504626602 11/03/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4673320

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Andrew D NORTON	08/14/2017
Stewart LOWTH	08/11/2017
Xin DONG	08/18/2017

RECEIVING PARTY DATA

Name:	ame: ROLLS-ROYCE plc	
Street Address: 62 Buckingham Gate		
City: London		
State/Country: Great Britain		
Postal Code:	SW1E 6AT	

PROPERTY NUMBERS Total: 1

Property Type	Number		
Application Number:	15803028		

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:** JAMES A. OLIFF Address Line 1: **OLIFF PLC**

Address Line 2: P.O. BOX 320850

Address Line 4: ALEXANDRIA, VIRGINIA 22320-4850

ATTORNEY DOCKET NUMBER: 179045 NAME OF SUBMITTER: SANDRADEE S. HARRIS SIGNATURE: /Sandradee S. Harris/for James A. Oliff **DATE SIGNED:** 11/03/2017

Total Attachments: 4

source=5334498_1#page1.tif source=5334498_1#page2.tif source=5334498 1#page3.tif

> **PATENT** REEL: 044029 FRAME: 0957 504626602

source=5334498_1#page4.tif

PATENT REEL: 044029 FRAME: 0958

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 Legal Name(s) Inventor(s)	S 6	NORTON, Andrew D		
(8-1)) or	LOWTH, Stewart		
	**************************************		DONG, Xin		
			u (\$1.00) and other good and valuable consideration paid to each of the undersigned, the receipt and dedged, each undersigned agrees to assign, and hereby does assign, transfer and set over to	}	
(9)	Insert Name of Assis	gnee	ROLLS-ROYCE ple		
(10) Insert Address of Assignee		signec	62 Buckingham Gate, London, SW1E 6AT, Great Britain		
(11)	for the United States of Ameri provisional, non-provisional, of Patent, extensions, reissues an Insert Identification	ea as defi livisional) and Assigner's heirs, successors, assigns and legal representatives, the entire right, title and interest med in 35 U.S.C. §100, in the invention, and in all applications for patent including any and all , continuation, international, confirmation, substitute and reissue application(s), and all Letters ination certificates that may be granted on the invention known as Hyper redundant robots	ŝ	
	such as Title, Case Number, or Foreign		6281 LMT		
	Application Number (mey Docket No. 179045	}	
(12)	Alternative	(12)	U.S. Application Number 15/803,028		
	Identification for filed applications	filed	November 3, 2017		

- 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 which may be declared concerning any application or patents for the invention and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.
- 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 and other issuing authorities 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 has full right to convey the entire interest herein assigned, and that he 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.

PATENT REEL: 044029 FRAME: 0959

(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.

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

invent	tor		
(Prist	name) NORTON, Andrew	D	
Date	14" AUGUST 2017	Inventor Signatur	· <u>Ara Da</u> (8541)
Consi	This assignment should preferably be all if outside the U.S.A. If neither, then	z signed before: (it should be sign	a) a Notary Public if within the U.S.A. (b) a U.S. and before at least two witnesses who also sign here:
Date	14 NOUST 2017	Witness	
Date	14th Avavst 2017	Witness	M. Marry //W

(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.

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

\$88.68	tor .			
(Print	name) LOWTH, Stewart			
Date	11th Aug 2017	Inventor Sign	sture <u>S.MN177</u>	(\$EAL)
Cons			re: (a) a Notary Public if within the U.S.A. signed before at least two witnesses who a	
Date	11 th Aug 2017	Witness	S Neerda M	

Date	11th Aug 2017	Witness	4. Bloomeday	

(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 (S) years, or both.

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

Inventor			
(Print name) DONG, Xin			
Date 18/08/2017	Inventor Signature	·	(SEAL)
		v a) a Notary Public if within the U.S., ed before at least two witnesses who	
Base 18/08/201	Witness	Zilin Yang	
Date 13/0 8/2017			