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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3823981

| SUBMISSION TYPE: | | NEW ASSIGNMENT | NEW ASSIGNMENT | | |
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| NATURE OF CONVEYANCE: | | ASSIGNMENT | ASSIGNMENT | | |
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| | | Name | | Execution Date | |
| CARL J. NUZMAN | | | | 04/06/2016 | |
| RECEIVING PARTY DA | ATA | | | | |
| Name: | ALCATEL-LUCENT USA INC. | | | | |
| Street Address: | 600-700 | 600-700 MOUNTAIN AVENUE | | | |
| City: | MURRA | MURRAY HILL | | | |
| State/Country: | NEW JE | NEW JERSEY | | | |
| Postal Code: | 07974 | | | | |
| Property Type | | Number | | | |
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ASSIGNMENT AND AGREEMENT

For value received, I, Carl J. NUZMAN of Union in County of Union and State of New Jersey, hereby sell, assign and transfer to Alcatel-Lucent USA Inc., a corporation of the State of Delaware, having an office at 600-700 Mountain Avenue, Murray Hill, NJ 07974, and its successors, assigns and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related to METHODS AND SYSTEMS FOR REDUCING CROSSTALK USING SEQUENTIAL NON-LINEAR VECTORING described in an application for Letters Patent of the United States, executed by us of even date herewith, and all the rights and privileges in said application and under any and all Letters Patent that may be granted in the United States for said inventions; and I also concurrently hereby sell, assign and transfer to Alcatel-Lucent USA Inc. the entire right, title and interest in and to said inventions for all countries foreign to the United States, including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions.

I authorize Alcatel-Lucent USA Inc. to make application for such protection in its own name and maintain such protection in any and all countries forcign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from us, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

I hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of Alcatel-Lucent USA Inc. to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

I request that any and all patents for said inventions be issued to Alcatel-Lucent USA Inc. in the United States and in all countries foreign to the United States, or to such nominees as Alcatel-Lucent USA Inc. may designate.

I agree that, when requested, I shall, without charge to Alcatel-Lucent USA Inc. but at its expense, sign all papers, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.

Attorney Docket No. 29250-002818-US Alcatel-Lucent Ref. No. 818485-US-NP

Carl J. NUZMAN

Date: 6 April 2016

United States of America

State of New Jersey

County of <u>Onion</u> On this <u>6</u>⁴⁴ day of <u>April</u>, <u>20/6</u> before me personally came <u>Care A. Muznan</u> to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

<u>Sanne K.)</u> Notary Public

SUZANNE R SABO Commission # 2362056 Notary Public, State of New Jersey My Commission Expires July 12, 2017

Alcatel-Lucent USA Inc. 600 Mountain Avenue (Room 3D-201) P. O. Box 636 Murray Hill, New Jersey 07974-0636

PATENT REEL: 038402 FRAME: 0180

RECORDED: 04/11/2016