503489259 09/22/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3535884

| SUBMISSION TYPE: | CORRECTIVE ASSIGNMENT |
|-----------------------|--|
| NATURE OF CONVEYANCE: | Corrective Assignment to correct the TO RECORD THE ASSIGNMENT WITH INVENTOR (D) SIGNATURE PAGE previously recorded on Reel 036089 Frame 0785. Assignor(s) hereby confirms the INVENTOR (D) ANDRE MENCK SHOULD BE ADDED TO THE NOTICE OF RECORDATION. |
| | |

CONVEYING PARTY DATA

| Name | Execution Date |
|---------------------|----------------|
| DAVID VENGEROV | 06/18/2015 |
| MOHAMED ZAIT | 06/28/2015 |
| SUNIL P. CHAKKAPPEN | 06/18/2015 |
| ANDRE MENCK | 09/18/2015 |

RECEIVING PARTY DATA

| Name: | ORACLE INTERNATIONAL CORPORATION |
|-------------------|----------------------------------|
| Street Address: | 500 ORACLE PARKWAY |
| Internal Address: | MAIL STOP 50P7 |
| City: | REDWOOD SHORES |
| State/Country: | CALIFORNIA |
| Postal Code: | 94065 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14753179 |

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.

Phone: 703-903-9000

Email: lpdocketing@MilesStockbridge.com,

hshannon@milesstockbridge.com

MILES & STOCKBRIDGE P.C. ORACLE INTERNAT **Correspondent Name:**

Address Line 1: 1751 PINNACLE DRIVE

Address Line 2: **SUITE 1500**

Address Line 4: TYSONS CORNER, VIRGINIA 22102-3833

| ATTORNEY DOCKET NUMBER: | T9049-21471US01 |
|-------------------------|-----------------|
| NAME OF SUBMITTER: | SHABNAM SHAFIEE |

PATENT REEL: 036644 FRAME: 0701

| SIGNATURE: | /Shabnam Shafiee/ | |
|---|-------------------|--|
| DATE SIGNED: | 09/21/2015 | |
| Total Attachments: 9 | | |
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| source=T9049-21471US01ASSIGNMEN | NT3#page2.tif | |
| source=T9049-21471US01ASSIGNMENT3#page3.tif | | |
| source=T9049-21471US01ASSIGNMENT3#page4.tif | | |
| source=T9049-21471US01ASSIGNMENT3#page5.tif | | |
| source=T9049-21471US01ASSIGNMENT3#page6.tif | | |
| source=T9049-21471US01ASSIGNMENT3#page7.tif | | |
| source=T9049-21471US01ASSIGNMENT3#page8.tif | | |

source=T9049-21471US01ASSIGNMENT3#page9.tif

PATENT REEL: 036644 FRAME: 0702 Assignment Page 1 of 2

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

| SUBMISSION TYPE: | CORRECTIVE ASSIGNMENT |
|-----------------------|---|
| NATURE OF CONVEYANCE: | Corrective Assignment to correct the SPELLING OF THE THIRD INVENTORS LAST NAME previously recorded on Reel 036006 Frame 0924. Assignor(s) hereby confirms the 3RD INVENTORS LAST NAME FROM CHAKKAPEN TO CHAKKAPPEN. |

CONVEYING PARTY DATA

| Name | Execution Date |
|---------------------|----------------|
| DAVID VENGEROV | 06/18/2015 |
| MOHAMED ZAIT | 06/28/2015 |
| SUNIL P. CHAKKAPPEN | 06/18/2015 |

RECEIVING PARTY DATA

| Name: | ORACLE INTERNATIONAL CORPORATION |
|-------------------|----------------------------------|
| Street Address: | 500 ORACLE PARKWAY |
| Internal Address: | |
| City: | REDWOOD SHORES |
| State/Country: | CALIFORNIA |
| Postal Code: | 94065 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14753179 |

CORRESPONDENCE DATA

Fax Number:

Phone: 703-903-9000

Email: Ipdocketing@MilesStockbridge.com, hshannon@milesstockbridge.com

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.

Correspondent Name: MILES & STOCKBRIDGE P.C. ORACLE INTERNAT

Address Line 1: 1751 PINNACLE DRIVE

Address Line 2: SUITE 1500

Address Line 4: TYSONS CORNER, VIRGINIA 22102-3833

| ATTORNEY DOCKET NUMBER: | T9049-21471US01 |
|-------------------------|-----------------|
| NAME OF SUBMITTER: | SHABNAM SHAFIEE |

