10/26/2018 505162585

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5209352

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SUKHDEV BALAJI	09/01/2017
GOUTHAM PATHURI	09/04/2017
ANKUR KRISHNA	09/01/2017
PRAMOD RAMDAS ZAGADE	09/01/2017
AROCKIAM DANIEL	09/01/2017

RECEIVING PARTY DATA

Name:	TATA CONSULTANCY SERVICES LIMITED
Street Address:	NIRMAL BUILDING, 9TH FLOOR
Internal Address:	NARIMAN POINT
City:	MUMBAI
State/Country:	INDIA
Postal Code:	400021

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16172681

CORRESPONDENCE DATA

Fax Number: (202)408-4400

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: (202) 408-4000

Email: monica.freeman@finnegan.com

TATA CONSULTANCY SERVICES LTD/FINNEGAN **Correspondent Name:**

901 NEW YORK AVE., NW Address Line 1: Address Line 4: WASHINGTON, D.C. 20001

ATTORNEY DOCKET NUMBER:	13178.0401
NAME OF SUBMITTER:	MONICA J. FREEMAN
SIGNATURE:	/monicajfreeman/
DATE SIGNED:	10/26/2018
	This document serves as an Oath/Declaration (37 CFR 1.63).

PATENT REEL: 047331 FRAME: 0783

505162585

Total Attachments: 8 source=13178-0401_DecAsst#page1.tif source=13178-0401_DecAsst#page2.tif source=13178-0401_DecAsst#page3.tif source=13178-0401_DecAsst#page4.tif source=13178-0401_DecAsst#page5.tif source=13178-0401_DecAsst#page6.tif source=13178-0401_DecAsst#page7.tif source=13178-0401_DecAsst#page8.tif

PATENT REEL: 047331 FRAME: 0784

ASSIGNMENT:

WHEREAS I/We, the below named inventor(s), (hereinafter referred to as Assignor(s)), have made an invention entitled:

for which I/WE executed an application for United States Letters Patent concurrently herewith; and

WHEREAS, Tata Consultancy Services Limited
a corporation of India
whose post office address is Nirmal Building, 9th Floor, Nariman Point, Mumbai 400021, Maharashtra, India

A FRAMEWORK TO ASSESS TECHNICAL FEASIBILITY OF DESIGNS FOR ADDITIVE MANUFACTURING

(hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, as well as all rights to claim priority on the basis of this application in any foreign country, and all applications for Letters Patent which may hereafter be filed for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, and all extensions, renewals, and reissues thereof; and I/We hereby authorize and request the Director of the United States Patent and Trademark Office and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, IWE HEREBY further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

AND, I/WE HEREBY authorize ar	nd request that the attorneys having	Power of Attorney in this application, insert
here in parentheses (Application No	, filed) the filing date and
application number of said application wh	en known.	

DECLARATION:

As a named inventor below, I hereby declare that: (1) This declaration is directed to the above-identified application; (2) the above-identified application was made or authorized to be made by me; (3) my residence and mailing address are as stated below next to my name; and (4) I believe I am an original inventor or an original joint inventor of a claimed invention in the application. I hereby acknowledge that any willful false statements made in this declaration are punishable by fine or imprisonment of not more than five (5) years, or both, under section 1001 of Title 18 of the United States Code.

As a below named inventor, I have reviewed and understand the contents of the application, including the claims, and am aware of the duty to disclose to the US PTO all information known to me to be material to patentability as defined in 37C.F.R. § 1.56.

Authorization To Permit Access To Application by Participating Offices:

If checked, the undersigned hereby grants the USPTO authority to provide the European Pielent Office (EPO), the Japan Patent Office (IPO) the Korean Intellectual Property Office (KIPO) and any other intellectual property offices in which a foreign application claiming priority to the above identified patent application is filed access to the above identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the Applicant does not wish the EPO UPO KIPO or other intellectual property office in which a foreign application claiming priority to the above-identified application is filed to have access to the above-identified patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the above-control operat application with respect to 11) the aboveidentified patent application as filled. 2) any foreign application to which the above-identified patent application claims priority under 35 U.S.C. 119(a)-(d) If a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filled in the above-identified patent application; and 3) any U.S. application-as-filled from which benefit is cought in the above-identified patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices.

