

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4522599

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|---|---------------------------------|
| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| JEREMY GOLDSTONE | 06/03/2017 |
| DERMOT DWYER | 05/02/2017 |
| RECEIVING PARTY DATA | |
| Name: | BARCLAYS BANK PLC |
| Street Address: | 1 CHURCHILL PLACE |
| City: | LONDON |
| State/Country: | UNITED KINGDOM |
| Postal Code: | E14 5HP |
| PROPERTY NUMBERS Total: 1 | |
| Property Type | Number |
| Application Number: | 14676131 |
| CORRESPONDENCE DATA | |
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| ATTORNEY DOCKET NUMBER: | 30419-039 |
| NAME OF SUBMITTER: | STEVEN D. UNDERWOOD |
| SIGNATURE: | /Steven D. Underwood/ |
| DATE SIGNED: | 07/27/2017 |
| Total Attachments: 3 | |
| source=30419-039-Assignment#page1.tif | |
| source=30419-039-Assignment#page2.tif | |
| source=30419-039-Assignment#page3.tif | |

ASSIGNMENT

WHEREAS, I, the below-named ASSIGNOR, am the inventor of the invention(s) described in one or more of the following patent application(s):

| APPLICATION NUMBER | COUNTRY | FILING DATE | TITLE |
|--------------------|---------|-------------|---------------------|
| 14/676,131 | US | 2015-04-01 | USER AUTHENTICATION |
| 1406041.2 | GB | 2014-04-03 | USER AUTHENTICATION |

And WHEREAS, Barclays Bank PLC., a corporation having its principal place of business at 1 Churchill Place, London E14 5HP, UK, ("ASSIGNEE"), desires to acquire the entire right, title, and interest in and to the invention(s) and the above-listed application(s), and in and to all applications for patent to be filed and all patents to be issued for the invention(s) and/or claiming priority to any of the above-listed application(s), throughout the world;

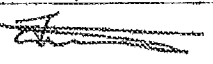
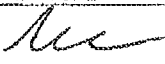
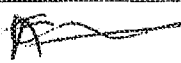
NOW, THEREFORE, be it known that, for US\$ 1.00 and other good and valuable consideration the receipt of which from ASSIGNEE is hereby acknowledged, ASSIGNOR has sold, assigned, transferred, and set over, and does hereby sell, assign, transfer, and set over unto ASSIGNEE, its lawful successors and assigns, the entire right, title, and interest in and to the invention(s) and the above-listed patent application(s), and all nonprovisional, foreign, and PCT applications claiming priority thereto, and divisions and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and all rights to claim priority on the basis of the above-listed application(s), and all Letters Patent which may be granted on the invention(s) and/or on applications claiming priority to the above-listed application(s), in any foreign country, and all extensions, renewals, and reissues thereof;

AND, ASSIGNOR hereby authorizes and requests the Commissioner for Patents and Trademarks of the United States, and any official of any foreign country whose duty it is to issue patents, to issue all Letters Patent for the invention(s) and/or the above-listed application(s) and related foreign applications to ASSIGNEE, its successors and assigns, in accordance with the terms of this ASSIGNMENT;

AND, ASSIGNOR further covenants and agrees that ASSIGNOR will, without further consideration, communicate with ASSIGNEE, its successors and assigns, any facts known to ASSIGNOR respecting the invention(s) and/or the above-listed applications, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect title to the invention(s) and/or the above-listed application(s) in said ASSIGNEE, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid ASSIGNEE, its successors and assigns, to obtain and enforce proper patent protection for the invention(s) and/or the above-listed application(s) in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by ASSIGNEE, its successors and assigns.

AND, ASSIGNOR further covenants and agrees that ASSIGNOR will assign, and hereby does assign, to ASSIGNEE, its lawful successors and assigns, ASSIGNOR'S entire right, title, and interest in and to any and all patent applications and patents, both United States and foreign, that claim priority to the above-listed application(s) (including continuations-in part).

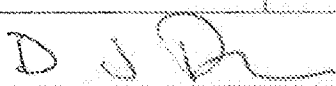

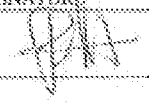
IN TESTIMONY WHEREOF, I hereunto set my hand the day and year corresponding to my signature:

| | | | | | |
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| 1 | ASSIGNOR | FAMILY NAME OR SURNAME | GIVEN NAME | MIDDLE NAME | |
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| WITNESS #2 | NAME | SIGNATURE | DATE | | |
| | ANNE CHINARE |  | 03/06/2017 | | |

| | | | | | |
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| 1 | ASSIGNOR | FAMILY NAME OR SURNAME | GIVEN NAME | MIDDLE NAME | |
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| WITNESS #1 | NAME | SIGNATURE | DATE | | |
| | | | | | |
| WITNESS #2 | NAME | SIGNATURE | DATE | | |
| | | | | | |

patent applications and patents, both United States and foreign, that claim priority to the above-listed application(s)
(including continuations-in part).

IN TESTIMONY WHEREOF, I hereunto set my hand the day and year corresponding to my signature:

| | | | | | |
|---|-----------------------|---|---|------------------|----------|
| 1 | ASSIGNOR | FAMILY NAME OR SURNAME | GIVEN NAME | MIDDLE NAME | |
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| | SIGNATURE OF ASSIGNOR | | | | DATE |
| 2 | WITNESS #1 | NAME | SIGNATURE | DATE | |
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| | WITNESS #2 | NAME | SIGNATURE | DATE | |
| | | | | | |
| | | | | | |
| | ASSIGNOR | FAMILY NAME OR SURNAME | GIVEN NAME | MIDDLE NAME | |
| | | DWYER | Dermot | | |
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| | SIGNATURE OF ASSIGNOR |  | | | DATE |
| | WITNESS #1 | NAME | SIGNATURE | DATE | |
| | | STEVE ROBINSON |  | 2/5/17 | |
| | WITNESS #2 | NAME | SIGNATURE | DATE | |
| | | JOE SPRETT |  | 2/5/17 | |
| | | | | | |