

PATENT ASSIGNMENT

Electronic Version v1.1
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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>David Kummer</td> <td>08/12/2013</td> </tr> <tr> <td>Germar Schaefer</td> <td>07/29/2013</td> </tr> </tbody> </table>		Name	Execution Date	David Kummer	08/12/2013	Germar Schaefer	07/29/2013				
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RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>EchoStar Technologies L.L.C.</td> </tr> <tr> <td>Street Address:</td> <td>100 Inverness Terrace East</td> </tr> <tr> <td>City:</td> <td>Englewood</td> </tr> <tr> <td>State/Country:</td> <td>COLORADO</td> </tr> <tr> <td>Postal Code:</td> <td>80112</td> </tr> </table>		Name:	EchoStar Technologies L.L.C.	Street Address:	100 Inverness Terrace East	City:	Englewood	State/Country:	COLORADO	Postal Code:	80112
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PROPERTY NUMBERS Total: 1											
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CORRESPONDENCE DATA											
<p>Fax Number: 3035714321 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 303-571-4000 Email: hedwards@kilpatricktownsend.com Correspondent Name: Kilpatrick Townsend & Stockton LLP Address Line 1: 1400 Wewatta Street, Suite 600 Address Line 2: Karam J. Saab Address Line 4: Denver, COLORADO 80202</p>											
ATTORNEY DOCKET NUMBER:	P2012-08-09.1 (863521)										
NAME OF SUBMITTER:	Karam J. Saab										
Signature:	/Karam J. Saab/										
Date:	08/12/2013										

OP \$40.00 13828001

Total Attachments: 6

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**ASSIGNMENT AND AGREEMENT IN AN APPLICATION FOR
LETTERS PATENT OF THE UNITED STATES OF AMERICA**

WHEREAS, David Kummer and Germar Schaefer (hereinafter, singularly and collectively "Assignor") have solely and/or have jointly (as appropriate) invented and/or discovered certain new and useful invention, process, machine, manufacture, or composition of matter, or any new and useful improvement in an invention as described in an application for Letters Patent entitled "Smartcard Encryption Cycling" filed in and/or with the United States herewith, and which is further identified by the EchoStar Docket No. set forth above (hereinafter, the "Invention"); and

WHEREAS, EchoStar Technologies L.L.C., a limited liability company organized and existing under the laws of the State of Texas, United States of America and having a principal place of business of 100 Inverness Terrace East, Englewood, Colorado 80112 (hereinafter, the "Assignee") desires to acquire all rights, title and interest in and to the Invention, including, but not limited to, all rights, title and interest in and to past, present and future damages, injunctive relief and to any and all other additional rights, title, interest, relief and/or remedies granted by any legislative, judicial, quasi-judicial, administrative or other body, or otherwise; and

WHEREAS, Assignor, to the extent they own any right, title and interest in and to the Invention are desirous of assigning any and all such rights, title and/or interest to Assignee.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignor hereby sells, assigns, transfers and sets over unto Assignee and its legal representatives, successor and assigns, the entire right, title and interest, including any all rights in and/or to past, present and future damages, injunctive relief and/or any other remedy and relief granted by a legislative, judicial, quasi-judicial or administrative body, in and to said Invention, said application, for any and all non-provisional, national, international, foreign, and regional applications corresponding and/or claiming priority thereto, any divisions, continuations, continuation-in-parts, reissues, reexaminations, renewals, and extensions thereof, and the Letters Patent, both foreign and domestic, that may or shall issue thereon, and does request the Commissioner of Patents to issue said Letters Patent to the Assignee, consistent with the terms of this agreement.

Assignor hereby authorizes Assignee to insert in this instrument the filing date and Application Serial Number in the above fields if not already present at the time of execution of this instrument.

Assignor hereby declares that he is the sole inventor of the Invention.

UPON SAID CONSIDERATION, Assignor hereby covenants and agrees with Assignee that they will not execute any writing or do any act whatsoever conflicting with these presents, and agrees that, when requested, he/she will, without charge to Assignee but at its expense, execute such additional assignments, declarations and other writings and do such additional acts as said Assignee may deem necessary or desirable to perfect the Assignee's enjoyment of this grant, and render all necessary assistance in making application for and obtaining original, continuation, continuation-in-part, divisional, renewal, reissued or extended Letters Patent of the United States, or of any and all foreign countries, on said invention, and in enforcing any rights or chooses in action accruing as a result of such applications or patents, by giving testimony in any proceedings

or transactions involving such applications or patents, and by executing preliminary statements and other affidavits, it being understood that the foregoing covenant and agreement shall bind, and inure to the benefit of, the assigns and legal representatives of both parties.

Assignor agrees that he will communicate to Assignee or its representatives any facts known to Assignor respecting said inventions within a reasonable time of discovering or coming into possession of the same.

Assignor authorizes and empowers Assignee, its successors, assigns or nominees, to make application for patent or other form of protection for said inventions in its or their own name, or in Assignor's name, in any and all countries to invoke and claim for any application for patent or other form of protection for said inventions filed by it or them, the benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it, and to invoke and claim such right of priority without further written or oral authorization from me.

