## 505061226 08/24/2018

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5107981

| SUBMISSION TYPE:<br>NATURE OF CONVEYANCE:   |  | NEW ASSIGNMENT   | NEW ASSIGNMENT<br>ASSIGNMENT |  |
|---|--|--|------------------------------|--|
|   |  | ASSIGNMENT   |                              |  |
| CONVEYING PARTY   | DATA   |  |                              |  |
|   |  | Name   | Execution Date               |  |
| VAHID SOTOUDEH  |  |  | 10/14/2009                   |  |
| RECEIVING PARTY D   | ΑΤΑ  |  |                              |  |
| Name:   | INTELL   | INTELLIGENT FIBER OPTIC SYSTEMS CORPORATION  |                              |  |
| Street Address:   | 2363 C   | 2363 CALLE DEL MUNDO   |                              |  |
| City:   | SANTA  | SANTA CLARA  |                              |  |
| State/Country:  | CALIFO   | CALIFORNIA   |                              |  |
| Postal Code:  | 95054  |  |                              |  |
| PROPERTY NUMBER   | S Total: 1   |  |                              |  |
| Property Type   |  | Number   | ]                            |  |
|   |  | 14147486   |                              |  |
|   | I  |  | ]                            |  |
| CORRESPONDENCE  | DATA   |  |                              |  |
| Fax Number: (650  |  | (650)494-3835  |                              |  |
|   |  | ) the e-mail address first; if that is uns<br>I; if that is unsuccessful, it will be sen   |                              |  |
| Phone:  | •  | 6506195270   | it via 05 iviali.            |  |
|   |  | jay@file-ee-patents.com  |                              |  |
| Correspondent Name  | :  | JAY A. CHESAVAGE   |                              |  |
| Address Line 1:   |  | 3833 MIDDLEFIELD RD.   |                              |  |
| Address Line 4:   |  | PALO ALTO, CALIFORNIA 94303  |                              |  |
| ATTORNEY DOCKET NUMBER:   |  |  |                              |  |
| ATTORNEY DOCKET   | NUMBER:  | IFOS_STANFORD_NEEDLE_DI  | /                            |  |
|   |  | IFOS_STANFORD_NEEDLE_DIV<br>JAY A. CHESAVAGE   | /                            |  |
| NAME OF SUBMITTER   |  |  | /                            |  |
| ATTORNEY DOCKET<br>NAME OF SUBMITTEF<br>SIGNATURE:<br>DATE SIGNED:  |  | JAY A. CHESAVAGE   | /                            |  |
| NAME OF SUBMITTEF<br>SIGNATURE:<br>DATE SIGNED:   |  | JAY A. CHESAVAGE<br>/JAY A. CHESAVAGE/   | /                            |  |
| NAME OF SUBMITTEF<br>SIGNATURE:<br>DATE SIGNED:<br>Total Attachments: 8   | ł:   | JAY A. CHESAVAGE<br>/JAY A. CHESAVAGE/   | /                            |  |
| NAME OF SUBMITTEF<br>SIGNATURE:<br>DATE SIGNED:<br>Total Attachments: 8<br>source=IFOS_Stanford_<br>source=IFOS_Stanford_   | assn_ann_<br>_assn_ann                                   | JAY A. CHESAVAGE     /JAY A. CHESAVAGE/     08/24/2018     0_fm_12_562_855#page1.tif     0_fm_12_562_855#page2.tif                               | /                            |  |
| NAME OF SUBMITTER<br>SIGNATURE:<br>DATE SIGNED:<br>Total Attachments: 8<br>source=IFOS_Stanford_<br>source=IFOS_Stanford_<br>source=IFOS_Stanford_                          | assn_ann<br>_assn_ann<br>_assn_ann                       | JAY A. CHESAVAGE     /JAY A. CHESAVAGE/     08/24/2018     o_fm_12_562_855#page1.tif     o_fm_12_562_855#page2.tif     o_fm_12_562_855#page3.tif | /                            |  |
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PATENT REEL: 046689 FRAME: 0646

## ASSIGNMENT UNDER 37 CFR 3.31

Whereas, the undersigned

Yong-Lae Park
Richard James Black
Behzad Moslehi
Mark Cutkosky
Santhi Elayaperumal
Bruce Daniel
Alan Yeung
Vahid Sotoudeh

