503563940 11/11/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3610567

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------------|----------------|
| ALCATEL-LUCENT USA INC. | 11/05/2015 |

RECEIVING PARTY DATA

| Name: | ALCATEL LUCENT |
|-----------------|---------------------------|
| Street Address: | 148/152 ROUTE DE LA REINE |
| City: | BOULOGNE-BILLANCOURT |
| State/Country: | FRANCE |
| Postal Code: | 92100 |

PROPERTY NUMBERS Total: 11

| Property Type | Number |
|---------------------|----------|
| Application Number: | 11323317 |
| Application Number: | 12894328 |
| Application Number: | 11808413 |
| Application Number: | 13276845 |
| Application Number: | 11862561 |
| Application Number: | 11778250 |
| Application Number: | 11744748 |
| Application Number: | 11783137 |
| Application Number: | 14870305 |
| Application Number: | 11088073 |
| Application Number: | 11702553 |

CORRESPONDENCE DATA

Fax Number:

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: 908-582-7109

Email:narpatent@alcatel-lucent.comCorrespondent Name:DOCKET ADMINISTRATORAddress Line 1:600-700 MOUNTAIN AVENUE

Address Line 2: ROOM 3B-212F

Address Line 4: MURRAY HILL, NEW JERSEY 07974-0636

503563940 REEL: 037007 FRAME: 0829

PATENT

| ATTORNEY DOCKET NUMBER: | OCTOBER2015-ISSUE FEES |
|-------------------------|------------------------|
| NAME OF SUBMITTER: | GREGORY J. MURGIA |
| SIGNATURE: | /Gregory J. Murgia/ |
| DATE SIGNED: | 11/11/2015 |

Total Attachments: 3

source=October2015_Assignment_ALUUSAINC-to-ALU_(AppendixA)_5Nov2015#page1.tif source=October2015_Assignment_ALUUSAINC-to-ALU_(AppendixA)_5Nov2015#page2.tif source=October2015_Assignment_ALUUSAINC-to-ALU_(AppendixA)_5Nov2015#page3.tif

PATENT REEL: 037007 FRAME: 0830

ASSIGNMENT

For valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Alcatel-Lucent USA Inc., a corporation established and existing under the laws of The United States of America, and having its principal place of business at 600-700 Mountain Avenue, Murray Hill, New Jersey, 07974-0636, United States of America ("Assignor"), does hereby sell, assign, transfer and convey, subject to any existing rights and/or licenses of or to third parties, unto Alcatel Lucent, a corporation established and existing under the laws of France and having its principal place of business at 148/152 Route de la Reine, 92100 Boulogne-Billancourt, France ("Assignee"), all of Assignor's right, title and interest, for all countries, jurisdictions and political entities of the world, in and to any and all of the following (collectively, "Rights"):

- (a) The invention or inventions (collectively, "Inventions") identified in APPENDIX A and all the Intellectual Property rights and privileges under any and all forms of protection, including those enumerated below;
- (b) The patent application(s) filed with respect to said Inventions, as identified in APPENDIX A, and patent applications or other applications that may be filed for protection including, without limitation, applications for certificates of invention, utility models, industrial design protection, design patent protection, and provisional patent applications wherever filed, with respect to the Inventions, (collectively, "Applications") including all rights to file and prosecute such Applications directly in the name of Assignee;
- (c) All patents including, without limitation, certificates of invention, utility models, industrial design protection, design patent protection, that may be granted, registered, or issued with respect to the Inventions or the Applications (collectively, "Patents") including, but not limited to, any already granted patents identified in APPENDIX A;
- (d) All reissues, requests for continuing examinations, re-examinations, extensions, continuations, continuing prosecution applications, divisions, or registrations of, any item in any of the any of the foregoing categories (b) or (c);
- (e) The right to claim priority rights deriving or arising from any of the foregoing categories (b),
 (c) or (d) and for Assignee to otherwise avail itself of the provisions of the international conventions governing the protection of inventions;
- (f) All causes of action and enforcement rights related to any of the foregoing categories (a), (b), (c) or (d) (including, without limitation, the right to sue and to pursue damages, injunctive relief, or other remedies for past, present, or future infringement, misappropriation, or violation of rights related thereto);
- (g) All rights to license and to collect royalties and other payments under or on account of any of the foregoing categories (a), (b), (c) or (d); and
- (h) Any and all other rights and interests arising out of, in connection with, or in relation to any of the foregoing categories (a), (b), (c) or (d),

with respect to which, and to the extent to which, Assignor had or has acquired the right to so sell, assign, convey, transfer and deliver.

-1/2-

Assignor requests the respective patent office or governmental agency in each jurisdiction to grant or issue any and all letters patents, certificates of invention, utility models or other governmental or inter-governmental grants or issuances that may be granted upon any of the Rights in the name of the Assignee, as the Assignee to the Assignor's entire interest therein.

