505722581 10/15/2019

EPAS ID: PAT5769392

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

SUBMISSION TYPE:NEW ASSIGNMENTNATURE OF CONVEYANCE:ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KEVIN B. BUSH	10/01/2019
MATTHEW D. HICKS	09/30/2019
TIMOTHY D. TRIPPEL	10/01/2019

RECEIVING PARTY DATA

Name:	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
Street Address:	77 MASSACHUSETTS AVENUE	
City:	CAMBRIDGE	
State/Country:	MASSACHUSETTS	
Postal Code:	02139	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16598293

CORRESPONDENCE DATA

Fax Number: (781)401-9966

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.

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 781-401-9988 **Email:** ALM@DC-M.COM

Correspondent Name: DALY, CROWLEY, MOFFORD & DURKEE, LLP
Address Line 1: ONE UNIVERSITY AVENUE, SUITE 201B
Address Line 4: WESTWOOD, MASSACHUSETTS 02090

ATTORNEY DOCKET NUMBER:	MIT-405BUS	
NAME OF SUBMITTER:	DO TE KIM	
SIGNATURE:	/Do Te Kim/	
DATE SIGNED:	10/15/2019	

Total Attachments: 5

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PATENT REEL: 050712 FRAME: 0531

ASSIGNMENT

Whereas we, the undersigned, Kevin B. Bush, Matthew D. Hicks and Timothy D. Trippel hereby have made certain inventions or discoveries (or both) set forth in an application for Letters Patent of the United States of America entitled DEFENSIVE ROUTING AND RELATED TECHNIQUES, identified as Attorney Docket No. MIT-405BUS, and Client Case No. 20945L, which application was executed on \(\frac{\circle{\chi}}{\chi}\frac{\chi}{\chi}\fr

Whereas Massachusetts Institute of Technology, a Massachusetts Corporation having a place of business at 77 Massachusetts Avenue, Cambridge, MA 02139, and which, together with its successors and assigns, is hereinafter called "Assignee," is desirous of acquiring the title, rights, benefits and privileges hereinafter recited;

Now, therefore, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which we hereby acknowledge, we hereby, without reservation:

- 1. Assign, transfer and convey to Assignee the entire right, title and interest in and to said inventions and discoveries, said application for Letters Patent of the United States of America, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, reissue, re-examination, PCT, PCT National Phase and Convention applications based in whole or in part upon said inventions or discoveries, or upon said applications, and any and all Letters Patent, reissues, reexaminations, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent and any provisional applications from which priority is claimed in said Letters Patent;
- Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in my name or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;
- 3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patent to Assignee, as assignee of the entire right, title and interest therein or otherwise as Assignee may direct;
- 4. Warrant that I have not knowingly conveyed to others any right in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything embodying or utilizing any of said inventions or discoveries; and that I have good right to assign the same to Assignee without encumbrance;

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PATENT ASSIGNMENT Atty, Dckt, No.: MIT-405BUS

Client Case No.: 20945L

5. Bind my heirs, legal representatives and assigns, as well as myself, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to me or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by me, my heirs, legal representatives and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to me relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in my control or in the control of my heirs, legal representatives or assigns which may be useful for establishing the facts of my conceptions, disclosures, and reduction to practice of said inventions and discoveries.

In testimony of which we have each executed this Assignment as an instrument on the date indicated next to our name(s).

PATENT REEL: 050712 FRAME: 0533

PATENT ASSIGNMENT Atty. Dckt. No.: MIT-405BUS Client Case No.: 20945I.

Dated: 10///19	KRI
	Kevin B. Bush
Witnessed by:	\wedge
Dated: 10/1/19	ANMA
	First Witness Signature
	Kyle W. Ingols
	First Witness Printed Narge
Dated: 10/1/19	my Conffeel
	Second Withess Signature
	DANIEL J VAN HOOK.
	Second Witness Printed Norms

PATENT ASSIGNMENT Atty. Dokt. No.: MIT-405BUS Client Case No.: 20945L

Dated: $9 - 30 - 19$	Mathe D. Hedr
	Matthew D. Hicks
	1971
Witnessed by:	
Dated: 9-30-2019	First Wintess Signature
á.	
*	Michael Moukarzel
	First Witness Printed Name
Dated: 09-30-2019	_alat.
	Second Witness Signature
	Fahad Ibrar
	Second Witness Printed Name

PATENT ASSIGNMENT Atty. Dokt. No.: MIT-405BUS Client Case No.: 20945L

Dated:	Timothy D. Trippel Timothy D. Trippel
Witnessed by: Dated: 10 1119	Lauren Willigan First Witness Printed Name
Dated: 10/1/19	Second Witness Signature Richard Ely Locke Higgins Second Witness Printed Name

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RECORDED: 10/15/2019