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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SIEMENS MEDICAL SOLUTIONS USA, INC.	09/10/2018

RECEIVING PARTY DATA

Name:	SIEMENS HEALTHCARE GMBH
Street Address:	HENKESTR. 127
City:	ERLANGEN
State/Country:	GERMANY
Postal Code:	91052

PROPERTY NUMBERS Total: 4

Property Type	Number
Application Number:	16103196
Application Number:	62545000
Application Number:	62552720
Application Number:	62671030

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ATTORNEY DOCKET NUMBER:	2017P18461US01
NAME OF SUBMITTER:	ELIZABETH PATLA
SIGNATURE:	/Elizabeth Patla/
DATE SIGNED:	09/18/2018

Total Attachments: 2

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> **PATENT** REEL: 046893 FRAME: 0940 505098177

Docket No.: 2017P18461 US01

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ASSIGNMENT OF RIGHTS Company to Company

WHEREAS, Siemens Medical Solutions USA, Inc. (Hereafter "Assignor") and Siemens Healthcare GmbH (Hereafter "Assignee") (individually referred to as "Party" and collectively as "Parties")

Hereby, (I)(A) acknowledge they have entered into certain agreements (hereinafter referred to as "the Agreements") which set forth certain rights, limitations and obligations regarding inventions developed by or among Parties, and/or Intellectual Property owned by one or both of the Parties and the Parties agree that the terms of the Agreements apply to any and all inventions; or

(B)(i) Agree to the extent such Agreement(s) or similar legal document(s) failed or fails, in whole or part, to have assigned, sold or transferred the entire right (including priority rights), title and interest, in and for the United States and all foreign countries, in and to all inventions which are disclosed in an invention disclosure and/or in the below-identified application or application already filed for Letters Patent, or (ii) if no such agreement(s) exist assigning, selling or transferring any such right (including priority rights), title or interest; then for good and valuable consideration, Assignor now and hereby, effective Nunc Pro Tunc on the filling date of the below identified patent application(s), pending patent application(s) or granted Letter Patent(s), assigns, sell and transfers to Assignee, its successors, assigns and legal representatives, the entire right, (including all priority rights), title and interest in and for the United States and all foreign countries, in and to any and all inventions and improvements which are disclosed in the following identified; patent application(s), pending patent application(s) or granted Letter Patent(s) which are disclosed in the application for Letters Patent or granted patent, entitled:

Patent Application Title: Dilated Fully Convolutional Network for Multi-Agent 2D/3D Medical Image Registration

Filing Date: 14 Aug 2018 Filing Number: 16/103,196

Internal Case Number(s): 2017P18461 US01

Patent Application Title: Method for 2D3D Image Registration using Artificial

Intelligent Agent Filing Date: 08/14/2017 Filing Number: 62/545,000

Internal Case Number(s): 2017P16989US

Patent Application Title: Dilated FCN for Multi-Agent 2D/3D Medical Image

Registration

Filing Date: 31 Aug 2017 Filing Number: 62/552,720

Internal Case Number(s): 2017P18461 US

Patent Application Title: Adaloss: Adaptive Loss Function for Landmark

Estimation

Filing Date: 14 May 2018 Filing Number: 62/671,030

Internal Case Number(s): 2018P10628US

and in and to said application or granted patents and all applications claiming priority to said application or granted patent, including, without limitation, and all divisional, continuing, substitute, renewal, reissue, and all other applications for Letters Patent which have been or

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shall be filed in the United States and all foreign countries on any of the inventions or improvements; and in and to all original and reissued patents which have been or shall be filed in the United States and all foreign countries on the inventions or improvements;

- (II) Agree that the Assignee may apply for and receive Letters Patent for said improvements in its own name; and that, when requested, without charge to but at the expense of said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all the inventions or improvements; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns, and legal representatives, all facts known to the undersigned relating to the inventions or improvements and the history thereof; and generally do everything possible which said Assignee, its successors, assigns or legal representatives shall consider desirable for aiding in securing and maintaining proper patent protection for the inventions or improvements and for vesting title to the inventions or improvements and all applications for patents and all patents on the inventions or improvements, in said Assignee, its successors, assigns and legal representatives; and
- (III) Covenant with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property

herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

The Parties acknowledge and agree that the inventor(s) may have previously assigned its rights (including all and any priority rights) in one or more above-referenced applications for Letters Patents directly to a Party as directed by the other Party, consistent with the Agreements. Any such directed assignment shall remain in full force and effect and shall take precedence over this Assignment to the extent any conflict exists.

Siemens Medical Solutions USA, Inc.				
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Name(s)	Cynthia G. Tymeson			
Title	Managing IP Counsel			
Date	Ant 10, 2016			
Siemens Healthcare GrybH				
Signature(s)	412 MUNC	14ª M =		
Name(s)	Ekkehard Ruyter	Markus Simon		
Title	Authorized Officer	Authorized Officer		
Date	1.7 SEP 2018			

PATENT REEL: 046893 FRAME: 0942