The terms and conditions of this Assignment will inure to the benefit of Assignee, its successors or assigns, and anyone properly designated by them and will be binding upon Assignor, its successors or assigns, and anyone properly designated by them.

IN WITNESS WHEREOF, each of the Parties has caused this Assignment to be executed by its duly authorized representatives on the respective dates entered below.

| ASSIGNOR: | ASSIGNEE: |
|---|--|
| ALCATEL-LUCENT USA INC. | ALCATEL LUCENT |
| ву: | By: |
| Name: Steven R. Santema | Name: Gregory J. Murgia |
| Title: Senior IP Corporate Counsel & Cluster Lead | Title: Senior Director, Americas Patent Creation & Senior IP Corporate Counsel |
| Date: 4/8/48 | Date: / 6 Nov Jess |

REEL: 037007 FRAME: 0832

| | 4 | APPENDIXA | | | | |
|-----------------------------|--|------------------------------|-------------|-----------------|--|--|
| | (October: | (October 2015 US Grant Fees) | int Fees) | | | |
| FAMILY REFERENCE | CASE REFERENCE | COUNTRY | FILING DATE | FILING NUMBER | GRANT DATE | GRANT NUMBER |
| 802373 | 802373-US-NP | Sn | 29-Dec-2005 | 11/323317 | | US9172629 |
| 807164 | 807164-US-NP | SN | 30-Sep-2010 | 12/894328 | 966ký plotoparación manación manación de la secono | |
| Bejerano 18-1 (Υ) | Bejerano 18-1 (Y)-US-NP | SO | 07-Jun-2007 | 11/808413 | 31-Jan-2012 | US8107399 |
| | Bejerano 18-1 (Y)-US-CNT | Sn | 19-Oct-2011 | 13/276845 | 10-Nov-2015 | US9185600 |
| Buddhikot 16-1 (MM) | Buddhikot 16-1 (MM)-KR-PCT | KR | 23-Sep-2008 | 20107006050 | 28-Feb-2012 | KR101123610 |
| | Buddhikat 16-1 (MM)-IN-PCT | 2 | 23-Sep-2008 | 1541/CHENP/2010 | | |
| | Buddhikot 16-1 (MM)-CN-PCT | S | 23-Sep-2008 | 200880108732.5 | 25-Jun-2014 | 21,200880108732.5 |
| | Buddhikot 16-1 (MM)-US-NP | Sn | 27-Sep-2007 | 11/862561 | | |
| | Buddhikot 16-1 (MM)-JP-PCT | ď | 23-Sep-2008 | 2010526920 | | |
| | Buddhikot 16-1 (MM)-JP-PCD | ₫. | 23-Sep-2008 | 201480793 | | |
| | Buddhikot 16-1 (MM)-FR-EPT | æ | 23-Sep-2008 | 08834074.0 | 05-Dec-2012 | EP2196043 |
| | Buddhikot 16-1 (MM)-DE-EPT | DE | 23-Sep-2008 | 08834074.0 | 05-Dec-2012 | EP2196043 |
| | Buddhikot 16-1 (MM)-G8-EPT | 68 | 23-Sep-2008 | 08834074.0 | 05-Dec-2012 | EP2196043 |
| Cai 110-11 (Y) | Cai 110-11 (Y)-IN-PCT | N | 20-Mar-2008 | 5675/CHENP/2009 | 3449149444444444444444955555555555555555 | 9569669644950000000000000000000000000000 |
| | Cai 110-11 (Y)-KR-PCT | <u>~</u> | 20-Mar-2008 | 20097020406 | 15-Jun-2012 | KR101158980 |
| | Cai 110-11 (Y)-US-NP | Sn | 16-Jul-2007 | 11/778250 | | |
| | Cai 110-11 (Y)-JP-PCT | <u>a</u> | 20-Mar-2008 | 2010500929 | 04-Oct-2013 | JP5380428 |
| | Cai 110-11 (Y)-CN-NP | 2 | 30-Mar-2007 | 200710091483.0 | | |
| Dinoff 1-12-12-14-16-1-1-15 | Dinoff 1-12-12-14-16-1-1-15 (RK)-US-NP | SD | 04-May-2007 | 11/744748 | 10-Nov-2015 | US9185239 |
| K V M 3-71-2-3 (N) | K V M 3-71-2-3 (N)-US-NP | SO | 06-Apr-2007 | 11/783137 | 27-Oct-2015 | US9171006 |
| | K V M 3-71-2-3 (N)[1]-US-DIV | Sn | 28-Sep-2015 | 14/870305 | | |
| Malhotra 7 (R) | Malhotra 7 (R)-US-NP | NS | 23-Mar-2005 | 11/088073 | 65000000000000000000000000000000000000 | US9185036 |
| Niu 2-5-2-2 (Z) | Niu 2-5-2-2 (Z)-US-NP | NS | 06-Feb-2007 | 11/702553 | *************************************** | |

RECORDED: 11/11/2015

PATENT REEL: 037007 FRAME: 0833