#### 502695557 02/25/2014

# PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT2742162

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

# **CONVEYING PARTY DATA**

Name	Execution Date
ROMULO PONTUAL	09/20/2013
HANNO BASSE	02/17/2014
SASSAN PEJHAN	05/08/2013
JOSEPH SANTORU	05/09/2013
ERNEST C. CHEN	10/23/2013

# **RECEIVING PARTY DATA**

Name:	The DIRECTV Group, Inc.
Street Address:	2230 E. Imperial Highway
City:	El Segundo
State/Country:	CALIFORNIA
Postal Code:	90245

## **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	13829916

## **CORRESPONDENCE DATA**

Fax Number: (310)964-0941

Email: janet.shibata@directv.com

Correspondence will be sent via US Mail when the email attempt is unsuccessful.

Correspondent Name: THE DIRECTV GROUP, INC. Address Line 1: 2230 E. IMPERIAL HIGHWAY

Address Line 2: CA/LA5/A109

Address Line 4: EL SEGUNDO, CALIFORNIA 90245

ATTORNEY DOCKET NUMBER:	PD-212037
NAME OF SUBMITTER:	JANET SHIBATA  PATENT

Signature:	/Janet Shibata/
Date:	02/25/2014
Total Attachments: 5 source=PD-212037-ASN#page1.tif source=PD-212037-ASN#page2.tif source=PD-212037-ASN#page3.tif source=PD-212037-ASN#page4.tif source=PD-212037-ASN#page5.tif	



### **ASSIGNMENT**

WHEREAS, ROMULO PONTUAL, HANNO BASSE, SASSAN PEJHAN, JOSEPH SANTORU and ERNEST C. CHEN, as below named joint inventors of the city and state as stated below next to our names, have invented a(an) METHOD AND APPARATUS FOR TRANSMITTING HIGH BANDWIDTH SIGNALS WITH LOW BANDWIDTH TRANSPONDERS for which application for Letters Patent of the United States has been filed on March 14, 2013 as U.S. patent application Serial No. 13/829,916, and is a continuation-in-part application of U.S. patent application Serial No. 13/484,756 filed on May 31, 2012 entitled COMBINING TRANSPONDER BANDWIDTHS FOR SOURCE AND FORWARD ERROR CORRECTION ENCODING EFFICIENCY by Ernest C. Chen, which is a continuation of U.S. patent application Serial No. 11/193,856 filed on July 29, 2005 and issued on June 12, 2002 as U.S. Patent No. 8,200,149.

WHEREAS, The DIRECTV Group, Inc. (hereinafter referred to as the "Company"), a Delaware Corporation, having its principal place of business in El Segundo, California, is desirous of acquiring the entire and exclusive right, title and interest in, to and under said invention, said application and any and all Letters Patent that may be granted therefore in the United States and throughout the world:

NOW, THEREFORE, in consideration of the obligations voluntarily assumed by us and set forth in invention agreements between us and our employer, effective the date as stated below next to our names, and other good and valuable consideration, receipt of which is hereby acknowledged, we do hereby sell, assign and transfer to the Company, its successors, assigns or other legal representatives, the entire and exclusive right, title and interest in and to said invention invented by us, to said application and any and all applications which are continuations, continuations-in- part, divisions or substitutes of said application and any and all Letters Patent that may be granted therefore in the United States and throughout the world on any of said applications and to any and all reexaminations, reissues, renewals or extensions of said Letters Patent in the United States and throughout the world for the full term or terms for which said Letters patent may be granted in the United States and throughout the world; authorize and request The Commissioner of Patents and Trademarks of the United States and all foreign countries to issue all such Letters Patent to said Company, its successors, assigns or other legal representatives; covenant that no assignment, sale, agreement, transfer or encumbrance has been, or will be, made or entered into which would conflict with this assignment, sale and transfer; and agree to communicate to the Company, its successors, assigns or other legal representatives, upon request and at no cost or expense to us, any facts known by us respecting said invention, do all lawful acts, including the execution and delivery of all papers and proper paths and giving of testimony that is deemed necessary or desirable by the Company, its successors, assigns or other legal representatives with regard to said invention for protecting, obtaining, maintaining and enforcing any and all of said Letters Patent in the United States and throughout the world for said invention and for perfecting, affirming, recording and maintaining the title of the Company, its successors, assigns or other legal representatives, and igenerally cooperate to the fullest extent in all matters pertaining to said invention, and any and all of said Letters Patent and the title thereto in the Company, its

successors, assigns or other legal representatives.

