

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5889884

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
VIDYA HEGDE	03/21/2016
JEAN DE LAVARENE	03/15/2016
MARK DILMAN	04/01/2016
LEONID NOVAK	04/01/2016
WEI MING HU	03/22/2016
ASHOK SHIVARUDRAIAH	03/19/2016
TONG ZHOU	03/23/2016
RECEIVING PARTY DATA	
Name:	ORACLE INTERNATIONAL CORPORATION
Street Address:	500 ORACLE PARKWAY
City:	REDWOOD SHORES
State/Country:	CALIFORNIA
Postal Code:	94065
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16724909
CORRESPONDENCE DATA	
Fax Number:	
<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>	
Phone:	4156172400
Email:	officeactions@tuckerellis.com
Correspondent Name:	TUCKER ELLIS LLP
Address Line 1:	201 MISSION ST
Address Line 2:	SUITE 2310
Address Line 4:	SAN FRANCISCO, CALIFORNIA 94105
ATTORNEY DOCKET NUMBER:	ORACL-05631US2
NAME OF SUBMITTER:	KARL KENNA REG. NO 45445
SIGNATURE:	/Karl Kenna/
DATE SIGNED:	12/31/2019

PATENT

Total Attachments: 21

source=oracl-05631us1_assignment_signed_1#page1.tif
source=oracl-05631us1_assignment_signed_1#page2.tif
source=oracl-05631us1_assignment_signed_1#page3.tif
source=oracl-05631us1_assignment_signed_1#page4.tif
source=oracl-05631us1_assignment_signed_1#page5.tif
source=oracl-05631us1_assignment_signed_1#page6.tif
source=oracl-05631us1_assignment_signed_1#page7.tif
source=oracl-05631us1_assignment_signed_1#page8.tif
source=oracl-05631us1_assignment_signed_1#page9.tif
source=oracl-05631us1_assignment_signed_1#page10.tif
source=oracl-05631us1_assignment_signed_1#page11.tif
source=oracl-05631us1_assignment_signed_1#page12.tif
source=oracl-05631us1_assignment_signed_1#page13.tif
source=oracl-05631us1_assignment_signed_1#page14.tif
source=oracl-05631us1_assignment_signed_1#page15.tif
source=oracl-05631us1_assignment_signed_1#page16.tif
source=oracl-05631us1_assignment_signed_1#page17.tif
source=oracl-05631us1_assignment_signed_1#page18.tif
source=oracl-05631us1_assignment_signed_1#page19.tif
source=oracl-05631us1_assignment_signed_1#page20.tif
source=oracl-05631us1_assignment_signed_1#page21.tif

ASSIGNMENT OF APPLICATION FOR PATENT

WHEREAS:

Vidya Hegde, a resident of Bangalore, India;

Jean de Lavarene, a resident of Levallois Perret, France;

Douglas Surber, a resident of Orinda, California, USA;

Mark Dilman, a resident of Sunnyvale, California, USA;

Leonid Novak, a resident of Redwood City, California, USA;

Wei Ming Hu, a resident of Palo Alto, California, USA;

Ashok Shivarudraiah, a resident of San Mateo, California, USA; and

Tong Zhou, a resident of Merrick, New York, USA

(full name(s) and city and state of residence of inventor(s) (including country))

(hereinafter referred to as ASSIGNOR(S)), has made a discovery and/or invention entitled:

**SYSTEM AND METHOD FOR PROVIDING ACCESS TO A SHARDED
DATABASE USING A CACHE AND A SHARD TOPOLOGY**

- for which application for Letters Patent of the United States has been executed on _____,
- for which an application for Letters Patent of the United States has been filed on April 20, 2016, under Application No. 15/133,979, claiming priority to U.S. Provisional Application No. 62/150,191, filed April 20, 2015; U.S. Provisional Application No. 62/198,958, filed July 30, 2015; and U.S. Provisional Application No. 62/150,188, filed April 20, 2015.

