505011425 07/19/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:		NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT	
CONVEYING PARTY DA	TA			
		Name	Execution Date	
TIANJUN FU			07/16/2018	
LONG WU			07/16/2018	
KENT WANNER			07/16/2018	
JASON DICKHERBER			07/16/2018	
CHRIS J. TREMEL			07/16/2018	
RECEIVING PARTY DA	 TA			
Name:		E & COMPANY		
Street Address:	ONE JOHN DEERE PLACE			
City:	MOLINE			
State/Country:	ILLINOIS			
Postal Code:	61265			
PROPERTY NUMBERS Property Type		Number		
Application Number:		15915553		
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Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 2: Address Line 4: ATTORNEY DOCKET NU	e sent to provideo	o the e-mail address first; if that is unsultd; if that is unsuccessful, it will be sent703-668-8000sprice@hdp.comHARNESS, DICKEY & PIERCE, P.L.C.11730 PLAZA AMERICA DRIVESUITE 600RESTON, VIRGINIA 2019016060-000058-US-CPAGARY D. YACURA		

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DECLARATION AND ASSIGNMENT

1. Declaration As the below named declarant-inventor(s)("declarant" or "inventor"), each declarantinventor who signs below hereby declares that: (1) the application identified below was made or was authorized to be made by each declarant, (2) the declarant believes himself or herself to be the original inventor or an original joint inventor of a claimed invention in the application, (3) the declarant hereby acknowledges that any willful false statement made in this declaration of inventorship or document is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both, (4) the declarant states that he or she has reviewed and understand the contents of the above identified application, including the claims, and (5) the declarant acknowledges that he or she is aware of the duty to disclose information (e.g., any prior art or publication) which is material to patentability as defined in 37 CFR § 1.56.

2. Assignment Subject to an obligation to assign the invention to:

- X Deere & Company ("Assignee" or "Deere"), a Delaware corporation; or
- D Phoenix International Corporation ("Assignee"), a wholly-owned subsidiary of Deere; or
- D NavCom Technology, Inc. ("Assignee"),, a wholly-owned subsidiary of Deere; or
- Maschinenfabrik Kemper GmbH & Co. KG, ("Assignee"), a German entity affiliated with Deere; or Sale Maaphinenfabrik CmbH (Masimosil) a German entity officiated with Deere;
- Sabo Maschinenfabrik GmbH ("Assignee"), a German entity affiliated with Deere;

the below named declarant-inventor(s) own(s) the entire right title and interest to the invention ("the Invention") which is the subject of a United States patent application ("the Application") entitled:

VOLTAGE SENSOR-LESS POSITION DETECTION IN AN ACTIVE FRONT END

U.S. Application No. 15/915,553 filed March 8, 2018

which each declarant-inventor has executed on the date indicated below next to each inventor's name.

Pursuant to an agreement between each declarant-inventor and Assignee or other legal obligation supported by good and valuable consideration, the receipt of which is acknowledged by each inventor, each declarant-inventor (individually and collectively "Assignor"), agrees to assign, and hereby assigns to Assignee all title, right and interest in the Invention and Application, including the assigned rights as more fully set forth herein. If any below listed declarant-inventor is or was employed by a German subsidiary or affiliate of Assignee, at the conception or creation of the Invention, as required under German law on employee inventions, Assignee, or its German subsidiary or affiliate, laid claim on the Invention and Assignee became the owner of any rights in the Invention and Application as required under German law. If any inventor has previously assigned the same Invention or same Application to Assignee, instead of merely assigning all title, rights, and interest to Assignee; the Assignor acknowledges that all title, right and interest in the Invention and Application was previously assigned to Assignee and hereby assigns, without any reservation, any remaining rights in or to the Invention and Application that the Assignor may hold for whatever reason.

The assigned rights include, but are not limited to, all worldwide rights to file any United States patent applications, international patent applications, and any foreign patent applications, utility patent applications, design patent applications, copyrights, plant patent applications, utility model applications, or similar industrial property rights for the Invention described in the name of each inventor or in the name of the Assignee, as well as any right of priority to any patent or application of the United States or any other country or jurisdiction based on the Invention. The assigned rights include the right for the Assignee, or its legal representatives, to file any continuing, continuation, continuation-in-part, divisional, reissue, extension, or reexaminations of the Application. These assigned rights are to be held and enjoyed by the Assignee, its successors or assigns, as fully and entirely as the same would have been held and enjoyed by each inventor had this assignment not been made.

