#### 11/15/2018 505191808

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5238577

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

#### **CONVEYING PARTY DATA**

Name	Execution Date
Y. RICHARD YANG	01/28/2014
ANDREAS VOELLMY	01/24/2014

### **RECEIVING PARTY DATA**

Name:	YALE UNIVERSITY
Street Address:	TWO WHITNEY AVENUE
City:	NEW HAVEN
State/Country:	CONNECTICUT
Postal Code:	06511

# **PROPERTY NUMBERS Total: 1**

Property Type	Number
PCT Number:	US1431249

#### CORRESPONDENCE DATA

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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.

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velika.cenaj@wolfgreenfield.com

**Correspondent Name:** JAMES H. MORRIS

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Address Line 4: BOSTON, MASSACHUSETTS 02210

ATTORNEY DOCKET NUMBER:	Y0087.70074WO00
NAME OF SUBMITTER:	VELIKA CENAJ
SIGNATURE:	/Velika Cenaj/
DATE SIGNED:	11/15/2018

#### **Total Attachments: 4**

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> **PATENT REEL: 047509 FRAME: 0503** 505191808

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PATENT REEL: 047509 FRAME: 0504 PCT Application No.: PCT/US2014/031249

Filing Date: March 14, 2019 Docket No.: Y0087.70074WO00

#### ASSIGNMENT

Yale Case: OCR 00006121US00

ASSIGNORS:

Andreas Voellmy, Y. Richard Yang

WHEREAS, the aforementioned individuals (the "ASSIGNORS") have developed a certain INVENTION having Yale Case No. OCR 00006121US00 and being entitled Dynamic Modeling and Optimization of Algorithmic Policies for Software-Defined Networks. (collectively, with all future enhancements and improvements thereto as well as all related original works of authorship related thereto other than those solely of an artistic, literary or scholarly nature, as the "INVENTION");

WHEREAS, the ASSIGNORS have executed an APPLICATION for a United States Patent based on the INVENTION, entitled **Dynamic Modeling and Optimization of Algorithmic Policies for Software-Defined Networks**, filed on **03/19/13**, and assigned APPLICATION **Serial No. 61/803,378**. (the "APPLICATION"):

WHEREAS, Yale University, a corporation of the State of Connecticut having its principal office and place of business at Two Whitney Avenue, New Haven, Connecticut, ("ASSIGNEE") is desirous of acquiring the entire and exclusive right, title, and interest in and to the INVENTION and the APPLICATION;

NOW THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the ASSIGNORS hereby sell, assign and transfer to ASSIGNEE the full and exclusive right, title and interest in the United States (including its territories and dependencies) and all countries foreign thereto in, to and under the INVENTION, the APPLICATION, and any other United States APPLICATIONS (including provisional, non-provisional, divisional, continuing and reissue APPLICATIONS) based in whole or in part on the APPLICATION or in whole or in part on the INVENTION, and any patents (including extensions thereof) of any country that have been or may be granted on any of the aforesaid APPLICATIONS or on the INVENTION or any part thereof and including all rights to claim priority through any international convention or treaty and all copyrights on or related to the INVENTION;

ASSIGNORS hereby warrant and represent to Assignee, its successors, legal representatives and assigns, that at the time of execution of this assignment, the ASSIGNORS listed above are the sole individuals who were or are presently employed by the ASSSIGNEE and made contributions to the INVENTION, that the ASSIGNORS are unencumbered and have good and full right and lawful authority to sell and convey the same in the manner herein set forth, and that all works of authorship assigned herein are original works created solely by the ASSIGNORS and are free from plagiarized, libelous, obscene or infringing material;

ASSIGNORS hereby authorize and request the Commissioner of Patents of the United States of America, to issue any and all United States Patents that may be granted on any assigned APPLICATION or on the INVENTION or any part thereof, in the name of ASSIGNEE;

ASSIGNORS hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this sale, assignment and transfer;