WHEREAS:

Oracle International Corporation, a corporation of California, having a business address of 500 Oracle Parkway, Mail Stop 50P7, Redwood Shores, CA 94065

and which, together with its successors, assigns, and legal representatives, is hereinafter referred to as ASSIGNEE, is desirous of acquiring the entire right, title and interest in, to and under said invention and in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

Be it known that for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR(S) hereby sells, assigns and transfers to ASSIGNEE, the full and exclusive right, title and interest to said discovery or invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any continuation, continuation-in-part, divisional, reexamination, renewal, substitute, reissue and/or any application claiming priority thereof, including any legal equivalent thereof, in a foreign country for the full term or terms for which the same may be granted.

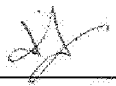
I, SAID ASSIGNOR(S), hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and any Official of any country or countries foreign to the United States of America whose duty it is to issue Letters Patent on applications as aforesaid, to issue all such Letters Patent for said discovery or invention to the ASSIGNEE, as assignee of the entire right, title and interest in, to and under the same, for the sole use and benefit of the ASSIGNEE in accordance with the terms of this instrument.

I, SAID, ASSIGNOR(S), hereby covenant with ASSIGNEE 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 I have full right to convey the entire right, title and interest herein sold, assigned, transferred and set over;

AND I, SAID ASSIGNOR(S) hereby further covenant and agree that the ASSIGNEE may apply for foreign Letters Patent on said discovery or invention and claim the benefits of the International Convention, and that I will, at any time, when called upon to do so by the ASSIGNEE communicate to the ASSIGNEE as the case may be, any facts known to me respecting said discovery or invention, and execute and deliver any and all lawful papers that may be necessary or desirable to perfect the title to the said discovery or invention, the said applications and the said Letters Patent in the ASSIGNEE and that if reissues or reexaminations of the said Letters Patent or disclaimers relating thereto, or divisionals, continuations, continuation-in-parts of the said applications shall hereafter be desired by the ASSIGNEE, I will, at any time, when called upon to do so by the ASSIGNEE sign all lawful papers, make all rightful oaths, execute and deliver all such disclaimers and all divisional, continuation, continuation-in-part, reexamination, and reissue applications so desired, and do all lawful acts requisite for the application for such continuations, continuation-in-parts, divisionals, reexaminations, or reissues and the procuring thereof and for the filing of such disclaimers and such applications, and generally do everything possible to aid the ASSIGNEE to obtain and enforce proper patent protection for said invention or discovery in all countries, all without further compensation but at the expense of the ASSIGNEE.

ASSIGNOR hereby authorizes and requests the prosecuting law firm to insert herein above the application number and filing date of said application when known.

Inventor(s): Please Sign and Date Below:

(1)  Date: 21st MARCH, 2016
Vidya Hegde

(2) _____ Date: _____
Jean de Lavarene

(3) _____ Date: _____
Douglas Surber

(4) _____ Date: _____
Mark Dilman

(5) _____ Date: _____
Leonid Novak

(6) _____ Date: _____
Wei Ming Hu

(7) _____ Date: _____
Ashok Shivarudraiah

(8) _____ Date: _____
Tong Zhou

ASSIGNMENT OF APPLICATION FOR PATENT

WHEREAS:

Vidya Hegde, a resident of Bangalore, India;

Jean de Lavarene, a resident of Levallois Perret, France;

Douglas Surber, a resident of Orinda, California, USA;

Mark Dilman, a resident of Sunnyvale, California, USA;

Leonid Novak, a resident of Redwood City, California, USA;

Wei Ming Hu, a resident of Palo Alto, California, USA;

Ashok Shivarudraiah, a resident of San Mateo, California, USA; and

Tong Zhou, a resident of Merrick, New York, USA

(full name(s) and city and state of residence of inventor(s) (including country))

(hereinafter referred to as ASSIGNOR(S)), has made a discovery and/or invention entitled:

**SYSTEM AND METHOD FOR PROVIDING ACCESS TO A SHARDED
DATABASE USING A CACHE AND A SHARD TOPOLOGY**

- for which application for Letters Patent of the United States has been executed on _____,
- for which an application for Letters Patent of the United States has been filed on April 20, 2016, under Application No. 15/133,979, claiming priority to U.S. Provisional Application No. 62/150,191, filed April 20, 2015; U.S. Provisional Application No. 62/198,958, filed July 30, 2015; and U.S. Provisional Application No. 62/150,188, filed April 20, 2015.