(hereinafter termed "Inventor"), resident of

- 1) Stanford, CA County of Santa Clara State of California
- 2) Menlo Park, CA County of San Mateo State of California
- 3) Los Altos, CA County of Santa Clara State of California
- 4) Palo Alto, CA County of Santa Clara State of California
- 5) Stanford, CA County of Santa Clara State of California
- 6) Stanford, CA County of Santa Clara State of California
- 7) Stanford, CA County of Santa Clara State of California
- Los Altos, CA County of Santa Clara State of California

Has invented certain new and useful improvements in

"Steerable Shape Sensing Biopsy Needle and Catheter"

s/n 14/147,486 (div of 12/562,855)

and has executed concurrently herewith an application for a United States patent disclosing and identifying the invention; and

PATENT REEL: 046689 FRAME: 0647

÷.,.

WHEREAS, "Intelligent Fiber Optic Systems Corporation", a corporation of the state of California, having a place of business at

2363 Calle Del Mundo Santa Clara, Ca. 95054

(hereinafter termed "Assignee"), is desirous of acquiring the entire right, title, and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered by said inventor (all collectively hereinafter termed "said invention"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries.

NOW THEREFORE, in consideration of good and valuable consideration acknowledged by said Inventor to have been received in full from said Assignee:

1. Said inventor does hereby sell, assign, transfer and convey unto said Assignee, the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply for foreign patents on said invention pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all patents granted on said invention in the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a division, substitution, or continuation of any of said applications; and (d) in and to each and every reissue or extension of any of said patents.

2. Said Inventor hereby jointly and severally covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest herein conveyed in the United States and foreign countries. Such cooperation by said Inventor shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing, or additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any of said patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Inventor in providing such cooperation shall be paid for by said Assignee.

3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representative, and shall be binding upon said Inventor, their respective heirs, legal representatives and assigns.

4. Said Inventor hereby jointly and severally warrants and represents that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

15th day of October, 2009 (1) Jonghful (Inventor) State of <u>CALIFORN</u> in YONG-LAE PARK

County of SANTA CLARA

On this <u>15</u> day of <u>6CTOBL2</u>, in the year <u>200</u> **F** before me <u>William F. BROWNER</u> the undersigned Notary Public, personally appeared

YONG LAE PARK (1)

Proved to me on the basis of satisfactory evidence to be the person/s whose name/s is/are subscribed to the within instrument and acknowledged to me that he executed the same in his/her/their authorized capacity and that by his signature on the instrument the person/s or the entity upon behalf of which the person acted, executed the instrument.

I certify under penalty of perjury under the laws of California that the foregoing papargraph is true and correct. Witness my hand and official seal.



(Notary Public)

IN WITNESS WHEREOF, the said inventor has executed and delivered this instrument to said Assignee this

14<sup>Tir</sup> day of <u>CCTOBER</u>, 2009 (2) <u>RICHARD</u> JAMES BLACK (Inventor)

State of CALIFORNA

County of SANTA CLARA

On this  $\frac{14}{1000}$  day of  $\underline{BCTOBER}$ , in the year  $\underline{2009}$ , before me  $\underline{WIIIAMF}$ ,  $\underline{BROWER}$  the undersigned Notary Public, personally appeared

RICHARD JAMES BLACK (2)

Proved to me on the basis of satisfactory evidence to be the person/s whose name/s is/are subscribed to the within instrument and acknowledged to me that he executed the same in his/her/their authorized capacity and that by his signature on the instrument the person/s or the entity upon behalf of which the person acted, executed the instrument.

I certify under penalty of perjury under the laws of California that the foregoing papargraph is true and correct. Witness my hand and official seal.



Assignment under 37 CFR 3.31

(Notary Public)



14th day of October 2009 (3) Bebjerd Molel ' State of CALIFORNIA Behzad Mosleh,

County of SANTA CLARA

On this  $\frac{14}{14}$  day of OCTOBER, in the year 2009, before me  $\frac{1114}{114}$ ,  $\frac{14}{114}$ ,  $\frac{14$ 

BENZAD MOSLEHI (3)

Proved to me on the basis of satisfactory evidence to be the person/s whose name/s is/are subscribed to the within instrument and acknowledged to me that he executed the same in his/her/their authorized capacity and that by his signature on the instrument the person/s or the entity upon behalf of which the person acted, executed the instrument.

