

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT6288504

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	ORACLE DEUTSCHLAND B.V. & CO. KG	06/10/2020
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	ORACLE INTERNATIONAL CORPORATION	
<b>Street Address:</b>	500 ORACLE PARKWAY, MAIL STOP 50P7	
<b>City:</b>	REDWOOD SHORES	
<b>State/Country:</b>	CALIFORNIA	
<b>Postal Code:</b>	94065	
<b>PROPERTY NUMBERS Total: 1</b>		
	<b>Property Type</b>	<b>Number</b>
	Application Number:	16863268
<b>CORRESPONDENCE DATA</b>		
<b>Fax Number:</b>		
<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>Email:</b>	ccallanta@h35g.com	
<b>Correspondent Name:</b>	HICKMAN PALERMO BECKER BINGHAM LLP	
<b>Address Line 1:</b>	1 ALMADEN BOULEVARD, FLOOR 12	
<b>Address Line 4:</b>	SAN JOSE, CALIFORNIA 95113	
<b>ATTORNEY DOCKET NUMBER:</b>	50277-5516	
<b>NAME OF SUBMITTER:</b>	MARCEL K. BINGHAM	
<b>SIGNATURE:</b>	/MarcelKBingham#42327/	
<b>DATE SIGNED:</b>	09/08/2020	
<b>Total Attachments: 12</b>		
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**STATEMENT UNDER 37 CFR 3.73(c)**Applicant/Patent Owner: Oracle International Corporation (Atty Docket No. 50277-5516)Application No./Patent No.: 16/863,268 Filed/Issue Date: April 30, 2020Titled: SUPPORTING PIECEWISE UPDATE OF JSON DOCUMENT EFFICIENTLYOracle Deutschland B.V. & Co. KG, a corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose one of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is \_\_\_\_\_%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose one of options A or B below):

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 052542, Frame 0001, or for which a copy thereof is attached.
- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at

Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

2. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at

Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**PATENT****REEL: 053716 FRAME: 0850**

**STATEMENT UNDER 37 CFR 3.73(c)**

3. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at  
 Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

4. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at  
 Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

5. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at  
 Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

6. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at  
 Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).


As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/MarcelKBingham#42327/

Signature

Marcel K. Bingham

Printed or Typed Name

July 21, 2020

Date

42,327

Title or Registration Number

## Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

## ASSIGNMENT OF RIGHTS TO DISCOVERY AND/OR INVENTION

## WHEREAS:

Beda Hammerschmidt, residing in Flensburg, Germany,

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

Invention Disclosure Title, Patent for technique of supporting Piecewise Update of JSON Document Efficiently, which is being referenced as Oracle Reference Number ORA190564 and which has been or may be approved for filing an application for Letters Patent of the United States, such application having an application number of 16/863,268 and a filing date of April 30, 2020, which may be filled in at a later time by a prosecuting law firm, and

\*\*\* Application reference added June 11, 2020 by Marcel K. Bingham  
, Reg. No. 42,327.

## WHEREAS:

ORACLE Deutschland B.V. & Co. KG, having a business address of Riesstraße 25,  
80992 München,

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 hereby sells, assigns and transfers to ASSIGNEE, my 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, 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 my full 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.

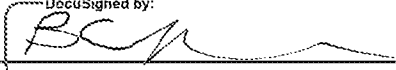

I, SAID, ASSIGNOR, hereby covenant with ASSIGNEE that, except for any assignment from ASSIGNOR to ASSIGNEE that may have already occurred pursuant to the German Act on Employees' Inventions, no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned and that I have full right to convey my right, title and interest herein sold, assigned, transferred and set over;

AND I, SAID ASSIGNOR, hereby further covenant and agree that the ASSIGNEE may apply for foreign Letters Patent on said discovery or invention and claim the benefits of international conventions and/or treaties such as the Paris Convention for the Protection of Industrial Property and/or the Patent Cooperation Treaty, 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.