WHEREAS:

Oracle International Corporation, a corporation of California, having a business address of 500 Oracle Parkway, Mail Stop 50P7, Redwood Shores, CA 94065

and which, together with its successors, assigns, and legal representatives, is hereinafter referred to as ASSIGNEE, is desirous of acquiring the entire right, title and interest in, to and under said invention and in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

Be it known that for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR(S) hereby sells, assigns and transfers to ASSIGNEE, the full and exclusive right, title and interest to said discovery or invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any continuation, continuation-in-part, divisional, reexamination, renewal, substitute, reissue and/or any application claiming priority thereof, including any legal equivalent thereof, in a foreign country for the full term or terms for which the same may be granted.

I, SAID ASSIGNOR(S), hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and any Official of any country or countries foreign to the United States of America whose duty it is to issue Letters Patent on applications as aforesaid, to issue all such Letters Patent for said discovery or invention to the ASSIGNEE, as assignee of the entire right, title and interest in, to and under the same, for the sole use and benefit of the ASSIGNEE in accordance with the terms of this instrument.

I, SAID, ASSIGNOR(S), hereby covenant with ASSIGNEE 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 I have full right to convey the entire right, title and interest herein sold, assigned, transferred and set over;

AND I, SAID ASSIGNOR(S) hereby further covenant and agree that the ASSIGNEE may apply for foreign Letters Patent on said discovery or invention and claim the benefits of the International Convention, and that I will, at any time, when called upon to do so by the ASSIGNEE communicate to the ASSIGNEE as the case may be, any facts known to me respecting said discovery or invention, and execute and deliver any and all lawful papers that may be necessary or desirable to perfect the title to the said discovery or invention, the said applications and the said Letters Patent in the ASSIGNEE and that if reissues or reexaminations of the said Letters Patent or disclaimers relating thereto, or divisionals, continuations, continuation-in-parts of the said applications shall hereafter be desired by the ASSIGNEE, I will, at any time, when called upon to do so by the ASSIGNEE sign all lawful papers, make all rightful oaths, execute and deliver all such disclaimers and all divisional, continuation, continuation-in-part, reexamination, and reissue applications so desired, and do all lawful acts requisite for the application for such continuations, continuation-in-parts, divisionals, reexaminations, or reissues and the procuring thereof and for the filing of such disclaimers and such applications, and generally do everything possible to aid the ASSIGNEE to obtain and enforce proper patent protection for said invention or discovery in all countries, all without further compensation but at the expense of the ASSIGNEE.

ASSIGNOR hereby authorizes and requests the prosecuting law firm to insert herein above the application number and filing date of said application when known.

Inventor(s): Please Sign and Date Below:

(1) _____ Date: _____
Vidya Hegde

(2) Jean de Lavarene Date: MARCH 15 2016
Jean de Lavarene

(3) _____ Date: _____
Douglas Surber

(4) _____ Date: _____
Mark Dilman

(5) _____ Date: _____
Leonid Novak

(6) _____ Date: _____
Wei Ming Hu

(7) _____ Date: _____
Ashok Shivarudraiah

(8) _____ Date: _____
Tong Zhou

ASSIGNMENT OF APPLICATION FOR PATENT

WHEREAS:

Vidya Hegde, a resident of Bangalore, India;

Jean de Lavarene, a resident of Levallois Perret, France;

Douglas Surber, a resident of Orinda, California, USA;

Mark Dilman, a resident of Sunnyvale, California, USA;

Leonid Novak, a resident of Redwood City, California, USA;

Wei Ming Hu, a resident of Palo Alto, California, USA;

Ashok Shivarudraiah, a resident of San Mateo, California, USA; and

Tong Zhou, a resident of Merrick, New York, USA

(full name(s) and city and state of residence of inventor(s) (including country))

(hereinafter referred to as ASSIGNOR(S)), has made a discovery and/or invention entitled:

**SYSTEM AND METHOD FOR PROVIDING ACCESS TO A SHARDED
DATABASE USING A CACHE AND A SHARD TOPOLOGY**

- for which application for Letters Patent of the United States has been executed on _____,
- for which an application for Letters Patent of the United States has been filed on April 20, 2016, under Application No. 15/133,979, claiming priority to U.S. Provisional Application No. 62/150,191, filed April 20, 2015; U.S. Provisional Application No. 62/198,958, filed July 30, 2015; and U.S. Provisional Application No. 62/150,188, filed April 20, 2015.

