503909125 07/11/2016

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:		NEW ASSIGNMENT			
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT		
CONVEYING PARTY DA	ATA				
		Name		Execution Date	
LALIT R. KOTECHA				07/29/2010	
SERGIO AGUIRRE				07/30/2010	
RAAFAT KAMEL				08/04/2010	
KAMLESH KAMDAR				08/02/2010	
RECEIVING PARTY DA	ТА				
Name:	VERIZO	N PATENT AND LICENSING IN	IC.		
Street Address:	ONE VE	RIZON WAY			
City:	BASKIN	IG RIDGE			
State/Country:	NEW JE	RSEY			
Postal Code:	07920				
Property Type Application Number:		Number			
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CORRESPONDENCE D	ΑΤΑ	703)439-2658			
CORRESPONDENCE D. Fax Number: <i>Correspondence will be</i>	ATA e sent to	703)439-2658 the e-mail address first; if tha		,	
CORRESPONDENCE D. Fax Number: <i>Correspondence will be</i>	ATA e sent to provided	703)439-2658		,	
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CORRESPONDENCE D. Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name:	ATA e sent to provided	703)439-2658 <i>the e-mail address first; if tha</i> ; <i>if that is unsuccessful, it will</i> 5712970007 pto@snyderllp.com SNYDER, CLARK, LESCH & CH	be sent via	,	
CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1:	ATA e sent to provided	703)439-2658 <i>the e-mail address first; if tha</i> ; <i>if that is unsuccessful, it will</i> 5712970007 oto@snyderllp.com SNYDER, CLARK, LESCH & CH 950 HERNDON PARKWAY	be sent via	,	
CORRESPONDENCE D Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 2:	ATA e sent to provided	703)439-2658 <i>the e-mail address first; if tha</i> ; <i>if that is unsuccessful, it will</i> 5712970007 bto@snyderllp.com SNYDER, CLARK, LESCH & CH 950 HERNDON PARKWAY SUITE 365	be sent via	,	
CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1:	ATA e sent to provided	703)439-2658 <i>the e-mail address first; if tha</i> ; <i>if that is unsuccessful, it will</i> 5712970007 oto@snyderllp.com SNYDER, CLARK, LESCH & CH 950 HERNDON PARKWAY	be sent via	,	
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CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4:	ATA e sent to provided	703)439-2658 <i>the e-mail address first; if tha</i> <i>; if that is unsuccessful, it will</i> 5712970007 pto@snyderllp.com SNYDER, CLARK, LESCH & CH 950 HERNDON PARKWAY SUITE 365 HERNDON, VIRGINIA 20170	be sent via	,	
CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4:	ATA e sent to provided	703)439-2658 <i>the e-mail address first; if tha</i> <i>; if that is unsuccessful, it will</i> 5712970007 oto@snyderllp.com SNYDER, CLARK, LESCH & CH 950 HERNDON PARKWAY SUITE 365 HERNDON, VIRGINIA 20170 20100425C1	<i>be sent via</i> UNG, LLP	,	

Verizon Invention Assignment fix Verizon Dunkost No.: 20100425 Page 1 of 1

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I/We, the undersigned:

have sold, assigned and transferred, and by the mezents do berefry sell, assign, and transfer, to the Verizon legal ٤. entity identified below ("Assignce") and its successors and assigns, the entire worldwide right, title and interest in and to any and all improvements which are described in the application for United States Letters Patent entitled

VIDEO CONTENT DELIVERY OVER WIRELESS ACCESS NETWORKS WITH QUALITY OF SERVICE (QoS) GUARANTEES

Nwhich has been executed by the undersigned communally herewith, and in which case I/we hareby authorize and request the Assignee, its excessors, assigns and/or legal representatives, to insert base in the pareotheses (Application Number 12/849,916, filed August 4, 2010) the filing date and application number of said application when known.

