PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4836378

SUBMISSION TYPE:	RESUBMISSION
NATURE OF CONVEYANCE:	ASSIGNMENT
RESUBMIT DOCUMENT ID:	504304099

CONVEYING PARTY DATA

Name	Execution Date
MARCOS PAUL GERARDO CASTRO	03/20/2017
DONGRAN LIU	03/20/2017
JINESH J JAIN	03/20/2017
SNEHA KADETOTAD	05/02/2017

RECEIVING PARTY DATA

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City:	DEARBORN
State/Country:	MICHIGAN
Postal Code:	48126

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15478118

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	83778576 (FGTL-20800)
NAME OF SUBMITTER:	DAVID R. STEVENS
SIGNATURE:	/David R. Stevens/
DATE SIGNED:	02/22/2018

Total Attachments: 4

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PATENT REEL: 045016 FRAME: 0551

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Attorney Docket Number	83778576 (FGTL-20800)

ASSIGNMENT AND DECLARATION (37 C.F.R. 1.63) FOR UTILITY, PROVISIONAL OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

inie of invention	OBSTACLE DETECTION SYSTEMS AND METHODS				
This declaration is directed to:					
☐ United	ached application, or States application or PCT international application number filed on (I hereby authorize the insertion of the application filing date and en they become known.)				
The above-identified ann	lication was made or authorized to be made by me.				
P4.2.	e reviewed and understand the contents of the specification in the above-identified application,				
I believe that I am the ori	ginal inventor or an original joint inventor of a claimed invention in the application.				
continuation-in-part appl	disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including for ications, material information which became available between the filing date of the prior all or PCT international filing date of the continuation-in-part application.				
FORD GLOBAL TECHN of the State of Delaware hereinafter referred to as interest, domestic and for of the ASSIGNEE, its sufor the inventions and disname or names, or in my insert the serial/applicat 15/478, 118 ASSIGNEE, its success applications, in and to the	coveries in any and all countries, entities and intergovernmental organizations, in its or their own name, at its or their election (and I hereby authorize the ASSIGNEE or ASSIGNEE's attorney to ion number and filing date of the application to receive Letters Patent herein. Serial No. , Filing Date04/03/2017), and I hereby sell, assign and set over to the ors. assigns or other legal representatives, and intergovernmental organizations and set over to the invention and all countries, entities and intergovernmental organizations.				
including applications for organizations, and to perl	nyself, my heirs, successors, assigns or other legal representatives to execute any and all papers, Letters Patent of any and all kinds and in any and all countries, entities and intergovernmental form any and all acts which the ASSIGNEE, its successors, assigns or other legal representatives cure thereto the rights herein sold, assigned and set over.				
And I hereby represent an	d warrant that I have not granted any rights inconsistent with the rights granted herein.				
or imprisonment of not m	it any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine ore than five (5) years or both.				
LEGAL NAME OF INVI Inventor: Jinesh I Ja					
- And	in				
Signature:	Man A				
Note: An Application Data	Sheet (PTO/SB/14 or equivalent), including running the entire inventive entity, must accompany this form, torm for each additional inventor				

Note: An Application Data Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional declaration form for each additional inventor.

Please direct all correspondence to:

Attorney Docket Number	83778576 (FGTL-20800)

ASSIGNMENT AND DECLARATION (37 C.F.R. 1.63) FOR UTILITY, PROVISIONAL OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

Title of Invention	OBSTACLE DETECTION SYSTEMS AND METHODS
This declaration is directed	AT 1688
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X The	attached application, or
and the second s	ed States application or PCT international application number
the insertion of the applic	filed on (I hereby authorize ation filing date and number into this form when they become known.)
The above-identified app	ication was made or authorized to be made by me.
I hereby state that I have including the claims.	reviewed and understand the contents of the specification in the above-identified application,
I believe that I am the ori	ginal inventor or an original joint inventor of a claimed invention in the application.
for continuation-in-part a	o disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including applications, material information which became available between the filing date of the prior al or PCT international filing date of the continuation-in-part application.
PORD GLOBAL TECH laws of the State of De Michigan, hereinafter refi title and interest, domes including the right of the receive Letters Patent is organizations, in its or to ASSIGNEE or ASSIGNE Letters Patent herein: S hereby sell, assign and s priority, including any pr and intergovernmental or	ent agreement heretofore made or by contractual obligation, I do sell, assign and set over unto NOLOGIES, LLC, a Ford Motor Company subsidiary, organized and existing by virtue of the laware, having its principal place of business at Dearborn, County of Wayne, and State of cred to as the ASSIGNEE, its successors, assigns or other legal representatives, the entire right, the and foreign, in and to the inventions and discoveries in the above-identified invention ASSIGNEE, its successors, assigns or other legal representatives to make applications and to be the inventions and discoveries in any and all countries, entities and intergovernmental neir own name or names, or in my name, at its or their election (and I hereby authorize the Et's attorney to insert the serial/application number and filing date of the application to receive erial No. $15/478$, 118 , Filing Date $04/03/2017$), and the over to the ASSIGNEE, its successors, assigns or other legal representatives, all rights of ovisional applications, in and to the inventions and discoveries in any and all countries, entities ganizations including all applications claiming benefit of the filing date hereof, continuations, isionals, reexaminations and reissue applications.
including applications for organizations, and to perf	yself, my heirs, successors, assigns or other legal representatives to execute any and all papers, Letters Patent of any and all kinds and in any and all countries, entities and intergovernmental form any and all acts which the ASSIGNEE, its successors, assigns or other legal representatives cure thereto the rights herein sold, assigned and set over.
And I hereby represent ar	d warrant that I have not granted any rights inconsistent with the rights granted herein.
	t any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine ore than five (5) years or both.
LEGAL NAME OF INV	ENTOR 2017
Inventor: 1 Snc	<u>ha Kadetotad</u> Date: CD/02/201
ALL STREET	