Assignor hereby consents that a copy of this Assignment shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document which may be required in any country for any purpose and more particularly in proof of the right of Assignee or its successors, assigns or nominees to apply for patent or other proper protection for said inventions, and to claim the aforesaid benefits of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it.

Assignor covenants with Assignee, its successors, assigns, legal representatives, and nominees, that to the best of Assignor's knowledge the right, title and interest herein conveyed are free and clear of any encumbrance, and that Assignor has the full right to convey the same as herein expressed.

This Agreement and Assignment supersedes all other assignments, agreements and addendums related to the above-identified application.

After this Assignment has been recorded, please return it to:

Attn: Max S. Gratton
EchoStar Technologies L.L.C.
100 Inverness Terrace East
Englewood, CO 80112

JOINT

Inventor: David Kummer
(Name)

David Kummer
(Signature in Full)

Citizenship: US

Post Office Address: _____

Residence: 8947 South Green Meadows Lane, Highlands Ranch, CO 80126

On this 24th day of August, 2013, before me a notary public in and for the county of Adams in the State of Colorado, appeared **David Kummer**, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he signed, seals and delivered the same instrument as a free and voluntary act for the use and purposes therein set forth.

Rachel L. Powers
My Commission Expires: May 4, 2017
Notary Public

RACHEL L. POWERS
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20014014018
MY COMMISSION EXPIRES MAY 4, 2017

(Seal)

JOINT

Inventor: Germar Schaefer
(Name)

(Signature in Full)

Citizenship: _____

Post Office Address: _____

Residence: 620 Portland Road, Monument, CO 80132

On this _____ day of _____, 2013, before me a notary public in and for the county of _____ in the State of _____, appeared **Germar Schaefer**, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he signed, seals and delivered the same instrument as a free and voluntary act for the use and purposes therein set forth.

My Commission Expires: _____
Notary Public

(Seal)

ASSIGNMENT AND AGREEMENT IN AN APPLICATION FOR LETTERS PATENT OF THE UNITED STATES OF AMERICA

WHEREAS, David Kummer and Germar Schaefer (hereinafter, singularly and collectively "Assignor") have solely and/or have jointly (as appropriate) invented and/or discovered certain new and useful invention, process, machine, manufacture, or composition of matter, or any new and useful improvement in an invention as described in an application for Letters Patent entitled "Smartcard Encryption Cycling" filed in and/or with the United States herewith, and which is further identified by the EchoStar Docket No. set forth above (hereinafter, the "Invention"); and

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WHEREAS, Assignor, to the extent they own any right, title and interest in and to the Invention are desirous of assigning any and all such rights, title and/or interest to Assignee.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignor hereby sells, assigns, transfers and sets over unto Assignee and its legal representatives, successor and assigns, the entire right, title and interest, including any all rights in and/or to past, present and future damages, injunctive relief and/or any other remedy and relief granted by a legislative, judicial, quasi-judicial or administrative body, in and to said Invention, said application, for any and all non-provisional, national, international, foreign, and regional applications corresponding and/or claiming priority thereto, any divisions, continuations, continuation-in-parts, reissues, reexaminations, renewals, and extensions thereof, and the Letters Patent, both foreign and domestic, that may or shall issue thereon, and does request the Commissioner of Patents to issue said Letters Patent to the Assignee, consistent with the terms of this agreement.

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or transactions involving such applications or patents, and by executing preliminary statements and other affidavits, it being understood that the foregoing covenant and agreement shall bind, and inure to the benefit of, the assigns and legal representatives of both parties.

Assignor agrees that he will communicate to Assignee or its representatives any facts known to Assignor respecting said inventions within a reasonable time of discovering or coming into possession of the same.

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Assignor hereby consents that a copy of this Assignment shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document which may be required in any country for any purpose and more particularly in proof of the right of Assignee or its successors, assigns or nominees to apply for patent or other proper protection for said inventions, and to claim the aforesaid benefits of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it.

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After this Assignment has been recorded, please return it to:

Attn: Max S. Gratton
EchoStar Technologies L.L.C.
100 Inverness Terrace East
Englewood, CO 80112

JOINT

Inventor: David Kummer (Name) _____ (Signature in Full)

Citizenship: _____

Post Office Address: _____

Residence: 8947 South Green Meadows Lane, Highlands Ranch, CO 80126

On this _____ day of _____, 2013, before me a notary public in and for the county of _____ in the State of _____, appeared **David Kummer**, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he signed, seals and delivered the same instrument as a free and voluntary act for the use and purposes therein set forth.

My Commission Expires: _____ (Seal)
Notary Public

JOINT

Inventor: Germar Schaefer (Name) _____ (Signature in Full)

Citizenship: Germany
Post Office Address: as below

Residence: 620 Portland Road, Monument, CO 80132

On this 29 day of July, 2013, before me a notary public in and for the county of Arapahoe in the State of Colorado, appeared **Germar Schaefer**, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he signed, seals and delivered the same instrument as a free and voluntary act for the use and purposes therein set forth.

Amber Karen Madison
My Commission Expires: _____
Notary Public