Infaich was filed on and assigned Application No.

and in and to said application, and all divisional, continuing (in whole or in part), substitute, renewal, reissue, provisioned, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of said improvements or based on or elabolag priority to said application; and in and to all original and reissued patents which have been or shall be issued in the United States and foreign concluses from any of said applications, and in and to all rights of priority resulting from the filing of any of said applications, and in and to all rights which may exist under the Internasional Convention for the Protection of Industrial Property to any of the foregoing;

- II. agree that said Assignee may apply for and receive Lefters Patent for said improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its uncessors, assigns and legal representatives, to carry out in good fach the intern and purpose of this Assignment, the undersigned will execute all divisional, coolinging (in whele or in part), substitute, renewed, reissue, and all other patcel applications on any and all said improvements; exercise all rightful eaths, declarations, assignments, powers of attomey and other papers; communicate to said Assignee, its successors, assigns, and representatives, all facts known to undersigned relating to said improvements and the history thereof, and generally do everything possible which said Assignce, its successors, assigns or representatives shall consider desirable for aiding to securing and maintaining proper patent protection for said improvements and for vesting litle to said improvements and all applications for Letters Patent and all Letters Patent on said hoprovements, in said Assignce, its successors and assigns; and
- III. onversant with said Assignce, its successors, assigns and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein identified has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

IN WITNESS to inviour agreement to the foregoing, I/we have executed this Assignment as set both below:

Verizon entity (Assignes): Verizon Patent and Licensing inc., having a place of business at One Verizon Way, Basking Ridge, MJ 07920.

ASSIGNORS:	ARA False
Signature:	S S Marin
Signature:	LAH Retilal KOTECHA
· ·	Sergio AGLIRRE
Signature:	REALANEL A
Signature:	Lahl-Bilder
	Kamlesh KANDAR

Date: \$ 2/20(00

PATENT REEL: 039123 FRAME: 0803

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I/We, the undersigned:

 have sold, assigned and transferred, and by the presents do hereby sell, assign, and transfer, to the Verizon legal entity identified below ("Assignee") and its successors and assigns, the entire worldwide right, title and interest in and to any and all improvements which are described in the application for United States Letters Patent entitled

VIDEO CONTENT DELIVERY OVER WIRELESS ACCESS NETWORKS WITH QUALITY OF SERVICE (QoS) GUARANTEES

Which has been executed by the undersigned concurrently herewith, and in which case l/we hereby authorize and request the Assignee, its successors, assigns and/or legal representatives, to insert here in the parentheses (Application Number 12/849, 916 filed August 4, 2019 the filing date and application number of said application when known.

which was filed on ______ and assigned Application No.

and in and to said application, and all divisional, continuing (in whole or in part), substitute, renewal, reissue, provisional, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of said improvements or based on or claiming priority to said application; and in and to all original and reissued patents which have been or shall be issued in the United States and foreign countries from any of said applications, and in and to all rights of priority resulting from the filing of any of said applications; and in and to all rights which may exist under the International Convention for the Protection of Industrial Property to any of the foregoing;

- II. agree that said Assignee may apply for and receive Letters Patent for said improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the indersigned will execute all divisional, continuing (in whole or in part), substitute, renewal, reissue, and all other patent applications on any and all said improvements; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns, and representatives, all facts known to undersigned relating to said improvements and the history thereof; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing and maintaining proper patent protection for said improvements and all applications for Letters Patent and all Letters Patent on said improvements, in said Assignee, its successors and assignee, its successors and assignee, its successors and assignee, its successors and all consider desirable for aiding in securing and maintaining proper patent protection for said improvements and all applications for Letters Patent and all Letters Patent on said improvements, in said Assignee, its successors and assigns; and
- III. covenant with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein identified has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

IN WITNESS to my/our agreement to the foregoing, I/we have executed this Assignment as set forth below:

Verizon entity (Assignee): <u>Verizon Patent and Licensing Inc.</u>, having a place of business at <u>One Verizon Way</u>, <u>Basking Ridge, NJ 07920</u>.

ASSIGNORS	•	
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Signature:	
Signature:	Lalit Ratilal KOTECHA XIERSI Guisse
Signature;	Sergio AGUIRRE
Signature:	Raafat KAMEL

Kamlesh KANDAR

Date July 30, Date: Date

Date:



PATENT REEL: 039123 FRAME: 0804

RECORDED: 07/11/2016