The Invention and Application shall be deemed the sole and exclusive property of Assignee and each inventor agrees to execute any and all documents which Assignee, its successors or assigns, deem necessary to transfer, acknowledge, or assign such rights in or to the Invention and Application to Assignee, its successors, or assigns. Each inventor agrees to execute all documents which Assignee, its successors or assigns deem expedient in connection with the Application and any continuing, continuation, continuation-in-part, divisional, reissue, reexamination or other domestic, international or

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foreign applications on a worldwide basis concerning the Invention or that claim priority based on the Application or Invention; and any renewal, revival or substitute of any of the foregoing applications, any derivation proceedings relating to any of the foregoing applications; and, as to patents granted on the any of the foregoing applications, any supplemental examination, derivation proceeding, opposition, post grant review, reissue, re-examination, inter partes review, or extension thereof. Each inventor agrees to cooperate with Assignee, its successors or assigns in every proper way possible to obtain, defend and assert one or more patent(s) based on: the Application and any continuing, continuation, continuation-in-part, divisional, reissue, reexamination or other domestic, international, or foreign applications concerning the Invention; any renewal, revival, or substitute of any domestic or foreign applications, any derivation proceedings relating to any of the foregoing applications; and, as to patents granted on the foregoing applications, any supplemental examination, derivation proceeding, opposition, post grant review, reissue, re-examination, inter partes review, or extension thereof. During or after any employment by Assignee, each inventor agrees, at no cost to Assignee, to execute any and all documents which Assignee, its successors, or assigns, deem necessary to obtain, maintain and/or enforce its rights in such Invention or Application including, but not limited to, any related patent applications which Assignee elects to file in all countries in the world and to fully cooperate with Assignee in the obtaining, maintaining and enforcement of any intellectual property protection sought or obtained for such inventions including providing any testimony required to obtain, maintain and/or enforce such rights. Each inventor hereby authorizes any patent office in the world to issue any letters patent based on the assigned rights to the Assignee. Each inventor hereby covenants that he or she has not made and will not make any assignment, sale, license, agreement or encumbrance which would conflict with this Declaration and Assignment. Each inventor grants the legal representative of Assignee. its successors and assigns, the power to insert on this Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

Each declarant-inventor declares and agrees to all provisions of this Declaration and Assignment by sianing below:

07/10/2013 City

Fanjo, ND

State

Tianjun FU

Date signed

The signing of the Declaration and Assignment by the above declarant-inventor is witnessed or notarized as set forth below:

Non-inventor witness printed name Witness signature Date Non-inventor witness printed name Witness signature Date State of Non County of A DO Sworn to before me this 10 day of 2018. Notary Public CINDY J MCDONALD Notary Public State of North Dakota My Commission Expires November 20, 2019

Attorney Docket No. 16060-000058-US-CPA Page 3 of 6 2h

07/16/2018 at Fango ND Date signed - City 54 Long WU State

The signing of the Declaration and Assignment by the above declarant-inventor is witnessed or notarized as set forth below:

Non-inventor witness printed nar	ne	
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Witness signature

Date

Non-inventor witness printed name

Witness signature

Date

State of Non County of ___ ano 1

Sworn to before me this <u>16</u> day of

Lucy Mi Donald

SEAL

CINDY J MCDONALD Notary Public State of North Dakota My Commission Expires November 20, 2019

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at_

State

7-16-18

NC 2100 City

ş

Kent WANNER

Date signed

The signing of the Declaration and Assignment by the above declarant-inventor is witnessed or notarized as set forth below:

Non-inventor witness printed name	Witness signature	Date
Non-inventor witness printed name	Witness signature	Date
State of Deth Dale State		
Sworn to before me this <u>16</u> day of <u>16 day of <u>16 day</u> of <u>16 day of <u>16 day of 16 day</u> of <u>16 day of <u>16 day of 16 day</u> of <u>16 day of 16 day</u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u>	Notary Public	Donald
SEAL CINDY J MCDONALD Notary Public State of North Dakota My Commission Expires November 20	0, 2019	

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Li

7/16/2018

Tai

Jason DICKHERBER

Date signed

City State

The signing of the Declaration and Assignment by the above declarant-inventor is witnessed or notarized as set forth below:

Non-inventor witness printed name Witness signature Date Non-inventor witness printed name Witness signature Date bath Dakata State of 1 County of Sworn to before me this _____0 _ day of **CINDY J MCDONALD** Notary Public **Notary Public** State of North Dakota Commission Expires November 20, 2019

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Chris J. TREMEL

<u>7/10/17</u> at <u>fury</u>, *N*) Date signed <u>City</u> State

The signing of the Declaration and Assignment by the above declarant-inventor is witnessed or notarized as set forth below:

Non-inventor witness printed name

Witness signature

Date

Non-inventor witness printed name

Witness signature

Date

State of Denth Dabota

Sworn to before me this <u>le</u> day of ___, 2018.

mald Notary Public

SEAL CINDY J MCDONALD Notary Public State of North Dakota My Commission Expires November 20, 2019

RECORDED: 07/19/2018