

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Mustafa Eroz</td> <td>08/04/2005</td> </tr> <tr> <td>Lin-Nan Lee</td> <td>08/08/2005</td> </tr> <tr> <td>Feng-Wen Sun</td> <td>08/08/2005</td> </tr> </tbody> </table>		Name	Execution Date	Mustafa Eroz	08/04/2005	Lin-Nan Lee	08/08/2005	Feng-Wen Sun	08/08/2005		
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RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>The DIRECTV Group, Inc.</td> </tr> <tr> <td>Street Address:</td> <td>2230 E. Imperial Highway</td> </tr> <tr> <td>City:</td> <td>El Segundo</td> </tr> <tr> <td>State/Country:</td> <td>CALIFORNIA</td> </tr> <tr> <td>Postal Code:</td> <td>90245</td> </tr> </table>		Name:	The DIRECTV Group, Inc.	Street Address:	2230 E. Imperial Highway	City:	El Segundo	State/Country:	CALIFORNIA	Postal Code:	90245
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PROPERTY NUMBERS Total: 1											
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>12753528</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	12753528						
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CORRESPONDENCE DATA											
<p>Fax Number: 3109640941 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Email: janet.shibata@directv.com</p> <p>Correspondent Name: The DIRECTV Group, Inc.</p> <p>Address Line 1: 2230 E. Imperial Highway</p> <p>Address Line 2: CA/LA1/A109</p> <p>Address Line 4: El Segundo, CALIFORNIA 90245</p>											
ATTORNEY DOCKET NUMBER:	PD-204040A										
NAME OF SUBMITTER:	Janet Shibata										
<p>Total Attachments: 3</p> <p>source=PD-204040 U.S. assignment#page1.tif</p> <p>source=PD-204040 U.S. assignment#page2.tif</p> <p>source=PD-204040 U.S. assignment#page3.tif</p>											

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ASSIGNMENT

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Attorney Docket No: PD-204040

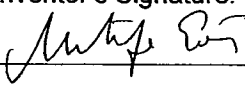
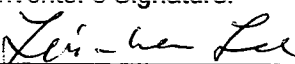

WHEREAS, I, as below named sole inventor (if only one name is listed below) or joint inventor (if plural names are listed below) of the city and state as stated below next to my name, have invented a **CODE DESIGN AND IMPLEMENTATION IMPROVEMENTS FOR LOW DENSITY PARITY CHECK CODES FOR MULTIPLE-INPUT MULTIPLE-OUTPUT CHANNELS:**

- ☒ for which application for Letters Patent of the United States has been executed by me on this day; or
☐ which is embodied in U.S. Patent Application Serial No. _____ filed on _____.

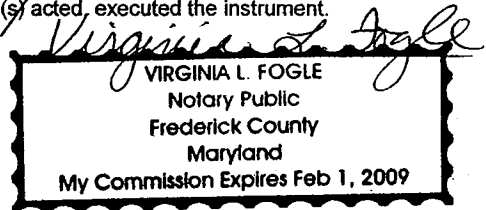
WHEREAS, **The DIRECTV GROUP, Inc.**, a Delaware Corporation, having its principal place of business in El Segundo, California, is desirous of acquiring the entire and exclusive right, title and interest in, to and under said invention, said application and any and all Letters Patent that may be granted therefor in the United States and throughout the world;

NOW, THEREFORE, in consideration of the obligations voluntarily assumed by me and set forth in an invention agreement between me and my employer, effective the date as stated below next to my name, and other good and valuable consideration, receipt of which is hereby acknowledged, I do hereby sell, assign and transfer to **The DIRECTV GROUP, Inc.**, its successors, assigns or other legal representatives, the entire and exclusive right, title and interest in and to said invention invented by me, 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 therefor 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 **The DIRECTV GROUP, Inc.**, 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 DIRECTV Group, Inc.**, its successors, assigns or other legal representatives, upon request and at no cost or expense to me, any facts known by me 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 DIRECTV GROUP, Inc.**, 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 DIRECTV GROUP, Inc.**, 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 DIRECTV GROUP, Inc.**, its successors, assigns or other legal representatives.

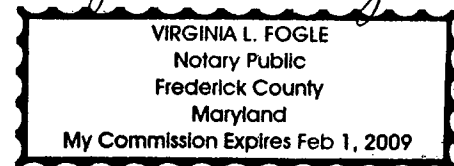
IN WITNESS WHEREOF, I have executed this instrument:

Full Name of Sole or Joint Inventor: Mustafa Eroz	Inventor's Signature: 	Date: 8/4/05
Residence (City and State) Germantown, MD		INVENTION AGREEMENT DATE
Full Name of Joint Inventor: Lin-Nan Lee	Inventor's Signature: 	Date: 8/4/05
Residence (City and State) Potomac, MD		INVENTION AGREEMENT DATE
Full Name of Joint Inventor: Feng-Wen Sun	Inventor's Signature: 	Date: 8-8-05
Residence (City and State) Germantown, MD		INVENTION AGREEMENT DATE
Full Name of Joint Inventor:	Inventor's Signature:	Date:
Residence (City and State)		INVENTION AGREEMENT DATE
Full Name of Joint Inventor:	Inventor's Signature:	Date:
Residence (City and State)		INVENTION AGREEMENT DATE
Full Name of Joint Inventor:	Inventor's Signature:	Date:
Residence (City and State)		INVENTION AGREEMENT DATE

STATE OF Maryland)
COUNTY OF Frederick) SS:
On August 4, 2005 before me, Virginia L. Fogle
a Notary Public in and for said State, personally appeared Mustafa Oroz
☒ 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. Notary Public



STATE OF Maryland)
COUNTY OF Frederick) SS:
On August 4, 2005 before me, Virginia L. Fogle
a Notary Public in and for said State, personally appeared Jen-Nan Lee
☒ 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. Notary Public



STATE OF Maryland)
COUNTY OF Frederick) SS:
On August 8, 2005 before me, Virginia L. Fogle
a Notary Public in and for said State, personally appeared Jeng-Wen Sun
☒ 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
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