505185135 11/11/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5231904

SUBMISSION TYPE: NATURE OF CONVEYANCE:		NEW ASS	NEW ASSIGNMENT ASSIGNMENT			
		ASSIGNM				
CONVEYING PARTY DA	ATA					
		Name				Execution Date
DAZHOU GUO					11/21/2017	
YUJIE WEI					11/21/2017	
XUE MEI					11/21/2017	
XIAODI HOU					11/21/2017	
RECEIVING PARTY DA	ТА					
Name:	TUSIM	PLE				
Street Address:	9191 T	OWNE CENTRE	DR.			
Internal Address:	SUITE	600				
City:	SAN D	EGO				
State/Country:	CALIF	DRNIA				
Postal Code:	92122					
	1					
PROPERTY NUMBERS	Total: 1					
Property Type		Ν	lumber			
		N 15822597	lumber			
Property Type Application Number:			lumber			
Application Number:	ATA	15822597	lumber			
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Application Number:	e sent to	15822597 (916)404-5569 • the e-mail add	ress first; if that is			
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Application Number: CORRESPONDENCE DA Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NU NAME OF SUBMITTER: SIGNATURE:	e sent to provideo	(916)404-5569 <i>the e-mail add</i> <i>if that is unsu</i> 4084064855 mail@inventive.l INVENTIVE LAV 11768 ATWOOE AUBURN, CALIF TUS-76 JIM H. SA /jim h salte 11/11/201	ress first; if that is ccessful, it will be aw V INC. D ROAD #214 FORNIA 95603 LTER er, Reg. #35668/	e sent	via US I	Mail.

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE

Title of Invention	SYSTEM AND METHOD FOR LARGE-SCALE LANE MARKING DETECTION USING MULTIMODAL SENSOR DATA
Docket Number	Tu8-76
As the below name	ed inventor, I hereby declare that:
This declaration	The attached patent application, or
is directed to:	United States patent application or PCT international application number:
	filed on files automation of the subscript and application number:
	filed on (I hereby authorize and request any attorney having appropriate authority from the assignee to insert on the designated lines above, the filing date and application number of said application when known.)
The above-identif	ed application was made or authorized to be made by me.
I believe that I am	the original inventor or an original joint inventor of a claimed invention in the application.
	dge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine f not more than five (5) years, or both.
WHEREA	S. TUSIMPLE (hereinafter referred to be "A OGICINITED 1 - 1
identified United S	S, TUSIMPLE (hereinafter referred to as "ASSIGNEE") having a place of business at: 9191 Towne Centre 1 Diego, CA 92122, desires to acquire the entire right, title and interest in said invention and the above- states patent application;
NOW, TH	IEREFORE for word and valuable considered
acknowledged, I h	ereby assign to the ASSIGNEE, the entire right, title and interest in said invention and in the above- states patent application and in all divisions continuations and in the above-
and reissues, reex;	states patent application and in all divisions, continuations and continuations-in-part of said application, aminations, extensions and renewals of Lattern Patent continuations.
applications filed	in countries foreign to the United States (likely rated granted mercon, and m all corresponding patent
International Conv	e right to claim priority to the above-identified United States patent application under the terms of the vention and any other relevant treaties;
countries to issue a	uthorize and request the United States Patent & Trademark Office and officials in patent offices in foreign my and all of said Letters Patent to the ASSIGNEE as the assignee of my entire right, title and interest in or the sole use and on behalf of the ASSIGNEE is an another statement of the ASSIGNEE.
full end of the term	for which said Letters Patent may be granted.
I nereby w	arrant and represent that no assignment grant with the state of the second state of th
expressed is nosee	a conveyed has been made to others by the undersigned, and that full right to convey the same as herein used by the undersigned; and
Further, I a	gree that without further considered in the
respecting said invi	gree that, without further consideration, I will communicate to the ASSIGNEE any facts known to me ention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, t, substitute, renewal, reexamination, extension, and minute all divisional, continuation,
continuation-in-par	t, substitute, renewal, reexamination, extension, and reissue applications, execute all divisional, continuation, o cause said Letters Patent to be issued to the A SUCO IVID
States and foreign c	
LEGAL NAME OF	
nventor: Da	zhou GUO Date: 11/21/2017
Signature:	in the second se
	INVENTIVE PATENT LAW DO