German Inventor: Please Sign and Date Below:

(1)   Date: 09-Jun-2020 | 11:55 AM PDT  
Beda Hammerschmidt

**CONFIRMATORY ASSIGNMENT**  
(Patent Application)

I, the undersigned, have invented certain inventions and improvements disclosed in a utility (provisional or non-provisional) or design patent application entitled

“SUPPORTING PIECEWISE UPDATE OF JSON DOCUMENT EFFICIENTLY,”

- ☐ the specification of which is provided with this Confirmatory Assignment and identified by the Attorney Docket No. above.,
- ☒ that was filed with the U.S. Patent and Trademark Office on April 30, 2020 as U.S. Application No. 16/863,268, and

For good and valuable consideration, the receipt and sufficiency of which I acknowledge, I:

1. Confirm that, due to a claiming of rights under the German Act on Employees' Inventions pursuant to that certain Agreement Regarding Invention Rights executed as of June 9, 2020, and further pursuant to that certain Assignment of Rights to Discovery and/or Invention Agreement executed as of June 9, 2020, attached hereto as Appendix A, I have assigned, transferred, conveyed, and sold, agree to assign, transfer, convey, and sell, and hereby assign, transfer, convey, and sell to Oracle Deutschland B.V. & Co. KG, a corporation formed under the laws of Germany having a principal place of business at Riesstrasse 25, 80992 Munich, Germany (“**Assignee**”), the entire right, title, and interest in and to:
  - (a) all intellectual property (including, without limitation, any innovation, information, invention, discovery, product, process, work or design) disclosed, embodied, shown, or claimed in the above-referenced patent application, implicitly or explicitly;
  - (b) the above-referenced patent application, the right to claim priority to the above-referenced patent application, all applications based in whole or in part upon the above-referenced patent application, including, without limitation, all applications that are a provisional, non-provisional, design, divisional, continuation, continuation-in-part, registration, utility model, industrial design, reissue, renewal, substitute, extension, reexamination, post-grant review, inter partes review, supplemental examination or non-U.S. patent application or application for other rights based in whole or in part on the above-referenced patent application;



CONFIRMATORY ASSIGNMENT

Attorney Docket No. 50277-5516

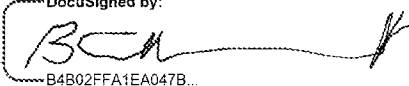
Oracle Ref. No. ORA190564-US-NP

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- (c) all patents (including, without limitation, all U.S. and non-U.S. patents, registrations, utility models, industrial designs, design patents, counterparts, continuations, continuations-in-part, divisionals, reissues, renewals, substitutes, extensions, reexaminations, post-grant reviews, inter partes reviews and supplemental examinations) that are granted or issued upon, or that claim priority to, any and all applications described in (b) of this paragraph or that disclose or claim intellectual property described in (a) of this paragraph, in whole or in part; and
  - (d) all claims for damages by reason of past infringement of any rights under the applications or patents described in (a), (b) or (c) of this paragraph (including provisional rights to reasonable royalties pursuant to 35 U.S.C. §154(d)) and the right to sue for and collect such damages and royalties for Assignee's own use.
- 2. Authorize and request the U.S. Patent and Trademark Office or any other U.S. or non-U.S. agency to issue to the Assignee any and all patent(s), or other rights or documents, resulting from the intellectual property, patent application(s) and patents described in paragraph 1 of this Confirmatory Assignment.
- 3. Agree to sign all papers and documents, including without limitation, applications, declarations, oaths and petitions, and, at the Assignee's expense, perform any other acts that are necessary in connection with prosecution of patent application(s) or intellectual property described in paragraph 1 of this Confirmatory Assignment and the enforcement of patent(s) or other rights resulting from such patent application(s) or intellectual property.
- 4. Agree that the terms, covenants, and conditions of this Confirmatory Assignment shall inure to the benefit of the Assignee, its successors, assigns and other legal representative, and shall be binding upon me, as well as my heirs, legal representatives, and assigns.
- 5. Promise and affirm that I have not entered, and will not enter, into any assignment, contract, or understanding that conflicts with this Confirmatory Assignment.
- 6. Authorize HICKMAN PALERMO BECKER BINGHAM to insert above the application number and filing date of the above-described patent application when known.

