503623817 12/22/2015

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JUCHANG LEE	12/17/2015
CHANG GYOO PARK	12/16/2015
KYU HWAN KIM	12/17/2015

RECEIVING PARTY DATA

Name:	SAP SE
Street Address:	DIETMAR-HOPP-ALLEE 16
City:	WALLDORF
State/Country:	GERMANY
Postal Code:	D-69190

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14977427

CORRESPONDENCE DATA

Fax Number: (503)595-5301

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.

Phone: 503-595-5300

Email: allison.green@klarquist.com **Correspondent Name:** KLARQUIST SPARKMAN, LLP

Address Line 1: 121 SW SALMON STREET, SUITE 1600

Address Line 2: ONE WORLD TRADE CENTER Address Line 4: PORTLAND, OREGON 97204

ATTORNEY DOCKET NUMBER: 8880-95976-01 **NAME OF SUBMITTER:** RYAN A. HECK SIGNATURE: /Ryan A. Heck, Reg. No. 51,795/ **DATE SIGNED:** 12/22/2015

Total Attachments: 3

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> **PATENT** REEL: 037351 FRAME: 0990 503623817

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 DECENTRALIZED TRANSACTION COMMIT PROTOCOL, having U.S. Patent Application No. 14/977,427, filed on December 21, 2015;

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 DEPIVATIVES.

	17/12012015
Inventor's Signature	Date Signed
Juchang Lee	
	2015/12/11
Witness Signature	Date Signed
Kin, Kyuhwan	
Witness Name (print)	

Assignment

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Attorney Docket No.: 8880-95976-01

Client Ref.: 151093US01

ASSIGNMENT

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

U.S. Patent Application entitled DECENTRALIZED TRANSACTION COMMIT PROTOCOL, having U.S. Patent Application No. $\underline{14/977,427}$, filed on December 21, 2015 ;

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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.

y fin My	Dec 16, 2015
Inventor's Signature	Date Signed
Chang Gyoo Park	Der 16, 2015.
Witness Signature	Date Signed
kim, Deak Hoe	
Witness Name (print)	

Assignment

Page 1 of 1

ASSIGNMENT

Client Ref.: 151093US01

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

U.S. Patent Application entitled DECENTRALIZED TRANSACTION COMMIT PROTOCOL, having U.S. Patent Application No. $\underline{14/977,427}$, filed on December 21, 2015 ;

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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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.

23/	2-15. /2. /0
Inventor's Signature	Date Signed
Kyu Hwan Kim	17/Dec/2015
Witness Signature	Date Signed
Juckay Lol	
Witness Name (print)	

Assignment Page I of I