IN WITNESS WHEREOF, we have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
ROMULO PONTUAL		
RESIDENCE (CITY AND STATE)		
Palos Verdes Estates, California		
CHIL NAME OF COLUMN FAMILIAN FAITOS	FORD OF KONTON ON ONLY A WORDS	7 exare
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
HANNO BASSE	14.72	2/17/14
RESIDENCE (CITY AND STATE)		····
Santa Monica, California		
FULL NAME OF SOLE OR JOINT INVENTOR	TINVENTOR'S SIGNATURE	TDATE
SASSAN PEJHAN		
RESIDENCE (CITY AND STATE)		
Los Angeles, California		
FULL NAME OF SOLE OR JOINT INVENTOR	I INVENTOR'S SIGNATURE	TOATE
JOSEPH SANTORU		
RESIDENCE (CITY AND STATE) Agoura Hills, California		
/ Agoura i mis, Gamorisa		
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
ERNEST C. CHEN	<u> </u>	
RESIDENCE (CITY AND STATE) San Pedro, California		
awar da		
STATE OF CALIFORNIA )		
).SS:		
COUNTY OF LOS ANGELES )		
On , before me, J	fariet E. Shibata, a Notary Public in and f	or said State.
personally appeared		
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed		
to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their		
authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity		
upon behalf of which the person(s) acted, executed	the instrument.	
I certify under PENALTY OF PERJURY under the la	num of the State of Collegation that the fea	nesina
paragraph is true and correct.	aws of the atata of palliothis that the for	agong
per ago agos or construction and construction		
WITNESS my hand and official seal.		
	X1 4 355 . 3 . 5	
	Notary Public	

successors, assigns or other legal representatives.

IN WITNESS WHEREOF, we have executed this instrument.

JANET E. SHIBATA
Commission # 1990823
Notary Public - California
Los Angeles County
My Comm. Expires Oct 9, 2016

FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
ROMULO PONTUAL	The area	9/20/13
RESIDENCE (CITY AND STATE)	1 '	
Palos Verdes Estates, California		
	······································	***************************************
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
HANNO BASSE		
RESIDENCE (CITY AND STATE)		
Santa Monica, California	······	
FULL NAME OF SOLE OR JOINT INVENTOR	I INVERTOR'S STGNATURE	DATE
TOLE TO WILL ON GOLD ON GONT WITH THE		5/8/2013
SASSAN PEJHAN	120.074	10/60/3
RESIDENCE (CITY AND STATE)		
Los Angeles, California		
CULL MAKE OF OO F OO SOMT INSTRUCTOR	LINGUISTONIO CICRIATION	Irsare
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
JOSEPH SANTORU	1 ATT	5/9/2013
RESIDENCE (CITY AND STATE)		
Agoura Hills, California		
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
ERNEST C. CHEN	Gut the	10/23/2013
RESIDENCE (CITY AND STATE)		
San Pedro, California		
STATE OF CALIFORNIA		
) SS: COUNTY OF LOS ANGELES )		
On May 8, 20(3 before me,	Janet E. Shibata, a Notary Public in and f	ne eniel Statis
personally appeared SASSAN PEJHA	ki	ca sauc Diata,
who proved to me on the basis of satisfactory evid		is/are subscribed
to the within instrument and acknowledged to me to		
authorized capacity(les), and that by his/her/their s		
upon behalf of which the person(s) acted, executed	-	~ / E
- Control of the cont		
I certify under PENALTY OF PERJURY under the	laws of the State of California that the for	egaing
paragraph is true and correct.		
WITNESS my hand and official seal.		•

rage o
STATE OF CALIFORNIA: ) SS:
COUNTY OF LOS ANGELES
On Nov 9, 2013 , before me, Janet E. Shibata, a Notary Public in and for said State, personally appeared 1058PH SANTORU ,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.
JANET E. SHIBATA Commission # 1980823 Notary Public - California Los Angeles County My Comm. Expires Oct 9, 2016
STATE OF CALIFORNIA )
) SS: COUNTY OF LOS ANGELES )
On September 20,20(3 , before me, Janet E. Shibata, a Notary Public in and for said State, personally appeared ROMULO PONTUME.
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed
to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANET E. SHIBATA
Commission # 1990823
Notary Public - Californis
Los Angeles County
My Comm. Expires Oct 9, 2016

# STATEMENT BY WITNESS

1,	, whose full post office address is
(name of witness)	
(address of	witness)
was personally present and did see HANNO BAS	SE, who is known to me, execute the above
assignment.	
	(signature of witness)
STATE OF CALIFORNIA ) SS: COUNTY OF LOS ANGELES )	
On October 23, 2013, before me, personally appeared ERNEST C. CHEN, who provperson(s) whose name(s) is/are subscribed to the he/she/they executed the same in his/her/their auti	Janet E. Shibata, a Notary Public in and for said State, yed to me on the basis of satisfactory evidence to be the within instrument and acknowledged to me that horized capacity(ies), and that by his/her/their signature(s) behalf of which the person(s) acted, executed the
certify under PENALTY OF PERJURY under the paragraph is true and correct.	laws of the State of California that the foregoing
WITNESS my hand and official seal.	Jute Silve
JANET E. SHIBATA Commission # 1990823 Notary Public - California East Angeles County My Comm. Expires Oct 9, 2016	

PATENT REEL: 032295 FRAME: 0855

RECORDED: 02/25/2014