ASSIGNORS hereby grant to ASSIGNEE and its agents and attorneys the power and right to insert herein the title, serial number and filing date of the APPLICATION, and title of the INVENTION after this Assignment is executed by the ASSIGNORS; and

ASSIGNORS further covenant that upon ASSIGNEE's request they will provide promptly to ASSIGNEE all pertinent facts and documents relating to the aforesaid APPLICATIONS and the INVENTION as may be known and accessible to ASSIGNORS, and ASSIGNORS will testify as to the same in any interference or litigation related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives without further consideration any and all papers, instruments or affidavits required to apply for, obtain, maintain and enforce the aforesaid APPLICATIONS that may be deemed necessary or desirable by ASSIGNEE to carry out the purposes hereof.

For the event that ASSIGNEE is unable, after reasonable effort, to secure any ASSIGNOR's signature on any APPLICATION, paper or other instrument relating to any patent, patent APPLICATION, letters patent, copyright or other analogous protection relating to the INVENTION in any country, whether

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because of the ASSIGNOR's mental incapacity, death or for any other reason whatsoever, each ASSIGNOR hereby irrevocably designates and appoints ASSIGNEE and its duly authorized officers and agents as each ASSIGNOR's agent and attorney in fact to act for and to execute and file any such APPLICATION, paper or other instrument on ASSIGNOR's behalf and to do all other lawfully permitted acts to further the prosecution and issuance of any patent, patent APPLICATION, letters patent, copyright or any other analogous protection related to the INVENTION with the same legal force and effect as if executed by such ASSIGNOR.

For the convenience of the parties, any number of counterparts of the Assignment may be executed by the parties hereto. Each such counterpart shall be and shall be deemed to be an original instrument but all such counterparts taken together shall constitute one and the same assignment.

IN WITNESS WHEREOF, the ASSIGNORS have hereunto s	et their hand to the foregoing
assignment.	
WITNESS my hand and seal this 29 day of Jan. 28	, 2014.
Y. Richard Yang	
State of Connecticut ) ss: Now Haver	
County of )	
Then personally appeared the above named Y. Richard Yang and acknown instrument to be his free act and deed, before me this Aday of Sanko	owledged the foregoing , 2014
Notary Public. (see	
Name: Diare & My Commission e	expires: 9-30-2019
WITNESS my hand and seal this 23th day of January Audilo	, 2014.
State of Connecticut  ss: Now Have	y
County of )	
Then personally appeared the above named <b>Andreas Voellmy</b> and ackinstrument to be his free act and deed, before me this 2 day of Sanu	
D K/1,	1

Notary Public (seal) Name: Diame

My Commission expires: 9-30-2014

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## **ASSIGNMENT**

Yale Case: OCR 00006121US01

#### ASSIGNORS:

Y. Richard Yang, Andreas Voeilmy

WHEREAS, the aforementioned individuals (the "ASSIGNORS") have developed a certain INVENTION having Yale Case No. OCR 00006121US01 and being entitled Dynamic Modeling and Optimization of Algorithmic Policies for Software-Defined Networks. (collectively, with all future enhancements and improvements thereto as well as all related original works of authorship related thereto other than those solely of an artistic, literary or scholarly nature, as the "INVENTION");

WHEREAS, the ASSIGNORS have executed an APPLICATION for a United States Patent based on the INVENTION, entitled **Dynamic Modeling and Optimization of Algorithmic Policies for Software-Defined Networks.**, filed on 03/27/13, and assigned U.S. Application Serial No. 61/853,056. (the "APPLICATION");

WHEREAS, Yale University, a corporation of the State of Connecticut having its principal office and place of business at Two Whitney Avenue, New Haven, Connecticut, ("ASSIGNEE") is desirous of acquiring the entire and exclusive right, title, and interest in and to the INVENTION and the APPLICATION;