Attorney Docket 1	umber	83778576	(FGTL-20800)

ASSIGNMENT AND DECLARATION (37 C.F.R. 1.63) FOR UTILITY, PROVISIONAL OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

Title of Invention	OBSTACLE DETECTION SY	STEMS AND METHODS		
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The above-identified app	lication was made or authorized to be ma	de by me.		
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continuation-in-part app	o disclose information which is material the disclose information which the disclose of the di	o patentability as defined in 37 C.F.R. 1.56, including for became available between the filing date of the prior continuation-in-part application.		
FORD GLOBAL TECHIO of the State of Delawam hereinafter referred to as interest, domestic and for of the ASSIGNEE, its suffer the inventions and diname or names, or in my insert the serial/applications applications, in and to the including all application reexaminations and reissan And I hereby agree for a including applications for	NOLOGIES, LLC, a Ford Motor Compare, having its principal place of business in the ASSIGNEE, its successors, assigns reign, in and to the inventions and discovercessors, assigns or other legal represent scoveries in any and all countries, entitie name, at its or their election (and I here ion number and filing date of the appropriate 104/03/201 fors, assigns or other legal representate inventions and discoveries in any and a second control of the filing date inventions. In a specification of the filing date inventions and discoveries are applications.	ontractual obligation, I do sell, assign and set over unto my subsidiary, organized and existing by virtue of the laws at Deurborn, County of Wayne, and State of Michigan, or other legal representatives, the entire right, title and teries in the above-identified invention including the right tatives to make applications and to receive Letters Patent is and intergovernmental organizations, in its or their own by authorize the ASSIGNEE or ASSIGNEE's attorney to optication to receive Letters Patent herein: Serial No. 7		
may deem necessary to so	form any and all acts which the ASSIGN ecure thereto the rights herein sold, assign	NEE, its successors, assigns or other legal representatives and set over.		
And I hereby represent and warrant that I have not granted any rights inconsistent with the rights granted herein.				
or imprisonment of not m	ore than five (5) years or both.	s declaration is punishable under 18 U.S.C. 1001 by fine		
LEGAL NAME OF INV Inventor: Marcos Pr	ENTOR 1111 Gerardo castro	Date: 03/20/2019		
Signature:		Ode. Usper Corr		
Notes An Amelian Com-	Na conference por participation of the conference property and the conference property			
Tise an additional development	. Street (* 13785) 14 OF Equivalent), mentang e form for each additional inventor	naming the culie inventive entity, must accompany this form.		

Attorne	v Do	ocket	Number	. :{	8377857	h i	FGTL	-20800	}

ASSIGNMENT AND DECLARATION (37 C.F.R. 1.63) FOR UTILITY, PROVISIONAL OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

Title of Invention OBSTACLE DETECTION SYSTEMS AND METHODS
This declaration is directed to:
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The attached application, or United States application or PCT international application number
United States application or PCT international application number filed on (I hereby authorize the insertion of the application filing date and
number into this form when they become known.)
The above-identified application was made or authorized to be made by me.
I hereby state that I have reviewed and understand the contents of the specification in the above-identified application, including the claims.
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
I am aware of the duty to disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including for continuation-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.
Pursuant to my employment agreement heretofore made or by contractual obligation, I do sell, assign and set over unto FORD GLOBAL TECHNOLOGIES, LLC, a Ford Motor Company subsidiary, organized and existing by virtue of the laws of the State of Delaware, having its principal place of business at Dearborn, County of Wayne, and State of Michigan, hereinafter referred to as the ASSIGNEE, its successors, assigns or other legal representatives, the entire right, title and interest, domestic and foreign, in and to the inventions and discoveries in the above-identified invention including the right of the ASSIGNEE, its successors, assigns or other legal representatives to make applications and to receive Letters Patent for the inventions and discoveries in any and all countries, entities and intergovernmental organizations, in its or their own name or names, or in my name, at its or their election (and I hereby authorize the ASSIGNEE or ASSIGNEE's automacy to insert the serial/application number and filing date of the application to receive Letters Patent herein: Scrial No. 15/478,118 Filing Date 04/03/2017 and I hereby sell, assign and set over to the ASSIGNEE, its successors, assigns or other legal representatives, all rights of priority, including any provisional applications, in and to the inventions and discoveries in any and all countries, entities and intergovernmental organizations including all applications claiming benefit of the filing date hereof, continuations, continuations-in-part, divisionals, reexaminations and reissue applications.
And I hereby agree for myself, my heirs, successors, assigns or other legal representatives to execute any and all papers, including applications for Letters Patent of any and all kinds and in any and all countries, entities and intergovernmental organizations, and to perform any and all acts which the ASSIGNEE, its successors, assigns or other legal representatives may deem necessary to secure thereto the rights herein sold, assigned and set over.
And I hereby represent and warrant that I have not granted any rights inconsistent with the rights granted herein.
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years or both.
LEGAL NAME OF INVENTOR Inventor: Dongran Liu Date: 03/Lo/2s 17
Signature: Dongram Liu Date: 05/108/28/
Note: An Application Data Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Lise an additional declaration form for each additional inventor. PATENT

RECORDED: 02/22/2018 REEL: 045016 FRAME: 0556