#### 504627418 11/03/2017

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4674136

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
ROBELLO SAMUEL	12/06/2016
ZHENGCHUN LIU	12/06/2016
JIN FEI	12/08/2016
JEFFREY MARC YARUS	11/18/2016

### **RECEIVING PARTY DATA**

Name:	LANDMARK GRAPHICS CORPORATION
Street Address:	3000 N. SAM HOUSTON PKWY E.
City:	HOUSTON
State/Country:	TEXAS
Postal Code:	77032

### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	15565411

### **CORRESPONDENCE DATA**

Fax Number: (949)851-9348

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 9498510633

Email: ocrayton@mwe.com, dstokes@mwe.com

MCDERMOTT WILL & EMERY LLP **Correspondent Name:** 

4 PARK PLAZA Address Line 1:

Address Line 2: 1700

Address Line 4: IRVINE, CALIFORNIA 92614-2559

ATTORNEY DOCKET NUMBER:	098273-2108
NAME OF SUBMITTER:	MARK J. ITRI
SIGNATURE:	/Mark J. Itri/
DATE SIGNED:	11/03/2017

### **Total Attachments: 8**

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**PATENT** REEL: 044033 FRAME: 0675 504627418

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PATENT REEL: 044033 FRAME: 0676

	As the	s the below named inventor, I hereby declare that:							
	This declaration is directed to:								
	$\boxtimes$	The attached application to be filed as a United States application or PCT							
		interna	tional ap	plication, or					
		United	States	application	or	PCT	international	application	number
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Regarding that application, I declare the following:

- 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.

Moreover, Whereas, LANDMARK GRAPHICS CORPORATION, a Delaware Corporation, having a place of business at 3000 N. Sam Houston Pkwy E., Houston, TX 77032 (hereinafter "Assignee") is desirous of acquiring an interest therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, by these presents do sell, assign and transfer and convey unto Assignee, its successors and assigns, the full and exclusive right, for the United States of America and its territorial possessions and for any and all foreign countries, in and to the said invention, described in the Patent Application identified above, and any national phase, divisional, continuing, continuation-in-part, or reissue application based on the present application preparatory to obtaining Letters Patent of the United States therefore; said invention, application and any and all Letters Patent issuing there from to be held and enjoyed by Assignee, for its own use and benefit, and for its legal representatives, successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me and had this assignment and sale not been made.

1 of 2

I do further agree to sign all papers, make all rightful oaths and do all requisite acts for the filing of any disclaimer or for the filing and assignment of any divisional, continuing or reissue application or applications for patent based on the present application, as well as for any other U.S. or foreign application for patent which relates to the said invention, at Assignee's expense.

I do further agree to communicate to Assignee, its successors, assign or other legal representatives, such facts relating to the invention disclosed in the present application or Letters Patent issuing thereon as may be known to me, and to testify as to such facts in any patent office proceeding or litigation, at Assignee's expense.

I do further grant the power to amend the following information on this document: the title of the application and the filing designation (attached or by reference to an application number) as required by or in view of any rules or requirements of the United States Patent and Trademark Office or any other patent regulatory authority.

Executed this Sixth day of De Can be V2016

STATE OF

COUNTY OF Harris)

Before me personally appeared said ROBELLO SAMUEL and acknowledged the foregoing instrument to be a free act and deed this 06 day of December, 2016.

Seal

GALE L. MUSKIET Notary ID #13078280-2 My Commission Expires August 17, 2020

REAL	TIME	TRAJE	CTORY	CONTROL I	UR	ING	DRILLING OF	PERATIONS	
Entitl	ed:			MACAS THE MACAS AND A STATE OF THE STATE OF					
		***************************************		filed o	n		; a	nd,	
		United	States	application	or	PCT	international	application	number
		interna	tional ap	plication, or					
	$\boxtimes$	The att	ached ap	oplication to	be f	iled as	a United Stat	es applicatio	n or PCT
	This d	leclaratio	n is dire	cted to:					
	As the	e below r	named in	ventor, I her	eby	decla	e that:		

Regarding that application, I declare the following:

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Moreover, Whereas, LANDMARK GRAPHICS CORPORATION, a Delaware Corporation, having a place of business at 3000 N. Sam Houston Pkwy E., Houston, TX 77032 (hereinafter "Assignee") is desirous of acquiring an interest therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, by these presents do sell, assign and transfer and convey unto Assignee, its successors and assigns, the full and exclusive right, for the United States of America and its territorial possessions and for any and all foreign countries, in and to the said invention, described in the Patent Application identified above, and any national phase, divisional, continuing, continuation-in-part, or reissue application based on the present application preparatory to obtaining Letters Patent of the United States therefore; said invention, application and any and all Letters Patent issuing there from to be held and enjoyed by Assignee, for its own use and benefit, and for its legal representatives, successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me and had this assignment and sale not been made.

