PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 Assignment ID: PATI84820

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Dr. Asa MacWilliams	01/04/2023
Dr. Daniel Labisch	11/11/2022
Dr. Joseph Newman	02/14/2023
Dr. Andreas Hutter	11/23/2022

RECEIVING PARTY DATA

Company Name:	Slemens Aktiengesellschaft	
Street Address:	Werner-von-Siemens-Strasse 1	
City:	Muenchen	
State/Country:	GERMANY	
Postal Code:	80333	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17916970

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.

Phone: 5124023575

Email: trosson@sgbfirm.com

Correspondent Name: Todd A Rosson
Address Line 1: 401 Congress Ave

Address Line 2: Suite 1650

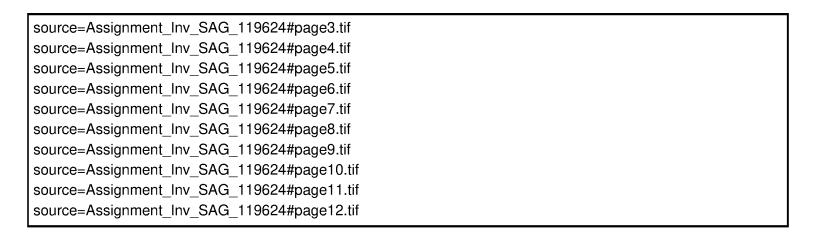
Address Line 4: Austin, TEXAS 78701

ATTORNEY DOCKET NUMBER:	03869.119624_1
NAME OF SUBMITTER:	Todd Rosson
SIGNATURE:	Todd Rosson
DATE SIGNED:	03/11/2024

Total Attachments: 12

source=Assignment_Inv_SAG_119624#page1.tif source=Assignment_Inv_SAG_119624#page2.tif

PATENT 508430632 REEL: 066716 FRAME: 0896



Page 1 of 3

ASSIGNMENT

For good and valuable consideration, I (We),

- Dr. Asa MacWilliams, residing at Am Sulzbogen 44, Fürstenfeldbruck, 82256, DE, citizen of US
- Dr. Daniel Labisch, residing at Spechtweg 14, Karlsruhe, 76149, DE, citizen of DE
- **Dr. Joseph Newman,** residing at Oskar-von-Miller-Str. 17a, Unterhaching, 82008, DE, citizen of GB
- Dr. Andreas Hutter, residing at Sturmiusweg 42, München, 81673, DE, citizen of DE

hereafter individually or collectively referred to as "Assignor(s)"; hereby

- (1) (A) acknowledge having previously assigned, sold and transferred to **Siemens Aktiengesellschaft**, a corporation organized and existing under the laws of GERMANY, having its principal place of business at Werner-von-Siemens-Straße 1, München, 80333, Germany, hereinafter "Assignee", its successors, assigns and legal representatives, or to a predecessor of Assignee, pursuant to
 - (i) the laws of GERMANY or
 - (ii) a Patent & Secrecy Agreement or similar legal document such as, without limitation, an employee agreement executed at the time of entering into the employment of, or executed as a condition of continuing employment with, the Assignee or a predecessor of the Assignee, the entire right, including any and all priority rights, title and interest, in and for the United States and all foreign countries, in and to any and all inventions or improvements which are disclosed in an invention disclosure and/or in the below-identified documents currently filed with this Assignment, already filed or granted for Letters Patent (in which case, if any provision of the subject Assignment that is in conflict with or is in addition to any provision in the prior agreement(s) or assignment(s) then this Assignment shall govern, take precedence, and be of legal effect), or
 - (B) (i) to the extent such laws of GERMANY or such Patent & Secrecy Agreement or similar legal document 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 or improvements which are disclosed in the below-identified application(s) or pending application(s) or granted 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(s) now and hereby, effective Nunc Pro Tunc on the filing date of the below identified patent application(s), pending patent application(s) or granted Letter Patent(s), assign, sell and transfer(s) to Assignee, its successors, assigns and legal representatives,

(i) 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/or improvements which are disclosed in the following identified; patent application(s), pending patent application(s) or granted Letter Patent(s). I/we hereby authorize the Assignee or its designee to insert below the information when known

LMH

Page 2 of 3

Patent Application Title: Aligning and augmenting a partial subspace of a physical infrastructure with at least one information element

Filing Date: 30 Mar 2021

Filing Number: PCT/EP2021/058219

Internal Case Number(s): 2020P05924WOUS

and

- (ii) in and to said application(s) or granted patents and all applications claiming priority to said application or granted patent, including, without limitation, all divisional, continuing, substitute, renewal, reissue, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of the inventions and/or improvements; and
- (iii) 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 and/or improvements;
- (2) agree that said Assignee may apply for and receive Letters Patent for said inventions and/or 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 said inventions and/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 said inventions and/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 said inventions and/or improvements and all applications for patents and all patents on said inventions and/or improvements, in said Assignee, its successors, assigns and legal representatives; and
- (3) 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.

