

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT3132031

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
WESTIN MICHAEL HILL	11/25/2014
MATTHEW ROY JOHNSON	11/24/2014
TARA LEE SCHMIDT BOETTCHER	11/26/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	MASSACHUSETTS INSTITUTE OF TECHNOLOGY
<b>Street Address:</b>	77 MASSACHUSETTS AVENUE
<b>City:</b>	CAMBRIDGE
<b>State/Country:</b>	MASSACHUSETTS
<b>Postal Code:</b>	02139
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14550436
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(781)644-6137
<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>	6179162658
<b>Email:</b>	patents@stratpat.com
<b>Correspondent Name:</b>	STRATEGIC PATENTS P.C.
<b>Address Line 1:</b>	P.O.BOX 920629
<b>Address Line 4:</b>	NEEDHAM, MASSACHUSETTS 02492
<b>ATTORNEY DOCKET NUMBER:</b>	MITE-0013-P01_MIT
<b>NAME OF SUBMITTER:</b>	ROBERT A. MAZZARESE
<b>SIGNATURE:</b>	/Robert Mazzaresse/
<b>DATE SIGNED:</b>	12/04/2014
<b>Total Attachments: 12</b>	
source=MITE-0013-P01_112414_Executed_DeclAsssg_Johnson#page1.tif	
source=MITE-0013-P01_112414_Executed_DeclAsssg_Johnson#page2.tif	
source=MITE-0013-P01_112414_Executed_DeclAsssg_Johnson#page3.tif	
source=MITE-0013-P01_112414_Executed_DeclAsssg_Johnson#page4.tif	
source=MITE-0013-P01_112514_Executed_DeclAsssg_Hill#page1.tif	
<b>PATENT</b>	

source=MITE-0013-P01\_112514\_Executed\_DeclAssg\_Hill#page2.tif  
source=MITE-0013-P01\_112514\_Executed\_DeclAssg\_Hill#page3.tif  
source=MITE-0013-P01\_112514\_Executed\_DeclAssg\_Hill#page4.tif  
source=MITE-0013-P01\_112614\_Executed\_DeclAssg\_Boettcher#page1.tif  
source=MITE-0013-P01\_112614\_Executed\_DeclAssg\_Boettcher#page2.tif  
source=MITE-0013-P01\_112614\_Executed\_DeclAssg\_Boettcher#page3.tif  
source=MITE-0013-P01\_112614\_Executed\_DeclAssg\_Boettcher#page4.tif

**United States Patent Application**  
**COMBINED DECLARATION AND ASSIGNMENT**

Title of Invention:  
**STEERING TECHNIQUES FOR SURGICAL INSTRUMENTS**

**DECLARATION**

As a below named and undersigned inventor, I hereby declare that:

(a) This declaration is directed to United States application or PCT international application number 14/550,436 filed on November 21, 2014.

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

(c) 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, and I acknowledge the duty to disclose all information which is material to the patentability of this application as defined in 37 C.F.R. § 1.56 (attached hereto).

## ASSIGNMENT

WHEREAS, the undersigned inventor ("Inventor") has developed certain inventions ("Inventions") described in the above U.S. patent application, and has full right to convey his or her entire interest, both legal and equitable, in and to said Inventions free from all prior assignments, agreements, licenses, mortgages, security interests, or other encumbrances whatsoever; and

WHEREAS, Massachusetts Institute of Technology ("ASSIGNEE"), an entity organized and existing under the laws of the state of Massachusetts, and having a place of business at 77 Massachusetts Avenue, Cambridge, MA, 02139, is desirous of acquiring the entire right, title, and interest in and to the Inventions and any and all patents to be obtained therefore;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by the Inventor, the Inventor hereby sells, assigns and transfers unto the ASSIGNEE, its successors and assigns, his or her entire right, title and interest in and to the Inventions as described in the above application and all applications resulting therefrom, including any and all conversions, divisions, continuations, continuations-in-part, substitute applications, and reissues or extensions thereof; and all resulting patents in any jurisdiction worldwide; along with all rights of priority and rights to sue for past infringement;

AND the Inventor hereby authorizes and requests the issuing authority to issue any and all patents issuing from any of the forgoing to the ASSIGNEE or its successors and assigns;

AND the Inventor agrees that ASSIGNEE's counsel, Strategic Patents, P.C. having Patent Office Customer Number 43520, shall hereinafter act on behalf of the ASSIGNEE with respect to the Inventions;

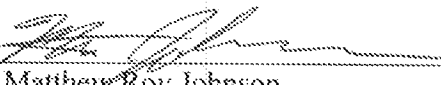
AND the Inventor further agrees, without any further payment or compensation by the ASSIGNEE or its successors and assigns, to communicate to the ASSIGNEE, its representatives or agents or its successors and assigns, any facts relating to the Inventions including evidence for interference purposes or for other legal proceedings whenever requested; to testify in any interference or other legal proceedings, whenever requested; to execute and deliver, on request, all lawful papers required to make any of the foregoing provisions effective; and to generally do everything possible to aid the ASSIGNEE, its successors or assigns and nominees to secure, obtain and enforce proper patent protection for the Inventions in this or any foreign country.