NOW THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the ASSIGNORS hereby sell, assign and transfer to ASSIGNEE the full and exclusive right, title and interest in the United States (including its territories and dependencies) and all countries foreign thereto in, to and under the INVENTION, the APPLICATION, and any other United States APPLICATIONS (including provisional, non-provisional, divisional, continuing and reissue APPLICATIONS) based in whole or in part on the APPLICATION or in whole or in part on the INVENTION, and any patents (including extensions thereof) of any country that have been or may be granted on any of the aforesaid APPLICATIONS or on the INVENTION or any part thereof and including all rights to claim priority through any international convention or treaty and all copyrights on or related to the INVENTION:

ASSIGNORS hereby warrant and represent to Assignee, its successors, legal representatives and assigns, that at the time of execution of this assignment, the ASSIGNORS listed above are the sole individuals who were or are presently employed by the ASSSIGNEE and made contributions to the INVENTION, that the ASSIGNORS are unencumbered and have good and full right and lawful authority to sell and convey the same in the manner herein set forth, and that all works of authorship assigned herein are original works created solely by the ASSIGNORS and are free from plagiarized, libelous, obscene or infringing material;

ASSIGNORS hereby authorize and request the Commissioner of Patents of the United States of America, to issue any and all United States Patents that may be granted on any assigned APPLICATION or on the INVENTION or any part thereof, in the name of ASSIGNEE;

ASSIGNORS hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this sale, assignment and transfer;

ASSIGNORS hereby grant to ASSIGNEE and its agents and attorneys the power and right to insert herein the title, serial number and filing date of the APPLICATION, and title of the INVENTION after this Assignment is executed by the ASSIGNORS; and

ASSIGNORS further covenant that upon ASSIGNEE's request they will provide promptly to ASSIGNEE all pertinent facts and documents relating to the aforesaid APPLICATIONS and the INVENTION as may be known and accessible to ASSIGNORS, and ASSIGNORS will testify as to the same in any interference or litigation related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives without further consideration any and all papers, instruments or affidavits required to apply for, obtain, maintain and enforce the aforesaid APPLICATIONS that may be deemed necessary or desirable by ASSIGNEE to carry out the purposes hereof.

For the event that ASSIGNEE is unable, after reasonable effort, to secure any ASSIGNOR's signature on any APPLICATION, paper or other instrument relating to any patent, patent APPLICATION, OCR 6121US01

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letters patent, copyright or other analogous protection relating to the INVENTION in any country, whether because of the ASSIGNOR's mental incapacity, death or for any other reason whatsoever, each ASSIGNOR hereby irrevocably designates and appoints ASSIGNEE and its duly authorized officers and agents as each ASSIGNOR's agent and attorney in fact to act for and to execute and file any such APPLICATION, paper or other instrument on ASSIGNOR's behalf and to do all other lawfully permitted acts to further the prosecution and issuance of any patent, patent APPLICATION, letters patent, copyright or any other analogous protection related to the INVENTION with the same legal force and effect as if executed by such ASSIGNOR.

For the convenience of the parties, any number of counterparts of the Assignment may be executed by the parties hereto. Each such counterpart shall be and shall be deemed to be an original instrument but all such counterparts taken together shall constitute one and the same assignment.

IN WITNESS WHEREOF, the ASSIGNORS have hereunto set their hand to the foregoing assignment.

WITNESS my ha	and and seal this	day of Jan. 28	, 2014.		
State of Connecticut	ss: Now Haven	chard Yang			
County of	)				
Then personally appeared the above named Y. Richard Yang and acknowledged the foregoing instrument to be his free act and deed, before me this 29 day of Sanuord , 2014					
		DKA			
		Notary Public (seal) Name: Dranc K. My Commission expi	Haumon res: 9-30-14		
WITNESS my ha	and and seal this	day of January &	で , 2014.		
State of Connecticut	ss: Now Haver	eas Voellmy			
County of	)				
Then personally appea foregoing instrument to	red the above named <b>An</b> be his free act and deed	dreas Voelimy and acknow, before me this 28 day of	ledged the January , 2014.		
		Notary Public (seal), Name: \ \ \an \cdot\ My Commission expi	(. Harmon res: 9-30-14		

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PATENT REEL: 047509 FRAME: 0508

**RECORDED: 11/15/2018**