

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4508186

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
<b>Name</b>		<b>Execution Date</b>
IMPAC MEDICAL SYSTEMS, INC.		07/17/2017
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	ELEKTA, INC.	
<b>Street Address:</b>	400 PERIMETER CENTER TERRACE	
<b>Internal Address:</b>	SUITE 50	
<b>City:</b>	ATLANTA	
<b>State/Country:</b>	GEORGIA	
<b>Postal Code:</b>	30346	
<b>PROPERTY NUMBERS Total: 31</b>		
<b>Property Type</b>	<b>Number</b>	
Application Number:	14308450	
Application Number:	14472317	
Application Number:	14474407	
Application Number:	14607654	
Application Number:	14881903	
Application Number:	14881939	
Application Number:	15248490	
Application Number:	15248628	
Application Number:	15385732	
Application Number:	15386673	
Application Number:	15387689	
Application Number:	15463253	
Application Number:	15485189	
Application Number:	15485204	
Application Number:	62384192	
Application Number:	62408676	
PCT Number:	US2012048938	
PCT Number:	IB2014061157	
PCT Number:	US2014013535	

PATENT

Property Type	Number
PCT Number:	US2014015952
PCT Number:	IB2015051383
PCT Number:	US2015045662
PCT Number:	US2015046011
PCT Number:	IB2015054440
PCT Number:	US2016056538
PCT Number:	US2016056635
PCT Number:	US2016014302
PCT Number:	US2016014258
PCT Number:	US2017015358
PCT Number:	US2016021867
PCT Number:	US2017013962

#### CORRESPONDENCE DATA

**Fax Number:** (202)408-4400

*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.*

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**ATTORNEY DOCKET NUMBER:** 12475.0999-00000

**NAME OF SUBMITTER:** ANNA MICHAUD

**SIGNATURE:** /Anna Michaud/

**DATE SIGNED:** 07/18/2017

#### Total Attachments: 5

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## ASSIGNMENT

WHEREAS IMPAC MEDICAL SYSTEMS, INC., a corporation of California whose post office address is 100 Mathilda Place Fifth Floor, Sunnyvale, California 94086 United States (hereinafter referred to as Assignor), is the assignee/owner of record for each of the applications identified in the below table:

