504857913 04/07/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4904652

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
OLIVER THEIS	03/30/2018
AXEL KOCHALE	11/26/2016
SIEGFRIED SCHWEIDLER	11/23/2016

RECEIVING PARTY DATA

Name:	THOMSON LICENSING
Street Address:	1 RUE JEANNE D'ARC
City:	ISSY LES MOULINEAUX
State/Country:	FRANCE
Postal Code:	92130

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15361311

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.

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Correspondent Name: PATRICIA A. VERLANGIERI, THOMSON LICENSING LLC.

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Address Line 4: PRINCETON, NEW JERSEY 08540

ATTORNEY DOCKET NUMBER:	PD150074-US-NP
NAME OF SUBMITTER:	PATRICIA A. VERLANGIERI
SIGNATURE:	/Patricia A. Verlangieri, Reg.No. 42201/
DATE SIGNED: 04/07/2018	
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 5

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PATENT 504857913 REEL: 045473 FRAME: 0534

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PATENT REEL: 045473 FRAME: 0535 Document Description: Oath or declaration filed

Approved for use through 01/31/2014. OMB 0651-0032

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SUBSTITUTE STATEMENT IN LIEU OF AN OATH OR DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (35 U.S.C. 115(d) AND 37 CFR 1.64)

Title of Invention	METHOD AND APPARATU	IS FOR DETERMINING A	A SHARPNESS MET	RIC OF AN IMAGE
OR United S LEGAL NA (E.g., Given	nt is directed to: ached application, states application or PCT internation ME of inventor to whom this s Name (first and middle (if any)) and	substitute statement applic	361311 filed on	11/25/2016
	except for a deceased or legally inc	anacitated inventor):		
_{city} Kall			GERMA	NY
Mailing Addre Detmolder S	ss (except for a deceased or legally inca r.10	apacitated inventor):		
_{city} Kall	etal	State	_{Zip} 32689	Country GERMANY
I believe the in the ap	above-named inventor or joint inve		or an original joint invento	r of a claimed invention
in the ap _l	above-named inventor or joint inve	entor to be the original inventor o	or an original joint invento	r of a claimed invention
in the appropriate in the above-in the above-in the above-in the above-in the above in the above in the appropriate above.	above-named inventor or joint inve olication.	entor to be the original inventor of uthorized to be made by me.		

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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SUBSTITUTE STATEMENT

Circumstances permitting execution of this substi	tute statement:			
Inventor is deceased,				
Inventor is under legal incapacity,				
Inventor cannot be found or reached aft	Inventor cannot be found or reached after diligent effort, or			
Inventor has refused to execute the oath	-	R 1.63.		
	If there are joint inventors, please check the appropriate box below: An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) naming the entire inventive entity has been			
OR				
An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) has not been submitted. Thus, a Substitute Statement Supplemental Sheet (PTO/AIA/11 or equivalent) naming the entire inventive entity and providing inventor information is attached. See 37 CFR 1.64(b).				
	WARNING:	oenoaneenoaneenoaneenoaneenoaneenoaneenoa	048484010000000000000000000000000000000	
Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.				
PERSON EXECUTING THIS SUBSTITUTE STAT	EMENT:			
Name: Brian J. Dorini Date (Optional): 2018-March-30				
Signature: /Brian J. Dorini/				
APPLICANT NAME AND TITLE OF PERSON EX				
If the applicant is a juristic entity, list the applicant i	name and the title of the sign	ier:		
Thomson Licensing Applicant Name:				
Title of Person Executing This Substitute Statement: Chief U.S. Attorr	ney, Patent Manager	ment		
The signer, whose title is supplied above, is autho	rized to act on behalf of the	applicant.		
Residence of the signer (unless provided in an	application data sheet, PT	O/AIA/14 or equivale	ent):	
Princeton City	NJ State	US Country		
Mailing Address of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent) Thomson Licensing, Patent Operations 4 Research Way 3rd Floor				
City Princeton St	New Jersey ate	08540-6620 Zip	US Country	
Note: Use an additional PTO/AIA/02 form for each inventor who is deceased, legally incapacitated, cannot be found or reached after diligent effort, or has refused to execute the oath or declaration under 37 CFR 1.63.				

[Page 2 of 2]

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- The information on this form will be treated confidentially to the extent allowed under the
 Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from
 this system of records may be disclosed to the Department of Justice to determine whether
 disclosure of these records is required by the Freedom of Information Act.
- 2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- 5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- 6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
- A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PATENT REEL: 045473 FRAME: 0538 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 Apparatus for determining a sharpness metric of an image the specification of which was filed on

as Application Senal No.

and was amended on

or, if not identified here by fixing date and senal number, is attached 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 reletted to above

Lecknowledge 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 filling 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 1901.

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, including limits and the United States of America, 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 daths. make all rightful declarations and do all ada 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.

Lagree 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.

I authorize and empower said 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 banefit 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 the 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, little 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

26.11.2016 Signed at Date Inventor Axel KOCHALE Name (Type or Print) (Signature in Full - No Initials) Post Office Beckerweg 1 - 31832 SPRINGE - GERMANY Address 1st Witness (&ignature in Full No Initials) 2nd Witness (Signature in Full - No Initials)

PATENT

REEL: 045473 FRAME: 0539

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 squaht on the invention entitled

Method and Apparatus for determining a sharpness metric of an image

the specification of which was filed on as Application Serial No. and was amended on , or, if not identified here by filing date and serial number, is attached 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

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for communition-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 witful false statements and the like so made are punishable by fine or imprisorment 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, including India and the United States of America, 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 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 protoction 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.

I authorize and empower said 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 filled by it or them, the banefit of the right of priority provided by the international Convention for the Profession 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.

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 free and clear of any encumbrance, and that I have full right to convey the same as herein expressed

Cohrden

Signed at

Inventor Sleafried SCHWEIDLER Name

(Type or Print)

Post Office

Südfeld 10 - 30989 GEHRDEN - GERMANY Address

1st Witness

(Signature in Full - No Initials)

2nd Witness

Schweidler

PATENT REEL: 045473 FRAME: 0540

RECORDED: 04/07/2018