Assignment Page 2 of 2

| Signature: | /Shabnam Shafiee/ |
|---|---|
| Date: | 07/10/2015 |
| source=T9049-21471U source=T9049-21471U source=T9049-21471U source=T9049-21471U source=T9049-21471U | 01assignmentreceiptwithassignment#page1.tif 01assignmentreceiptwithassignment#page2.tif 01assignmentreceiptwithassignment#page3.tif 01assignmentreceiptwithassignment#page4.tif 01assignmentreceiptwithassignment#page5.tif 01assignmentreceiptwithassignment#page6.tif |
| RECEIPT INFORMATION | |
| EPAS ID: | PAT3433067 07/10/2015 |
| Receipt Date: | 07/10/2013 |

Assignment Page 1 of 2

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

| | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------------|----------------|
| DAVID VENGEROV | 06/18/2015 |
| MOHAMED ZAIT | 06/28/2015 |
| SUNIL P. CHAKKAPEN | 06/18/2015 |

RECEIVING PARTY DATA

| Name: | ORACLE INTERNATIONAL CORPORATION |
|-------------------|----------------------------------|
| Street Address: | 500 ORACLE PARKWAY |
| Internal Address: | MAIL STOP 50P7 |
| City: | REDWOOD SHORES |
| State/Country: | CALIFORNIA |
| Postal Code: | 94065 |

PROPERTY NUMBERS Total: 1

| Property Type | | |
|---------------------|----------|--|
| Application Number: | 14753179 | |

CORRESPONDENCE DATA

Fax Number:

Phone: 703-903-9000

Email: Ipdocketing@MilesStockbridge.com, hshannon@milesstockbridge.com

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.

Correspondent Name: MILES & STOCKBRIDGE P.C. ORACLE INTERNAT

Address Line 1: 1751 PINNACLE DRIVE

Address Line 2: SUITE 1500

Address Line 4: TYSONS CORNER, VIRGINIA 22102-3833

| ATTORNEY DOCKET NUMBER: | T9049-21471US01 |
|-------------------------|-------------------|
| NAME OF SUBMITTER: | SHABNAM SHAFIEE |
| Signature: | /Shabnam Shafiee/ |
| | |

Assignment Page 2 of 2

Date: 07/07/2015

Total Attachments: 4

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RECEIPT INFORMATION

EPAS ID: PAT3427657 **Receipt Date:** 07/07/2015

ASSIGNMENT OF APPLICATION FOR PATENT

WHEREAS:

- (A) David VENGEROV, residing in San Jose, CA;
- (B) Mohamed ZAIT, residing in San Jose, CA;
- (C) Sunil P. CHAKKAPPEN, residing in Foster City, CA;
- (D) Andre MENCK, residing in Redwood City, CA;

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

ONE-PASS JOIN SIZE ESTIMATION WITH CORRELATED SAMPLING

- for which application for Letters Patent of the United States has been executed on even date herewith,
- for which application for Letters Patent of the United States has been filed <u>June 29</u>, 2015, under Application No. 14/753,179, and

WHEREAS:

Oracle International Corporation, a corporation of California, having a business address of 500 Oracle Parkway, Mail Stop 5OP7, 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.

Oracle Matter No. ORA150855-US-NP

PATENT REEL: 036644 FRAME: 0707 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 caths, 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:

| (A) | David VENGEROV | Date | 6/18/2015 |
|-----|--------------------|-------|-----------|
| (8) | Mohamed ZAIY | Date: | |
| (C) | Sunii P. CHAKKAPEN | Date: | |
| 0) | Andre MENCK | Date: | |

Oracle Matter No. ORA150855-US-NP

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 end 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. | 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:

| (A) | David VENGEROV | Date: | |
|-----|--------------------|-------|--------------------|
| (B) | Mohamed ZAIT | Date: | <u>06/28/2</u> 0/5 |
| (C) | Sunil P. CHAKKAPEN | Date: | |
| D) | Andre MENCK | Date: | |

Oracle Matter No. ORA150855-US-NP

Attorney Docket No. T9049-21471US01

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. (will, at any time, when called upon to do so by the ASSIGNEE sign all lawful papers, make all rightful paths, 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 filling date of said application when known.

Inventor(s): Please Sign and Date Below:

| (A) | David VENGEROV | Date: |
|-----|--------------------|-----------------------------|
| (B) | Mohamed ZAIT | Date: |
| (C) | Sunii P. CHAKKAPEN | Date: <u>June 18</u> , 2015 |
| D) | Andre MENCK | Date: |

Oracle Matter No. ORA150855-US-NP

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:

| | _ Date: | |
|--------------------|---------|---|
| David VENGEROV | | |
| | _ Date: | |
| Mohamed ZAIT | | |
| | _ Date: | ****************************** |
| Sunil P. CHAKKAPEN | | |
| Well inhall | Date: | 09/18/2015 |
| Andre MENCK | uu. | *************************************** |

Oracle Matter No. ORA150855-US-NP

PATENT REEL: 036644 FRAME: 0711