INVENTIVE PATENT LAW P.C. 2280 East Bidwell St. #214, Folsom, CA 95630 US (408) 406-4855

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE

Title of Invention	SYSTEM AND METHOD FOR LARGE-SCALE LANE MARKING DETECTION USING MULTIMODAL SENSOR DATA
Docket Number	TuS-76
As the below nan	ed inventor. I hereby declare that:
This declaration	The attached patent application, or
is directed to:	United States patent application or PCT international application number:
	filed on (I hereby authorize and request any attorney having appropriate authority from the assignee to insort on the designated lines above, the filing date and application number of said application when known.)
The above-identil	led application was made or authorized to be made by me.
	the original inventor or an original joint inventor of a claimed invention in the application.
	edge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine of not more than five (5) years, or both.
Dr., Suite 600, Sa	AS, TUSIMPLE (hereinafter referred to as "ASSIGNEE") having a place of business at: 9191 Towne Centre in Diego, CA 92122, desires to acquire the entire right, title and interest in said invention and the above- States patent application;
NOW, T acknowledged, I identified United and reissues, ree: applications filed applications, and I hereby own name and t	HEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby hereby assign to the ASSIGNEE, the entire right, title and interest in said invention and in the above- States patent application and in all divisions, continuations and continuations-in-part of said application, caminations, extensions and renewals of Letters Patent granted thereon, and in all corresponding patent in countries foreign to the United States ("foreign countries") and corresponding international patent in all Letters Patents issuing on any such patent applications in the United States and foreign countries; assign to the ASSIGNEE the right to file patent applications in foreign countries on said invention in its he right to claim priority to the above-identified United States patent application under the terms of the ivention and any other relevant treaties;
countries to issue and to the same,	authorize and request the United States Patent & Trademark Office and officials in patent offices in foreign any and all of said Letters Patent to the ASSIGNEE as the assignee of my entire right, title and interest in for the sole use and on behalf of the ASSIGNEE, its successors, assigns, and legal representatives, to the m for which said Letters Patent may be granted;
I hereby and property her	warrant and represent that no assignment, grant, mortgage, license, or other agreement affecting the rights ein conveyed has been made to others by the undersigned, and that full right to convey the same as herein essed by the undersigned; and
Further, I respecting said in continuation-in-p assignment paper	agree that, without further consideration, I will communicate to the ASSIGNEE any facts known to me evention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, art, substitute, renewal, reexamination, extension, and reissue applications, execute all necessary s to cause said Letters Patent to be issued to the ASSIGNEE, make all rightful oaths, and, perform all lawful iSIGNEE, its successors and assigns, to obtain and enforce Letters Patent for said invention in the United
LEGAL NAME	
	(ajje WEI Date: 11/21/2017
Signature:	Yujie Wei
	INVENTIVE PATENT LAW F.C.

INVENTIVE PATENT LAW P.C. 2280 East Bidwell St. #214, Folsom, CA 95630 US (408) 406-4855