The Inventor hereby authorizes the attorneys and agents associated with Patent Office Customer Number 43520 to insert hereon any further information necessary or desirable for recordation of this document.

I accept and agree to the terms of the ASSIGNMENT above.

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

Full Legal Name of inventor: Matthew Roy Johnson  
Residence: Somerville, MA

Signature:  Date: 11/24/2014  
Matthew Roy Johnson

Witness Signature: 

Print Witness Name: CHRIS RIESS

Address: 194 Cambridge Tpk  
Concord, MA 01742

Witness Signature: 

Print Witness Name: Josh Erling

Address: 71 Waltham St  
Maynard MA 01754

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) Prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) The closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a *prima facie* case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
  - (i) Opposing an argument of unpatentability relied on by the Office, or
  - (ii) Asserting an argument of patentability.

A *prima facie* case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, the applicant, an assignee, or anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

(e) In any continuation-in-part application, the duty under this section includes the duty to disclose to the Office all information known to the person to be material to patentability, as defined in paragraph (b) of this section, which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

**United States Patent Application**  
**COMBINED DECLARATION AND ASSIGNMENT**

Title of Invention:  
STEERING TECHNIQUES FOR SURGICAL INSTRUMENTS

**DECLARATION**

As a below named and undersigned inventor, I hereby declare that:

(a) This declaration is directed to United States application or PCT international application number 14/550,436 filed on November 21, 2014.

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

(c) 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, and I acknowledge the duty to disclose all information which is material to the patentability of this application as defined in 37 C.F.R. § 1.56 (attached hereto).

## ASSIGNMENT

WHEREAS, the undersigned inventor ("Inventor") has developed certain inventions ("Inventions") described in the above U.S. patent application, and has full right to convey his or her entire interest, both legal and equitable, in and to said Inventions free from all prior assignments, agreements, licenses, mortgages, security interests, or other encumbrances whatsoever; and

WHEREAS, Massachusetts Institute of Technology ("ASSIGNEE"), an entity organized and existing under the laws of the state of Massachusetts, and having a place of business at 77 Massachusetts Avenue, Cambridge, MA, 02139, is desirous of acquiring the entire right, title, and interest in and to the Inventions and any and all patents to be obtained therefore;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by the Inventor, the Inventor hereby sells, assigns and transfers unto the ASSIGNEE, its successors and assigns, his or her entire right, title and interest in and to the Inventions as described in the above application and all applications resulting therefrom, including any and all conversions, divisions, continuations, continuations-in-part, substitute applications, and reissues or extensions thereof; and all resulting patents in any jurisdiction worldwide; along with all rights of priority and rights to sue for past infringement;

AND the Inventor hereby authorizes and requests the issuing authority to issue any and all patents issuing from any of the forgoing to the ASSIGNEE or its successors and assigns;

AND the Inventor agrees that ASSIGNEE's counsel, Strategic Patents, P.C. having Patent Office Customer Number 43520, shall hereinafter act on behalf of the ASSIGNEE with respect to the Inventions;

AND the Inventor further agrees, without any further payment or compensation by the ASSIGNEE or its successors and assigns, to communicate to the ASSIGNEE, its representatives or agents or its successors and assigns, any facts relating to the Inventions including evidence for interference purposes or for other legal proceedings whenever requested; to testify in any interference or other legal proceedings, whenever requested; to execute and deliver, on request, all lawful papers required to make any of the foregoing provisions effective; and to generally do everything possible to aid the ASSIGNEE, its successors or assigns and nominees to secure, obtain and enforce proper patent protection for the Inventions in this or any foreign country.

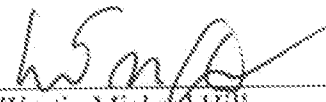
The Inventor hereby authorizes the attorneys and agents associated with Patent Office Customer Number 43520 to insert hereon any further information necessary or desirable for recordation of this document.

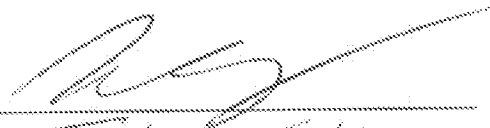


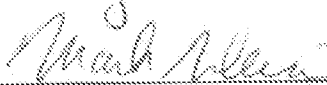
I accept and agree to the terms of the ASSIGNMENT above.