WHEREAS:

Oracle International Corporation, a corporation of California, having a business address of 500 Oracle Parkway, Mail Stop 50P7, Redwood Shores, CA 94065

and which, together with its successors, assigns, and legal representatives, is hereinafter referred to as ASSIGNEE, is desirous of acquiring the entire right, title and interest in, to and under said invention and in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

Be it known that for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR(S) hereby sells, assigns and transfers to ASSIGNEE, the full and exclusive right, title and interest to said discovery or invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any continuation, continuation-in-part, divisional, reexamination, renewal, substitute, reissue and/or any application claiming priority thereof, including any legal equivalent thereof, in a foreign country for the full term or terms for which the same may be granted.

I, SAID ASSIGNOR(S), hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and any Official of any country or countries foreign to the United States of America whose duty it is to issue Letters Patent on applications as aforesaid, to issue all such Letters Patent for said discovery or invention to the ASSIGNEE, as assignee of the entire right, title and interest in, to and under the same, for the sole use and benefit of the ASSIGNEE in accordance with the terms of this instrument.

I, SAID, ASSIGNOR(S), hereby covenant with ASSIGNEE 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 I have full right to convey the entire right, title and interest herein sold, assigned, transferred and set over;

AND I, SAID ASSIGNOR(S) hereby further covenant and agree that the ASSIGNEE may apply for foreign Letters Patent on said discovery or invention and claim the benefits of the International Convention, and that I will, at any time, when called upon to do so by the ASSIGNEE communicate to the ASSIGNEE as the case may be, any facts known to me respecting said discovery or invention, and execute and deliver any and all lawful papers that may be necessary or desirable to perfect the title to the said discovery or invention, the said applications and the said Letters Patent in the ASSIGNEE and that if reissues or reexaminations of the said Letters Patent or disclaimers relating thereto, or divisionals, continuations, continuation-in-parts of the said applications shall hereafter be desired by the ASSIGNEE, I will, at any time, when called upon to do so by the ASSIGNEE sign all lawful papers, make all rightful oaths, execute and deliver all such disclaimers and all divisional, continuation, continuation-in-part, reexamination, and reissue applications so desired, and do all lawful acts requisite for the application for such continuations, continuation-in-parts, divisionals, reexaminations, or reissues and the procuring thereof and for the filing of such disclaimers and such applications, and generally do everything possible to aid the ASSIGNEE to obtain and enforce proper patent protection for said invention or discovery in all countries, all without further compensation but at the expense of the ASSIGNEE.

ASSIGNOR hereby authorizes and requests the prosecuting law firm to insert herein above the application number and filing date of said application when known.

Inventor(s): Please Sign and Date Below:

- (1) _____ Date: _____
Vidya Hegde
- (2) _____ Date: _____
Jean de Lavarene
- (3) _____ Date: _____
Douglas Surber
- (4) Mark Dilman Date: 4/1/16
Mark Dilman
- (5) _____ Date: _____
Leonid Novak
- (6) _____ Date: _____
Wei Ming Hu
- (7) _____ Date: _____
Ashok Shivarudraiah
- (8) _____ Date: _____
Tong Zhou

ASSIGNMENT OF APPLICATION FOR PATENT

WHEREAS:

Vidya Hegde, a resident of Bangalore, India;

Jean de Lavarene, a resident of Levallois Perret, France;

Douglas Surber, a resident of Orinda, California, USA;

Mark Dilman, a resident of Sunnyvale, California, USA;

Leonid Novak, a resident of Redwood City, California, USA;

Wei Ming Hu, a resident of Palo Alto, California, USA;

Ashok Shivarudraiah, a resident of San Mateo, California, USA; and

Tong Zhou, a resident of Merrick, New York, USA

(full name(s) and city and state of residence of inventor(s) (including country))

(hereinafter referred to as ASSIGNOR(S)), has made a discovery and/or invention entitled:

**SYSTEM AND METHOD FOR PROVIDING ACCESS TO A SHARDED
DATABASE USING A CACHE AND A SHARD TOPOLOGY**

- for which application for Letters Patent of the United States has been executed on _____,
- for which an application for Letters Patent of the United States has been filed on April 20, 2016, under Application No. 15/133,979, claiming priority to U.S. Provisional Application No. 62/150,191, filed April 20, 2015; U.S. Provisional Application No. 62/198,958, filed July 30, 2015; and U.S. Provisional Application No. 62/150,188, filed April 20, 2015.