Application No.	Country of Filing	Filing Date	Title
14/308,450	US	18-Jun-2014	SYSTEM AND METHOD FOR AUTOMATIC TREATMENT PLANNING
14/472,317	US	28-Aug-2014	DOSE RATE MODULATED STEREOTACTIC RADIO SURGERY
14/474,407	US	02-Sep-2014	SYSTEMS AND METHODS FOR SEGMENTING MEDICAL IMAGES BASED ON ANATOMICAL LANDMARK-BASED FEATURES
14/607,654	US	28-Jan-2015	THREE DIMENSIONAL LOCALIZATION AND TRACKING FOR ADAPTIVE RADIATION THERAPY
14/881,903	US	13-Oct-2015	PSEUDO-CT GENERATION FROM MR DATA USING A FEATURE REGRESSION MODEL
14/881,939	US	13-Oct-2015	PSEUDO-CT GENERATION FROM MR DATA USING TISSUE PARAMETER ESTIMATION
15/248,490	US	26-Aug-2016	IMAGE SEGMENTATION USING NEURAL NETWORK METHOD
15/248,628	US	26-Aug-2016	SYSTEMS AND METHODS FOR IMAGE SEGMENTATION USING CONVOLUTIONAL NEURAL NETWORK
15/385,732	US	20-Dec-2016	SYSTEMS AND METHODS FOR SEGMENTATION OF INTRA-PATIENT MEDICAL IMAGES
15/386,673	US	21-Dec-2016	ONLINE LEARNING ENHANCED ATLAS-BASED AUTO-SEGMENTATION
15/387,689	US	22-Dec-2016	THERAPY CONTROL USING MOTION PREDICTION BASED ON CYCLIC MOTION MODEL
15/463,253	US	20-Mar-2017	SYSTEM AND METHOD FOR AUTO-CONTOURING IN ADAPTIVE RADIOTHERAPY
15/485,189	US	11-Apr-2017	THREE DIMENSIONAL LOCALIZATION OF A MOVING TARGET FOR ADAPTIVE RADIATION THERAPY
15/485,204	US	11-Apr-2017	DOSE RATE MODULATED STEREOTACTIC RADIO SURGERY
62/384,192	US	07-Sep-2016	LEARNING MODELS OF RADIOTHERAPY TREATMENT PLANS TO PREDICT THERAPY DOSE DISTRIBUTIONS
62/408,676	US	14-Oct-2016	DEEP CONVOLUTIONAL NEURAL NETWORK SYSTEMS AND METHODS FOR SYNTHETIC IMAGE GENERATION
PCT/US2012/048938	PCT	31-July-2012	METHOD AND APPARATUS FOR CORRECTION OF ERRORS IN SURFACES
PCT/IB2014/061157	PCT	2-May-2014	METHOD AND APPARATUS FOR AUTOMATED DELINEATION OF STRUCTURE SHAPE FOR IMAGE GUIDED TREATMENT PLANNING
2014261044	Australia	2-May-2014	METHOD AND APPARATUS FOR AUTOMATED DELINEATION OF STRUCTURE SHAPE FOR IMAGE GUIDED TREATMENT PLANNING
2017200435	Australia	2-May-2014	METHOD AND APPARATUS FOR AUTOMATED DELINEATION OF STRUCTURE SHAPE FOR IMAGE GUIDED TREATMENT PLANNING
201480024415.0	China	2-May-2014	METHOD AND APPARATUS FOR AUTOMATED DELINEATION OF STRUCTURE SHAPE FOR IMAGE GUIDED TREATMENT PLANNING

