNED:</b>	10/07/2019
<b>Total Attachments: 7</b> source=MARKEDASSIGNMENT-110971-9091-US03#page1.tif source=Assignment from parent#page1.tif source=Assignment from parent#page2.tif source=Assignment from parent#page3.tif source=Assignment from parent#page4.tif source=Assignment from parent#page5.tif source=Assignment from parent#page6.tif	

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5745388

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	CHRISTIAN BORSS	09/19/2016
	CHRISTIAN ERTEL	09/26/2016
	JOHANNES HILPERT	09/26/2016
	ACHIM KUNTZ	09/26/2016
	MICHAEL FISCHER <u>10/25/2016</u>	<del>09/26/2016</del>
	FLORIAN SCHUH	09/26/2016
	BERNHARD GRILL	10/20/2016
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.	
<b>Street Address:</b>	HANSASTRASSE 27C	
<b>City:</b>	MUNICH	
<b>State/Country:</b>	GERMANY	
<b>Postal Code:</b>	80686	
<b>PROPERTY NUMBERS Total: 1</b>		
<b>Property Type</b>	<b>Number</b>	
<b>Application Number:</b>	16154502	
<b>CORRESPONDENCE DATA</b>		
<b>Fax Number:</b>		
<i>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.</i>		
<b>Email:</b>	patentprocurement@perkinscoie.com	
<b>Correspondent Name:</b>	PERKINS COIE LLP - PAO GENERAL	
<b>Address Line 1:</b>	P.O. BOX 1247	
<b>Address Line 4:</b>	SEATTLE, WASHINGTON 98111-1247	
<b>ATTORNEY DOCKET NUMBER:</b>	110971-9091.US03	
<b>NAME OF SUBMITTER:</b>	KATE SMITH	
<b>SIGNATURE:</b>	/Kate Smith/	
<b>DATE SIGNED:</b>	09/30/2019	

**DECLARATION (37 C.F.R. 1.63) FOR UTILITY OR DESIGN PATENT APPLICATION  
USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT**

Title of Invention: APPARATUS AND METHOD FOR GENERATING A PLURALITY OF AUDIO  
CHANNELS

As a below named inventor, I hereby declare that:

This declaration is directed to the attached application, or (if following box is checked):

[X] United States application or PCT international application number 15/202,443 filed on July 5, 2016.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application, including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 C.F.R. Section 1.56.

Whereas, the undersigned inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application and further identified by the Attorney Docket Number provided above in the header of this document;

Whereas, Fraunhofer-Gesellschaft zur Foerderung der angewandten Forschung e.V., a corporation duly organized under and pursuant to the laws of the country of Germany having its principal place of business at Hansastrasse 27c, 80686 Munich, Germany, desires to acquire and each undersigned inventor desires to grant to Fraunhofer-Gesellschaft zur Foerderung der angewandten Forschung e.V., the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for one dollar (\$1.00) and good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor, hereinafter referred to as ASSIGNOR, hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred to Fraunhofer-Gesellschaft zur Foerderung der angewandten Forschung e.V., hereinafter referred to as ASSIGNEE, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to the Assignee, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by the Assignee, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned inventor agrees to execute, without charge to said Assignee but at the Assignee's expense, any and all documents and instruments and perform all lawful

acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in Assignee, its successors, legal representatives, and assigns, whenever requested by the Assignee, its successors, legal representatives, or assigns.

ASSIGNOR(S) grants the attorney of record the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Each undersigned inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to the Assignee and is unaware of any reason why they may not have the full and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned inventor also hereby grants the assignee, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent Application Number) which may be necessary or desirable for recordation of this Assignment.

This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

1) Legal Name of Inventor: Christian BORSS

Signature:  Date: 19.09.2016

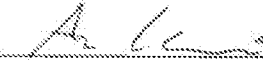
2) Legal Name of Inventor: Christian ERTEL

Signature:  Date: 26.09.2016

3) Legal Name of Inventor: Johannes HILPERT

Signature:  Date: 26.9.16

4) Legal Name of Inventor: Achim KUNTZ

Signature:  Date: 26.9.16

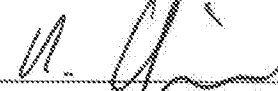
5) Legal Name of Inventor: Michael FISCHER

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

6) Legal Name of Inventor: Florian SCHUH

Signature:  Date: 26.08.16

7) Legal Name of Inventor: Bernhard GRILL

Signature:  Date: 10. OCTOBER 16

ATTORNEY DOCKET NUMBER: 110971-9091.US01 | FH150101PUS

**DECLARATION (37 C.F.R. 1.63) FOR UTILITY OR DESIGN PATENT APPLICATION  
USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT**

Title of Invention: APPARATUS AND METHOD FOR GENERATING A PLURALITY OF AUDIO  
CHANNELS

As a below named inventor, I hereby declare that:

This declaration is directed to the attached application, or (if following box is checked):

[X] United States application or PCT international application number 15/202,443 filed on July 5, 2016.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application, including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 C.F.R. Section 1.56.

Whereas, the undersigned inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application and further identified by the Attorney Docket Number provided above in the header of this document;

Whereas, **Fraunhofer-Gesellschaft zur Foerderung der angewandten Forschung e.V.**, a corporation duly organized under and pursuant to the laws of the country of Germany having its principal place of business at Hansastrasse 27c, 80686 Munich, Germany, desires to acquire and each undersigned inventor desires to grant to **Fraunhofer-Gesellschaft zur Foerderung der angewandten Forschung e.V.**, the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for one dollar (\$1.00) and good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor, hereinafter referred to as ASSIGNOR, hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred to **Fraunhofer-Gesellschaft zur Foerderung der angewandten Forschung e.V.**, hereinafter referred to as ASSIGNEE, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to the Assignee, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by the Assignee, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned inventor agrees to execute, without charge to said Assignee but at the Assignee's expense, any and all documents and instruments and perform all lawful

ATTORNEY DOCKET NUMBER: 110971-9091.US01 | FH150101PUS

acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in Assignee, its successors, legal representatives, and assigns, whenever requested by the Assignee, its successors, legal representatives, or assigns.

ASSIGNOR(S) grants the attorney of record the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Each undersigned inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to the Assignee and is unaware of any reason why they may not have the full and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned inventor also hereby grants the assignee, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent Application Number) which may be necessary or desirable for recordation of this Assignment.

This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

1) Legal Name of Inventor: Christian BORSS

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

2) Legal Name of Inventor: Christian ERTEL

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

3) Legal Name of Inventor: Johannes HILPERT

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

4) Legal Name of Inventor: Achim KUNTZ

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

5) Legal Name of Inventor: Michael FISCHER

Signature: Michael Fischer X Date: 25.10.2016 X



ATTORNEY DOCKET NUMBER: 110971-9091.US01 | FH150101PUS

6) Legal Name of Inventor: Florian SCHUH

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

7) Legal Name of Inventor: Bernhard GRILL

Signature: \_\_\_\_\_ Date: \_\_\_\_\_