

## PATENT ASSIGNMENT

Electronic Version v1.1

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SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Brad Kenneth BORLAND</td> <td>03/14/2013</td> </tr> <tr> <td>Paul Russell FRIEND</td> <td>03/14/2013</td> </tr> <tr> <td>Matthew CHACKO</td> <td>03/14/2013</td> </tr> </tbody> </table>		Name	Execution Date	Brad Kenneth BORLAND	03/14/2013	Paul Russell FRIEND	03/14/2013	Matthew CHACKO	03/14/2013				
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RECEIVING PARTY DATA													
<table border="1"> <tr> <td>Name:</td> <td>CATERPILLAR INC.,</td> </tr> <tr> <td>Street Address:</td> <td>100 N.E. Adams Street</td> </tr> <tr> <td>Internal Address:</td> <td>Intellectual Property Department</td> </tr> <tr> <td>City:</td> <td>Peoria</td> </tr> <tr> <td>State/Country:</td> <td>ILLINOIS</td> </tr> <tr> <td>Postal Code:</td> <td>61629-9510</td> </tr> </table>		Name:	CATERPILLAR INC.,	Street Address:	100 N.E. Adams Street	Internal Address:	Intellectual Property Department	City:	Peoria	State/Country:	ILLINOIS	Postal Code:	61629-9510
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PROPERTY NUMBERS Total: 1													
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CORRESPONDENCE DATA													
<p>Fax Number: 2024084400</p> <p><i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 202-408-4000</p> <p>Email: chetan.bansal@finnegan.com</p> <p>Correspondent Name: CATERPILLAR/FINNEGAN, HENDERSON, L.L.P.</p> <p>Address Line 1: 901 New York Avenue, NW</p> <p>Address Line 4: WASHINGTON, DISTRICT OF COLUMBIA 20001-4413</p>													
ATTORNEY DOCKET NUMBER:	08350.1030-00000												
NAME OF SUBMITTER:	Chetan R. Bansal												
<p>Total Attachments: 4</p> <p>source=Assignment#page1.tif</p> <p>source=Assignment#page2.tif</p> <p>source=Assignment#page3.tif</p> <p>source=Assignment#page4.tif</p>													

OP \$40.00 13837905

## ASSIGNMENT

WHEREAS We, the below named inventors, [hereinafter referred to as Assignors], have made an invention entitled:

### TRAFFIC ANALYSIS SYSTEM UTILIZING POSITION BASED AWARENESS

for which We will or have filed a patent application; and

WHEREAS, CATERPILLAR INC., a corporation of Delaware whose post office address is Intellectual Property Department, 100 N.E. Adams Street, Peoria, IL 61629-9510 (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention, and in and to the patent application for this invention and any and all patents to be issued upon this application throughout the world;

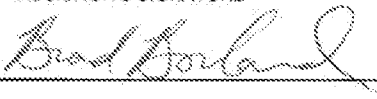
NOW THEREFORE, be it known that for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, We, as Assignors, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, our entire right, title, and interest in and to this invention, and this application, and all divisions, and continuations thereof, and all patents which may be granted thereon, and all reissues thereof, as well as all rights to claim priority in any country or jurisdiction or patent office on the basis of this application, and all applications for patents which may hereafter be filed for this invention in any country or jurisdiction or patent office and all patents which may be granted on this invention in any country or jurisdiction or patent office, and all extensions, renewals, and reissues thereof; and We hereby authorize and request any official of any country or jurisdiction or patent office whose duty it is to issue patents on applications as described above, to issue all patents for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

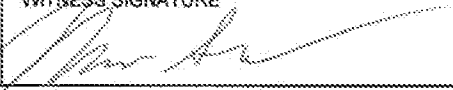
AND, WE HEREBY covenant that We have the full right to convey the interest assigned by this Assignment, and We have not executed and will not execute any agreement in conflict with this Assignment;

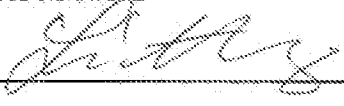
AND, WE HEREBY further covenant and agree that We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in any country or jurisdiction or patent office, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns;

AND, WE HEREBY authorize Assignee or the attorneys/representatives of Assignee to insert here in parentheses the country, application number, and official filing date ( \_\_\_\_\_ Application No. \_\_\_\_\_, filed \_\_\_\_\_ ).

IN TESTIMONY WHEREOF, We have hereunto set our hands.

1. FULL NAME OF SOLE OR FIRST ASSIGNOR <b>Brad Kenneth BORLAND</b>	ASSIGNOR'S SIGNATURE 	DATE <b>3/14/13</b>
ADDRESS <b>5602 N Biltmore Ave, Peoria, IL 61614</b>		CITIZENSHIP <b>USA</b>

1. WITNESS NAME MARK SHEPHERD	WITNESS SIGNATURE 	DATE 03/14/13
ADDRESS 202 APPLE DRIVE, GERMANTOWN HILLS IL 61848		CITIZENSHIP USA

2. WITNESS NAME Hong Lin	WITNESS SIGNATURE 	DATE 03/14/2013
ADDRESS 1907 W Forestglen Dr Peoria, IL 61615		CITIZENSHIP China

2. FULL NAME OF SECOND ASSIGNOR, IF ANY Paul Russell FRIEND	ASSIGNOR'S SIGNATURE	DATE
ADDRESS 718 N. Oregon Avenue, Morton, Illinois 61550		CITIZENSHIP USA

1. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP

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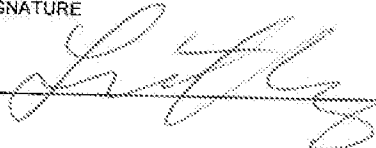
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ADDRESS		CITIZENSHIP

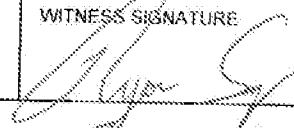
2. FULL NAME OF SECOND ASSIGNOR, IF ANY	ASSIGNOR'S SIGNATURE	DATE
Paul Russell FRIEND	<i>Paul Russell Friend</i>	3/14/2013
ADDRESS 718 N. Oregon Avenue, Morton, Illinois 61550		CITIZENSHIP USA

1. WITNESS NAME	WITNESS SIGNATURE	DATE
<i>Hongchang</i>	<i>Hongchang</i>	3/14/2013
ADDRESS 10716 Collett Dr. Peoria, IL, 61615		CITIZENSHIP USA

2. WITNESS NAME	WITNESS SIGNATURE	DATE
<i>TIM FRANS</i>	<i>[Signature]</i>	3/14/2013
ADDRESS 5904 BROOKHARE ST, EDWARDS, IL, 61528		CITIZENSHIP USA

3. FULL NAME OF THIRD ASSIGNOR, IF ANY <b>Mathew CHACKO</b>	ASSIGNOR'S SIGNATURE 	DATE 3/14/2013
ADDRESS <b>2507 W. Carlisle Lane, Dunlap IL 61525</b>		CITIZENSHIP <b>INDIA</b>

1. WITNESS NAME <b>Hong Liu</b>	WITNESS SIGNATURE 	DATE 03/14/2013
ADDRESS <b>1907 W Forest Glen Dr, Peoria, IL 61615</b>		CITIZENSHIP <b>China</b>

2. WITNESS NAME <b>Ryon Sney</b>	WITNESS SIGNATURE 	DATE 3/14/2013
ADDRESS <b>225 W Candlelight CT apt 202 Peoria IL 61614</b>		CITIZENSHIP <b>USA</b>