Application No.	Country of Filing	Filing Date	Title
14730203.8	Europe	2-May-2014	METHOD AND APPARATUS FOR AUTOMATED DELINEATION OF STRUCTURE SHAPE FOR IMAGE GUIDED TREATMENT PLANNING
2016-511160 (Patent No. 5957629)	Japan	2-May-2014	METHOD AND APPARATUS FOR AUTOMATED DELINEATION OF STRUCTURE SHAPE FOR IMAGE GUIDED TREATMENT PLANNING
PCT/US2014/013535	PCT	29-Jan-2014	METHOD AND APPARATUS FOR GENERATING A DERIVED IMAGE USING IMAGES OF DIFFERENT TYPES
2014212517	Australia	29-Jan-2014	METHOD AND APPARATUS FOR GENERATING A DERIVED IMAGE USING IMAGES OF DIFFERENT TYPES
201480006111.1	China	29-Jan-2014	METHOD AND APPARATUS FOR GENERATING A DERIVED IMAGE USING IMAGES OF DIFFERENT TYPES
11 2014 000 611.4	Germany	29-Jan-2014	METHOD AND APPARATUS FOR GENERATING A DERIVED IMAGE USING IMAGES OF DIFFERENT TYPES
2015-555425 (Patent No. 6144781)	Japan	29-Jan-2014	METHOD AND APPARATUS FOR GENERATING A DERIVED IMAGE USING IMAGES OF DIFFERENT TYPES
1511617.1	United Kingdom	29-Jan-2014	METHOD AND APPARATUS FOR GENERATING A DERIVED IMAGE USING IMAGES OF DIFFERENT TYPES
PCT/US2014/015952	PCT	12-Feb-2014	METHOD AND APPARATUS FOR LEARNING-ENHANCED ATLAS-BASED AUTO-SEGMENTATION
2014221357	Australia	12-Feb-2014	METHOD AND APPARATUS FOR LEARNING-ENHANCED ATLAS-BASED AUTO-SEGMENTATION
2903158	Canada	12-Feb-2014	METHOD AND APPARATUS FOR LEARNING-ENHANCED ATLAS-BASED AUTO-SEGMENTATION
201480011383.0	China	12-Feb-2014	METHOD AND APPARATUS FOR LEARNING-ENHANCED ATLAS-BASED AUTO-SEGMENTATION
14708993.2	Europe	12-Feb-2014	METHOD AND APPARATUS FOR LEARNING-ENHANCED ATLAS-BASED AUTO-SEGMENTATION
2015-560195	Japan	12-Feb-2014	METHOD AND APPARATUS FOR LEARNING-ENHANCED ATLAS-BASED AUTO-SEGMENTATION
PCT/IB2015/051383	PCT	24-Feb-2015	SYSTEM AND METHOD FOR AUTO-CONTOURING IN ADAPTIVE RADIOTHERAPY
2015221826	Australia	24-Feb-2015	SYSTEM AND METHOD FOR AUTO-CONTOURING IN ADAPTIVE RADIOTHERAPY
201580022410.9	China	24-Feb-2015	SYSTEM AND METHOD FOR AUTO-CONTOURING IN ADAPTIVE RADIOTHERAPY
15736039.7	Europe	24-Feb-2015	SYSTEM AND METHOD FOR AUTO-CONTOURING IN ADAPTIVE RADIOTHERAPY
2016-554572	Japan	24-Feb-2015	SYSTEM AND METHOD FOR AUTO-CONTOURING IN ADAPTIVE RADIOTHERAPY
2016137791	Russia	24-Feb-2015	SYSTEM AND METHOD FOR AUTO-CONTOURING IN ADAPTIVE RADIOTHERAPY
PCT/US2015/045662	PCT	18-Aug-2015	DOSE RATE MODULATED STEREOTACTIC RADIO SURGERY
201580046224.9	China	18-Aug-2015	DOSE RATE MODULATED STEREOTACTIC RADIO SURGERY
15756519.3	Europe	18-Aug-2015	DOSE RATE MODULATED STEREOTACTIC RADIO SURGERY
PCT/US2015/046011	PCT	20-Aug-2015	SYSTEMS AND METHODS FOR SEGMENTING MEDICAL IMAGES BASED ON ANATOMICAL LANDMARK-BASED FEATURES
2015312327	Australia	20-Aug-2015	SYSTEMS AND METHODS FOR SEGMENTING MEDICAL IMAGES BASED ON ANATOMICAL LANDMARK-BASED FEATURES

Application No.	Country of Filing	Filing Date	Title
201580046996.2	China	20-Aug-2015	SYSTEMS AND METHODS FOR SEGMENTING MEDICAL IMAGES BASED ON ANATOMICAL LANDMARK-BASED FEATURES
15763677.0	Europe	20-Aug-2015	SYSTEMS AND METHODS FOR SEGMENTING MEDICAL IMAGES BASED ON ANATOMICAL LANDMARK-BASED FEATURES
2017-512347	Japan	20-Aug-2015	SYSTEMS AND METHODS FOR SEGMENTING MEDICAL IMAGES BASED ON ANATOMICAL LANDMARK-BASED FEATURES
2017110538	Russia	20-Aug-2015	SYSTEMS AND METHODS FOR SEGMENTING MEDICAL IMAGES BASED ON ANATOMICAL LANDMARK-BASED FEATURES
PCT/IB2015/054440	PCT	11-June-2015	SYSTEM AND METHOD FOR AUTOMATIC TREATMENT PLANNING
2015275750	Australia	11-June-2015	SYSTEM AND METHOD FOR AUTOMATIC TREATMENT PLANNING
201580032255.9	China	11-June-2015	SYSTEM AND METHOD FOR AUTOMATIC TREATMENT PLANNING
15731400.6	Europe	11-June-2015	SYSTEM AND METHOD FOR AUTOMATIC TREATMENT PLANNING
2016-574096	Japan	11-June-2015	SYSTEM AND METHOD FOR AUTOMATIC TREATMENT PLANNING
2017101161	Russia	11-June-2015	SYSTEM AND METHOD FOR AUTOMATIC TREATMENT PLANNING
PCT/US2016/056538	PCT	12-Oct-2016	PSEUDO-CT GENERATION FROM MR DATA USING A FEATURE REGRESSION MODEL
PCT/US2016/056635	PCT	12-Oct-2016	PSEUDO-CT GENERATION FROM MR DATA USING TISSUE PARAMETER ESTIMATION
PCT/US2016/014302	PCT	21-Jan-2016	THREE DIMENSIONAL LOCALIZATION OF A MOVING TARGET FOR ADAPTIVE RADIATION THERAPY
PCT/US2016/014258	PCT	21-Jan-2016	THREE DIMENSIONAL LOCALIZATION AND TRACKING FOR ADAPTIVE RADIATION THERAPY
PCT/US2017/015358	PCT	27-Jan-2017	THERAPY CONTROL USING MOTION PREDICTION BASED ON CYCLIC MOTION MODEL
PCT/US2016/021867	PCT	10-Mar-2016	ADAPTIVE TREATMENT MANAGEMENT SYSTEM WITH A WORKFLOW MANAGEMENT ENGINE
PCT/US2017/013962	PCT	18-Jan-2017	SYSTEMS AND METHODS FOR SEGMENTATION OF INTRA-PATIENT MEDICAL IMAGES

