504633448 11/08/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4680166

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------|----------------|
| TAO LUO | 11/12/2013 |
| KANGYING CAI | 11/12/2013 |
| JIANG TIAN | 11/15/2013 |

RECEIVING PARTY DATA

| Name: | THOMSON LICENSING |
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| City: | ISSY-LES-MOULINEAUX |
| State/Country: | FRANCE |
| Postal Code: | 92130 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 15032615 |

CORRESPONDENCE DATA

Fax Number:

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.

Email: jennifer@tb-iplaw.com

Correspondent Name: TUTUNJIAN & BITETTO, P.C. Address Line 1: 401 BROADHOLLOW RD. MELVILLE, NEW YORK 11747

| ATTORNEY DOCKET NUMBER: | PA130028 |
|-------------------------|---------------------|
| NAME OF SUBMITTER: | JOHN G. TUTUNJIAN |
| SIGNATURE: | /John G. Tutunjian/ |
| DATE SIGNED: | 11/08/2017 |

Total Attachments: 3

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PATENT 504633448 REEL: 044074 FRAME: 0580

As a below named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled

METHOD AND DEVICE FOR CONSTRUCTING GRAPH REPRESENTATION FOR A 3D OBJECT

the specification of which was filed

as Application Serial No.

and was amended on

or, if not identified here by filling date and serial number, is attached hereto.

PCT/CN2013/086075

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

I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information 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.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment of not more than five (5) years, or both, under 18 USC 1001.

ASSIGNMENT AND AGREEMENT IN AN APPLICATION FOR LETTERS PATENT

For valuable consideration received, I hereby sell, assign and transfer to Thomson Licensing, a corporation duly organized and existing under the laws of the country of France, its successors, and assigns my entire right, title and interest, for all countries in and to said inventions, and all the rights and privileges under any and all Letters Patent that may be granted therefor, and any divisions, continuations, reissues and extensions thereof.

agree that, when requested, I will, without charge to said corporation but at its expense, sign all papers, take all rightful oaths, make all rightful declarations and do all acts which may be necessary, desirable or convenient for securing and maintaining patents or other forms of protection for said inventions in any and all countries and for vesting title thereto in said corporation, its successors, assigns or nominees.

I agree that I will communicate to said corporation or its representatives any facts known to me respecting said inventions and when requested by said corporation and at its expense will testify in any legal proceedings, and generally do everything possible to aid said corporation, its successors, assigns and legal representatives or nominees, to obtain or enforce proper protection for said inventions in any and all countries.

authorize and empower sald corporation, its successors, assigns or nominees, to make application for patent or other form of protection for said inventions in its or their own name, or in my/our name, in any and all countries and to invoke and claim for any application for patent or other form of protection for said inventions filed by it or them, the benefit of the right of priority provided by the international Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it, and to invoke and claim such right of priority without further written or oral authorization from me.

I hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document which may be required in any country for any purpose and more particularly in proof of the right of the said corporation or its successors, assigns or nominees to apply for patent or other proper protection for said inventions, and to claim the aforesaid benefits of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it.

I coveriant with Thomson Licensing, its successors, assigns, legal representatives, and nominees, that to the best of my knowledge the right, title and interest herein conveyed by me are free and clear of any encumbrance, and that I have full right to convey the same as herein expressed.

| Signed at | Ronnes, France | Date Nov. 12, 2013 | | | |
|-------------------------|--|--------------------------------------|--|--|--|
| inventor Name | LUO Tao | Tao Lus | | | |
| | (Type or Print) | (Signature in Full - No Initials) | | | |
| Post Office Address | 8F, Building A TECHNOLOGY FORTUN District, 100192 BEIJING - CHINA | IE CENTER, 8 Xue Qing Road, Hai Dian | | | |
| 1° Witness | GAURAY SHARMA | Compe | | | |
| | (Type or Print) | (Signature in Full – No Initials) | | | |
| 2 nd Witness | Sushena Shi | Lughar Av | | | |
| | (Type or Print) | (Signature in Full - No Initials) | | | |

PATENT

REEL: 044074 FRAME: 0581

As a below named inventor, I hereby declare that: I believe I am the original inventor or an original joint inventor of the subject matter which is claimed and for which is patent is sought on the invention entitled

METHOD AND DEVICE FOR CONSTRUCTING GRAPH REPRESENTATION FOR A 3D OBJECT
The specification of which was filed on October 28, 2013 as Application Serial No. PCT/CN2013/086075 and was amended on or, if not identified hare by filing date and sarial number, is affached hereto.