WHEREAS:

Oracle International Corporation, a corporation of California, having a business address of 500 Oracle Parkway, Mail Stop 50P7, Redwood Shores, CA 94065

and which, together with its successors, assigns, and legal representatives, is hereinafter referred to as ASSIGNEE, is desirous of acquiring the entire right, title and interest in, to and under said invention and in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

Be it known that for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR(S) hereby sells, assigns and transfers to ASSIGNEE, the full and exclusive right, title and interest to said discovery or invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any continuation, continuation-in-part, divisional, reexamination, renewal, substitute, reissue and/or any application claiming priority thereof, including any legal equivalent thereof, in a foreign country for the full term or terms for which the same may be granted.

I, SAID ASSIGNOR(S), hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and any Official of any country or countries foreign to the United States of America whose duty it is to issue Letters Patent on applications as aforesaid, to issue all such Letters Patent for said discovery or invention to the ASSIGNEE, as assignee of the entire right, title and interest in, to and under the same, for the sole use and benefit of the ASSIGNEE in accordance with the terms of this instrument.

I, SAID, ASSIGNOR(S), hereby covenant with ASSIGNEE 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 I have full right to convey the entire right, title and interest herein sold, assigned, transferred and set over;

AND I, SAID ASSIGNOR(S) hereby further covenant and agree that the ASSIGNEE may apply for foreign Letters Patent on said discovery or invention and claim the benefits of the International Convention, and that I will, at any time, when called upon to do so by the ASSIGNEE communicate to the ASSIGNEE as the case may be, any facts known to me respecting said discovery or invention, and execute and deliver any and all lawful papers that may be necessary or desirable to perfect the title to the said discovery or invention, the said applications and the said Letters Patent in the ASSIGNEE and that if reissues or reexaminations of the said Letters Patent or disclaimers relating thereto, or divisionals, continuations, continuation-in-parts of the said applications shall hereafter be desired by the ASSIGNEE, I will, at any time, when called upon to do so by the ASSIGNEE sign all lawful papers, make all rightful oaths, execute and deliver all such disclaimers and all divisional, continuation, continuation-in-part, reexamination, and reissue applications so desired, and do all lawful acts requisite for the application for such continuations, continuation-in-parts, divisionals, reexaminations, or reissues and the procuring thereof and for the filing of such disclaimers and such applications, and generally do everything possible to aid the ASSIGNEE to obtain and enforce proper patent protection for said invention or discovery in all countries, all without further compensation but at the expense of the ASSIGNEE.

ASSIGNOR hereby authorizes and requests the prosecuting law firm to insert herein above the application number and filing date of said application when known.

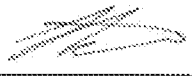
Inventor(s): Please Sign and Date Below:

(1) _____ Date: _____
Vidya Hegde

(2) _____ Date: _____
Jean de Lavarene

(3) _____ Date: _____
Douglas Surber

(4) _____ Date: _____
Mark Dilman

(5)  _____ Date: 04/01/76
Leonid Novak

(6) _____ Date: _____
Wei Ming Hu

(7) _____ Date: _____
Ashok Shivarudraiah

(8) _____ Date: _____
Tong Zhou

ASSIGNMENT OF APPLICATION FOR PATENT

WHEREAS:

Vidya Hegde, a resident of Bangalore, India;

Jean de Lavarene, a resident of Levallois Perret, France;

Douglas Surber, a resident of Orinda, California, USA;

Mark Dilman, a resident of Sunnyvale, California, USA;

Leonid Novak, a resident of Redwood City, California, USA;

Wei Ming Hu, a resident of Palo Alto, California, USA;

Ashok Shivarudraiah, a resident of San Mateo, California, USA; and

Tong Zhou, a resident of Merrick, New York, USA

(full name(s) and city and state of residence of inventor(s) (including country))

(hereinafter referred to as ASSIGNOR(S)), has made a discovery and/or invention entitled:

**SYSTEM AND METHOD FOR PROVIDING ACCESS TO A SHARDED
DATABASE USING A CACHE AND A SHARD TOPOLOGY**

- for which application for Letters Patent of the United States has been executed on _____,
- for which an application for Letters Patent of the United States has been filed on April 20, 2016, under Application No. 15/133,979, claiming priority to U.S. Provisional Application No. 62/150,191, filed April 20, 2015; U.S. Provisional Application No. 62/198,958, filed July 30, 2015; and U.S. Provisional Application No. 62/150,188, filed April 20, 2015.

