506232415 09/01/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6279159

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PETER JUNG	08/21/2020

RECEIVING PARTY DATA

Name:	TECHNISCHE UNIVERSITÄT BERLIN
Street Address:	STRASSE DES 17. JUNI 135
City:	BERLIN
State/Country:	GERMANY
Postal Code:	10623

PROPERTY NUMBERS Total: 2

Property Type	Number
Application Number:	16785279
PCT Number:	US2020017289

CORRESPONDENCE DATA

Fax Number: (949)852-0004

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: 9498520000
Email: pair@kppb.com
Correspondent Name: KPPB LLP

Address Line 1: 2190 S. TOWNE CENTRE PLACE

Address Line 2: SUITE 300

Address Line 4: ANAHEIM, CALIFORNIA 92806

ATTORNEY DOCKET NUMBER:	C9-06547
NAME OF SUBMITTER:	KATRINA LEE
SIGNATURE:	/Katrina Lee/
DATE SIGNED:	09/01/2020

Total Attachments: 5

source=06547berlinassignment#page1.tif source=06547berlinassignment#page2.tif source=06547berlinassignment#page3.tif source=06547berlinassignment#page4.tif

PATENT 506232415 REEL: 053665 FRAME: 0870

source=06547berlinassignment#page5.tif

PATENT REEL: 053665 FRAME: 0871

RECORDATION FORM COVER SHEET				
PATENTS ONLY				
To the Director of the U.S. Patent and Trademark Office: Pleas	e record the attached documents or the new address(es) below.			
1. Name of conveying party(ies)	2. Name and address of receiving party(ies)			
Peter Jung	Name: Technische Universität Berlin			
	Internal Address:			
Additional name(s) of conveying party(ies) attached? Yes less No. 3. Nature of conveyance/Execution Date(s):	Street Address: Straße des 17. Juni 135 City: Berlin			
Execution Date(s) August 21, 2020				
Assignment Merger				
Security Agreement Change of Name				
Joint Research Agreement	State:			
Government Interest Assignment				
Executive Order 9424, Confirmatory License	Country: Germany Zip: 10623			
Other	Additional name(s) & address(es) attached? Yes			
Parama.	document serves as an Oath/Declaration (37 CFR 1.63).			
A. Patent Application No.(s)	B. Patent No.(s)			
16/785,279; PCT/US2020/017289				
A 1413 in a 1 a 1 a 1 a 1 a 1 a 1 a 1 a 1 a 1 a				
Additional numbers att	ached? Yes Man			
Additional numbers att 5. Name and address to whom correspondence	}			
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: 2			
5. Name and address to whom correspondence	6. Total number of applications and patents			
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: 2			
5. Name and address to whom correspondence concerning document should be mailed: Name: KPPB LLP	6. Total number of applications and patents involved: 2			
5. Name and address to whom correspondence concerning document should be mailed: Name: KPPB LLP Internal Address: Suite 300	6. Total number of applications and patents involved: 2 7. Total fee (37 CFR 1.21(h) & 3.41) \$			
5. Name and address to whom correspondence concerning document should be mailed: Name: KPPB LLP	6. Total number of applications and patents involved: 2 7. Total fee (37 CFR 1.21(h) & 3.41) \$ Authorized to be charged to deposit account			
5. Name and address to whom correspondence concerning document should be mailed: Name: KPPB LLP Internal Address: Suite 300 Street Address: 2190 S. Towne Centre Place	6. Total number of applications and patents involved: 2 7. Total fee (37 CFR 1.21(h) & 3.41) \$ Authorized to be charged to deposit accountEnclosed			
5. Name and address to whom correspondence concerning document should be mailed: Name: KPPB LLP Internal Address: Suite 300 Street Address: 2190 S. Towne Centre Place City: Anaheim	6. Total number of applications and patents involved: 2 7. Total fee (37 CFR 1.21(h) & 3.41) \$ Authorized to be charged to deposit account			
