506932411 10/20/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6979248

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Hiroshi HIGASHIDE	08/24/2021
Keiichi UNO	08/24/2021

RECEIVING PARTY DATA

Name:	TOYOTA JIDOSHA KABUSHIKI KAISHA
Street Address:	1, TOYOTA-CHO
City:	TOYOTA-SHI, AICHI-KEN
State/Country:	JAPAN
Postal Code:	471-8571

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17506160

CORRESPONDENCE DATA

Fax Number: (703)836-2787

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: 703-836-6400
Email: email@oliff.com
Correspondent Name: AARON L. WEBB

Address Line 1: OLIFF PLC

Address Line 2: P.O. BOX 320850

Address Line 4: ALEXANDRIA, VIRGINIA 22320-4850

ATTORNEY DOCKET NUMBER:	195845
NAME OF SUBMITTER:	KIMBERLY SCOTT
SIGNATURE:	/Kimberly C. Scott/ for Aaron L. Webb
DATE SIGNED:	10/20/2021

Total Attachments: 4

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506932411

PATENT REEL: 057850 FRAME: 0214

ASSIGNMENT (BEING FILED FOR DUAL PURPOSE UNDER 37 CFR 1.63(e)) For Application with Filing Date on or after September 16, 2012

ASSIGNMENT

	Insert	(1)	HEOSIII HIGASHIDE	(2)	
(1-8)	Legal Name(s)	(3)		(4)	
	of Inventor(s)	(5)		(6)	
		(7)		(8)	
		the unc		ollar (\$1.00) and other good and valuable consideration paid to each oriency of which are hereby acknowledged, each undersigned agrees fer and set over to	
(9)	(9) Insert Name of Assignee		ТОУОТА ЛІДОЅНА КАВО	JSHIKI KAISHA	
(10)	Insert Address of Assignee	(10)	(10) 1, Toyota-cho, Toyota-shi, Aichi-ken, 471-8571 Japan		
		the ent inventi continu	ire right, title and interest for t on, and in all applications for lation, international, substitute	ee) and Assignee's heirs, successors, assigns and legal representative he United States of America as defined in 35 U.S.C. §100, in the patent including any and all provisional, non-provisional, divisional, and reissue application(s), and all Letters Patent, extensions, reissue ay be granted on the invention known as	,
(11)	Insert Identification	(11)	OPERATION MANAGEM	ENT APPARATUS, SYSTEM, OPERATION MANAGEMENT	
	such as Title, Case Number, or Foreign		METHOD, AND NON-TRA	ANSITORY COMPUTER READABLE MEDIUM	
	Application Number	(Attor	ney Docket No. 195845), filed on even date herewith or as	
(12)	Alternative	(12)	U.S. Application Number	17/506,160	
	Identification for filed applications	filed	October 20, 2021		

- 1) Each undersigned agrees to execute all papers necessary in connection with any application and/or patent for the invention and also to execute separate assignments in connection with such applications and patents as the Assignee may deem necessary.
- 2) Each undersigned agrees to execute all papers necessary in connection with any interference or post-grant proceeding which may be declared concerning any application or patent for the invention and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or post-grant proceeding.
- 3) Each undersigned agrees to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.
- 4) Each undersigned agrees to perform all affirmative acts which may be necessary to obtain, maintain or confirm by reissue or reexamination a grant of a valid United States patent to the Assignee.
- 5) Each undersigned authorizes and requests the Commissioner of the U.S. Patent and Trademark Office to issue any and all patents resulting from said application(s) to the said Assignee, as Assignee of the entire interest, and covenants that he or she has full right to convey the entire interest herein assigned, and that he or she has not executed, and will not execute, any agreement(s) in conflict herewith, and agrees that this assignment is binding on Assignor and Assignor's heirs, successors, assigns and legal representatives.
- 6) Each undersigned hereby grants the firm of OLIFF PLC the power to insert on this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

(13) Declaration

As an above named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of a claimed invention (or claimed design) in the above-identified application for which this declaration is being submitted.

