

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT3848143

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| SUBMISSION TYPE: | NEW ASSIGNMENT | |
| NATURE OF CONVEYANCE: | ASSIGNMENT | |
| SEQUENCE: | 2 | |
| CONVEYING PARTY DATA | | |
| | Name | Execution Date |
| | NOKIA CORPORATION | 01/16/2015 |
| RECEIVING PARTY DATA | | |
| Name: | NOKIA TECHNOLOGIES OY | |
| Street Address: | KARAPORTTI 3 | |
| City: | ESPOO | |
| State/Country: | FINLAND | |
| Postal Code: | FI-02610 | |
| PROPERTY NUMBERS Total: 1 | | |
| | Property Type | Number |
| | Application Number: | 14305433 |
| CORRESPONDENCE DATA | | |
| Fax Number: | (704)444-1111 | |
| <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> | | |
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| Email: | patent-mail@alston.com | |
| Correspondent Name: | RUSSELL P. BLAISE | |
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| Address Line 4: | CHARLOTTE, NORTH CAROLINA 28280-4000 | |
| ATTORNEY DOCKET NUMBER: | 042933/426884 | |
| NAME OF SUBMITTER: | RUSSELL P. BLAISE | |
| SIGNATURE: | /Russell P. Blaise/ | |
| DATE SIGNED: | 04/27/2016 | |
| Total Attachments: 9 | | |
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| PATENT ASSIGNMENT COVER SHEET |
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Electronic Version v1.1
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| RECEIVING PARTY DATA | |
| Name: | NOKIA TECHNOLOGIES OY |
| Street Address: | KARAPORTTI 3 |
| City: | ESPOO |
| State/Country: | FINLAND |
| Postal Code: | 02610 |
| PROPERTY NUMBERS Total: 100 | |
| Property Type | Number |
| Patent Number: | 8386816 |
| Patent Number: | 8063669 |
| Patent Number: | 8559867 |
| Patent Number: | 8397117 |
| Application Number: | 12284927 |
| Patent Number: | 8892392 |
| Application Number: | 12164617 |
| Application Number: | 13056709 |
| Patent Number: | 8194921 |
| Application Number: | 12251967 |
| Application Number: | 12319125 |
| Application Number: | 13054374 |
| Patent Number: | 8935292 |
| Patent Number: | 8195452 |
| Patent Number: | 8265721 |
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| Patent Number: | 8229524 |
| Patent Number: | 8344962 |

| Property Type | Number |
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| Application Number: | 12318209 |
| Application Number: | 13121316 |
| Application Number: | 12193475 |
| Patent Number: | 8630435 |
| Application Number: | 12617775 |
| Patent Number: | 8700303 |
| Patent Number: | 8339451 |
| Patent Number: | 8196162 |
| Application Number: | 13145110 |
| Application Number: | 12269120 |
| Patent Number: | 8089749 |
| Patent Number: | 8490881 |
| Patent Number: | 8239550 |
| Patent Number: | 8924202 |
| Patent Number: | 8168892 |
| Patent Number: | 8135433 |
| Application Number: | 12467059 |
| Patent Number: | 8577363 |
| Patent Number: | 8630361 |
| Patent Number: | 8022393 |
| Application Number: | 12156537 |
| Application Number: | 12737461 |
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| Application Number: | 13061175 |
| Application Number: | 12291877 |
| Patent Number: | 8538688 |
| Application Number: | 12494799 |
| Patent Number: | 8798632 |
| Application Number: | 12146987 |
| Patent Number: | 8111656 |
| Patent Number: | 8823542 |
| Patent Number: | 8353082 |
| Patent Number: | 7885506 |
| Patent Number: | 8855199 |
| Patent Number: | 8266307 |
| Application Number: | 12165167 |
| Patent Number: | 8514818 |
| Patent Number: | 8213657 |