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

Full Legal Name of inventor: Westin Michael Hill  
Residence: Cambridge, MA

Signature:  Date: 11/25/2014  
Westin Michael Hill

Witness Signature:   
Print Witness Name: Josh Erling  
Address: 71 Walker St  
Maynard MA 01754

Witness Signature:   
Print Witness Name: Mark Weiner  
Address: 3 Carriage Dr  
Lexington MA 02420

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) Prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) The closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a *prima facie* case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
  - (i) Opposing an argument of unpatentability relied on by the Office, or
  - (ii) Asserting an argument of patentability.

A *prima facie* case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, the applicant, an assignee, or anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

(e) In any continuation-in-part application, the duty under this section includes the duty to disclose to the Office all information known to the person to be material to patentability, as defined in paragraph (b) of this section, which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

# **United States Patent Application**

## **COMBINED DECLARATION AND ASSIGNMENT**

**Title of Invention:**  
**STEERING TECHNIQUES FOR SURGICAL INSTRUMENTS**

### **DECLARATION**

As a below named and undersigned inventor, I hereby declare that:

(a) This declaration is directed to United States application or PCT international application number 14/550,436 filed on November 21, 2014.

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

(c) 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, and I acknowledge the duty to disclose all information which is material to the patentability of this application as defined in 37 C.F.R. § 1.56 (attached hereto).

## ASSIGNMENT

WHEREAS, the undersigned inventor (“Inventor”) has developed certain inventions (“Inventions”) described in the above U.S. patent application, and has full right to convey his or her entire interest, both legal and equitable, in and to said Inventions free from all prior assignments, agreements, licenses, mortgages, security interests, or other encumbrances whatsoever; and

WHEREAS, Massachusetts Institute of Technology (“ASSIGNEE”), an entity organized and existing under the laws of the state of Massachusetts, and having a place of business at 77 Massachusetts Avenue, Cambridge, MA, 02139, is desirous of acquiring the entire right, title, and interest in and to the Inventions and any and all patents to be obtained therefore;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by the Inventor, the Inventor hereby sells, assigns and transfers unto the ASSIGNEE, its successors and assigns, his or her entire right, title and interest in and to the Inventions as described in the above application and all applications resulting therefrom, including any and all conversions, divisions, continuations, continuations-in-part, substitute applications, and reissues or extensions thereof; and all resulting patents in any jurisdiction worldwide; along with all rights of priority and rights to sue for past infringement;

AND the Inventor hereby authorizes and requests the issuing authority to issue any and all patents issuing from any of the forgoing to the ASSIGNEE or its successors and assigns;

AND the Inventor agrees that ASSIGNEE’s counsel, Strategic Patents, P.C. having Patent Office Customer Number 43520, shall hereinafter act on behalf of the ASSIGNEE with respect to the Inventions;

AND the Inventor further agrees, without any further payment or compensation by the ASSIGNEE or its successors and assigns, to communicate to the ASSIGNEE, its representatives or agents or its successors and assigns, any facts relating to the Inventions including evidence for interference purposes or for other legal proceedings whenever requested; to testify in any interference or other legal proceedings, whenever requested; to execute and deliver, on request, all lawful papers required to make any of the foregoing provisions effective; and to generally do everything possible to aid the ASSIGNEE, its successors or assigns and nominees to secure, obtain and enforce proper patent protection for the Inventions in this or any foreign country.

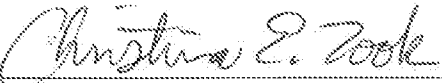
The Inventor hereby authorizes the attorneys and agents associated with Patent Office Customer Number 43520 to insert hereon any further information necessary or desirable for recordation of this document.

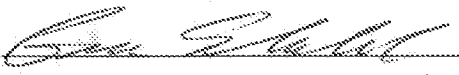
I accept and agree to the terms of the ASSIGNMENT above.

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

Full Legal Name of inventor: Tara Lee Schmidt Boettcher  
Residence: Chelmsford, MA

Signature:  Date: 11-26-14  
Tara Lee Schmidt Boettcher

Witness Signature:   
Print Witness Name: Christina E. Zook  
Address: 177 Catamount Rd  
Tewksbury, MA 01876

Witness Signature:   
Print Witness Name: Eric Schwoebel  
Address: 1 Thornfen Dr  
Burlington MA 0003

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) Prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) The closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a *prima facie* case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
  - (i) Opposing an argument of unpatentability relied on by the Office, or
  - (ii) Asserting an argument of patentability.

A *prima facie* case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, the applicant, an assignee, or anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

(e) In any continuation-in-part application, the duty under this section includes the duty to disclose to the Office all information known to the person to be material to patentability, as defined in paragraph (b) of this section, which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.