

<b>PATENT ASSIGNMENT COVER SHEET</b>
--------------------------------------

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5179149

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
PETER MARDILOVICH	09/18/2018
SONG-WON KO	09/20/2018
SUSAN TROLIER-MCKINSTRY	09/18/2018
TRENT BORMAN	09/18/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	XAAR TECHNOLOGY LIMITED
<b>Street Address:</b>	SCIENCE PARK
<b>City:</b>	CAMBRIDGE CAMBRIDGESHIRE
<b>State/Country:</b>	UNITED KINGDOM
<b>Postal Code:</b>	CB4 0XR
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16085378
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(202)408-4400
<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>	202.216.5492
<b>Email:</b>	gonnella@finnegan.com
<b>Correspondent Name:</b>	XAAR/FINNEGAN
<b>Address Line 1:</b>	901 NEW YORK AVE., NW
<b>Address Line 4:</b>	WASHINGTON, D.C. 20001
<b>ATTORNEY DOCKET NUMBER:</b>	13234.0029-00000
<b>NAME OF SUBMITTER:</b>	AMY-MARIE GONNELLA
<b>SIGNATURE:</b>	/Amy-Marie Gonnella/
<b>DATE SIGNED:</b>	10/09/2018
<b>Total Attachments: 6</b>	
source=X860US--PCT_13234_0029-00000_-_Assignment__Worldwide_rights___signed_#page1.tif	
source=X860US--PCT_13234_0029-00000_-_Assignment__Worldwide_rights___signed_#page2.tif	
source=X860US--PCT_13234_0029-00000_-_Assignment__Worldwide_rights___signed_#page3.tif	

source=X860US--PCT\_13234\_0029-00000\_-\_Assignment\_\_Worldwide\_rights\_\_\_signed\_#page4.tif  
source=X860US--PCT\_13234\_0029-00000\_-\_Assignment\_\_Worldwide\_rights\_\_\_signed\_#page5.tif  
source=X860US--PCT\_13234\_0029-00000\_-\_Assignment\_\_Worldwide\_rights\_\_\_signed\_#page6.tif

### ASSIGNMENT

WHEREAS I/We are the below-named inventor(s) (hereinafter referred to as Assignor(s)) of an invention entitled:

#### A PIEZOELECTRIC THIN FILM ELEMENT

as disclosed and claimed in the applications identified below this paragraph:

Application Number	Country of Filing	Filing Date
16/065,378	US	September 14, 2018
PCT/GB2017/050896	PCT	March 14, 2017
16160658.7	EP	March 16, 2016
1604467.0	GB	March 16, 2016

WHEREAS, Xaar Technology Limited, a corporation of United Kingdom whose post office address is Science Park, Cambridge Cambridgeshire CB4 0XR, United Kingdom (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to all applications for patents on this invention in all countries throughout the world, including any PCT International Application and all national stage applications based thereon that may be filed, and all patents issued upon such applications in all countries throughout the world;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention, the above-referenced applications that disclose and claim this invention, any PCT International Application and all national stage applications based thereon that may be filed, any other applications for patents filed anywhere in the world that claim this invention, and all divisions, and continuations of any such application, and all patents which may be granted thereon, and all reissues thereof, and all rights to claim priority in any country on the basis of any such applications, and all extensions, renewals, and reissues thereof; and I/We hereby authorize and request that any official of any country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

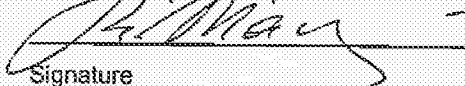
AND, I/WE covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

AND, I/WE authorize and request a patent practitioner of record in this application, to insert the filing date, country of filing, and application number of the above-referenced application(s) when known.

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

**ASSIGNOR (Inventor) 1**

  
\_\_\_\_\_  
Signature

Peter MARDLOVICH  
\_\_\_\_\_  
Print Name

18/09/18  
\_\_\_\_\_  
Execution Date

**ASSIGNOR (Inventor) 2**

\_\_\_\_\_  
Signature

Song-Won KO  
\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Execution Date

**ASSIGNOR (Inventor) 3**

\_\_\_\_\_  
Signature

Susan TROLIER-MCKINSTRY  
\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Execution Date

**ASSIGNOR (Inventor) 4**

\_\_\_\_\_  
Signature

Trent BORMAN  
\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Execution Date

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

ASSIGNOR (Inventor) 1


Signature

Peter MARDILOVICH

Print Name

Execution Date

ASSIGNOR (Inventor) 2

  
Signature

Song-Won KO

Print Name

Sep 20, 2018

Execution Date

ASSIGNOR (Inventor) 3

Signature

Susan TROUER-MCKINSTRY

Print Name

Execution Date

ASSIGNOR (Inventor) 4

Signature

Trent BORMAN

Print Name

Execution Date

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

**ASSIGNOR (Inventor) 1**

\_\_\_\_\_  
Signature

Peter MARDILOVICH

Print Name

\_\_\_\_\_  
Execution Date

**ASSIGNOR (Inventor) 2**

\_\_\_\_\_  
Signature

Song-Won KO

Print Name

\_\_\_\_\_  
Execution Date

**ASSIGNOR (Inventor) 3**

*Susan Troler McKinstry*  
\_\_\_\_\_

Signature

Susan TROLIER-MCKINSTRY

Print Name

9-18-2018

Execution Date

**ASSIGNOR (Inventor) 4**

\_\_\_\_\_  
Signature

Trent BORMAN

Print Name

\_\_\_\_\_  
Execution Date

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

ASSIGNOR (Inventor) 1

\_\_\_\_\_  
Signature

Peter MARDILOVICH

Print Name

\_\_\_\_\_  
Execution Date

ASSIGNOR (Inventor) 2

\_\_\_\_\_  
Signature

Song-Won KO

Print Name

\_\_\_\_\_  
Execution Date

ASSIGNOR (Inventor) 3


\_\_\_\_\_  
Signature

Susan TROQUIER-MCKINSTRY

Print Name

\_\_\_\_\_  
Execution Date

ASSIGNOR (Inventor) 4



Signature

Trent BORMAN

Print Name

September 19 2018

Execution Date

Assignee Name: Xaar Technology Limited

Signature:



Printed Name:

Gavin Clarke  
Director of IP & Legal

Corporate Title:

Date:

25 Sept 2018