5. Name and address to whom correspondence concerning document should be mailed: Name: KPPB LLP Internal Address: Suite 300 Street Address: 2190 S. Towne Centre Place City: Anaheim State: CA Zip: 92806	6. Total number of applications and patents involved: 2 7. Total fee (37 CFR 1.21(h) & 3.41) \$ Authorized to be charged to deposit account			
5. Name and address to whom correspondence concerning document should be mailed: Name: KPPB LLP Internal Address: Suite 300 Street Address: 2190 S. Towne Centre Place City: Anaheim State: CA Zip: 92806 Phone Number: 949.852.0000	6. Total number of applications and patents involved: 2 7. Total fee (37 CFR 1.21(h) & 3.41) \$ Authorized to be charged to deposit account			
5. Name and address to whom correspondence concerning document should be mailed: Name: KPPB LLP Internal Address: Suite 300 Street Address: 2190 S. Towne Centre Place City: Anaheim State: CA Zip: 92806 Phone Number: 949.852.0000 Docket Number: C9-06547/PCT	6. Total number of applications and patents involved: 2 7. Total fee (37 CFR 1.21(h) & 3.41) \$ Authorized to be charged to deposit account			
5. Name and address to whom correspondence concerning document should be mailed: Name: KPPB LLP Internal Address: Suite 300 Street Address: 2190 S. Towne Centre Place City: Anaheim State: CA Zip: 92806 Phone Number: 949.852.0000 Docket Number: C9-06547/PCT Email Address: pair@kppb.com	6. Total number of applications and patents involved: 2 7. Total fee (37 CFR 1.21(h) & 3.41) \$			
5. Name and address to whom correspondence concerning document should be mailed: Name: KPPB LLP Internal Address: Suite 300 Street Address: 2190 S. Towne Centre Place City: Anaheim State: CA Zip: 92806 Phone Number: 949.852.0000 Docket Number: C9-06547/PCT	6. Total number of applications and patents involved: 2 7. Total fee (37 CFR 1.21(h) & 3.41) \$ Authorized to be charged to deposit account			
5. Name and address to whom correspondence concerning document should be mailed: Name: KPPB LLP Internal Address: Suite 300 Street Address: 2190 S. Towne Centre Place City: Anaheim State: CA Zip: 92806 Phone Number: 949.852.0000 Docket Number: C9-06547/PCT Email Address: pair@kppb.com 9. Signature: /David J. Bailey/ Signature David J. Bailey	6. Total number of applications and patents involved: 2 7. Total fee (37 CFR 1.21(h) & 3.41) \$			
5. Name and address to whom correspondence concerning document should be mailed: Name: KPPB LLP Internal Address: Suite 300 Street Address: 2190 S. Towne Centre Place City: Anaheim State: CA Zip: 92806 Phone Number: 949.852.0000 Docket Number: C9-06547/PCT Email Address: pair@kppb.com 9. Signature: /David J. Bailey/ Signature	6. Total number of applications and patents involved: 2 7. Total fee (37 CFR 1.21(h) & 3.41) \$			

PATENT REEL: 053665 FRAME: 0872

ASSIGNMENT AGREEMENT

WHEREAS, I/We, Peter Jung (Assignor(s)) have made certain new and useful inventions, improvement and/or designs set forth in an application for Letters Patent of the United States entitled Systems and Methods for Communicating by Modulating Data on Zeros in the Presence of Channel Impairments, filed on February 7, 2020 and having been assigned Application No. 16/785,279 (Assigned Patent Application);

WHEREAS, Technische Universität Berlin, a university, having a place of business at Straße des 17. Juni 135, 10623 Berlin, Germany (Assignee), is desirous of acquiring the entire right, title and interest in and to said inventions, improvement and/or designs and in and to any and all Letters Patent of the United States and foreign countries which may be obtained therefor:

NOW, THEREFORE, Assignor(s) and Assignee do hereby enter into the following Assignment Agreement.

1. Definitions

The **Assigned Patent Rights** means certain new and useful inventions, improvements, and designs made by the **Assignor(s)** for which the **Assigned Patent Application** has been or will be filed.

