

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
RAYNOLD M. KAHN	05/11/2006
PETER M. KLAUSS	05/11/2006
STEPHEN P. DULAC	05/11/2006
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	THE DIRECTV GROUP, INC.
<b>Street Address:</b>	2230 E. IMPERIAL HIGHWAY
<b>City:</b>	EL SEGUNDO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	90245-0956
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15339559
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(310)641-8798
<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>	3106418797
<b>Email:</b>	ebrown@gates-cooper.com
<b>Correspondent Name:</b>	GATES & COOPER LLP
<b>Address Line 1:</b>	6701 CENTER DRIVE WEST
<b>Address Line 2:</b>	SUITE 1050
<b>Address Line 4:</b>	LOS ANGELES, CALIFORNIA 90045
<b>ATTORNEY DOCKET NUMBER:</b>	DTV205043A
<b>NAME OF SUBMITTER:</b>	VICTOR G. COOPER, REG. NO. 39,641
<b>SIGNATURE:</b>	/Victor G. Cooper/
<b>DATE SIGNED:</b>	01/10/2017
<b>Total Attachments: 2</b>	
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## ASSIGNMENT

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PD-205043

WHEREAS, RAYNOLD M. KAHN, PETER M. KLAUSS, AND STEPHEN P. DULAC, as below named inventors of the cities and states as stated below next to their names, has invented a **METHODS AND APPARATUS TO PROVIDE CONTENT ON DEMAND IN CONTENT BROADCAST SYSTEMS** for which application for Letters Patent of the United States has been executed by us on this day, or (if the following is completed) filed on May 15, 2006 as Serial No. 11/433,969;

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, 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 oaths 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 generally 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, I have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
RAYNOLD M. KAHN RESIDENT (CITY AND STATE) Los Angeles, California	<i>Raynold M. Kahn</i>	5/11/06

FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
PETER M. KLAUSS RESIDENT (CITY AND STATE) Torrance, California	<i>Peter M. Klauss</i>	5/11/06

FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
STEPHEN P. DULAC RESIDENT (CITY AND STATE) Santa Clarita, California	<i>Stephen P. Dulac</i>	5/11/06

STATE OF CALIFORNIA        )  
  )        SS:  
COUNTY OF LOS ANGELES    )

On May 11, 2006, before me, Janet E. Shibata, a Notary Public in and aforesaid State, personally appeared: RAYNOLD M. KAHN, PETER M. KLAUSS and STEPHEN P. DULAC  
 personally known to me or  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.

WITNESS my hand and official seal.



*Janet E. Shibata*  
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Notary Public