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

1 FULL NAME OF SOLE OR FIRST ASSIGNOR BACALL Sukides	ASSISSION'S SICHATORE	of SEP 2017
MAILBUS CORRESS Tata Consultancy Services Limited SUM Toyers No 18 Section Food, Gandhingar Bengalinu, 560,009	Karnetaka, India	RESIDENCE India
2 FULL NAME OF SECOND ASSIGNOR, IF ANY PATRURI, Goutham	ASSIGNOR'S SIGNATURE	DATE
MAD INC. ADDRESS Total Consultative Services Limited, GR Tech Park, Dhara I 89/2, House Whiteheld Hoad, Bengaluru, 589,066, Kamat,	Suiking aka, India	RESIDENCE ricis
3. FULL NAME OF THED ASSIGNOR IF ANY KERSIMA, Anklir	ASSIGNOR'S SIGNATURE	DATE
MAILING ADDREPS) Tata Consultancy Services Limited, Tata Research Develop 54-B. Hadapsar Industrial Estate, Hadapsar, Pune: 411-01	pment & Design Centre 3. Maharashtra India	RESIDENCE India
FULL NAME OF FOURTH ASSIGNOR IF ANY ZAGADE, Practical Randas	ASSIGNORS SIGNATURE	DATE
MAILING ADDRESS Tata Consultancy Services Limited. Tata Research Develop 54-6. Hadapsar Industrial Estate. Hadapsar, Pure + 411.91	vnent & Design Centre 3. Misherashtra, tivite	RESIDENCE India
5 FULL NAME OF DETH ASSIGNOR, IF ANY DANIEL Another	ASSIGNOR'S SIGNATURE	DATE
MARLING ACTIONS Tale Consultancy Services Limited, ESEAW, SIPCO I Indu- Service - 683-68, Chemia, India	Strat Estate	RESIDENCE India

(BA CONSTRUCTOR)

ASSIGNMENT:

WHEREAS I/We, the below named inventor(s), (hereinafter referred to as Assignor(s)), have made an invention entitled:

for which I/WE executed an application for United States Letters Patent concurrently herewith; and

WHEREAS, Tata Consultancy Services Limited
a corporation of India
whose post office address is Nirmal Building, 9th Floor, Nariman Point, Mumbai 400021, Maharashtra, India

A FRAMEWORK TO ASSESS TECHNICAL FEASIBILITY OF DESIGNS FOR ADDITIVE MANUFACTURING

(hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, as well as all rights to claim priority on the basis of this application in any foreign country, and all applications for Letters Patent which may hereafter be filed for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, and all extensions, renewals, and reissues thereof; and I/We hereby authorize and request the Director of the United States Patent and Trademark Office and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

AND, I/WE HEREBY authorize ar	nd request that the attorneys having	Power of Attorney in this application, insert
here in parentheses (Application No	, filed) the filing date and
application number of said application wh	en known.	

DECLARATION:

As a named inventor below, I hereby declare that: (1) This declaration is directed to the above-identified application; (2) the above-identified application was made or authorized to be made by me; (3) my residence and mailing address are as stated below next to my name; and (4) I believe I am an original inventor or an original joint inventor of a claimed invention in the application. I hereby acknowledge that any willful false statements made in this declaration are punishable by fine or imprisonment of not more than five (5) years, or both, under section 1001 of Title 18 of the United States Code.

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In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the above-identified patent application with respect to: 1) the above-identified patent application dains priority under 35 U.S.C. T19(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the above-identified patent application; and 3) any U.S. application-ac-filed from which benefit is sought in the above-identified patent application.

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IN TESTIMONY WHEREOF, IAVe have hereunto set our hands.

1. FULL NAME OF SIZE OF FIRST ASSIGNOR BALAJE SUREMEN	ASSIGNOR'S SIGNATURE	ammunumumumumumumumumumumumumumumumumumu
MAKING ADDRESS Tata Consultancy Services Limited, 6JM Towers No.18 Seshadri Road, Gandhinagar, Bengaluru - 560 008,	RESIDENCE India	
2 FULL NAME OF SECONO ASSIGNOR, IF ANY PATHURI, Gouthern	ABSIGNORYE BIONATURE PORKA	Oute O4 - Sept-Sol7
MARLAYG ADDRESS Teta Consultancy Services Umited, GR Tech Park, Dhara I 55/2, Hoodi Whitefield Road, Bengaluru - 580 086, Kamati		RESIDENCE India
KRIGHNA Ankur	ASSIONOR'S SIGNATURE	DAYE
MAILING ADDRESS Tele Consultancy Services Limited, Tale Research Develop 54-B. Hadacsar Industrial Estate, Hadapsar, Pune - 411.01	PESIDENCE India	
ZAGADE, Pramod Ramdes	ASBIONOR'S BIONATURE	DAYE
MAILING ADDRESS Tate Consultancy Services Limited, Tate Research Development & Design Centre, 54-S. Eladapsar Indianal Estate, Hadapsar, Plans - 411 013, Manarashira, India 5. FULL NAME OF FIFTH ASSIGNOR, IF ANY ASSIGNOR'S SIGNATURE		RESIDENCE India
DANIEL, Amekiam	ASSIGNOR'S SIGNATURE	CATE
MALING ADDRESS Tate Consultancy Services Limited, EB2 NW, SIPCOT Industrial Exists; Siruseri —803-103, Chennai, India		RESIDENCE India

[JDF-123859-W1-IN]

ASSIGNMENT:

WHEREAS I/We, the below named inventor(s), (hereinafter referred to as Assignor(s)), have made an invention entitled:

for which I/WE executed an application for United States Letters Patent concurrently herewith; and

WHEREAS, __Tata Consultancy Services Limited
a corporation of __India

A FRAMEWORK TO ASSESS TECHNICAL FEASIBILITY OF DESIGNS FOR ADDITIVE MANUFACTURING

(hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application;

whose post office address is Nirmal Building, 9th Floor, Nariman Point, Mumbai 400021, Maharashtra, India

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, as well as all rights to claim priority on the basis of this application in any foreign country, and all applications for Letters Patent which may hereafter be filed for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, and all extensions, renewals, and reissues thereof; and I/We hereby authorize and request the Director of the United States Patent and Trademark Office and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

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IN TESTIMONY WHEREOF, IWe have hereunto set our hands.

