PATENT ASSIGNMENT

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SUBMISSION TYPE:		NEW ASSIGNMENT			
NATURE OF CONVEYANCE:		ASSIGNMENT			
CONVEYING PARTY	DATA				
	Name Execution Date				
Sergey KORENEV					
RECEIVING PARTY DATA					
Name:	Caterpillar, Inc.				
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City:	Peoria				
State/Country:	ILLINOIS				
Postal Code:	ostal Code: 61629-9510				
PROPERTY NUMBERS Total: 1					
Property Ty	Property Type Number				
Application Number:	131	74418			
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ATTORNEY DOCKET NUMBER: 08350.0321					
NAME OF SUBMITTE	R:	Charles D. Cathey			
Total Attachments: 2 source=Assignment#page1.tif source=Assignment#page2.tif					

ASSIGNMENT

WHEREAS I, the below named inventor, [hereinafter referred to as Assignor], have made an invention entitled:

SYSTEM IMPLEMENTING CONSTITUENT IDENTIFICATION AND CONCENTRATION DETECTION

for which I executed an application for United States Letters Patent concurrently herewith, and

WHEREAS, Caterpillar Inc., a corporation of Delaware whose post office address is 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 in all countries throughout the world, and in and to the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application;

NOW THEREFORE, be it known that for and in consideration of the sum of One Dollar (\$1.00) in hand paid and other good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I, as Assignor, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my entire right, title, and Interest in and to this Invention, and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and all rights to claim priority on the basis of the above provisional application (if any), as well as all rights to claim priority on the basis of this application, and all applications for Letters Patent which may hereafter be filed for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, and all extensions, renewals, and reissues thereof; and I hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

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

AND, I HEREBY further covenant and agree that I will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me 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 the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

AND, I HEREBY authorize and request the attorneys I have empowered in the Declaration and Power of Attorney in this application, to insert here in parentheses (Application No. 13/174418, filed (230/2011)) the filing date and application number of said application when known.

IN TESTIMONY WHEREOF, I have hereunto set my hands.

Full Name of First Inventor Sergey KORENEV	Inventor's Signature	Date 06/27/2011
Residence Mundelein, IL		Citizenship United States
Post Office Address 328 N. Bingham Circle, Mundelein, IL 60060		

Listing of Inventors Continued on Page 2 hereof
Yes X No

SOLE/JOINT INVENTION (Worktwide Rights) Attorney Docket No. 08350.0321-00000 Client Ref. No. 10-0349

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Page 2 of 2

RECORDED: 08/05/2011