PATENT REEL: 047468 FRAME: 0146

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE

assignment papers to cause said Letters Patent to be issued to the ASSIGNEE, make all rightful oaths, and, perform all lawful acts to aid the ASSIGNEE, its successors and assigns, to obtain and enforce Letters Patent for said invention in the United States and foreign countries. LEGAL NAME OF INVENTOR Inventor: Xue MEI Date: $\frac{11/21/2017}{}$	Title of Invention	SYSTEM AND METHOD FOR LARGE-SCALE LANE MARKING DETECTION USING MULTIMODAL SENSOR DATA
This declaration The attached patent application, or is directed to: United States patent application or PCT international application number:	1	TuS-76
This declaration The attached patent application, or is directed to: United States patent application or PCT international application number:	As the below nat	med inventor. I hereby declare that
is directed to: United States patent application or PCT international application number: filed on		8.72
Idea on	is directed to:	
The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. 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. WHEREAS, TUSIMPLE (hereinafter referred to as "ASSIGNEE") having a place of business at: 9191 Towne Centre Dr., Suite 600, San Diego, CA 92122, desires to acquire the entire right, title and interest in said invention and the above- identified United States patent application: NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged. I hereby assign to the ASSIGNEE, the entire right, title and interest in said invention and in a above- identified United States patent application and in all divisions, continuations and continuations-in-part of said application, and reissues, reexaminations, extensions and renewals of Letters Patent granted thereon, and in all corresponding patent applications, and in all Letters Patents issuing on any such patent applications in the United States and foreign countries; I hereby assign to the ASSIGNEE the right to file patent applications in foreign countries on said invention in its own name and the right to claim priority to the above-identified United States patent application under the terms of the International Convention and any other relevant treaties; I hereby authorize and request the United States Patent & Trademark Office and officials in patent offices in foreign countries to issue any and all of said Letters Patent to the ASSIGNEE as the assignee of my entire right, title and interest in and to the same, for the sole use and on behalf of the ASSIGNEE is successors, assigns, and legal representatives, to the full end of the term for which said Letters Patent may be granted; I hereby warrant and represent that no assignment, grant,		a manual barrow abbucation of r.r. 1. International application number.
I beheve that I am the original inventor or an original joint inventor of a claimed invention in the application. 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. WHEREAS, TUSIMPLE (hereinafter referred to as "ASSIGNEE") having a place of business at: 9191 Towne Centre Dr., Suite 600, San Diego, CA 92122, desires to acquire the entire right, title and interest in said invention and the above- identified United States patent application; NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I hereby assign to the ASSIGNEE the entire right, title and interest in said invention and in the above- identified United States patent application and in all divisions, continuations and continuations-in-part of said application, and reissues, reexaminations, extensions and renewals of Letters Patent granted thereon, and in all corresponding patent applications filed in countries foreign to the United States ("foreign countries") and corresponding international patent applications, and in all Letters Patents issuing on any such patent applications in foreign countries on said invention in its own name and the right to claim priority to the above-identified United States patent application under the terms of the International Convention and any other relevant treaties; I hereby authorize and request the United States Patent & Trademark Office and officials in patent offices in foreign countries to issue any and all of said Letters Patent may be granted; I hereby warrant and represent that no assignment, grant, mortgage, liceuse, 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, and prisenty herein conveyed has been made to others by the undersigned; and Fourthey herein conveyed has be		
I beheve that I am the original inventor or an original joint inventor of a claimed invention in the application. 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. WHEREAS, TUSIMPLE (hereinafter referred to as "ASSIGNEE") having a place of business at: 9191 Towne Centre Dr., Suite 600, San Diego, CA 92122, desires to acquire the entire right, title and interest in said invention and the above- identified United States patent application; NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I hereby assign to the ASSIGNEE the entire right, title and interest in said invention and in the above- identified United States patent application and in all divisions, continuations and continuations-in-part of said application, and reissues, reexaminations, extensions and renewals of Letters Patent granted thereon, and in all corresponding patent applications filed in countries foreign to the United States ("foreign countries") and corresponding international patent applications, and in all Letters Patents issuing on any such patent applications in foreign countries on said invention in its own name and the right to claim priority to the above-identified United States patent application under the terms of the International Convention and any other relevant treaties; I hereby authorize and request the United States Patent & Trademark Office and officials in patent offices in foreign countries to issue any and all of said Letters Patent may be granted; I hereby warrant and represent that no assignment, grant, mortgage, liceuse, 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, and prisenty herein conveyed has been made to others by the undersigned; and Fourthey herein conveyed has be	The above-identi	fied application was made or authorized to be made by me.
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identified United States patent application; NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged. I hereby assign to the ASSIGNEE, the entire right, title and interest in said invention and in the above- identified United States patent application and in all divisions, continuations and continuations-in-part of said application, and reissues, reexaminations, extensions and renewals of Letters Patent granted thereon, and in all corresponding patent applications filed in countries foreign to the United States ("foreign countries") and corresponding international patent applications, and in all Letters Patents issuing on any such patent applications in foreign countries on said invention in its own name and the right to claim priority to the above-identified United States patent application under the terms of the International Convention and any other relevant treaties; I hereby authorize and request the United States Patent & Trademark Office and officials in patent offices in foreign countries to issue any and all of said Letters Patent to the ASSIGNEE as the assignee of my entire right, title and interest in and to the same, for the sole use and on behalf of the ASSIGNEE, its successors, assigns, and legal representatives, to the full end of the term for which said Letters Patent may be granted; I hereby warrant and represent 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; and Further, I agree that, without further consideration, I will communicate to the ASSIGNEE any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, continuation-in-part, substitute, renewal, reexamination, extension, and reissue applications, excente all divisional, continu	or imprisonment	of not more than five (5) years, or both.
