# 504455406 07/13/2017 PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4502107

SUBMISSION TYPE:		NEW ASSIGNMENT	NEW ASSIGNMENT			
NATURE OF CONVEYANCE:		ASSIGNMENT				
CONVEYING PARTY DA	ATA					
		Name	Execution Date			
JOSEPH NORMAN ULR	EY		04/04/2014			
JOHN ERIC ROLLINGER	7		04/04/2014			
MICHAEL HOWARD SH	ELBY		03/10/2014			
JIANWEN JAMES YI			03/03/2014			
Name:	me: FORD GLOBAL TECHNOLOGIES, LLC					
Street Address:	FAIRLANE PLAZA SOUTH, SUITE 800					
Internal Address:	330 TOWN CENTER DRIVE					
City:	DEARBORN					
State/Country:	MICHIGAN					
Postal Code:	48126					
	1					
PROPERTY NUMBERS	Total: 1		7			
Property Type		Number				
Application Number:156		5648787				
CORRESPONDENCE D	ΑΤΑ					
Fax Number:	(9	971)271-8021				
		he e-mail address first; if that is un				
Using a tax number, if p Phone:	•	<i>if that is unsuccessful, it will be se</i> 71-271-8020	nt via US Mali.			
Email:		berts@mccrus.com				
Correspondent Name:		OY RUSSELL LLP				
Address Line 1:	806 S.W. BROADWAY, SUITE 600					
Address Line 4:	PORTLAND, OREGON 97205					
ATTORNEY DOCKET NU	IMBER:	83851050	83851050			
NAME OF SUBMITTER:		LAURA ROBERTS	LAURA ROBERTS			
SIGNATURE:		/Laura Roberts/	/Laura Roberts/			
DATE SIGNED:		07/13/2017	07/13/2017			
Total Attachments: 4 source=Executed Assignment (from parent) 83851050#page1.tif						

source=Executed Assignment (from parent) 83851050#page2.tif	
source=Executed Assignment (from parent) 83851050#page3.tif	
source=Executed Assignment (from parent) 83851050#page4.tif	

Attorney Docket Number 83423374

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

Title of Invention	METHOD AND SYSTEM FOR ENGINE CONTROL					
This declaration is direct	ed to:					
The attached application, or United States application or PCT international application number filed on						
The above-identified app	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 ori	ginal 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, 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 in my name, at its or their election (and I hereby authorize the ASSIGNEE or ASSIGNEE's attorney to the applications, in and to the inventions and filing date of the application to receive Letters Patent herein: Serial No. $14/245, 945$ , Filing Date $April 4, 2014$ , and I hereby sell, assign and set over to the applications, in and to the inventions and discoveries in any and all countries, entities and intergovernmental organizations, including any provisional applications, in and to the inventions and discoveries in any and all countries, entities and intergovernmental organizations, 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.						
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 an	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 INVE Inventor:Joseph Nor						
Signature: Juph W. Uliz						
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.						

PATENT REEL: 042998 FRAME: 0414

#### Please direct all correspondence to customer number: 36865

Attorney Docket Number 83423374

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

#### **Title of Invention** METHOD AND SYSTEM FOR ENGINE CONTROL This declaration is directed to: $\mathbb{X}$ The attached application, or United States application or PCT international application number filed on 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 attorney to insert the serial/application number and filing date of the application to receive Letters Patent herein: Serial No. 14/245,945 . Filing Date April 4, 2014 ), 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: John Eric Rollinger Date: Rellingues

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.

Signature:

### PATENT REEL: 042998 FRAME: 0415

Attorney Docket Number 83423374

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

Title of Invention	METHOD AND SYSTEM FOR ENGINE CONTROL				
This declaration is direct	This declaration is directed to:				
The attached application, or United States application or PCT international application number filed on					
The above-identified app	lication was made or authorized to be made by me.				
I hereby state that I have including the claims.	ve reviewed and understand the contents of the specification in the above-identified application,				
I believe that I am the or	iginal 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 attorney to insert the serial/application number and filing date of the application to receive Letters Patent herein: Serial No. $14/245, 945$ , Filing Date April 4, 2014, 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, in chuding any provisional applications and to the inventions and discoveries in any and all countries, entities and intergovernmental organizations including any provisional 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 INV Inventor: Michael	Howard Shelby Date: <u>ζ ~ /0 ~ 2 ωΨ</u>				
ARTIGALIST. ITANALSSI	. / >				
Signature: <u>776 (</u>	<u>M. Komzi SkrZY</u>				
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.					

PATENT REEL: 042998 FRAME: 0416

Attorney Docket Number 83423374

REEL: 042998 FRAME: 0417

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

Title of Invention	on	METHOD ANI	SYSTEM FOR ENGINE CONTROL		
This declaration is	s direc	ed to:			
		tached application, or 1 States application or PCT internation filed o	anal application number		
The above-identif	ied app	plication was made or authorized to l	se 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 or	iginal inventor or an original joint in	ventor of a claimed invention in the application.		
continuation-in-pa	irt apr	lications, material information wh	erial to patentability as defined in 37 C.F.R. 1.56, including for the became available between the filing date of the prior of the continuation-in-part application.		
FORD GLOBAL of the State of D hereinafter referre interest, domestic of the ASSIGNEE for the inventions name or names, of insert the serial/s 14/245,945 ASSIGNEE, its applications, in an	TECH elawar ed to a and fc 5, its s and di r in my applica succes ed to the licatio	NOLOGIES, LLC, a Ford Motor Co e, having its principal place of bus s the ASSIGNEE, its successors, a reign, in and to the inventions and co uccessors, assigns or other legal rep iscoveries in any and all countries, e y name, at its or their election (and l tion number and filing date of t , Filing Date April 4, sors, assigns or other legal repre te inventions and discoveries in any ns claiming benefit of the filing	by contractual obligation, I do sell, assign and set over unto impany subsidiary, organized and existing by virtue of the laws iness at Dearborn, County of Wayne, and State of Michigan, ssigns or other legal representatives, the entire right, title and liscoveries in the above-identified invention including the right resentatives to make applications and to receive Letters Patent nitities and intergovernmental organizations, in its or their own hereby authorize the ASSIGNEE or ASSIGNEE's attorney to he application to receive Letters Patent herein: Serial No. 2014 ), and I hereby sell, assign and set over to the sentatives, all rights of priority, including any provisional and all countries, entities and intergovernmental organizations date hereof, continuations, continuations-in-part, divisionals,		
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 fin or imprisonment of not more than five (5) years or both.					
그는 사람이 있는 것은 것이 많은 것이 있는 것이 없는 것이 없는 것이 없다.	7277 11				
Note: An Application Data Sheet (PTD/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.					
		n form for each additional inventor.			
			PATENT		

## RECORDED: 07/13/2017