PATENT

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PATENT

REEL: 038393 FRAME: 0106

| Property Type | Number |
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| Patent Number: | 8190643 |
| Application Number: | 12431619 |
| Patent Number: | 8811240 |
| Application Number: | 13123104 |
| Application Number: | 13944372 |
| Patent Number: | 8497920 |
| Patent Number: | 8402536 |
| Application Number: | 12937246 |
| Application Number: | 12455644 |
| Patent Number: | 8755322 |
| Patent Number: | 8818448 |
| Patent Number: | 8244727 |
| Application Number: | 12992827 |
| Application Number: | 12639124 |
| Application Number: | 12319008 |
| Application Number: | 12236242 |
| Patent Number: | 8269842 |
| Patent Number: | 7990992 |
| Application Number: | 12109644 |
| Patent Number: | 8849870 |
| Application Number: | 12135166 |
| Patent Number: | 8498227 |
| Application Number: | 12317190 |
| Application Number: | 12936332 |
| Patent Number: | 8149776 |
| Application Number: | 12934900 |
| Patent Number: | 8473190 |
| Patent Number: | 8369360 |
| Patent Number: | 8132468 |
| Patent Number: | 8930197 |
| Patent Number: | 8374165 |
| Patent Number: | 8286047 |
| Patent Number: | 8854296 |
| Patent Number: | 8848581 |
| Patent Number: | 8291052 |
| Patent Number: | 7850333 |
| Patent Number: | 8659555 |
| Patent Number: | 7920495 |

PATENT

REEL: 035496 FRAME: 0655

PATENT

REEL: 038393 FRAME: 0107

| Property Type | Number |
|----------------|---------|
| Patent Number: | 8818992 |
| Patent Number: | 8775543 |
| Patent Number: | 8106787 |
| Patent Number: | 8588127 |

CORRESPONDENCE DATA

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Correspondent Name: NOKIA USA, INC

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Address Line 2: ATTN: INTELLECTUAL PROPERTY

Address Line 4: SUNNYVALE, CALIFORNIA 94086

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| SIGNATURE: | /jacqueline linebarger/ |
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| DATE SIGNED: | 04/24/2015 |
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PATENT
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PATENT
REEL: 038393 FRAME: 0108

PATENT ASSIGNMENT

THIS Assignment is effective as of 31 December 2014 between

Assignor **NOKIA CORPORATION** of Karaportti 3, FI - 02610 Espoo, Finland, a corporation organized under the laws of Finland (hereinafter "Nokia Corporation") and Assignee **NOKIA TECHNOLOGIES OY** of Karaportti 3, FI - 02610 Espoo, Finland, a corporation organized under the laws of Finland (hereinafter "Nokia Technologies")

WHEREAS, Nokia Corporation is the owner of certain patents and patent applications, as more particularly described in Attachment 1 hereto (hereinafter "the Patents"), incorporated herein by reference;

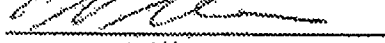
NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and in accordance with that certain Business Purchase Agreement between Nokia Corporation and Nokia Technologies having an effective date of 31 December 2014 (hereinafter "Agreement"):

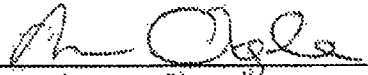
Nokia Corporation sells, assigns, transfers and conveys to Nokia Technologies, and its successors and assigns, all right, title, and interest in and to each of the Patents and patent applications listed in Attachment 1 hereto and all continuations, divisions, and reissues arising from or related to the Patents.

This sale, assignment, transfer, and conveyance to Nokia Technologies, and its successors and assigns, is made subject to certain retained rights in favor of Nokia Corporation for the Patents and patent applications listed in Attachment 1, as are set forth in the Agreement.

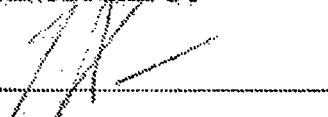
IN WITNESS WHEREOF, the parties have caused their respective corporate names to be affixed hereto and this instrument to be signed by their duly authorized officers as of the day and year written below:

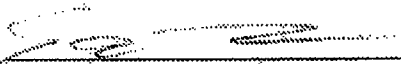
NOKIA CORPORATION

By: 
Name: Esa Niinimäki
Title: Authorized signatory
Date: 16 January 2015


Name: Anne Oksala
Title: Legal Counsel
Date: 16 January 2015

NOKIA TECHNOLOGIES OY

By: 
Name: Jyri Laasi
Title: Vice President, Legal & IP
Date: 16 January 2015


Name: Sami Oskari
Title: Head of Finance and operations
Date: 16 January 2015

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|--------------|--------------------------|-------------|-----------|-------------|---------|
| 64994-US-NP | United States Of America | 30 Oct 2008 | 12/261380 | 26 Feb 2013 | 8386816 |
| 64982-US-NP | United States Of America | 06 Nov 2008 | 12/291255 | 22 Nov 2011 | 8063669 |
| 64978-US-PCT | United States Of America | 19 Aug 2009 | 13/060039 | 15 Oct 2013 | 8559867 |
| 64967-US-NP | United States Of America | 10 Jun 2009 | 12/482067 | 12 Mar 2013 | 8397117 |
| 64927-US-NP | United States Of America | 25 Sep 2008 | 12/284927 | | |
| 64921-US-PCT | United States Of America | 30 Jul 2008 | 13/056356 | 18 Nov 2014 | 8892392 |
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| 64889-US-PCT | United States Of America | 26 Nov 2008 | 13/056709 | | |
| 64886-US-NP | United States Of America | 27 Jun 2008 | 12/147643 | 05 Jun 2012 | 8194921 |
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| 64866-US-NP | United States Of America | 30 Dec 2008 | 12/319125 | | |
| 64862-US-PCT | United States Of America | 13 Jul 2009 | 13/054374 | | |
| 64861-US-NP | United States Of America | 15 Oct 2008 | 12/251948 | 13 Jan 2015 | 8935292 |
| 64856-US-NP | United States Of America | 12 Jun 2008 | 12/138084 | 05 Jun 2012 | 8195452 |
| 64851-US-NP | United States Of America | 15 Dec 2008 | 12/316603 | 11 Sep 2012 | 8265721 |
| 64842-US-NP | United States Of America | 02 Dec 2008 | 12/326673 | | |
| 64825-US-NP | United States Of America | 25 Nov 2008 | 12/277891 | | |
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| 64787-US-NP | United States Of America | 20 Nov 2008 | 12/313405 | 01 Jan 2013 | 8344962 |
| 64786-US-NP | United States Of America | 23 Dec 2008 | 12/318209 | | |
| 64784-US-PCT | United States Of America | 24 Sep 2009 | 13/121316 | | |
| 64732-US-NP | United States Of America | 18 Aug 2008 | 12/193475 | | |
| 64711-US-NP | United States Of America | 26 Mar 2009 | 12/383850 | 14 Jan 2014 | 8630435 |
| 64705-US-NP | United States Of America | 13 Nov 2009 | 12/617775 | | |

PATENT
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| 64700-US-PCT | United States Of America | 20 Nov 2008 | 13/130483 | 15 Apr 2014 | 8700303 |
| 64694-US-PCT | United States Of America | 26 Dec 2010 | 13/001424 | 25 Dec 2012 | 8339451 |
| 64693-US-NP | United States Of America | 30 Jun 2008 | 12/164655 | 05 Jun 2012 | 8196162 |
| 64687-US-PCT | United States Of America | 19 Jan 2009 | 13/145110 | | |
| 64662-US-NP | United States Of America | 12 Nov 2008 | 12/269120 | | |
| 64661-US-NP | United States Of America | 18 Jul 2008 | 12/175767 | 03 Jan 2012 | 8089749 |
| 64616-US-PCT | United States Of America | 09 Jun 2008 | 12/995985 | 23 Jul 2013 | 8490881 |
| 64611-US-NP | United States Of America | 14 May 2008 | 12/152376 | 07 Aug 2012 | 8239550 |
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| 64606-US-NP | United States Of America | 23 Feb 2009 | 12/380091 | 01 May 2012 | 8168892 |
| 64597-US-NP | United States Of America | 02 Dec 2008 | 12/315502 | 13 Mar 2012 | 8135433 |
| 64593-US-CIP | United States Of America | 15 May 2009 | 12/467059 | | |
| 64590-US-NP | United States Of America | 14 Jul 2008 | 12/218491 | 05 Nov 2013 | 8577363 |
| 64589-US-PCT | United States Of America | 23 Jul 2008 | 13/055379 | 14 Jan 2014 | 8630361 |
| 64588-US-NP | United States Of America | 29 Jul 2008 | 12/221068 | 20 Sep 2011 | 8022393 |
| 64568-US-NP | United States Of America | 02 Jun 2008 | 12/156537 | | |
| 64556-US-PCT | United States Of America | 17 Jul 2008 | 12/737461 | | |
| 64547-US-NP | United States Of America | 27 Jun 2008 | 12/147636 | 01 Jul 2014 | 8768070 |
| 64542-US-PCT | United States Of America | 29 Aug 2008 | 13/061175 | | |
| 64527-US-NP | United States Of America | 14 Nov 2008 | 12/291877 | | |
| 64522-US-NP | United States Of America | 18 Nov 2008 | 12/273285 | 17 Sep 2013 | 8538688 |
| 64510-US-NP | United States Of America | 30 Jun 2009 | 12/494799 | | |
| 64505-US-PCT | United States Of America | 13 Jun 2008 | 12/997793 | 05 Aug 2014 | 8798632 |
| 64502-US-NP | United States Of America | 26 Jun 2008 | 12/146987 | | |
| 64501-US-NP | United States Of America | 01 May 2009 | 12/434245 | 07 Feb 2012 | 8111656 |