Dr. Asa MacWilliams	
Jrn 4, 2023 Date	
Dr. Daniel Labisch	
Date	

LMH

Page 3 of 3

Dr. Joseph New	yman	
Date		
Dr. Andreas Hu	tter	
Date		
Companies Re Siemens Aktien	gesellschaft	
Signature(s):	Haberl Digital unterschrieber Klinger Won Haberl Oliver Von Haberl Oliver Grund: IV.	
Name(s):	Oliver Grund: i.V. Datum: 2023.02.21 88:34:53 +01'00' Katharina Grund: iiV. 16:47:52 +01'00'	0
Title:	Both authorized signatories	
Date:		

LMH

Page 1 of 3

ASSIGNMENT

For good and valuable consideration, I (We),

- Dr. Asa MacWilliams, residing at Am Sulzbogen 44, Fürstenfeldbruck, 82256, DE, citizen of US
- Dr. Daniel Labisch, residing at Spechtweg 14, Karlsruhe, 76149, DE, citizen of DE
- **Dr. Joseph Newman,** residing at Oskar-von-Miller-Str. 17a, Unterhaching, 82008, DE, citizen of GB
- Dr. Andreas Hutter, residing at Sturmiusweg 42, München, 81673, DE, citizen of DE

hereafter individually or collectively referred to as "Assignor(s)"; hereby

- (1) (A) acknowledge having previously assigned, sold and transferred to Siemens Aktiengesellschaft, a corporation organized and existing under the laws of GERMANY, having its principal place of business at Werner-von-Siemens-Straße 1, München, 80333, Germany, hereinafter "Assignee", its successors, assigns and legal representatives, or to a predecessor of Assignee, pursuant to
 - (i) the laws of GERMANY or
 - (ii) a Patent & Secrecy Agreement or similar legal document such as, without limitation, an employee agreement executed at the time of entering into the employment of, or executed as a condition of continuing employment with, the Assignee or a predecessor of the Assignee, the entire right, including any and all priority rights, title and interest, in and for the United States and all foreign countries, in and to any and all inventions or improvements which are disclosed in an invention disclosure and/or in the below-identified documents currently filed with this Assignment, already filed or granted for Letters Patent (in which case, if any provision of the subject Assignment that is in conflict with or is in addition to any provision in the prior agreement(s) or assignment(s) then this Assignment shall govern, take precedence, and be of legal effect), or
 - (i) to the extent such laws of GERMANY or such Patent & Secrecy Agreement or similar legal document 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 or improvements which are disclosed in the below-identified application(s) or pending application(s) or granted 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(s) now and hereby, effective Nunc Pro Tunc on the filing date of the below identified patent application(s), pending patent application(s) or granted Letter Patent(s), assign, sell and transfer(s) to Assignee, its successors, assigns and legal representatives,

(i) 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/or improvements which are disclosed in the following identified; patent application(s), pending patent application(s) or granted Letter Patent(s). I/we hereby authorize the Assignee or its designee to insert below the information when known

LMH

Page 2 of 3

Patent Application Title: Aligning and augmenting a partial subspace of a physical infrastructure with at least one information element

Filing Date: 30 Mar 2021

Filing Number: PCT/EP2021/058219

Internal Case Number(s): 2020P05924WOUS

and

- (ii) in and to said application(s) or granted patents and all applications claiming priority to said application or granted patent, including, without limitation, all divisional, continuing, substitute, renewal, reissue, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of the inventions and/or improvements; and
- (iii) 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 and/or improvements;
- (2) agree that said Assignee may apply for and receive Letters Patent for said inventions and/or 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 said inventions and/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 said inventions and/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 said inventions and/or improvements and all applications for patents and all patents on said inventions and/or improvements, in said Assignee, its successors, assigns and legal representatives; and
- (3) 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.

