PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Levi A. CAMPBELL	10/22/2012
Richard C. CHU	02/27/2013
Milnes P. DAVID	10/22/2012
Michael J. ELLSWORTH Jr.	10/22/2012
Madhusudan K. IYENGAR	10/18/2012
Roger R. SCHMIDT	10/19/2012
Robert E. SIMONS	10/22/2012

RECEIVING PARTY DATA

Name:	INTERNATIONAL BUSINESS MACHINES CORPORATION
Street Address:	New Orchard Road
City:	Armonk
State/Country:	NEW YORK
Postal Code:	10504

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13781993

CORRESPONDENCE DATA

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Fax Number: 5184525579

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518-452-5600 Phone: Email: sdm@hrfmlaw.com Correspondent Name: Kevin P. Radigan, Esq.

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ATTORNEY DOCKET NUMBER: POU920120212US2

> **PATENT** REEL: 029904 FRAME: 0057

NAME OF SUBMITTER: Kevin P. Radigan, Esq.			
	This document serves as an Oath/Declaration (37 CFR 1.63).		
Total Attachments: 8 source=POU920120212US2_Assignment-S source=POU920120212US2_Assignment-S source=POU920120212US2_Assignment-S source=POU920120212US2_Assignment-S source=POU920120212US2_Assignment-S source=POU920120212US2_Assignment-S source=POU920120212US2_Assignment-S source=POU920120212US2_Assignment-S source=POU920120212US2_Assignment-S	statement#page2.tif statement#page3.tif statement#page4.tif statement#page5.tif statement#page6.tif statement#page6.tif		

PATENT REEL: 029904 FRAME: 0058

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

Title of Invention:

SEPARATE CONTROL OF COOLANT FLOW THROUGH COOLANT CIRCUITS

This declaratio	n is directed to the attached application, or (if following box is checked):
	United States application or PCT international application number, filed on

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application, including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR Section 1.56.

Whereas, the undersigned inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application and further identified by the IBM Docket Number provided above in the header of this document;

Whereas, International Business Machines Corporation, a corporation of New York having a place of business at Armonk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned inventor desires to grant to IBM, the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor ("ASSIGNOR") hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to IBM, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by IBM, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned inventor agrees to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in IBM, its successors, legal representatives, and assigns, whenever requested by IBM, its successors, legal representatives, or assigns.

Page 1 of 3

Each undersigned inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to IBM and is unaware of any reason why they may not have the full and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned inventor also hereby grants IBM, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent Application Number) which may be necessary or desirable for recordation of this Assignment. This Assignment is governed by the substantive laws of the State of New York, and any disputes will be resolved in a New York state court or federal court sited in New York.

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.

(1) Legal Name of Inventor: Levi A. CAMPBELL	
Signature: 4 > cful	Date: <u> </u>
(2) Legal Name of Inventor: Richard C. CHU	
Signature: (See Substitute Statement in Lieu of Oath or Declara	tion) Date:
(3) Legal Name of Inventor: Milnes P. DAVID	
Signature:	Date: 10/22/12
(4) Legal Name of Inventor: Michael J. ELLSWORTH, Jr.	
Signature: Muhof Gilden	Date: 18/22/2012

(5) Legal Name of Inventor: Madhusudan K. IYENGAR	
Signature:	Date:
(6) Legal Name of Inventor: Roger R. SCHMIDT	
Signature: Myw AMMA	Date: 10/19/2012
(7) Legal Name of Inventor: Robert E. SIMONS	
Signature: RESimons	

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

Title of Invention:

SEPARATE CONTROL OF COOLANT FLOW THROUGH COOLANT CIRCUITS

As a belo	w nam	ned inventor, I hereby declare that:
This decla	aration	is directed to the attached application, or (if following box is checked):
į	[]	United States application or PCT international application number, filed on

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.

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Whereas, International Business Machines Corporation, a corporation of New York having a place of business at Armonk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned inventor desires to grant to IBM, the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor ("ASSIGNOR") hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to IBM, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by IBM, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned inventor agrees to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in IBM, its successors, legal representatives, and assigns, whenever requested by IBM, its successors, legal representatives, or assigns.