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| 64448-US-NP | United States Of America | 26 Nov 2008 | 12/315135 | 02 Sep 2014 | 8823542 |
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| 64402-US-NP | United States Of America | 20 Apr 2009 | 12/426629 | 07 Oct 2014 | 8855199 |
| 64398-US-NP | United States Of America | 12 May 2008 | 12/152081 | 11 Sep 2012 | 8266307 |
| 64347-US-NP | United States Of America | 30 Jun 2008 | 12/165167 | | |
| 64323-US-NP | United States Of America | 24 Dec 2008 | 12/343832 | 20 Aug 2013 | 8514818 |
| 64319-US-NP | United States Of America | 30 Jun 2008 | 12/165508 | 03 Jul 2012 | 8213657 |
| 64313-US-NP | United States Of America | 23 May 2008 | 12/126402 | 29 May 2012 | 8190643 |
| 64311-US-NP | United States Of America | 28 Apr 2009 | 12/431619 | | |
| 64300-US-NP | United States Of America | 29 Apr 2008 | 12/111958 | 19 Aug 2014 | 8811240 |
| 64278-US-PCT | United States Of America | 08 Oct 2008 | 13/123104 | | |
| 64255-US-CNT | United States Of America | 17 Jul 2013 | 13/944372 | | |
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| 64252-US-NP | United States Of America | 16 Apr 2008 | 12/104096 | 19 Mar 2013 | 8402536 |
| 64246-US-PCT | United States Of America | 25 Mar 2009 | 12/937246 | | |
| 64244-US-NP | United States Of America | 03 Jun 2009 | 12/455644 | | |
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| 64221-US-NP | United States Of America | 08 Apr 2009 | 12/420161 | 26 Aug 2014 | 8818448 |
| 64205-US-NP | United States Of America | 29 May 2008 | 12/129200 | 14 Aug 2012 | 8244727 |
| 64198-US-PCT | United States Of America | 15 May 2008 | 12/992827 | | |
| 64140-US-NP | United States Of America | 16 Dec 2009 | 12/639124 | | |
| 64126-US-NP | United States Of America | 30 Dec 2008 | 12/319008 | | |
| 64123-US-NP | United States Of America | 23 Sep 2008 | 12/236242 | | |
| 64121-US-NP | United States Of America | 11 Jun 2008 | 12/137202 | 18 Sep 2012 | 8269842 |

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| 64102-US-NP | United States Of America | 26 Jun 2008 | 12/146787 | 30 Sep 2014 | 8849870 |
| 64090-US-NP | United States Of America | 07 Jun 2008 | 12/135166 | | |
| 64066-US-PCT | United States Of America | 20 Jun 2008 | 13/000294 | 30 Jul 2013 | 8498227 |
| 64063-US-NP | United States Of America | 18 Dec 2008 | 12/317190 | | |
| 64062-US-PCT | United States Of America | 30 Mar 2009 | 12/936332 | | |
| 64058-US-NP | United States Of America | 12 May 2009 | 12/454053 | 03 Apr 2012 | 8149776 |
| 64054-US-PCT | United States Of America | 26 Mar 2009 | 12/934900 | | |
| 64050-US-PCT | United States Of America | 25 Apr 2008 | 12/736641 | 25 Jun 2013 | 8473190 |
| 64048-US-NP | United States Of America | 01 May 2009 | 12/387374 | 05 Feb 2013 | 8369360 |
| 64039-US-NP | United States Of America | 29 May 2008 | 12/156468 | 13 Mar 2012 | 8132468 |
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| 64021-US-NP | United States Of America | 24 Mar 2009 | 12/409739 | 09 Oct 2012 | 8286047 |
| 64016-US-NP | United States Of America | 01 Aug 2008 | 12/221331 | 07 Oct 2014 | 8854296 |
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| 63976-US-NP | United States Of America | 25 Jun 2008 | 12/146182 | 05 Apr 2011 | 7920495 |
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