identified United States patent application and in all divisions, continuations and continuations-in-part of said application, and reissues, reexaminations, extensions and renewals of Letters Patent granted thereon, and in all corresponding international patent applications, and in all Letters Patents issuing on any such patent applications in the United States and foreign countries.' and corresponding international patent applications, and in all Letters Patents issuing on any such patent applications in the United States and foreign countries.' I hereby assign to the ASSIGNEE the right to file patent applications in foreign countries on said invention in its own name and the right to claim priority to the above-identified United States patent application under the terms of the International Convention and any other relevant treaties; I hereby authorize and request the United States Patent & Trademark Office and officials in patent offices in foreign countries to issue any and all of said Letters Patent to the ASSIGNEE as the assignce of my entire right, title and interest in and to the same, for the sole use and on behalf of the ASSIGNEE, its successors, assigns, and legal representatives, to the full end of the term for which said Letters Patent may be granted; I hereby warrant and represent 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; and Further, I agree that, without further consideration, I will communicate to the ASSIGNEE any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, continuation-in-part, substitute, renewal, reexamination, extension, and reissue applications, execute all necessary assignment papers to cause said Letters Patent to be issued to the ASSIGNEE, make all rightful oaths, and, perform all l	WHERE, Dr., Suite 600, S identified United	AS, TUSIMPLE (hereinafter referred to as "ASSIGNEE") having a place of business at: 9191 Towne Centre an Diego, CA 92122, desires to acquire the entire right, title and interest in said invention and the above-States patent application;
I hereby authorize and request the United States Patent & Trademark Office and officials in patent offices in foreign countries to issue any and all of said Letters Patent to the ASSIGNEE as the assignee of my entire right, title and interest in and to the same, for the sole use and on behalf of the ASSIGNEE, its successors, assigns, and legal representatives, to the full end of the term for which said Letters Patent may be granted; I hereby warrant and represent 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; and Further, I agree that, without further consideration, I will communicate to the ASSIGNEE any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, continuation-in-part, substitute, renewal, reexamination, extension, and reissue applications, execute all necessary assignment papers to cause said Letters Patent to be issued to the ASSIGNEE, make all rightful oaths, and, perform all lawful acts to aid the ASSIGNEE, its successors and assigns, to obtain and enforce Letters Patent for said invention in the United States and foreign countries. LEGAL NAME OF INVENTOR Inventor: Xue MEI	identified United and reissues, ree: applications filed applications, and I hereby own name and th International Cor	States patent application and in all divisions, continuations and continuations-in-part of said application, xaminations, extensions and renewals of Letters Patent granted thereon, and in all corresponding patent in countries foreign to the United States ("foreign countries") and corresponding international patent in all Letters Patents issuing on any such patent applications in the United States and foreign countries; assign to the ASSIGNEE the right to file patent applications in foreign countries on said invention in its he right to claim priority to the above-identified United States patent application under the terms of the ivention and any other relevant treaties;
Example property farterin 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; and Further, I agree that, without further consideration, I will communicate to the ASSIGNEE any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, continuation-in-part, substitute, renewal, reexamination, extension, and reissue applications, execute all necessary assignment papers to cause said Letters Patent to be issued to the ASSIGNEE, make all rightful oaths, and, perform all lawful acts to aid the ASSIGNEE, its successors and assigns, to obtain and enforce Letters Patent for said invention in the United States and foreign countries. LEGAL NAME OF INVENTOR Inventor: Xue MEI Date: 1//21/2017	I hereby countries to issue and to the same, full end of the ter	authorize and request the United States Patent & Trademark Office and officials in patent offices in foreign any and all of said Letters Patent to the ASSIGNEE as the assignce of my entire right, title and interest in for the sole use and on behalf of the ASSIGNEE, its successors, assigns, and legal representatives, to the m for which said Letters Patent may be granted;
Further, I agree that, without further consideration, I will communicate to the ASSIGNEE any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, continuation-in-part, substitute, renewal, reexamination, extension, and reissue applications, execute all necessary assignment papers to cause said Letters Patent to be issued to the ASSIGNEE, make all rightful oaths, and, perform all lawful acts to aid the ASSIGNEE, its successors and assigns, to obtain and enforce Letters Patent for said invention in the United States and foreign countries. LEGAL NAME OF INVENTOR Date: $1/(21/2017)$	mus herebourd note	an conveyed has been made to others by the understoned and that full right to convey the many as have
	Further, I respecting said in continuation-in-pa assignment papers acts to aid the AS	agree that, without further consideration, I will communicate to the ASSIGNEE any facts known to me vention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, art, substitute, renewal, reexamination, extension, and reissue applications, execute all necessary to cause said Letters Patent to be issued to the ASSIGNEE, make all rightful oaths, and, perform all lawful SIGNEE, its successors and assigns, to obtain and enforce Letters Patent for said invention in the United
	LEGAL NAME C	OF INVENTOR
	Inventor: X	
Signature: Me Me	Sígnature:	due Mei