Page 1 of 3

Each undersigned inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to IBM and is unaware of any reason why they may not have the full and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned inventor also hereby grants IBM, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent Application Number) which may be necessary or desirable for recordation of this Assignment. This Assignment is governed by the substantive laws of the State of New York, and any disputes will be resolved in a New York state court or federal court sited in New York.

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.

(1) Legal Name of Inventor: Levi A. CAMPE	BELL
Signature:	Date:
(2) Legal Name of Inventor: Richard C. CHU	IJ
Signature: (See Substitute Statement in L	ieu of Oath or Declaration) Date:
(3) Legal Name of Inventor: Milnes P. DAV	(D
Signature:	Date:
(4) Legal Name of Inventor: Michael J. ELL	SWORTH, Jr.
Signature:	Date:

Signature: K. Hylyfelia	Date: 10/18/2012
(6) Legal Name of Inventor: Roger R. SCHMIDT	
Signature:	Date;
(7) Legal Name of Inventor: Robert E. SIMONS	<u> </u>
Signature	Date:

(5) Legal Name of Inventor: Madhusudan K. IYENGAR

Doc code: Oath
Document Description: Oath or declaration filed

POU920120212US2 0560.1168A/KPR/sdm

PTO/AIA/02 (06-12)
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SUBSTITUTE STATEMENT IN LIEU OF AN OATH OR DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (35 U.S.C. 115(d) AND 37 CFR 1.64)

Title of Invention SEPARATE CONTROL C	OF COOLANT FLOW	/THROUGH COOL	ANT CIRCUITS	
This statement is directed to:		***************************************	***************************************	
The attached application,				
OR				
United States application or PCT international	application number	filed on)	
LEGAL NAME of inventor to whom this sub		es: Richard C. CHU	***************************************	
(E.g., Given Name (first and middle (if any)) and Fa	•	***************************************	40000000000000000000000000000000000000	
***************************************	chard C. CHU			
Residence (except for a deceased or legally incapa	citated inventor):		***************************************	
City Mailing Address (except for a deceased or legally incapac	State	Country	40000000000000000000000000000000000000	
City	State	200	Country	
believe the above-named inventor or joint inventor to be the original inventor or an original joint inventor of a claimed invention in the application. The above-identified application was made or authorized to be made by me. I hereby acknowledge that any willful false statement made in this statement is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.				
Relationship to the inventor to whom this substitute	e statement applies.	N-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0	JANUARA A A A A A A A A A A A A A A A A A A	
Legal Representative (for deceased or legally incapacitated inventor only). Assignee,				
Person to whom the inventor is under an				
Person who otherwise shows a sufficient proprietary interest in the matter (petition under 37 CFR 1.46 is required), or Joint Inventor.				

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The Information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commercie, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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SUBSTITUTE STATEMENT

Circumstances permitting execution of this substitute statement:					
Inventor is deceased.					
	Inventor is under legal incapacity.				
	Inventor cannot be found or reached after diligent effort, or				
Inventor has refused to execute the oath or declaration under 37 CFR 1.63.					
If there are joint inventors, please check the appropriate box below:					
	An application data sheet under 37 CFR 1.76 (PTO/AiA/14 or equivalent) naming the entire inventive entity has been or is currently submitted.				
OR	OR				
An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) has not been submitted. Thus, a Substitute Statement Supplemental Sheet (PTO/AIA/11 or equivalent) naming the entire inventive entity and providing inventor information is attached. See 37 CFR 1.64(b).					
WARNING:					
contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.					
Name: Pryor A. Garnett, Senior Counsel, Reg.No. 32,136 02/27/2013					
Signature: Pag A Co-					
esidence (unisse provided in an শ্লাক্সাcation data sheet, PTO/AIA/14 or equivalent):					
ity	Portland	OR State	Country		
Address (unless provided in an application data sheet, PTO/AIA/14 or equivalent) 1385 NW Ambergien Parkway					
iity	Hillsboro	OR State	_{Zsp} 97006	Country US	
Note: Use an additional PTO/AIA/02 form for each inventor who is deceased, legally incapacitated, cannot be found or eached after diligent effort, or has refused to execute the ceth or dectaration under 37 CFR 1.63.					

[Page 2 of 2]

PATENT REEL: 029904 FRAME: 0066

RECORDED: 03/01/2013