The Assigned Patent Rights also includes:

- the Assigned Patent Application;
- all Letters Patent granted based upon an application for Letters Patent forming part of the Assigned Patent Rights;
- any inventions, improvements, and designs disclosed by an application for Letters Patent forming part of the Assigned Patent Rights;
- any provisional patent application to which priority is claimed under 35 U.S.C. § 119(e) by an application for Letters Patent forming part of the Assigned Patent Rights and any conversion under 37 C.F.R. 1.53(c)(2) or (3) that has not previously been assigned by the Assignor(s);
- all divisionals, continuations, continuations-in-part, and any design patent application claiming priority to an application for Letters Patent forming part of the Assigned Patent Rights;
- any revival, reissue, reexamination, renewal or extension of an application for Letters Patent forming part of the Assigned Patent Rights:

C9-06547

- any substitute application filed based upon an application for Letters Patent forming part of the Assigned Patent Rights;
- any priority rights associated with an application for Letters Patent forming part of the Assigned Patent Rights, including priority under International Agreements, Treaties and Conventions for the protection of intellectual property in its various forms and all applications in which a right of priority is claimed and any Letters Patent, Design Patent, Utility Model, or equivalent granted therefrom;
- any legal equivalents of priority rights associated with an application for Letters
 Patent forming part of the Assigned Patent Rights, including priority under
 International Agreements, Treaties and Conventions for the protection of
 intellectual property in its various forms and all applications in which a right of
 priority is claimed and any Letters Patent, Design Patent, Utility Model, or
 equivalent granted therefrom; and
- any right to sue for infringement of any right arising from the filing of an application for Letters Patent forming part of the Assigned Patent Rights.

2. Assignment of the Assigned Patent Rights

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignor(s) confirm that they have and/or otherwise do hereby sell, assign, and transfer to Assignee, and the successors, and assigns of the Assignee all right, title, and interest in and to the Assigned Patent Rights for the United States and its territorial possessions and in all foreign countries.

3. Cooperation Agreement

The Assignor(s) further agree without further or additional consideration, but at the expense of Assignee, to:

- promptly provide Assignee, upon request, with all pertinent facts and documents relating to the Assigned Patent Rights, including, but not limited to, copies of any documents evidencing conception and/or reduction to practice within Assignor(s)' possession;
- cooperate with Assignee in the protection and prosecution of the Assigned Patent Rights;

C9-06547

- review, execute, verify, acknowledge and deliver to Assignee or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue, or enforce the Assigned Patent Rights; and
- perform such other acts as Assignee lawfully may request to obtain or maintain the Assigned Patent Rights.

4. Assignor(s) Representations

The Assignor(s) hereby represent and warrant that they have not entered into any assignment, license agreement, sale agreement, or encumbrance that conflicts with the assignment of the Assigned Patent Rights.

5. Authorization to issue patents in name of Assignee

The Assignor(s) and Assignee hereby confirm that the assignment to the Assignee of all rights in the Assigned Patent Rights includes authorization by the Assignor(s) for the United States Commissioner of Patents and Trademarks, and officials of any other country whose duty it is to issue patents on applications, to issue any Letters Patent arising from the Assigned Patent Rights to the Assignee, its successors, or assigns.

Assignor(s) grants the attorney of record the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

C9-06547

RECORDED: 09/01/2020

IN TESTIMONY WHERE	OF, I, Peter Jung, hereunto set my hand the 2020.	nis <u>21</u> day of
<i>u</i>	1 N	
	- Problem	
	Peter Jung	anning the same of
	Frühlingstr//8	
	13158 Berlin, Germany	
	994	possession.
	Witnessed:	
	Ratael Schnef	<u> </u>
	Hemisaufor Str. 5	X
	12209 BeHL, G	Children
Assignee hereby accept		V
Salvine Impelil		
Sabine Liesenfeld	Representative by Technische Universität Berlin	08/21/2020
Name:	Title	Date
Technische Universität Be	nihe	Cato