

<b>PATENT ASSIGNMENT COVER SHEET</b>
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 Stylesheet Version v1.2

EPAS ID: PAT5104109

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ABHIJAN BHATTACHARYYA	01/24/2018
SUVRAT AGRAWAL	01/23/2018
HEMANT KUMAR RATH	01/23/2018
ARPAN PAL	01/25/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	TATA CONSULTANCY SERVICES LIMITED
<b>Street Address:</b>	NIRMAL BUILDING, 9TH FLOOR
<b>Internal Address:</b>	NARIMAN POINT
<b>City:</b>	MUMBAI
<b>State/Country:</b>	INDIA
<b>Postal Code:</b>	400021
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16108920
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(202)408-4400
<i>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.</i>	
<b>Phone:</b>	(202) 408-4000
<b>Email:</b>	monica.freeman@finnegan.com
<b>Correspondent Name:</b>	TATA CONSULTANCY SERVICES LTD/FINNEGAN
<b>Address Line 1:</b>	901 NEW YORK AVE., NW
<b>Address Line 4:</b>	WASHINGTON, D.C. 20001
<b>ATTORNEY DOCKET NUMBER:</b>	13178.0386
<b>NAME OF SUBMITTER:</b>	MONICA J. FREEMAN
<b>SIGNATURE:</b>	/monicajfreeman/
<b>DATE SIGNED:</b>	08/22/2018
This document serves as an Oath/Declaration (37 CFR 1.63).	
<b>Total Attachments: 6</b>	

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## ASSIGNMENT AND DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION

### ASSIGNMENT:

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

**ADAPTIVE RESTful REAL-TIME LIVE MEDIA STREAMING**

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

(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 and 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 when 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 Patent Office (EPO), the Japan Patent Office (JPO), 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.

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-as-filed; 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 filed in the above-identified patent application; and 3) any U.S. application-as-filed from which benefit is sought 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 BHATTACHARYYA, Abhijan	ASSIGNOR'S SIGNATURE <i>Abhijan Bhattacharyya</i>	DATE 24-Jan-2018
MAILING ADDRESS Tata Consultancy Services Limited, Building 1B, Ecospace, Innovation Labs, Kolkata - STP, Kolkata - 700160, West Bengal, India		RESIDENCE India
2. FULL NAME OF SECOND ASSIGNOR, IF ANY AGRAWAL, Suvrat	ASSIGNOR'S SIGNATURE	DATE
MAILING ADDRESS Tata Consultancy Services Limited, Kalinga Park, Plot-33, Patia, Chandaka Industrial Estate, Bhubaneswar - 751024, Orisha, India		RESIDENCE India
3. FULL NAME OF THIRD ASSIGNOR, IF ANY RATH, Hemant Kumar	ASSIGNOR'S SIGNATURE	DATE
MAILING ADDRESS Tata Consultancy Services Limited, ODC-4, 7th Floor, H-Block, Gopalan Global Axis Building Opposite to Safya Sai Hospital, Bengaluru - 560066, Karnataka, India		RESIDENCE India
4. FULL NAME OF FOURTH ASSIGNOR, IF ANY PAL, Arpan	ASSIGNOR'S SIGNATURE <i>Arpan</i>	DATE 25-Jan-2018
MAILING ADDRESS Tata Consultancy Services Limited, Building 1B, Ecospace, Innovation Labs, Kolkata - STP, Kolkata - 700160, West Bengal, India		RESIDENCE India

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(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.

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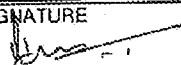
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1. FULL NAME OF SOLE OR FIRST ASSIGNOR <b>BHATTACHARYYA, Abhijan</b>	ASSIGNOR'S SIGNATURE	DATE
MAILING ADDRESS Tata Consultancy Services Limited, Building 1B,Ecospace, Innovation Labs, Kolkata - STP, Kolkata - 700160, West Bengal, India		RESIDENCE India
2. FULL NAME OF SECOND ASSIGNOR, IF ANY <b>AGRAWAL, Suvrat</b>	ASSIGNOR'S SIGNATURE	DATE
MAILING ADDRESS Tata Consultancy Services Limited, Kalinga Park, Plot-35, Patia, Chandaka Industrial Estate, Bhubaneswar - 751024, Odisha, India		RESIDENCE India
3. FULL NAME OF THIRD ASSIGNOR, IF ANY <b>RATH, Hemant Kumar</b>	ASSIGNOR'S SIGNATURE 	DATE 23 Jan 2018
MAILING ADDRESS Tata Consultancy Services Limited, ODC-4, 7th Floor, H-Block, Gopalan Global Axis Building Opposite to Satya Sai Hospital, Bengaluru - 560066, Karnataka, India		RESIDENCE India
4. FULL NAME OF FOURTH ASSIGNOR, IF ANY <b>PAL, Arpan</b>	ASSIGNOR'S SIGNATURE	DATE
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SOLE/JOINT INVENTION  
(Worldwide Rights)

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