The application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified application, including the claims, and am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

PATENT REEL: 057850 FRAME: 0215 In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date	August,24,2021	Inventor Signature	Hiroshi Higashide/	(SEAL)
			Hiroshi HIGASHIDE	(02.22)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature	,	(SEAL)
Date		Inventor Signature		(SEAL)
neither,	This assignment should preferably be sig then it should be signed before at least two		lic if within the U.S.A. (b) a U.S. Consul if outside re:	the U.S.A. II
Date		Witness		
Date		Witness		

(D)

Keiichi UNO

Insert

ASSIGNMENT (BEING FILED FOR DUAL PURPOSE UNDER 37 CFR 1.63(e)) For Application with Filing Date on or after September 16, 2012

ASSIGNMENT

(2)

Legal Name(s)	(3)	(4)	
of Inventor(s)	(5)	(6)	
	(7)	(8)	
	the unc	sideration of the sum of one dollar (\$1.00) and other good and valuable consideration paid to each of lersigned, the receipt and sufficiency of which are hereby acknowledged, each undersigned agrees to and hereby does assign, transfer and set over to	
Insert Name of Assignee	(9)	TOYOTA JIDOSHA KABUSHIKI KAISHA	
Insert Address of (10) 1 Tayota the Tayota shi Ainti kan 471 8571 Japan			
Insert Identification	the ent inventi continu and ree	after designated as the Assignee) and Assignee's heirs, successors, assigns and legal representatives, ire right, title and interest for the United States of America as defined in 35 U.S.C. §100, in the on, and in all applications for patent including any and all provisional, non-provisional, divisional, nation, international, substitute and reissue application(s), and all Letters Patent, extensions, reissues examination certificates that may be granted on the invention known as	
such as Title, Case	(11)	OPERATION MANAGEMENT APPARATUS, SYSTEM, OPERATION MANAGEMENT	
		METHOD, AND NON-TRANSITORY COMPUTER READABLE MEDIUM	
Appacation ranges	(Atten	ney Docket No. 195845), filed on even date herewith or as	
Alternative	(12)	U.S. Application Number 17/506,160	
Identification for			
filed applications	filed	October 20, 2021	
	Insert Name of Assignee Insert Address of Assignee Insert Identification such as Title, Case Number, or Foreign Application Number Alternative Identification for	of Inventor(s) (7) In constitue and assign, Insert Name of Assignee Insert Address of (10) (herein the entinventic continuand reconstruction Number (Attorn Alternative (12))	

- 1) Each undersigned agrees to execute all papers necessary in connection with any application and/or patent for the invention and also to execute separate assignments in connection with such applications and patents as the Assignee may deem necessary.
- 2) Each undersigned agrees to execute all papers necessary in connection with any interference or post-grant proceeding which may be declared concerning any application or patent for the invention and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or post-grant proceeding.
- 3) Each undersigned agrees to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.
- 4) Each undersigned agrees to perform all affirmative acts which may be necessary to obtain, maintain or confirm by reissue or reexamination a grant of a valid United States patent to the Assignee.
- 5) Each undersigned authorizes and requests the Commissioner of the U.S. Patent and Trademark Office to issue any and all patents resulting from said application(s) to the said Assignee, as Assignee of the entire interest, and covenants that he or she has full right to convey the entire interest herein assigned, and that he or she has not executed, and will not execute, any agreement(s) in conflict herewith, and agrees that this assignment is binding on Assignor and Assignor's heirs, successors, assigns and legal representatives.
- 6) Each undersigned hereby grants the firm of OLIFF PLC the power to insert on this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

(13) Declaration

As an above named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of a claimed invention (or claimed design) in the above-identified application for which this declaration is being submitted.

The application was made or authorized to be made by me.

There reviewed and understand the contents of the above-identified application, including the claims, and am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

PATENT REEL: 057850 FRAME: 0217

RECORDED: 10/20/2021

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

	August,24,2021		/Kerichi Unol	
Date		Inventor Signature	Keiichi UNO	(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
neither,	This assignment should preferably be signed before at least tw		lic if within the U.S.A. (b) a U.S. Consul if outside re:	the U.S.A. If
Date		Witness		
Date		Witness		