WHEREAS:

Oracle International Corporation, a corporation of California, having a business address of 500 Oracle Parkway, Mail Stop 50P7, Redwood Shores, CA 94065

and which, together with its successors, assigns, and legal representatives, is hereinafter referred to as ASSIGNEE, is desirous of acquiring the entire right, title and interest in, to and under said invention and in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

Be it known that for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR(S) hereby sells, assigns and transfers to ASSIGNEE, the full and exclusive right, title and interest to said discovery or invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any continuation, continuation-in-part, divisional, reexamination, renewal, substitute, reissue and/or any application claiming priority thereof, including any legal equivalent thereof, in a foreign country for the full term or terms for which the same may be granted.

I, SAID ASSIGNOR(S), hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and any Official of any country or countries foreign to the United States of America whose duty it is to issue Letters Patent on applications as aforesaid, to issue all such Letters Patent for said discovery or invention to the ASSIGNEE, as assignee of the entire right, title and interest in, to and under the same, for the sole use and benefit of the ASSIGNEE in accordance with the terms of this instrument.

I, SAID, ASSIGNOR(S), hereby covenant with ASSIGNEE 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 I have full right to convey the entire right, title and interest herein sold, assigned, transferred and set over;

AND I, SAID ASSIGNOR(S) hereby further covenant and agree that the ASSIGNEE may apply for foreign Letters Patent on said discovery or invention and claim the benefits of the International Convention, and that I will, at any time, when called upon to do so by the ASSIGNEE communicate to the ASSIGNEE as the case may be, any facts known to me respecting said discovery or invention, and execute and deliver any and all lawful papers that may be necessary or desirable to perfect the title to the said discovery or invention, the said applications and the said Letters Patent in the ASSIGNEE and that if reissues or reexaminations of the said Letters Patent or disclaimers relating thereto, or divisionals, continuations, continuation-in-parts of the said applications shall hereafter be desired by the ASSIGNEE, I will, at any time, when called upon to do so by the ASSIGNEE sign all lawful papers, make all rightful oaths, execute and deliver all such disclaimers and all divisional, continuation, continuation-in-part, reexamination, and reissue applications so desired, and do all lawful acts requisite for the application for such continuations, continuation-in-parts, divisionals, reexaminations, or reissues and the procuring thereof and for the filing of such disclaimers and such applications, and generally do everything possible to aid the ASSIGNEE to obtain and enforce proper patent protection for said invention or discovery in all countries, all without further compensation but at the expense of the ASSIGNEE.

ASSIGNOR hereby authorizes and requests the prosecuting law firm to insert herein above the application number and filing date of said application when known.

Inventor(s): Please Sign and Date Below:

(1) _____ Date: _____
Vidya Hegde

(2) _____ Date: _____
Jean de Lavarene

(3) _____ Date: _____
Douglas Surber

(4) _____ Date: _____
Mark Dilman

(5) _____ Date: _____
Leonid Novak

(6) Wei Ming Hu Date: 3/22/2016
Wei Ming Hu

(7) _____ Date: _____
Ashok Shivarudraiah

(8) _____ Date: _____
Tong Zhou

ASSIGNMENT OF APPLICATION FOR PATENT

WHEREAS:

Vidya Hegde, a resident of Bangalore, India;

Jean de Lavarene, a resident of Levallois Perret, France;

Douglas Surber, a resident of Orinda, California, USA;

Mark Dilman, a resident of Sunnyvale, California, USA;

Leonid Novak, a resident of Redwood City, California, USA;

Wei Ming Hu, a resident of Palo Alto, California, USA;

Ashok Shivarudraiah, a resident of San Mateo, California, USA; and

Tong Zhou, a resident of Merrick, New York, USA

(full name(s) and city and state of residence of inventor(s) (including country))