I certify under penalty of perjury under the laws of California that the foregoing papargraph is true and correct. Witness my hand and official seal.

(Notary Public)



(4) <u>(cha Mark R Cutkosky</u> State of <u>CALIFORNIA</u> MARK R CUTKOSKY

County of SANTA CLARA

On this <u>15</u> day of <u>OCTOBER</u>, in the year <u>2009</u>, before me <u>William F. BROWWER</u> the undersigned Notary Public, personally appeared

(4) MARK CUTRESKY

Proved to me on the basis of satisfactory evidence to be the person/s whose name/s is/are subscribed to the within instrument and acknowledged to me that he executed the same in his/her/their authorized capacity and that by his signature on the instrument the person/s or the entity upon behalf of which the person acted, executed the instrument.

I certify under penalty of perjury under the laws of California that the foregoing papargraph is true and correct. Witness my hand and official seal.



(Notary Public)

IN WITNESS WHEREOF, the said inventor has executed and delivered this instrument to said Assignee this

Br day of October, 2009 (5) <u>Spale den</u> State of CALIFORNIA Santhi Elayaperumal

County of SANTA CLARD

On this 15 day of OCTOBER, in the year 2009, before me Uijlian F. BROWNER, the undersigned Notary Public, personally appeared

## (5) SANTHI ELAYAPERUMAL

Proved to me on the basis of satisfactory evidence to be the person/s whose name/s is/are subscribed to the within instrument and acknowledged to me that he executed the same in his/her/their authorized capacity and that by his signature on the instrument the person/s or the entity upon behalf of which the person acted, executed the instrument.

I certify under penalty of perjury under the laws of California that the foregoing papargraph is true and correct. Witness my hand and official seal. (Notary Public)



Assignment under 37 CFR 3.31

5

PATENT REEL: 046689 FRAME: 0651

14 day of October, 2009 B-6 E (6) BRUCE L. Daniel (Inventor) State of CARLIFORNIA

County of SANTA CLARA

On this  $\frac{14}{2009}$  day of  $\underline{OCTOBER}$ , in the year  $\underline{2009}$ , before me the undersigned Notary Public, ly appeared personally appeared

(6) BRUCE L. DANIEL

Proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity and that by his signature on the instrument the person or the entity upon behalf of which the person acted, executed the instrument.

I certify under penalty of perjury under the laws of California that the foregoing papargraph is true and correct. Witness my hand and official seal.

William Former (Notary Public)



15 day of Oct , 200 (Inventor) ALAN YEUNG (7)State of CALIFORNIA County of SANTACLARA

On this 15 day of 3creBER, in the year 2009, before me  $N_1/1AN_F$ , BROWNER the undersigned Notary Public, personally appeared

ALAN YENNG (7)

Proved to me on the basis of satisfactory evidence to be the person/s whose name/s is/are subscribed to the within instrument and acknowledged to me that he executed the same in his/her/their authorized capacity and that by his signature on the instrument the person/s or the entity upon behalf of which the person acted, executed the instrument.

I certify under penalty of perjury under the laws of California that the foregoing papargraph is true and correct. Witness my hand and official seal.

(Notary Public)



7 PATENT REEL: 046689 FRAME: 0653

14 day of OCT, 2009 (8) Vahid Sotoude (Inventor) State of <u>California</u>

County of Santa Claron

On this  $\underline{19}$  day of  $\underline{0070} B \in \mathcal{R}$ , in the year  $\underline{2009}$ , before me  $\underline{111} \text{ arm F. BROWER}$  the undersigned Notary Public, personally appeared

NAHID SOTOUDEH (8)

Proved to me on the basis of satisfactory evidence to be the person/s whose name/s is/are subscribed to the within instrument and acknowledged to me that he executed the same in his/her/their authorized capacity and that by his signature on the instrument the person/s or the entity upon behalf of which the person acted, executed the instrument.

I certify under penalty of perjury under the laws of California that the foregoing papargraph is true and correct. Witness my hand and official seal.

William J Bonner (Notary Public)



Assignment under 37 CFR 3.31

**RECORDED: 08/24/2018**