

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
GUIDO MOERKOTTE	05/22/2017
ALEXANDER BOEHM	05/22/2017
NORMAN MAY	05/22/2017

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:	15603319

CORRESPONDENCE DATA

Fax Number: (858)314-1501

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.

Email: mscarr@mintz.com

Correspondent Name: MINTZ LEVIN SAN DIEGO / PEDRO SUAREZ

Address Line 1: 3580 CARMEL MOUNTAIN ROAD

Address Line 2: SUITE 300

Address Line 4: SAN DIEGO, CALIFORNIA 92130

ATTORNEY DOCKET NUMBER:	54874-257F01US
NAME OF SUBMITTER:	PEDRO F. SUAREZ, ESQ.
SIGNATURE:	/PFS/
DATE SIGNED:	06/29/2019

Total Attachments: 4

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ASSIGNMENT

We, **Guido Moerkotte, Alexander Boehm, and Norman May**, the undersigned, herein referred to as the ASSIGNOR, for good and valuable consideration, the receipt of which is hereby acknowledged, confirm that we have sold and assigned, and do hereby assign, sell and transfer to **SAP SE**, a European company, with an office at Dietmar-Hopp-Allee 16, Walldorf, Germany, D69190 and to its successors, assigns and legal representatives, collectively hereinafter referred to as the ASSIGNEE: (1) our entire right, title and interest for the United States and in all countries, in and to any and all inventions, discoveries and applications which are disclosed in the application for United States Letters Patent entitled:

CARDINALITY ESTIMATION FOR DATABASE QUERY PLANNING

and electronically filed with the U.S. Patent and Trademark Office on **May 23, 2017**, and assigned Application No. **15/603,319**, including any subsequently filed utility applications, which claim priority to Application No. **15/603,319**, including any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof and any substitute applications therefor; (2) the full and complete right to file patent applications in the name of the ASSIGNEE, its designee, or in our names as the ASSIGNEE, or its designee's election, on the aforesaid inventions, discoveries and applications in all countries of the world; (3) the entire right, title and interest in and to any Letters Patent which may issue thereon in the United States or in any country, and any renewals, revivals, reissues, reexaminations and extensions thereof, and any patents of confirmation, registration and importation of the same; and (4) the entire right, title and interest in all Convention and Treaty Rights of all kinds thereon, including without limitation all rights of priority in any country of the world, in and to the above inventions, discoveries and applications.

We authorize and request the attorneys of record or the attorney filing the application to insert into this assignment the filing date and serial number of the application when known.

We hereby authorize and request the competent authorities to grant and to issue any and all such Letters Patent in the United States and throughout the world to the ASSIGNEE of the entire right, title and interest therein, as fully and entirely as the same would have been held and enjoyed by us had this assignment, sale and transfer not been made.

We agree, at any time, upon the request of the ASSIGNEE, to execute and to deliver to the ASSIGNEE any additional applications for patents for said inventions and discoveries, or any part or parts thereof, and any applications for patents of confirmation, registration and importation based on any Letters Patent issuing on said inventions, discoveries, or applications and divisions, continuations, renewals, revivals, reissues, reexaminations and extensions thereof.

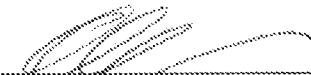
We further agree at any time to execute and to deliver upon request of the ASSIGNEE such additional documents, if any, as are necessary or desirable to secure patent protection on said inventions, discoveries and applications throughout all countries of the world, and otherwise to do the necessary to give full effect to and to perfect the rights of the ASSIGNEE under this Assignment, including the execution, delivery and procurement of any and all further documents evidencing this assignment, transfer and sale as may be necessary or desirable.

We hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

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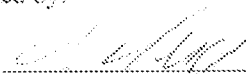
We further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

Date: 22.05.17



Guido Moerkotte

Witnessed by:



Signature

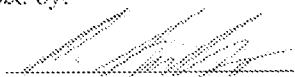
22.05.17

Date

Simon Seigel

Print Name

Witnessed by:



Signature


22.05.17

Date

Magnus Müller

Print Name

Date: 2017-05-22


Alexander Hochm

Witnessed by:


Signature

2017-05-22
Date

HOLGER BISCHOFF
Print Name

Witnessed by:


Signature

2017-05-22
Date

KAI MORICH
Print Name

Date: 22.5.2017

Norman May
Norman May

Witnessed by:

[Signature]
Signature

22.5.2017
Date

Etsushi Koike
Print Name

Witnessed by:

[Signature]
Signature

2017-05-22
Date

ALEXANDER BOEHM
Print Name