(hereinafter referred to as ASSIGNOR(S)), has made a discovery and/or invention entitled:

**SYSTEM AND METHOD FOR PROVIDING ACCESS TO A SHARDED
DATABASE USING A CACHE AND A SHARD TOPOLOGY**

- for which application for Letters Patent of the United States has been executed on _____,
- for which an application for Letters Patent of the United States has been filed on April 20, 2016, under Application No. 15/133,979, claiming priority to U.S. Provisional Application No. 62/150,191, filed April 20, 2015; U.S. Provisional Application No. 62/198,958, filed July 30, 2015; and U.S. Provisional Application No. 62/150,188, filed April 20, 2015.

WHEREAS:

Oracle International Corporation, a corporation of California, having a business address of 500 Oracle Parkway, Mail Stop 50P7, Redwood Shores, CA 94065

and which, together with its successors, assigns, and legal representatives, is hereinafter referred to as ASSIGNEE, is desirous of acquiring the entire right, title and interest in, to and under said invention and in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

Be it known that for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR(S) hereby sells, assigns and transfers to ASSIGNEE, the full and exclusive right, title and interest to said discovery or invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any continuation, continuation-in-part, divisional, reexamination, renewal, substitute, reissue and/or any application claiming priority thereof, including any legal equivalent thereof, in a foreign country for the full term or terms for which the same may be granted.

I, SAID ASSIGNOR(S), hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and any Official of any country or countries foreign to the United States of America whose duty it is to issue Letters Patent on applications as aforesaid, to issue all such Letters Patent for said discovery or invention to the ASSIGNEE, as assignee of the entire right, title and interest in, to and under the same, for the sole use and benefit of the ASSIGNEE in accordance with the terms of this instrument.

I, SAID, ASSIGNOR(S), hereby covenant with ASSIGNEE 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 I have full right to convey the entire right, title and interest herein sold, assigned, transferred and set over;

AND I, SAID ASSIGNOR(S) hereby further covenant and agree that the ASSIGNEE may apply for foreign Letters Patent on said discovery or invention and claim the benefits of the International Convention, and that I will, at any time, when called upon to do so by the ASSIGNEE communicate to the ASSIGNEE as the case may be, any facts known to me respecting said discovery or invention, and execute and deliver any and all lawful papers that may be necessary or desirable to perfect the title to the said discovery or invention, the said applications and the said Letters Patent in the ASSIGNEE and that if reissues or reexaminations of the said Letters Patent or disclaimers relating thereto, or divisionals, continuations, continuation-in-parts of the said applications shall hereafter be desired by the ASSIGNEE, I will, at any time, when called upon to do so by the ASSIGNEE sign all lawful papers, make all rightful oaths, execute and deliver all such disclaimers and all divisional, continuation, continuation-in-part, reexamination, and reissue applications so desired, and do all lawful acts requisite for the application for such continuations, continuation-in-parts, divisionals, reexaminations, or reissues and the procuring thereof and for the filing of such disclaimers and such applications, and generally do everything possible to aid the ASSIGNEE to obtain and enforce proper patent protection for said invention or discovery in all countries, all without further compensation but at the expense of the ASSIGNEE.

ASSIGNOR hereby authorizes and requests the prosecuting law firm to insert herein above the application number and filing date of said application when known.

Inventor(s): Please Sign and Date Below:

(1) _____ Date: _____
Vidya Hegde

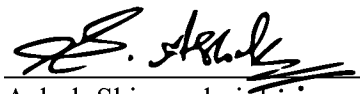
(2) _____ Date: _____
Jean de Lavarene

(3) _____ Date: _____
Douglas Surber

(4) _____ Date: _____
Mark Dilman

(5) _____ Date: _____
Leonid Novak

(6) _____ Date: _____
Wei Ming Hu

(7)  _____ Date: 19th Mar, 2016
Ashok Shivarudraiah

(8) _____ Date: _____
Tong Zhou

ASSIGNMENT OF APPLICATION FOR PATENT

WHEREAS:

Vidya Hegde, a resident of Bangalore, India;

Jean de Lavarene, a resident of Levallois Perret, France;

Douglas Surber, a resident of Orinda, California, USA;

Mark Dilman, a resident of Sunnyvale, California, USA;