WHEREAS, ELEKTA, INC., a corporation of Georgia whose post office address is 400 Perimeter Center Terrace, Suite 50, Atlanta, Georgia 30346 United States (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest owned by the Assignor in and to any invention disclosed in the above-referenced applications and in and to all other applications and patents 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, Assignor, has sold, assigned, transferred, and set over, and does hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, its entire right, title, and interest in and to the above-referenced applications, any other 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 any invention disclosed in the above-referenced applications, 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 Assignor hereby authorizes and requests 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;

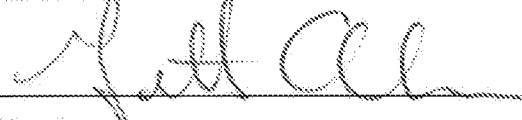
AND, Assignor covenant that it has the full right to convey the interest assigned by this Assignment, and Assignor has not executed and will not execute any agreement in conflict with this Assignment;

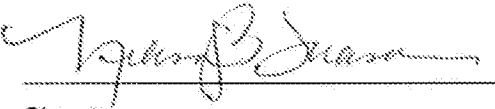
AND, Assignor further covenants and agrees that it will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to Assignor respecting the above-referenced applications (and any of the other applications or patents based thereon), and testify in any legal 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 the above-referenced applications (and any of the other applications or patents based thereon) 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 the above-referenced applications (and any of the other applications or patents based thereon) 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.

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

ASSIGNOR

WITNESSED BY

  
Signature

  
Signature

Garth Andrews  
Print Name

Melissa B. Fraser  
Print Name

President and SVP PMO/TOG  
Title at IMPAC MEDICAL SYSTEMS, INC.

17 July 2017  
Execution Date

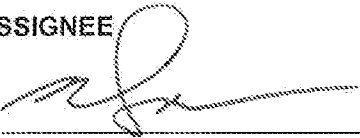
17 July 2017  
Execution Date

Sunnyvale, CA, USA  
Place of Execution

Sunnyvale, CA USA  
Place of Execution

ASSIGNEE

WITNESSED BY



Signature

Michael J. Hartman

Print Name

Corporate Secretary and SVP Legal Affairs

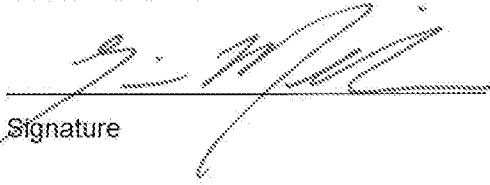
Title at ELEKTA, INC.

July 17<sup>th</sup> 2017

Execution Date

Atlanta, GA, USA

Place of Execution



Signature

Erin Melville

Print Name

July 17<sup>th</sup> 2017

Execution Date

Atlanta, GA, USA

Place of Execution