

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4110912

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
STEWART PAUL TOOTILL	10/17/2016
KEVIN LINGLEY	10/14/2016
DAVID NIAL COGLAN	10/17/2016
MICHAL VINE	10/21/2016
LINDEN VONGSATHORN	10/17/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	MICROSOFT TECHNOLOGY LICENSING, LLC
<b>Street Address:</b>	ONE MICROSOFT WAY
<b>City:</b>	REDMOND
<b>State/Country:</b>	WASHINGTON
<b>Postal Code:</b>	98052
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15331651
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(503)595-5301
<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>	503-595-5300
<b>Email:</b>	kelly.mccarthy@klarquist.com
<b>Correspondent Name:</b>	CORY A. JONES, KLARQUIST SPARKMAN, LLP
<b>Address Line 1:</b>	121 SW SALMON STREET, SUITE 1600
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<b>Address Line 4:</b>	PORTLAND, OREGON 97204
<b>ATTORNEY DOCKET NUMBER:</b>	3382-97264-02
<b>NAME OF SUBMITTER:</b>	CORY A. JONES
<b>SIGNATURE:</b>	/Cory A. Jones/
<b>DATE SIGNED:</b>	10/24/2016
<b>Total Attachments: 10</b>	

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## PATENT ASSIGNMENT

I, Stewart Paul Tootill ("ASSIGNOR"), am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "ANALYZING CHANGES IN VOCAL POWER WITHIN MUSIC CONTENT USING FREQUENCY SPECTRUMS" ("APPLICATION"), which:

☒ will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S legal representatives, of Microsoft Technology Licensing, LLC, One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES) to insert here in parentheses (filed on October 21, 2016 and given Application No. 15/331,651 by the following Office: United States Patent and Trademark Office) this APPLICATION's Application No. filing date, and Office, when known;

☐ was filed on \_\_\_\_ and was given Application No. \_\_\_\_ by the following Office "United States Patent and Trademark Office";

Microsoft Technology Licensing, LLC, a Washington limited liability company, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest, including the right of priority, in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in whole or in part, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));


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Application No.	Filing Date	Office

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNOR, the ASSIGNOR hereby sells, assigns and transfers to

the ASSIGNEE, ASSIGNOR'S entire and exclusive rights, title and interest, including the right of priority, in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in whole or in part, in and for the United States, its territories, and all foreign countries (APPLICATION DERIVATIVES));

ASSIGNOR agrees to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

 _____ Inventor's Signature	<u>17th October 2016</u> _____ Date
<u>Stewart Paul Tootill</u> _____ Printed Name in English	_____ Printed Name in Native Language (if other than English)

## PATENT ASSIGNMENT

I, Kevin Lingley ("ASSIGNOR"), am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "ANALYZING CHANGES IN VOCAL POWER WITHIN MUSIC CONTENT USING FREQUENCY SPECTRUMS" ("APPLICATION"), which:

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	10/14/2016
Inventor's Signature	Date
Kevin Lingley	
Printed Name in English	Printed Name in Native Language (if other than English)

## PATENT ASSIGNMENT

I, David Niall Coghlan ("ASSIGNOR"), am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "ANALYZING CHANGES IN VOCAL POWER WITHIN MUSIC CONTENT USING FREQUENCY SPECTRUMS" ("APPLICATION"), which:

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<u>David Goghan</u>	<u>17/Oct/16</u>
Inventor's Signature	Date
<u>David Niall Coghlan</u>	<u></u>
Printed Name in English	Printed Name in Native Language (if other than English)



# PATENT ASSIGNMENT

I, Michal Vine ("ASSIGNOR"), am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "ANALYZING CHANGES IN VOCAL POWER WITHIN MUSIC CONTENT USING FREQUENCY SPECTRUMS" ("APPLICATION"), which:

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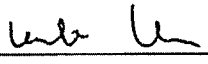
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<u></u>	<u>21 Oct 2016</u>
Inventor's Signature	Date
<u>Michal Vine</u>	<u>—</u>
Printed Name in English	Printed Name in Native Language (if other than English)

## PATENT ASSIGNMENT

I, Linden Vongsathorn ("ASSIGNOR"), am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "ANALYZING CHANGES IN VOCAL POWER WITHIN MUSIC CONTENT USING FREQUENCY SPECTRUMS" ("APPLICATION"), which:

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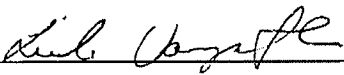
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	17 OCT 2016
Inventor's Signature	Date
Linden Vongsathorn	
Printed Name in English	Printed Name in Native Language (if other than English)