Dr. Asa MacWilliams	
Date	
Labisch Daniel Daniel Datum: 2022.11.11 07:58:25 +01'00' Dr. Daniel Labisch	
Date	

LMH

Page 3 of 3

Dr. Joseph Ne	wman			
Date				
Dr. Andreas H	utter			
2117 11141 933 11				
Date				
Companies Ro Siemens Aktie	epresentative(s) ngesellschaft			
Signature(s):	Haberl Digital unterschrieben von Haberl Oliver		rina	_
Name(s):	Oliver Grund: i.V. Datum: 2023.02.21	Katharina Grund: i.V. Datum: 2023.0 16:48:29 +01'0	02.20 00'	_
Title:	Both authorized signa	atories		_
Date:				

LMH

ASSIGNMENT

For good and valuable consideration, I (We),

Dr. Asa MacWilliams, residing at Am Sulzbogen 44, Furstenfeldbruck, 82256, DE, citizen of US

Dr. Daniel Labisch, residing at Spechtweg 14, Karlsruhe, 76149, DE, citizen of DE

Dr. Joseph Newman, residing at Oskar-von Miller-Str. 17a. Unterhaching, 82008, DE, citizen of GB

Dr. Andreas Hutter, residing at Sturmiusweg 42, Munchen, 81673, DE, citizen of DE

hereafter individually or collectively referred to as "Assignor(s)", hereby

- (1) (A) acknowledge having previously assigned, sold and transferred to Siemens Aktiengesellschaft, a corporation organized and existing under the laws of GERMANY, having its principal place of business at Werner-von-Siemens-Straße 1, Munchen, 80333. Germany, hereinafter "Assignee", its successors, assigns and legal representatives, or to a predecessor of Assignee, pursuant to
 - (i) the laws of GERMANY or
 - (ii) a Patent & Secrecy Agreement or similar legal document such as, without limitation, an employee agreement executed at the time of entering into the employment of, or executed as a condition of continuing employment with, the Assignee or a predecessor of the Assignee, the entire right, including any and all priority rights, title and interest, in and for the United States and all foreign countries, in and to any and all inventions or improvements which are disclosed in an invention disclosure and/or in the below-identified documents currently filed with this Assignment, already filed or granted for Letters Patent (in which case, if any provision of the subject Assignment that is in conflict with or is in addition to any provision in the prior agreement(s) or assignment(s) then this Assignment shall govern, take precedence, and be of legal effect), or
 - (B) (i) to the extent such laws of GERMANY or such Patent & Secrecy Agreement or similar legal document 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 or improvements which are disclosed in the below-identified application(s) or pending application(s) or granted 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(s) now and hereby, effective Nunc Pro Tunc on the filing date of the below identified patent application(s), pending patent application(s) or granted Letter Patent(s), assign, sell and transfer(s) to Assignee, its successors, assigns and legal representatives,

(i) 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/or improvements which are disclosed in the following identified; patent application(s), pending patent application(s) or granted Letter Patent(s). I/we hereby authorize the Assignee or its designee to insert below the information when known

IDNR: 1930 / 21 05 2016

PATENT REEL: 066716 FRAME: 0904

1 WH

Docket No. 2020P05924WOUS Page 2 of 3

Patent Application Title: Aligning and augmenting a partial subspace of a physical infrastructure with at least one information element.

Filing Date: 30 Mar 2021

Filing Number: PCT/EP2021/058219

Internal Case Number(s): 2020P05924WOUS

and
(ii) in and to said application(s) or granted patents and all applications claiming priority to said application or granted patent including, without limitation, all divisional, continuing, substitute, renewal, reissue, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of the inventions and/or improvements, and
(iii) 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 and/or improvements;

- agree that said Assignee may apply for and receive Letters Patent for said inventions and/or 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 said inventions and/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 said inventions and/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 said inventions and/or improvements and all applications for patents and all patents on said inventions and/or improvements, in said Assignee, its successors, assigns and legal representatives; and
- (3) 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.

