505278182 01/15/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KYLE ANDREW DONALD MESTERY	12/20/2018
IAN WELLS	12/20/2018
GREGORY J. SHEPHERD	01/07/2019

RECEIVING PARTY DATA

Name:	CISCO TECHNOLOGY, INC.
Street Address:	170 WEST TASMAN DRIVE
City:	SAN JOSE
State/Country:	CALIFORNIA
Postal Code:	95134

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16247664

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: 617-918-7600

Email: patent@piblaw.com, dawn.grimes@piblaw.com

Correspondent Name: PARKER IBRAHIM & BERG LLP
Address Line 1: ONE FINANCIAL CENTER

Address Line 4: BOSTON, MASSACHUSETTS 02111

ATTORNEY DOCKET NUMBER:	0141181.U
NAME OF SUBMITTER:	KENNETH J. HEYWOOD
SIGNATURE:	/KENNETH J. HEYWOOD/
DATE SIGNED:	01/15/2019

Total Attachments: 6

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ASSIGNMENT

WHEREAS, I/we the undersigned inventor(s) (hereinafter "ASSIGNOR(S)") have invented certain new and useful improvements as set forth in the patent application entitled:

MULTICAST-BASED CONTENT DISTRIBUTION FOR IOT NETWORKS USING BIT INDEX EXPLICIT REPLICATION (BIER)

⊠which is being filed herewith	
□which was filed on	as U.S. Patent Application No.
(hereinafter the "Application").	

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I/we, the ASSIGNOR(S):

1) Have assigned, transferred and set over, and by these presents do hereby assign, transfer and set over, unto **Cisco Technology, Inc.**, a California corporation having a place of business at 170 West Tasman Drive, San Jose, California 95134-1706 (hereinafter "ASSIGNEE") and its successors and assigns, each ASSIGNOR's entire right, title, and interest in, to, and under, the Application and any and all improvements disclosed in the Application, as well as any and all other applications that may be based upon, and patent(s) which may be granted upon, the information that is disclosed in the Application, throughout the World, including without prejudice to the generality of the foregoing:

the right to file applications and to obtain patents or like protection (including, e.g., utility models, inventors' certificates, and/or designs) for the improvements in any country throughout the World, including the right to claim priority from any such application; and any and all provisional, non-provisional, divisional, continuing (whether a continuation or a continuation in part), substitute, renewal, reissue, and other applications for Letters Patent which have been or shall be filed in any country on any of the improvements; and in and to all original and reissued patents which have been or shall be filed in any country on any of the improvements;

- Authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, as applicable, to issue the same to ASSIGNEE and its successors and assigns, in accordance with the terms of the instrument:
- 3) Covenant and agree, when requested and at no charge to, but at the expense of, ASSIGNEE and its successors and assigns, to: execute all applications for the improvements (including without limitation any and all provisional, non-provisional, divisional, continuing (whether a continuation or a continuation in part), substitute, renewal, reissue, and other patent applications); execute all rightful oaths, assignments, powers of attorney and other papers; communicate to ASSIGNEE, its successors, assigns, and legal representatives, all facts known to the undersigned relating to the improvements and the history thereof; and perform any acts that ASSIGNEE, its successors, assigns or legal representatives consider reasonably necessary for securing and maintaining proper patent protection for the improvements, for vesting title to the improvements and all patent applications and patents for the improvements, in ASSIGNEE and

its successors and assigns, and for enforcing the rights of ASSIGNEE and its successor and assigns, in and to any or all of the improvements and any application(s) or patent(s) therefor;

- 4) Covenant and agree that I/we have full right to convey the entire interest herein assigned, and that I/we have not executed, and will not execute, any agreement in conflict herewith.
- 5) Covenant and agree that the terms, covenants and conditions of this assignment shall inure to the benefit of ASSIGNEE and its successors and assigns, and shall be binding upon me/us and my/our heirs, assigns, and legal representatives.
- 6) Covenant and agree that this assignment and any action, suit, proceeding or claim arising under or relating to this assignment will be governed, interpreted, construed, and enforced in all respects in accordance with the laws of the State of California and by any controlling Federal U.S. law with respect to the subject matter, without reference to its choice of law principles to the contrary.
- 7) Authorize a representative of PARKER IBRAHIM & BERG LLP, One Financial, Boston, Massachusetts 02111 to insert in the blanks above the filing date and application number of the Application when known.

•	7	
Signature: Typed Name: Ian Wells Address: 1370 Nestwood Way, Milpitas, CA	Date:	
Signature:	Date:	
	Typed Name: Kyle Andrew Donald Mestery Address: 3020 Tanner Road, Woodbury, MN Signature: Typed Name: Ian Wells Address: 1370 Nestwood Way, Milpitas, CA Signature: Typed Name: Gregory J. Shepherd	Typed Name: Kyle Andrew Donald Mestery Address: 3020 Tanner Road, Woodbury, MN 55129 Signature: Date: Typed Name: Ian Wells Address: 1370 Nestwood Way, Milpitas, CA 95035 Signature: Date:

8)



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Address: 26895 Petzold Road, Eugene, Oregon 97402

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- 6) Covenant and agree that this assignment and any action, suit, proceeding or claim arising under or relating to this assignment will be governed, interpreted, construed, and enforced in all respects in accordance with the laws of the State of California and by any controlling Federal U.S. law with respect to the subject matter, without reference to its choice of law principles to the contrary.
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Signature: Date:
Typed Name: Kyle Andrew Donald Mestery
Address: 3020 Tanner Road, Woodbury, MN 55129

Signature: Date:
Typed Name: Ian Wells
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Signature: Date: //////
Typed Name: Gregory J. Shepherd
Address: 26895 Petzold Road, Eugene, Oregon 97402

PATENT REEL: 048002 FRAME: 0899

RECORDED: 01/15/2019

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