503652409 01/15/2016

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ZHE WANG	01/04/2016
CHRISTOPHER B. WILKERSON	12/30/2015
ZESHAN A. CHISHTI	12/30/2015
SETH H. PUGSLEY	01/05/2016
ALAA R. ALAMELDEEN	12/30/2015
SHIH-LIEN L. LU	12/30/2015

RECEIVING PARTY DATA

Name:	INTEL CORPORATION
Street Address:	2200 MISSION COLLEGE BOULEVARD
City:	SANTA CLARA
State/Country:	CALIFORNIA
Postal Code:	95054

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14863255

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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Correspondent Name: BLAKELY SOKOLOFF TAYLOR & ZAFMAN

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Address Line 4: MINNEAPOLIS, MINNESOTA 55402

ATTORNEY DOCKET NUMBER:	42.P87717
NAME OF SUBMITTER:	ROBERT B. O'ROURKE
SIGNATURE:	/Robert B. O'Rourke/
DATE SIGNED:	01/15/2016

PATENT 503652409 REEL: 037504 FRAME: 0788

Total Attachments: 12 source=P87717_Assignment_Wang#page1.tif source=P87717_Assignment_Wang#page2.tif source=P87717_Assignment_Wilkerson#page1.tif source=P87717_Assignment_Wilkerson#page2.tif source=P87717_Assignment_Chishti#page1.tif source=P87717_Assignment_Chishti#page2.tif source=P87717_Assignment_Pugsley_#page1.tif source=P87717_Assignment_Pugsley_#page2.tif source=P87717_Assignment_Pugsley_#page2.tif source=P87717_Assignment_Alameldeen#page1.tif source=P87717_Assignment_Alameldeen#page2.tif source=P87717_Assignment_Lu_#page1.tif source=P87717_Assignment_Lu_#page2.tif

ASSIGNMENT

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, we, the undersigned inventor(s):

Zhe Wang, Christopher B. Wilkerson, Zeshan A. Chishti, Seth H. Pugsley, Alaa R. Alameldeen, Shih-Lien L. Lu

hereby sell, assign, and transfer to:

Intel Corporation

a corporation of Delaware, having a principal place of business at 2200 Mission College Boulevard, Santa Clara, California, 95054 USA ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all other countries, in and to any and all inventions and improvements that are disclosed in the application for the patent entitled:

METHOD AND APPARATUS FOR PRE-FETCHING DATA IN A SYSTEM HAVING A MULTI-LEVEL SYSTEM MEMORY

(I hereby authorize and request my attorney, associated with customer number 45209, to insert on the designated lines below, the filing date and application number of said application when known.)

which was filed on <u>September 23.</u>	2015	·····	28.
U.S. COUNTRY or International Office	Application Number	14/863,255	and

which has been executed by the undersigned prior hereto or concurrently herewith on the date(s) indicated below.

and in and to said application and all Additional Applications, and all other patent applications that have been or shall be filed in the United States and all other countries and international filing offices on any of said inventions and improvements; and in and to all original and reissued patents that have been or shall be issued in the United States and all other countries and international filing offices on said inventions and improvements; and in and to all rights of priority resulting from the filing of said applications; as used herein "Additional Applications" includes but is not limited to design, utility, utility model, divisional, continuing, continuation-in-part, substitute, renewal, reissue, and national phase applications on said inventions and improvements;

and agree that said Assignee may apply for and receive a patent or patents for said inventions and improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute

Page 1 of 2

The vol	01/04/2016
Zhe Wang	Date signed
Christopher B. Wilkerson	Date signed
Zeshan A. Chishti	Date signed
Seth H. Pugsley	Date signed
Alaa R. Alameldeen	Date signed
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Alaa R. Alameldeen	Down day of
Alaa K. Alamenteen	Date signed
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all Additional Applications, and all other patent applications on any and all said inventions and improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and legal representatives all facts known to the undersigned relating to said inventions and improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions and improvements and for vesting title to said inventions and improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

Zhe Wang	Date signed
Christopher B. Wilkerson	Date signed
Zeshan A. Chishti	Date signed
Sty R. Night	1-5-16
Seth H. Pugsley	Date signed
Alaa R. Alameldeen	Date signed
Shih-Lien L., Lu	Date signed

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covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Zhe Wang	Date signed
Christopher B. Wilkerson	Date signed
Zeshan A. Chishti	Date signed
Seth H. Pugsley	Date signed
Alaa R. Alameldeen	Date signed
Ship Lu Lu	December 30, 2015
Shih-Lien L. Lu	Date signed

Page 2 of 2