1 of 2

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I do further agree to communicate to Assignee, its successors, assign or other legal representatives, such facts relating to the invention disclosed in the present application or Letters Patent issuing thereon as may be known to me, and to testify as to such facts in any patent office proceeding or litigation, at Assignee's expense.

I do further grant the power to amend the following information on this document: the title of the application and the filing designation (attached or by reference to an application number) as required by or in view of any rules or requirements of the United States Patent and Trademark Office or any other patent regulatory authority.

Executed this 6th day of December, 2016

STATE OF TEXAS )

COUNTY OF Harris

Before me personally appeared said ZHENGCHUN LIU and acknowledged the foregoing instrument to be a free act and deed this <u>06</u> day of <u>December 2016</u>.

Seal

GALE L. MUSKIET Notary ID #13078280-2 My Commission Expires August 17, 2020

REAL-T	IME	TRAJE	CTORY	CONTROL D	)UR:	ING E	ORILLING OF	PERATIONS	
Entitled	:						AND		·
		PCT/US	2016/06	<u>7735</u> filed or	ı <u>20</u>	Decen	<u>nber 2016;</u> an	d,	
	$\leq$	United	States	application	or	PCT	international	application	number
		internat	ional ap	plication, or					
L		The attached application to be filed as a United States application or $\operatorname{PCT}$							
T	This declaration is directed to:								
Α	is the	le below named inventor, I hereby declare that:							
۸	As the below named inventor, I hereby declare that:								

Regarding that application, I declare the following:

- 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.

Moreover, Whereas, LANDMARK GRAPHICS CORPORATION, a Delaware Corporation, having a place of business at 10200 Bellaire Boulevard, Houston, TX 77072 (hereinafter "Assignee") is desirous of acquiring an interest therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, by these presents do sell, assign and transfer and convey unto Assignee, its successors and assigns, the full and exclusive right, for the United States of America and its territorial possessions and for any and all foreign countries, in and to the said invention, described in the Patent Application identified above, and any national phase, divisional, continuing, continuation-in-part, or reissue application based on the present application preparatory to obtaining Letters Patent of the United States therefore; said invention, application and any and all Letters Patent issuing there from to be held and enjoyed by Assignee, for its own use and benefit, and for its legal representatives, successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me and had this assignment and sale not been made.

1 of 2

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I do further agree to sign all papers, make all rightful oaths and do all requisite acts for the filing of any disclaimer or for the filing and assignment of any divisional, continuing or reissue application or applications for patent based on the present application, as well as for any other U.S. or foreign application for patent which relates to the said invention, at Assignee's expense.

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I do further grant the power to amend the following information on this document: the title of the application and the filing designation (attached or by reference to an application number) as required by or in view of any rules or requirements of the United States Patent and Trademark Office or any other patent regulatory authority.

STATE OF Texas)

COUNTY OF Harris)

Before me personally appeared said JEFFREY MARC YARUS and acknowledged the foregoing instrument to be a free act and deed this 18 day of Movember 2016.

GALE L. MUSKIET Notary ID #13078280-2 🛭 My Commission Expires August 17, 2020

As the	As the below named inventor, I hereby declare that:								
	This declaration is directed to:								
$\boxtimes$	The attached application to be filed as a United States application or PCT								
	international application, or								
	United States application or PCT international application number								
	filed on; and,								
Entitled:	,								
REAL-TIME	TRAJECTORY CONTROL DURING DRILLING OPERATIONS								

Regarding that application, I declare the following:

- 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.

Moreover, Whereas, LANDMARK GRAPHICS CORPORATION, a Delaware Corporation, having a place of business at 3000 N. Sam Houston Pkwy E., Houston, TX 77032 (hereinafter "Assignee") is desirous of acquiring an interest therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, by these presents do sell, assign and transfer and convey unto Assignee, its successors and assigns, the full and exclusive right, for the United States of America and its territorial possessions and for any and all foreign countries, in and to the said invention, described in the Patent Application identified above, and any national phase, divisional, continuing, continuation-in-part, or reissue application based on the present application preparatory to obtaining Letters Patent of the United States therefore; said invention, application and any and all Letters Patent issuing there from to be held and enjoyed by Assignee, for its own use and benefit, and for its legal representatives, successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me and had this assignment and sale not been made.

1 of 2

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I do further agree to sign all papers, make all rightful oaths and do all requisite acts for the filing of any disclaimer or for the filing and assignment of any discional, continuing or reissue application or applications for patent based on the present application, as well as for any other U.S. or foreign application for patent which relates to the said invention, at Assignee's expense.

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Executed this	day of	Dee	, 2016
		2	
	JI	N FEI	
STATE OF TEXAS	)		
COUNTY OF Harris	)		

Before me personally appeared said JIN FEI and acknowledged the foregoing instrument to be a free act and deed this 8 day of December , 2016.



(Notary)

2 of 2

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RECORDED: 11/03/2017