

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JUCHANG LEE	07/25/2016
CHANG GYOO PARK	07/25/2016
JAERYUN NOH	08/01/2016
SUNG HEUN WI	07/21/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SAP SE
<b>Street Address:</b>	DIETMAR-HOPP-ALLEE 16
<b>City:</b>	WALLDORF
<b>State/Country:</b>	GERMANY
<b>Postal Code:</b>	D-69190
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15231566
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(503)595-5301
<i>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.</i>	
<b>Phone:</b>	503-595-5300
<b>Email:</b>	kelly.mccarthy@klarquist.com
<b>Correspondent Name:</b>	CORY A. JONES, KLARQUIST SPARKMAN, LLP
<b>Address Line 1:</b>	121 SW SALMON STREET, SUITE 1600
<b>Address Line 2:</b>	ONE WORLD TRADE CENTER
<b>Address Line 4:</b>	PORTLAND, OREGON 97204
<b>ATTORNEY DOCKET NUMBER:</b>	8880-97135-01
<b>NAME OF SUBMITTER:</b>	CORY A. JONES
<b>SIGNATURE:</b>	/Cory A. Jones/
<b>DATE SIGNED:</b>	08/08/2016
<b>Total Attachments: 4</b>	
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source=Assignments-97135-01#page3.tif

source=Assignments-97135-01#page4.tif

**ASSIGNMENT**

I, Juchang Lee ("ASSIGNOR"), have invented subject matter ("INVENTION"), disclosed and/or claimed in the following patent application(s) ("APPLICATIONS"):

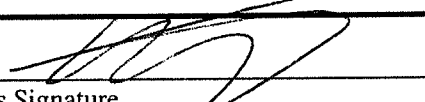
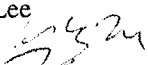
U.S. Patent Application entitled GROUP GARBAGE COLLECTION FOR MULTI-VERSION CONCURRENCY CONTROL IN DATABASE SYSTEMS, having U.S. Patent Application No. 15/231,566, filed on August 8, 2016;

ASSIGNOR hereby authorizes and requests ASSIGNEE'S legal representatives of Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, OR 97204 USA, who are associated with customer number 106592, to insert the application number(s) and filing date(s) above when known;

SAP SE, Dietmar-Hopp-Allee 16, D-69190 Walldorf, Germany, a company organized under the laws of the country of Germany, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to and is desirous of acquiring the entire and exclusive rights, title, and interest in the INVENTION, the APPLICATIONS, and all other applications and patents derived therefrom, such as continuing applications, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES");

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNOR, the ASSIGNOR hereby sells, assigns, and transfers to the ASSIGNEE, the entire and exclusive rights, title, and interest in the INVENTION, the APPLICATIONS, and APPLICATION DERIVATIVES, including foreign priority rights;

ASSIGNOR agrees to sign any documents required for the prosecution of the APPLICATIONS and APPLICATION DERIVATIVES, for litigation regarding letters patent derived therefrom, and for protecting and perfecting title to the APPLICATIONS and APPLICATION DERIVATIVES.

 _____ Inventor's Signature Juchang Lee	<u>25. July. 2016</u> _____ Date Signed
 _____ Witness Signature Park Chong gyo	<u>July 25, 2016</u> _____ Date Signed
_____ Witness Name (print)	

ASSIGNMENT

I, Chang Gyoo Park ("ASSIGNOR"), have invented subject matter ("INVENTION"), disclosed and/or claimed in the following patent application(s) ("APPLICATIONS"):

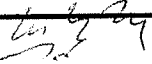
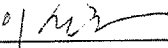
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	<u>July 25, 2016</u>
Inventor's Signature Chang Gyoo Park	Date Signed
	<u>July 25, 2016</u>
Witness Signature	Date Signed
<u>Lee, SunHo</u>	
Witness Name (print)	

## ASSIGNMENT

I, Jaeyun Noh ("ASSIGNOR"), have invented subject matter ("INVENTION"), disclosed and/or claimed in the following patent application(s) ("APPLICATIONS"):



U.S. Patent Application entitled **GROUP GARBAGE COLLECTION FOR MULTI-VERSION CONCURRENCY CONTROL IN DATABASE SYSTEMS**, having U.S. Patent Application No. 15/231,566, filed on August 8, 2016;

ASSIGNOR hereby authorizes and requests ASSIGNEE'S legal representatives of Klarquist Sparkman, LLP, 121 S.W. Salmon Street, Suite 1600, Portland, OR 97204 USA, who are associated with customer number 106592, to insert the application number(s) and filing date(s) above when known;

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<div style="text-align: center;"> _____ Inventor's Signature Jaeyun Noh</div>	<div style="text-align: center;"><u>Aug. 1. 2016</u> _____ Date Signed</div>
<div style="text-align: center;"> _____ Witness Signature  Juchang Lee _____ Witness Name (print)</div>	<div style="text-align: center;"><u>Aug. 1. 2016</u> _____ Date Signed</div>

**ASSIGNMENT**

I, Sung Heun Wi ("ASSIGNOR"), have invented subject matter ("INVENTION"), disclosed and/or claimed in the following patent application(s) ("APPLICATIONS"):

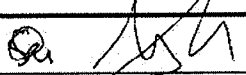

U.S. Patent Application entitled GROUP GARBAGE COLLECTION FOR MULTI-VERSION CONCURRENCY CONTROL IN DATABASE SYSTEMS, having U.S. Patent Application No. 15/231,566, filed on August 8, 2016;

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ASSIGNOR agrees to sign any documents required for the prosecution of the APPLICATIONS and APPLICATION DERIVATIVES, for litigation regarding letters patent derived therefrom, and for protecting and perfecting title to the APPLICATIONS and APPLICATION DERIVATIVES.

	<u>July 21, 2016</u>
Inventor's Signature	Date Signed
Sung Heun Wi	
	<u>July 21, 2016</u>
Witness Signature	Date Signed
<u>Jinsu Lee</u>	
Witness Name (print)	