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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:NEW ASSIGNMENTNATURE OF CONVEYANCE:ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HARTMUT LUDWIG	10/17/2018
LINGYUN WANG	03/05/2018
FLORIAN ERSCH	11/28/2018

RECEIVING PARTY DATA

Name:	SIEMENS CORPORATION
Street Address:	170 WOOD AVENUE SOUTH
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State/Country:	NEW JERSEY
Postal Code:	08830

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16482322

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DATE SIGNED: 07/31/2019

Total Attachments: 3

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> PATENT REEL: 049912 FRAME: 0383

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ASSIGNMENT

For good and valuable consideration, I (We),

Hartmut Ludwig, residing at 9 Robert Drive, West Windsor, NJ 08550, US, citizen of US **Lingyun Wang,** residing at 114 N. Barrow Place, Princeton, NJ 08540, US, citizen of US **Florian Ersch,** residing at 87 Elsie Drive, Plainsboro, NJ 08536, US, citizen of DE

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

Hereby, (I) acknowledge having previously assigned, sold and transferred to **Siemens Corporation**, organized and existing under the **state laws of Delaware**, having its principal place of business at **170 Wood Avenue South**, **Iselin**, **NJ**, **08830**, hereinafter "Assignee", its successors, assigns and legal representatives, or to a predecessor of Assignee, pursuant to (A)(i) the laws of **THE UNITED STATES OF AMERICA** 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, 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 **THE UNITED STATES OF AMERICA** 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, 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)

Patent Application Title: PRODUCT CLOSING THE LOOP

Filing Date: 19 Feb 2018

IDNR: 1930 / 21.05.2015

Filing Number: PCT/US2018/018601 Internal Case Number(s): 2017P03728WO

and in and to said application(s) 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 shall be filed in the United States and all foreign countries on any of the inventions and/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 and/or improvements;

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(II) 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

(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.

Witness Signature United name	Hartmut Ludwig Date
Mitness Signature Macuf Dimid printed name	Lingyun Wang 3/5//8 Date
Witness Signature Virinted name	Florian Ersch

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Representative(s)
Siemens Corporation

Signature(s):

Name(s):

Patricia Kane Schmidt

Title:

Lead Counsel

Date:

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RECORDED: 07/31/2019