INVENTIVE PATENT LAW P.C. 2280 East Bidwell St. #214, Folsom, CA 95630 US (408) 406-4855

> PATENT REEL: 047468 FRAME: 0147

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE

administration of the states patent application and in all divisions, continuations and continuations-in-part of said application	Title of Invention	SYSTEM AND METHOD FOR LARGE-SCALE LANE MARKING DETECTION USING MULTIMODAL SENSOR DATA
This declaration In the attached patent application, or is directed to: United States patent application or PCT international application number:	A State State State A	TuS-76
is directed to: United States patent application, of PCT international application number: filed on	As the below nam	ed inventor, I hereby declare that:
is directed to: United States patent application or PCT international application number: <u>international directors</u> <u>international application number</u> <u>international application number</u> <u>international application when known</u> .] The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. 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. WHEREAS, TUSIMPLE (hereinafter referred to as "ASSIGNEE") having a place of business at: 9191 Towne Centre Dr., Suite 600, San Diego, CA 92122, desires to acquire the entire right, title and interest in said invention and the above- identified United States patent application; NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged. I hereby assign to the ASSIGNEE, the entire right, title and interest in said invention and in the above- identified United States patent applications and renewals of Letters Patent granted thereon, and in all corresponding patent applications, extensions and renewals of Letters Patent granted thereon, and in all corresponding patent applications, field in countries foreign to the United States ("foreign countries") and corresponding international in the application in all Letters Patents issuing on any such patent applications in the United States and foreign countries; I hereby assign to the ASSIGNEE the right to file patent applications in foreign countries on said invention in its own name and the right to claim priority to the above-identified United States patent application under the terms of the International Convention and any other relevant treaties; I hereby authorize and request the United States Patent & Trademark Office and officials in patent offices in foreign countries to issue any and all of said Letters		The attached patent application, or
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	LEGAL NAME O	FINVENTOR
Inventor: Xiaodi HOU Date:	Inventor: Xi	aodi HOU Date:
Signature: 1	Signature:	

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