CONFIRMATORY ASSIGNMENT  
Attorney Docket No. 50277-5516  
Oracle Ref. No. ORA190564-US-NP  
Page 3 of 4

Signed on the dates indicated beside my signature.

Signature: \_\_\_\_\_  
DocuSigned by:  
  
B4B02FFA1EA047B...  
Beda Hammerschmidt

Date: 10-Jun-2020 | 12:03 PM PDT  
\_\_\_\_\_

CONFIRMATORY ASSIGNMENT  
Attorney Docket No. 50277-5516  
Oracle Ref. No. ORA190564-US-NP  
Page 4 of 4

**Appendix A**

Assignment of Rights to Discovery and/or Invention

## CONFIRMATORY ASSIGNMENT

By virtue of that certain Second Amended & Restated Master Services Agreement effective as of May 31, 2012, as amended from time to time (the “MSA”), to which the following are parties:

- **Oracle Deutschland B.V. & Co. KG**, a German corporation, having a business address of Riesstrasse 25, 80992 Munich, Germany (“**Assignor**”); and
- **Oracle International Corporation** (“**Assignee**”), a California corporation and wholly-owned subsidiary of **Oracle**, with its place of business at 500 Oracle Parkway, Redwood Shores, California 94065,

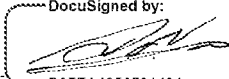
**Assignor** has assigned to **Assignee**, its successors, legal representatives and assigns, **Assignor’s** entire right, title and interest in, to, and under all inventions covered by the issued patents and provisional and non-provisional patent applications listed on the attached Schedule A.

For the avoidance of doubt and for good and valuable consideration, the receipt and sufficiency of which **Assignor** acknowledges, **Assignor**:

1. Confirms that, pursuant to the MSA, **Assignor** has assigned, transferred, conveyed, and sold to **Assignee**, the entire right, title and interest in, to and under the issued patents and provisional and non-provisional patent applications listed on the attached Schedule A, as well as any divisions, renewals and continuations thereof, and all Letters Patents of the United States which may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent which may hereafter be filed for inventions embodied by said pending applications in any country or countries foreign to the United States, and all Letters Patent which may be granted for said inventions embodied by said pending applications in any country or countries foreign to the United States and all extensions, renewals and reissues thereof and all rights of priority in any such country or countries based upon the filing of said pending applications in the United States which are created by any law, treaty or international convention, together with the right to sue for and recover damages for past infringement of any such patents.
2. Authorizes and requests the U.S. Patent and Trademark Office or any other U.S. or non-U.S. agency to issue to the **Assignee** any and all patent(s), or other rights or documents, resulting from the intellectual property, patent application(s) and patents described in Section 1 of this Confirmatory Assignment.

IN WITNESS WHEREOF, Oracle Deutschland B.V. & Co., KG has caused this Confirmatory Assignment to be signed by a duly authorized corporate officer, as of this 10th day of June, 2020.

Oracle Deutschland B.V. & Co. KG

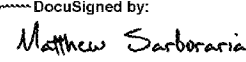
By:  DocuSigned by:  
D87EA4658581494...

Name: Sascha van der Ven

Title: Director

IN WITNESS WHEREOF, Oracle International Corporation has caused this Confirmatory Assignment to be signed by a duly authorized corporate officer, as of this 10th day of June, 2020.

Oracle International Corporation

By:  DocuSigned by:  
CA2F12C71FFA4E2...

Name: Matthew Sarboraria

Title: Vice President

**Schedule A**

<b>Attorney Docket No.; Oracle Reference No.</b>	<b>Country</b>	<b>Application No. Filing Date</b>	<b>Patent No. Issue Date</b>
50277-5592 ORA190564-US-PSP	US	62/916,154 10/16/2019	
50277-5516 ORA190564-US-NP	US	16/863,268 4/30/2020	