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

I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

rred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.58, including for continuation in part applications, material information 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.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment of not more than five (5) years, or both, under 18 USC 1001.

assignment and agreement in an application for letters patent

For valuable consideration received, I hereby sell, assign and transfer to Thomson Licensing, a corporation duly organized and existing under the laws of the country of France, its successors, and assigns my entire right, title and interest, for all countries in and to said inventions, and all the rights and privileges under any and all Letters Patent that may be granted therefor, and any divisions, continuations,

reissues and extensions thereof.

I agree that, when requested, I will, without energy to said corporation but at its expense, sign all papers, take all rightful out is make all rightful declarations and do all acts which may be necessary desirable or convenient for securing and maintaining patents or other forms of protection for said inventions in any and all countries and for vesting title thereto in said corporation, its successors, assigns or

es. I agree that I will communicate to said (5)?//3000 its representatives any facis known to me respecting said inventions 300 when requested by said corporation and at its expense will testify in any legal proceedings, and generally do everything possible to ald-said corporation, its successors, assigns and legal representatives or nominees, to obtain or enforce proper protection for said inventions in any

I authorize and empower said corporation, its successors assigns or nominees to make application for patent or other term of protection for said inventions in its or their own name, or in my/our name, in any and all countries and to invoke and claim for any application for patent or other form of protection for said inventions filed by it or them, the benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it, and to

or like document which may be required in any country for any properly as amended, or by any convention which may henceforth be substituted for it, and to invoke and claim such right of priority without further written or oral authorization from me.

I hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document which may be required in any country for any purpose and more particularly-in-proof of the right of the said corporation or its successors, assigns or nominees to apply for patent or other proper protection for said inventions, and to claim the aforesaid benefits of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it.

I covenant with Thomson Licensing, its successors, assigns, legal representatives, and nominees, that to the best of my knowledge the right, title and interest herein conveyed by me are tree and clear of any encumbrance, and that I have full north to convey the same as herein expressed. 7

| Signed at | Kennes, Franco | Date 10v-12-2013 |
|-------------------------|--|-----------------------------------|
| Inventor Name | CAI Kangying (Type or Print) | (Signature in Full – No Initials) |
| Post Office Address | 8F, Building A TECHNOLOGY FORTUNE C District,100192 BEIJING – CHINA | ENTER, 8 Xue Qing Road, Hai Dian |
| 1 st Witness | GAURAN SHAKMA (Type or Print) | (Signature in Full – No Initials) |
| 2" ^d Witness | Alexey DEFROV (Type or Print) | (Signature in Full – No Initials) |

REEL: 044074 FRAME: 0582

| j | 18 | Š. | DEJOW | named | inventor, | 1 | herehv. | decision | the. |
|---|----|----|-------|-------|-----------|---|----------|-----------|----------|
| | | | | | | • | TOT CHAY | CHELLIONS | 20,034.0 |

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METHOD AND DEVICE FOR CONSTRUCTING GRAPH REPRESENTATION FOR A 3D OBJECT

the specification of which was filed on _Dotober 28, 2013 ___ as Application Serial No. __PCT/CN2013/086075

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part applications: measurer information which became available between the using date of the continuation-in-part application.

Thereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge mat willful false statements and the like so made are durishable by fine or imprisonment of not more than five (5) years, or both, under 18 USC 1001.

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invoke and casm such right of priority without further written or oral authorization from me.

I hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document which may be required in any country for any outpose and more particularly in proof of the right of the said corporation or its successors, assigns or nominees to apply for patent or other proper protection for said inventions; and to claim the aforesaid benefits of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention.

coverant with Thomson Licensing, its successors, assigns, legal representatives, and nominees, that to the best of my knowledge the right, title and interest herein conveyed by me are free and clear of any encumbrance, and that I have full right to convey the same se

| Signed at | Beijing China | Loate Nov. | 5, 2013 |
|-------------------------|--|------------|---------------------------------|
| Inventor Name | TIAN Jiang (Type or Print) | (Signature | e in Full – No initials) |
| Post Office Address | 8F. Building A TECHNOLOGY FORTUNE District 100192 BELLING - CHINA | | |
| 1 st Witness | Man Ping | (Signature | GeVCP) In Pull (No Initials) |
| ^{2nd} Witness | Donaldi (Type or Print) | (Signatur | in Full – No Initials) |

PATENT

REEL: 044074 FRAME: 0583

RECORDED: 11/08/2017