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PATENT ASSIGNMENT COVER SHEET

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| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|---------------|----------------|
| TSAI-YANG JEA | 11/20/2013 |
| ZHI ZHANG | 11/20/2013 |

RECEIVING PARTY DATA

| Name: | INTERNATIONAL BUSINESS MACHINES CORPORATION |
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| City: | ARMONK |
| State/Country: | NEW YORK |
| Postal Code: | 10504 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14093036 |

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| ATTORNEY DOCKET NUMBER: | AUS920110396US2 |
|-------------------------|-----------------|
| NAME OF SUBMITTER: | PAUL S. DRAKE |
| Signature: | /Paul S. Drake/ |
| Date: | 11/28/2013 |
| | PATENT |

REEL: 031691 FRAME: 0441

PATENT

This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 2

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PATENT REEL: 031691 FRAME: 0442

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: MANAGING A REGION CACHE

| As a below named inventor, I hereby declare that: | |
|--|--|
| This declaration is directed to the attached application, or (if following box is checked): | |
| [] United States application or PCT international application number | |
| 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 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;

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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: Tsai-Yang Jea

(2) Legal Name of Inventor: Zhi Zhang

Signature: _______ Date: 1/20/20/2