1. FULL NAME OF SOLE OR FIRST ASSIGNOR BALAJI, Sukhdev	ASSICNOR'S SIGNATURE	DATE
MAILING ADDRESS	\$4.44.44.44.44.44.44.44.44.44.44.44.44.4	RESIDENCE
Tata Consultancy Services Limited, SJM Towers		India
No.18 Seshadri Road, Gandhinagar, Bengaluru - 560 009,	Kamataka, India	
2. FULL NAME OF SECOND ASSIGNOR, IF ANY	ASSIGNOR'S SIGNATURE	DATE
PATHURI, Goutham		
MAILING ADDRESS	<u> </u>	RESIDENCE
Tata Consultancy Services Limited, GR Tech Park, Dhara B		India
69/2, Hoodi Whitefield Road, Bengaluru - 560 066, Karnati		
3. FULL NAME OF THIRD ASSIGNOR, IF ANY	ASSIGNOR'S SIGNATURE	DATE
KRISHNA, Ankur		
MAIUNG ADDRESS		RESIDENCE
Tata Consultancy Services Limited, Tata Research Develop	India	
54-B, Hadapsar industrial Estate, Hadapsar, Pune - 411 01	3, Maharashtra, India	
	ASSIGNOR'S SIGNATURE	DATE
ZAGADE, Pramod Ramdas		
MAILING ADDRESS		RESIDENCE
Tata Consultancy Services Limited, Tata Research Development & Design Centre,		India
54-B, Hadapsar Industrial Estate, Hadapsar, Pune - 411 01		
5. FULL NAME OF FIFTH ASSIGNOR, IF ANY	ASSIGNOR'S SIGNATURE	DATE
DANIEL, Arockiam	A. Daniel	01 SEP 2017
MAILING ADDRESS		RESIDENCE
Tata Consultancy Services Limited. ES2 NW, SIPCOT Industrial Estate,		India
Siruseri 603 103, Chennai, India		In

ASSIGNMENT:

WHEREAS I/We, the below named inventor(s), (hereinafter referred to as Assignor(s)), have made an invention entitled:

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WHEREAS, Tata Consultancy Services Limited
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[IDF-123859-001-IN]

PATENT REEL: 047331 FRAME: 0791

SOLE/JOINT INVENTION (Worldwide Rights)

Authorization To Permit Access To Application by Participating Offices:

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (UPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified patent application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the Applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the above-identified application is filed to have access to the above-identified patent application.

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FULL NAME OF SOLE OR FIRST ASSIGNOR BALAJI, Sukhdev	ASSIGNOR'S SIGNATURE	DATE
MAILING ADDRESS Tata Consultancy Services Limited, SJM Towers No.18 Seshadri Road, Gandhinagar, Bengaluru - 560 009, Kamataka, India		RESIDENCE India
2. FULL NAME OF SECOND ASSIGNOR, IF ANY PATHURI, Goutham	ASSIGNOR'S SIGNATURE	DATE
MAILING ADDRESS Tata Consultancy Services Limited, GR Tech Park, Dhara Building 69/2, Hoodi Whitefield Road, Bengaluru - 560 066, Karnataka, India		RESIDENCE India
3. FULL NAME OF THIRD ASSIGNOR, IF ANY KRISHNA, Ankur	ASSIGNOR'S SIGNATURE	DATE 01-Sep-2017
MAILING ADDRESS Tata Consultancy Services Limited, Tata Research Development & Design Centre, 54-B, Hadapsar Industrial Estate, Hadapsar, Pune - 411 013, Meharashtra, India		RESIDENCE India
ZAGADE, Pramod Ramdas	ASSIGNOR'S SIGNATURE	DATE 01-568-2017
MAILING ADDRESS Tata Consultancy Services Limited, Tata Research Development & Design Centre, 54-B, Hadapsar Industrial Estate, Hadapsar, Pune - 411 013, Maharashtra, India		RESIDENCE India
5. FULL NAME OF FIFTH ASSIGNOR, IF ANY DANIEL, Arockiam	ASSIGNOR'S SIGNATURE	DATE
MAILING ADDRESS Tata Consultancy Services Limited, EB2 NW, SIPCOT Industrial Estate, Siruseri — 603 103, Chennai, India		RESIDENCE India

[IDF-123859-001-IN]

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