Leonid Novak, a resident of Redwood City, California, USA;

Wei Ming Hu, a resident of Palo Alto, California, USA;

Ashok Shivarudraiah, a resident of San Mateo, California, USA; and

Tong Zhou, a resident of Merrick, New York, USA

(full name(s) and city and state of residence of inventor(s) (including country))

(hereinafter referred to as ASSIGNOR(S)), has made a discovery and/or invention entitled:

**SYSTEM AND METHOD FOR PROVIDING ACCESS TO A SHARDED
DATABASE USING A CACHE AND A SHARD TOPOLOGY**

- for which application for Letters Patent of the United States has been executed on _____,
- for which an application for Letters Patent of the United States has been filed on April 20, 2016, under Application No. 15/133,979, claiming priority to U.S. Provisional Application No. 62/150,191, filed April 20, 2015; U.S. Provisional Application No. 62/198,958, filed July 30, 2015; and U.S. Provisional Application No. 62/150,188, filed April 20, 2015.

WHEREAS:

Oracle International Corporation, a corporation of California, having a business address of 500 Oracle Parkway, Mail Stop 50P7, Redwood Shores, CA 94065

and which, together with its successors, assigns, and legal representatives, is hereinafter referred to as ASSIGNEE, is desirous of acquiring the entire right, title and interest in, to and under said invention and in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

Be it known that for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR(S) hereby sells, assigns and transfers to ASSIGNEE, the full and exclusive right, title and interest to said discovery or invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any continuation, continuation-in-part, divisional, reexamination, renewal, substitute, reissue and/or any application claiming priority thereof, including any legal equivalent thereof, in a foreign country for the full term or terms for which the same may be granted.

I, SAID ASSIGNOR(S), hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and any Official of any country or countries foreign to the United States of America whose duty it is to issue Letters Patent on applications as aforesaid, to issue all such Letters Patent for said discovery or invention to the ASSIGNEE, as assignee of the entire right, title and interest in, to and under the same, for the sole use and benefit of the ASSIGNEE in accordance with the terms of this instrument.

I, SAID, ASSIGNOR(S), hereby covenant with ASSIGNEE 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 I have full right to convey the entire right, title and interest herein sold, assigned, transferred and set over;

AND I, SAID ASSIGNOR(S) hereby further covenant and agree that the ASSIGNEE may apply for foreign Letters Patent on said discovery or invention and claim the benefits of the International Convention, and that I will, at any time, when called upon to do so by the ASSIGNEE communicate to the ASSIGNEE as the case may be, any facts known to me respecting said discovery or invention, and execute and deliver any and all lawful papers that may be necessary or desirable to perfect the title to the said discovery or invention, the said applications and the said Letters Patent in the ASSIGNEE and that if reissues or reexaminations of the said Letters Patent or disclaimers relating thereto, or divisionals, continuations, continuation-in-parts of the said applications shall hereafter be desired by the ASSIGNEE, I will, at any time, when called upon to do so by the ASSIGNEE sign all lawful papers, make all rightful oaths, execute and deliver all such disclaimers and all divisional, continuation, continuation-in-part, reexamination, and reissue applications so desired, and do all lawful acts requisite for the application for such continuations, continuation-in-parts, divisionals, reexaminations, or reissues and the procuring thereof and for the filing of such disclaimers and such applications, and generally do everything possible to aid the ASSIGNEE to obtain and enforce proper patent protection for said invention or discovery in all countries, all without further compensation but at the expense of the ASSIGNEE.

ASSIGNOR hereby authorizes and requests the prosecuting law firm to insert herein above the application number and filing date of said application when known.

Inventor(s): Please Sign and Date Below:

(1) _____ Date: _____
Vidya Hegde

(2) _____ Date: _____
Jean de Lavarene

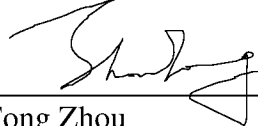
(3) _____ Date: _____
Douglas Surber

(4) _____ Date: _____
Mark Dilman

(5) _____ Date: _____
Leonid Novak

(6) _____ Date: _____
Wei Ming Hu

(7) _____ Date: _____
Ashok Shivarudraiah

(8)  _____ Date: 03/23/2016
Tong Zhou