

<b>PATENT ASSIGNMENT COVER SHEET</b>
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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
David C. Bradley	03/23/2017
Jeremy Semko	03/21/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	KNUEDGE INCORPORATED
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<b>City:</b>	SAN DIEGO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	92121
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15463930
<b>CORRESPONDENCE DATA</b>	
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<b>ATTORNEY DOCKET NUMBER:</b>	41498-0072001
<b>NAME OF SUBMITTER:</b>	NANCY GRANT
<b>SIGNATURE:</b>	/Nancy Grant/
<b>DATE SIGNED:</b>	04/03/2017
<b>Total Attachments: 2</b>	
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source=41498-0072001SignedAssignment#page2.tif	

ASSIGNMENT

For valuable consideration, the receipt of which we acknowledge, and intending to be bound legally, we, DAVID C. BRADLEY and JEREMY SEMKO, each individually assign to KNUEDGE INCORPORATED, a corporation formed under the laws of Delaware and having a principal place of business at 10350 Science Center Drive, Suite 140, San Diego, California 92121, and its successors, transferees, and assignees (collectively the "Assignee"), all of our individual and joint right, title, and interest throughout the world in the subject matter (the "Subject Matter") of a patent application that names us as inventors, is titled "ESTIMATING PITCH OF HARMONIC SIGNALS," and was filed in the United States Patent and Trademark Office on March 20, 2017, as application 15/463,930 (the "Application"). We authorize the insertion of the filing date and application number above.

This Assignment assigns (a) the Application and all other applications that may be made for, and all patents, utility models, design registrations, and other rights of exclusion and inventors' certificates for, any of the Subject Matter (collectively the "Applications and Granted Rights") in every country or region, (b) the right to claim priority based on and the benefit of the filing date of any of the Applications and Granted Rights under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other applicable treaties or conventions, and (c) the right to pursue, collect, and retain in the Assignee's name or otherwise, damages and any other remedies arising from any past, present, or future infringement of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment.

We authorize the Assignee to apply for and pursue protection for any or all of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment in all countries, regions, and territories of the world, in our names or in the Assignee's name.

We represent and warrant that we have the right and power to make this Assignment and that we have not made and will not make any other assignment that conflicts with this Assignment.

We will communicate to the Assignee (or at the request of the Assignee to other parties) all known facts in any form relating to the Subject Matter, will execute and provide all oaths and declarations, statements, testimony, assignments, powers of attorney, applications, and

documents, and will perform all other lawful acts necessary or desirable to secure fully to the Assignee the rights, titles, and interests assigned by this Assignment.

[Signature]  
David C. Bradley Date: 3/23/17

Witnessed by:  
Signature: [Signature] Date: 3/23/17

Print Name: Daniel DeBate

Signature: [Signature] Date: 3/23/17

Print Name: Joel Evin

[Signature]  
Jeremy Semko Date: 3/21/17

Witnessed by:  
Signature: [Signature] Date: 3/21/17

Print Name: Daniel T. DeBate

Signature: [Signature] Date: 3/21/17

Print Name: DEVON PERRYMAN

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