Dr. Asa MacWilliams	_	
Date		
Dr. Daniel Labisch		
Date		

LMH

Docket No. 2020P05924WOUS Page 3 of 3

	all and
Dr Joseph Ne	wman
Date	
Dr. Andreas Hi	ulter
Date	
Companies Ri Siemens Aktiei	
Signature(s)	Haber Digital unterschrieben von Klinger Unterschrieben von Klinger Katharina Gründf (M. Gründf (M
Name(s)	Grund: I.V. Katharina Datum: 2023.02.20 Datum: 2023.02.21 08:35:58 +01'00'
Title	Both authorized signatories
Date.	

PATENT REEL: 066716 FRAME: 0906

LMH

Page 1 of 3

ASSIGNMENT

For good and valuable consideration, I (We),

- Dr. Asa MacWilliams, residing at Am Sulzbogen 44, Fürstenfeldbruck, 82256, DE, citizen of US
- Dr. Daniel Labisch, residing at Spechtweg 14, Karlsruhe, 76149, DE, citizen of DE
- **Dr. Joseph Newman,** residing at Oskar-von-Miller-Str. 17a, Unterhaching, 82008, DE, citizen of GB
- Dr. Andreas Hutter, residing at Sturmiusweg 42, München, 81673, DE, citizen of DE

hereafter individually or collectively referred to as "Assignor(s)"; hereby

- (1) (A) acknowledge having previously assigned, sold and transferred to Siemens Aktiengesellschaft, a corporation organized and existing under the laws of GERMANY, having its principal place of business at Werner-von-Siemens-Straße 1, München, 80333, Germany, hereinafter "Assignee", its successors, assigns and legal representatives, or to a predecessor of Assignee, pursuant to
 - (i) the laws of GERMANY or
 - (ii) a Patent & Secrecy Agreement or similar legal document such as, without limitation, an employee agreement executed at the time of entering into the employment of, or executed as a condition of continuing employment with, the Assignee or a predecessor of the Assignee, the entire right, including any and all priority rights, title and interest, in and for the United States and all foreign countries, in and to any and all inventions or improvements which are disclosed in an invention disclosure and/or in the below-identified documents currently filed with this Assignment, already filed or granted for Letters Patent (in which case, if any provision of the subject Assignment that is in conflict with or is in addition to any provision in the prior agreement(s) or assignment(s) then this Assignment shall govern, take precedence, and be of legal effect), or
 - (B) (i) to the extent such laws of GERMANY or such Patent & Secrecy Agreement or similar legal document 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 or improvements which are disclosed in the below-identified application(s) or pending application(s) or granted 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(s) now and hereby, effective Nunc Pro Tunc on the filing date of the below identified patent application(s), pending patent application(s) or granted Letter Patent(s), assign, sell and transfer(s) to Assignee, its successors, assigns and legal representatives,

(i) 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/or improvements which are disclosed in the following identified; patent application(s), pending patent application(s) or granted Letter Patent(s). I/we hereby authorize the Assignee or its designee to insert below the information when known

LMH

Page 2 of 3

Patent Application Title: Aligning and augmenting a partial subspace of a physical infrastructure with at least one information element

Filing Date: 30 Mar 2021

Filing Number: PCT/EP2021/058219

Internal Case Number(s): 2020P05924WOUS

and

- (ii) in and to said application(s) or granted patents and all applications claiming priority to said application or granted patent, including, without limitation, all divisional, continuing, substitute, renewal, reissue, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of the inventions and/or improvements; and
- (iii) 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 and/or improvements;
- agree that said Assignee may apply for and receive Letters Patent for said inventions and/or 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 said inventions and/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 said inventions and/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 said inventions and/or improvements and for vesting title to said inventions and/or improvements and all applications for patents and all patents on said inventions and/or improvements, in said Assignee, its successors, assigns and legal representatives; and
- (3) 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.

Dr. Asa MacWilliams	_	
Date	-	
Dr. Daniel Labisch	-	
Date	_	

LMH

Docket No.: 2020P05924WOUS Page 3 of 3

Dr. Joseph Ne	ewman					
Date						
Dr. Andreas H	lutter					
23 Nev - C	2012					
Companies Ro Siemens Aktie	epresentative(s ngesellschaft	s)				
Signature(s):	Haberl	Digital unterschrieben von Haberl Oliver	Klinger Kathari	Digital unterschrieben von Klinger Katharina		
Name(s):	_Oliver_	Grund: i.V. Datum: 2023.02.21	na	Datum: 2023.02.20 16:49:34 +01'00'	_	
Title:	Both author	rized signato	ries			
Date:						

LMH RECORDED: 03/11/2024