#### PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

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#### PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14063162

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ATTORNEY DOCKET NUMBER: POU920110101US3 PATENT

502545979 REEL: 031478 FRAME: 0350

NAME OF SUBMITTER:	KEVIN P. RADIGAN, ESQ.	
Signature:	/Kevin P. Radigan, Esq./	
Date:	10/25/2013	
	This document serves as an Oath/Declaration (37 CFR 1.63).	

#### Total Attachments: 5

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PATENT REEL: 031478 FRAME: 0351

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

# THERMAL EXPANSION-ENHANCED HEAT SINK FOR AN ELECTRONIC ASSEMBLY

As a below named inventor. I hereby declare that:

This de	ela	ratio	in is directed to the attached application, or (if following box is checked):
	•	]	United States application or PCT international application number filed on
The abo	ve-	ider	ntified 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 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.

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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: 22-h	Date: 7/30/13
(2) Legal Name of Inventor: Richard C. CHU	
Signature: (See Substitute Statement in Lieu of Oath or Declarati	ion) Date:
(3) Legal Name of Inventor: Milnes P. DAVID	
Signature: A Paid	Date: 07/30/13
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Signature: Maha et J. Ellawonn	Date: 7/30/2013
(5) Legal Name of Inventor: Madhusudan K. IYENGAR	
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IBM DOCKET NUMBER: POU920110101US3

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7) Legal Name of Inventor: Prabjit SINGH	
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Doc code: Oath

Document Description: Oath or declaration filed

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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	THERMAL EXPANSION-ENHANCED HEAT SINK FOR AN ELECTRONIC ASSEMBLY				
OR United S LEGAL NA (E.g., Given	ont is directed to:  ached application,  States application or PCT international  ME of Inventor to whom this sul  Name (first and middle (if any)) and F	bstitute statement app family Name or Surname) Richard C. CHU	lles:	filed on	
City		State	Country	***************************************	
City		State	Zp	***************************************	Country
I 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.					
Leg Ass Per	to the inventor to whom this substituted as Representative (for deceased or legiques, son to whom the inventor is under an ason who otherwise shows a sufficient at Inventor.	egally incapacitated inventor		under 37 CFI	R 1.46 is required), or

[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 Commerce, 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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**PATENT** 

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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	Inventor cannot be found or reached after diligent effort, or				
inventor has refused to execute the	oath or declaration under 37 C	FR 1.63.			
If there are joint inventors, please check the					
An application data sheet under 37 or is currently submitted.	CFR 1.76 (PTO/AIA/14 or equi	valent) naming the ent	ire inventive entity has been		
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:		**************************************		
Exitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may 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 is support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, settitioners/applicants should consider redacting such personal information from the documents before submitting them to the isophication endough it is advised that the record of a patent application is available to the public after publication of the isophication (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a set of in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms a TO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.					
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Signature: Pay A Gar					
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the applicant is a juristic entity, list the applica					
pplicant Name: INTERNATIONAL BUS	SINESS MACHINES C	ORPORATION			
Title of Person Executing This Substitute Statement: Senior Counsel					
he signer, whose title is supplied above, is authorized to act on behalf of the applicant.  Residence of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent):					
Portland		LIS	<u> </u>		
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1385 NW Amberglen Parkway					
	State OR	<sub>Zip</sub> 97006	Country US		
tote: Use an additional PTO/AIA/02 form for each inventor who is deceased, legally incapacitated, cannot be found or reached.					
ter diligent effort, or has refused to execute the oath or declaration under 37 CFR 1,63.					

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