PATENT ASSIGNMENT

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SUBMISSION TYPE	E:	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT	
CONVEYING PART	Y DATA	,		
		Name	Execution Date	
Richard M. Woundy	/		04/02/2007	
Manoj Chaudhari			03/30/2007	
Raju Datla			03/30/2007	
Eugene Lee			04/04/2007	
Srinivas Bongoni			04/04/2007	
RECEIVING PARTY	Ź DATA			
Name:	Comcast Cable	e Holdings, LLC		
Street Address:	1500 Market St	treet		
Internal Address:	34th Floor			
City:	Philadelphia			
State/Country:	PENNSYLVAN	IA		
Postal Code:	19102-2148			
]	
Property			mber	
Application Numbe	r : 1	4039720		
CORRESPONDENC	CE DATA			
Fax Number: <i>Correspondence win</i> Email: Correspondent Nam Address Line 1: Address Line 4:	BWPTOP ne: Banner & 1100 13th	01 <i>Iail when the fax attempt is unsucce</i> AT@bannerwitcoff.com, dholbert@ Witcoff / Evan M. Clark Street, N.W. on, DISTRICT OF COLUMBIA 2000	bannerwitcoff.com	
ATTORNEY DOCKE	ET NUMBER:	007412.02532		
NAME OF SUBMIT	rer:	Evan M. Clark		
502516709			PATENT REEL: 031320 FRAME: 0640	

Signature:	/Evan M. Clark/
Date:	10/01/2013
Total Attachments: 3 source=02532ASNpdf#page1.tif source=02532ASNpdf#page2.tif source=02532ASNpdf#page3.tif	

Atty, Docket No. 2006009864

ASSIGNMENT

For good and valuable consideration, receipt of which is hereby acknowledged, we Richard M. Woundy, Manoj Chaudhari, Raju Datla, Eugene Lee, and Srinivas Bongoni, of 17 Foley Drive, North Reading, Massachusetts 01864, 11 Breeze Drive, Dayton, New Jersey 08810, 5 Brompton Court, Cherry Hill, New Jersey 08003, 2284 Georgetown Drive, Malvern, Pennsylvania 19355, 251 West Dekalb Pike, D612, King of Prussia, Pennsylvania 19406, respectively, do hereby assign, sell and set over to COMCAST CABLE HOLDINGS, LLC, a corporation organized and existing under the laws of the State of Delaware, and having a place of business at 1500 Market Street, 34th Floor, Philadelphia, PA 19102-2148, hereinafter referred to as the ASSIGNEE, its successors, assigns or other legal representatives, the entire right, title and interest, domestic and foreign, in and to the inventions and discoveries in

SYSTEM AND METHOD FOR PROVIDING AN APPLICATION TO A DEVICE

for which an application for a United States Patent is to be filed or will have been filed on <u>January 22, 2007</u>, as Application Serial No. <u>11/625,422</u> (we hereby authorize our attorney to insert the application filing date and serial number when they become known), including the right of said ASSIGNEE, its successors, assigns or other legal representatives to make applications and to receive Letters Patent for said inventions and discoveries in any and all foreign countries in its or their own name or names, or in our names, at its or their election, and we hereby assign, sell and set over to said ASSIGNEE, its successors, assigns or other legal representatives, all rights of priority, including any provisional applications, in and to said inventions and discoveries in all countries, including all applications claiming benefit of the filing date hereof, continuations, continuations-in-part, divisionals, reexaminations and reissue applications.

And we hereby agree for ourselves, our heirs, successors, assigns or other legal representatives to execute any and all papers, including applications for Letters Patent of any and all kinds and in any and all countries and to perform any and all acts which said ASSIGNEE, its successors, assigns or other legal representatives may deem necessary to secure thereto the rights herein assigned, sold and set over.

And we hereby represent and warrant that we have not granted any rights inconsistent with the rights granted herein.

20()Date

Date:

Date: 3 - 30 20 07

Woundv

Manoj Chaudha Raju Datla

PATENT REEL: 031320 FRAME: 0642

Atty. Docket No. 2006009864

Date:
Engene Lee Date: <u>0</u> 4 10 4 _ 20 07 STATE OF <u>M</u> COUNTY OF <u>MDDEEER</u>) Ss. On this <u>0</u> day of <u>MADDEEER</u>) Ss. On this <u>0</u> day of <u>MADDEEER</u>) Ss. On this <u>0</u> day of <u>MADDEEER</u>) State OF Motary Public Notary Public My Commission expires: FERDINAND J. REINKE NOTARY PUBLIC STATE OF MY COMMISSION EXPIRES JUNE 2, 2010 STATE OF On this <u>30</u> day of <u>MMNOJ</u> common to be the person named in and who executed the above instrument, and acknowledged that he executed the same to the uses and purposes therein mentioned. STATE OF) State OF
STATE OF
On this <u>Or</u> day of <u>AMU</u> , <u>20</u> , <u>personally appeared before</u> me <u>Remain Wounder</u> , to me known to be the person named in and who executed the above instrument, and acknowledged that he executed the same for the uses and purposes therein mentioned. <u>Junious</u> Notary Public My Commission expires: FERDINAND J. REINKE NOTARY PUBLIC STATE OF <u>MIDDLESE</u> SS. COUNTY OF <u>MIDDLESE</u> (SEAL) On this <u>30</u> day of <u>MMCH</u> , <u>2007</u> , personally appeared before me <u>MMOJ</u> <u>CHAUDHAET</u> , to me known to be the person named in and who executed the above instrument, and acknowledged that he executed the same for the uses and purposes therein mentioned. <u>Junious</u> (SEAL) SS. COUNTY OF <u>MIDDLESE</u> (SEAL) STATE OF On this <u>30</u> day of <u>MMCH</u> , <u>2007</u> , personally appeared before me <u>MMOJ</u> <u>CHAUDHAET</u> , to me known to be the person named in and who executed the above instrument, and acknowledged that he executed the same for the uses and purposes therein mentioned. <u>Junious</u> My Commission expires: FERDINAND J. REINKE NOTARY PUBLIC STATE OF NEW JERSEY COMM. ID 2329753 MY COMMISSION EXPIRES JUNE 2, 2010 STATE OF NEW JERSEY COUNTY OF MUDLESE() SS.
On this <u>Or</u> day of <u>AMU</u> , <u>20</u> , <u>personally appeared before</u> me <u>Remain Wounder</u> , to me known to be the person named in and who executed the above instrument, and acknowledged that he executed the same for the uses and purposes therein mentioned. <u>Junious</u> Notary Public My Commission expires: FERDINAND J. REINKE NOTARY PUBLIC STATE OF <u>MIDDLESE</u> SS. COUNTY OF <u>MIDDLESE</u> (SEAL) On this <u>30</u> day of <u>MMCH</u> , <u>2007</u> , personally appeared before me <u>MMOJ</u> <u>CHAUDHAET</u> , to me known to be the person named in and who executed the above instrument, and acknowledged that he executed the same for the uses and purposes therein mentioned. <u>Junious</u> (SEAL) SS. COUNTY OF <u>MIDDLESE</u> (SEAL) STATE OF On this <u>30</u> day of <u>MMCH</u> , <u>2007</u> , personally appeared before me <u>MMOJ</u> <u>CHAUDHAET</u> , to me known to be the person named in and who executed the above instrument, and acknowledged that he executed the same for the uses and purposes therein mentioned. <u>Junious</u> My Commission expires: FERDINAND J. REINKE NOTARY PUBLIC STATE OF NEW JERSEY COMM. ID 2329753 MY COMMISSION EXPIRES JUNE 2, 2010 STATE OF NEW JERSEY COUNTY OF MUDLESE() SS.
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My Commission expires: FERDINAND J. REINKE (SEAL) STATE OF NEW JERSEY COMM. ID 2329753 MY COMMISSION EXPIRES JUNE 2, 2010 STATE OF STATE OF MI On this 30 day of MARCH , 2007, personally appeared before me MANDJ CHAUDHART to me known to be the person named in and who executed the above instrument, and acknowledged that he executed the same for the uses and purposes therein mentioned. STATE OF My Commission expires: Notary Public My Commission expires: Notary Public My Commission expires: STATE OF MY COMMISSION EXPIRES JUNE 2, 2010 STATE OF STATE OF STATE OF State of NEW JERSEY COUNTY OF State of NEW JERSEY State of State of NEW JERSEY State of State of NEW JERSEY State of State of NEW JERSEY COUNTY OF State of NEW JERSEY State of State of NEW JERSEY State of State of NEW JERSEY State of
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$MY COMMISSION EXPIRES JUNE 2, 2010$ $STATE OF _MI \\) ss.$ $COUNTY OF \underline{MIDDLESE}(X)$ $MARCH \\ 0 n this \underline{30} \\ 0 n this $
On this <u>30</u> day of <u>MARCH</u> , 2007, personally appeared before me <u>MANOT</u> <u>CHAUDHAET</u> , to me known to be the person named in and who executed the above instrument, and acknowledged that he executed the same for the uses and purposes therein mentioned. <u>Jacobucery Mulce</u> Notary Public My Commission expires: FERDINAND J. REINKE NOTARY PUBLIC STATE OF <u>MIDDLESE</u> (SEAL) STATE OF <u>MIDDLESE</u> (SEAL) STATE OF <u>MIDDLESE</u> STATE OF <u>MIDDLESE</u>
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(SEAL) STATE OF
(SEAL) (SEAL) STATE OF NOTARY PUBLIC STATE OF NEW JERSEY COMM. ID 2329753 MY COMMISSION EXPIRES JUNE 2, 2010 SS. COUNTY OF MIDDLESEX
STATE OF
On this <u>30</u> day of <u>MARCH</u> , 20 <u>0</u> , personally appeared before me <u>RATU</u> <u>DATLA</u> , to me known to be the person named in and who executed the above instrument, and acknowledged that he executed the same for the uses and purposes therein mentioned.
Notary Public My Commission expires:
(SEAL) FERDINAND J. REINKE
-2- NOTARY PUBLIC -2- STATE OF NEW JERSEY COMM. ID 2329753 MY COMMISSION EXPIRES JUNE 2, 2010

PATENT REEL: 031320 FRAME: 0643

STATE OF Pennsy Wand COUNTY OF Phila ______day of ______, 20 <u>07</u> personally appeared before ______, to me known to be the person named in and who executed the above On this ______ me Eugene, Lee instrument, and acknowledged that he executed the same for the uses and purposes therein mentioned. Notary Public My Commission expires: COMMONWEALTH OF PENNSYLVANIA NOTARIAL SEAL (SEAL) AIDA SPARTA, Notary Public City of Philadelphia, Phila. County My Commission Expires March 30, 2008 STATE OF Pennsy lunn COUNTY OF Thild On this <u>4</u>th day of <u>April</u>, 20<u>67</u>, personally appeared before me <u>Srinivas</u> <u>Bonana</u>, to me known to be the person named in and who executed the above instrument, and acknowledged that he executed the same for the uses and purposes therein mentioned. Notary Public My Commission expires. (SEAL) COMMONWEALTH OF PENNSYLVANIA NOTARIAL SEAL AIDA SPARTA, Notary Public City of Philadelphia, Phila. County My Commission Expires March 30, 2008

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PATENT REEL: 031320 FRAME: 0644

RECORDED: 10/01/2013