503615121 12/16/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3661752

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------|----------------|
| MICHAEL T. DUGAN | 12/02/2004 |
| DAVID A. KUMMER | 12/28/2004 |

RECEIVING PARTY DATA

| Name: | ECHOSTAR TECHNOLOGIES L.L.C. |
|-----------------|------------------------------|
| Street Address: | 100 Inverness Terrace East |
| City: | Englewood |
| State/Country: | COLORADO |
| Postal Code: | 80112 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14789681 |

CORRESPONDENCE DATA

Fax Number: (480)385-5061

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.

Phone: (480) 385-5060 Email: docketing@ifllaw.com

Correspondent Name: INGRASSIA FISHER & LORENZ, P.C.

Address Line 1: 7010 EAST COCHISE ROAD

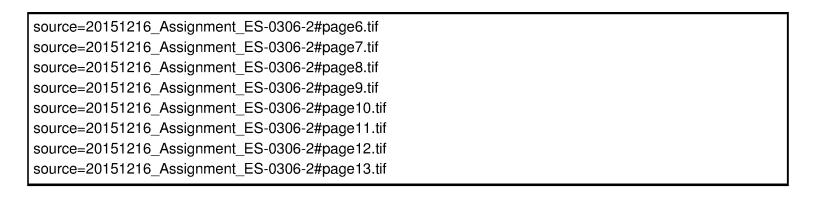
Address Line 4: SCOTTSDALE, ARIZONA 85253-1406

| ATTORNEY DOCKET NUMBER: | 066.0269C1 (ES-0306.2) |
|-------------------------|------------------------|
| NAME OF SUBMITTER: | BRETT A. CARLSON |
| SIGNATURE: | /Brett A. Carlson/ |
| DATE SIGNED: | 12/16/2015 |

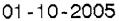
Total Attachments: 13

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PATENT 503615121 REEL: 037308 FRAME: 0750



PATENT REEL: 037308 FRAME: 0751 01-05-05





102916418

U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

To the Commissioner of Patents and

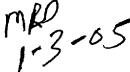
1. Name of conveying party(ies):

Michael T. Dugan David A. Kummer

FORM PTO-1595

OMB No. 0651-0011 (exp. M&G-40353,0006USU1

(Rev. 6-93)



RJ

2. Name and address of receiving party(ies):

EchoStar Technologies Corporation 90 Inverness Circle East Englewood, CO 80112

| Additional name(s) of conveying party(ies) attached? Yes No | Additional name(s) & address(es) attached? Yes No |
|---|--|
| 3. Nature of conveyance: Assignment Security Agreement Other: Merger Change of Name | |
| Execution Date: 12/28/04 | |
| 4. Application number(s) or patent number(s): | |
| If this document is being filed together with a new a | pplication, the execution date of the application is: 12/27/04 |
| A. Patent Application No.(s) | B. Patent No.(s) |
| 10/940,077 | |
| Additi | onal numbers attached? 🔲 Yes 🗵 No |
| 5. Name and address of party to whom correspondence document should be mailed: | |
| Name: George C. Lewis Address: Merchant & Gould P.C. P.O. Box 2903 Minneapolis, MN 55402-0903 | 7. Total fee (37 CFR 3.41): \$40.00 Enclosed Authorized to be charged to deposit account 8. Please charge any additional fees or credit any overpayments to our Deposit account number: 13-2725 |
| | DO NOT USE THIS SPACE |
| 9. Statement and signature: | |
| To the best of my knowledge and belief, the foregoi original document. | ng information is true and correct and any attached copy is a true copy of the |
| George C. Lewis | January 3, 2005 |
| Name of Person Signing | Signature Date Total number of pages including cover sheet, attachments, and document: 6 |
| | Do not detach this portion |
| Mail documents to be recorded with required corer sheet informs Mail Sto | ntion to: pp Assignment Recordation Services |

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Director - U.S. Patent and Trademark Office

P.O. Box 1450 Alexandria, VA 22313-1450

Alexandria, VA 22313-1450
Public burden reporting for this sample cover sheet is estimated to average about 30 minutes per document to be recorded, including time for reviewing the document and gathering the data needed, and completing and reviewing the sample cover sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Office of information systems, PK2-1000C, Washington, D.C. 20231, and to the Office of Management and Budget, Paperwork Reduction Project (0651-0011), Washington, D.C. 20503.

23552

PATENT TRADEMARK OFFICE

PATENT

REEL: 016125 FRAME: 0630

ASSIGNMENT

WHEREAS, we, Michael T. Dugan, residing at 7539 East Inspiration Drive, Parker, Colorado 80138 and David A. Kummer, residing at 8947 South Green Meadows Lane, Highlands Ranch, Colorado 80126, made certain new and useful inventions and improvements for which we filed an application for Letters Patent of the United States on September 13, 2004, application Serial No. 10/940,077 which is entitled METHOD AND APPARATUS FOR RECORDING A VIDEO PROGRAM FOR USER INSTRUCTION.

AND WHEREAS, EchoStar Technologies Corporation, a corporation organized and existing under and by virtue of the laws of the State of Texas, and having an office and place of business at 90 Inverness Circle East, Englewood, CO 80112 (hereinafter "Assignee") is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor:

NOW THEREFORE, to all whom it may concern, be it known that for and in consideration of the sum of One Dollar and other good and valuable considerations, the receipt and sufficiency whereof is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the Assignee, its successors and assigns.

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be

PATENT REEL: 016125 FRAME: 0631

necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by us.

| IN TESTIMONY WHEREOF, I have hereunto set my hand this day of | |
|---|--|
| December, 2001. | |
| | |
| and the second | |
| | |

COUNTY OF DOUGLES) ss.

On this <u>May</u> of <u>December</u>, 20 december, before me personally appeared Michael T. Dugan to me known and known to me to be the person described in and who executed the foregoing instrument, and he duly acknowledged to me that he executed the same for the uses and purposes therein set forth.

[SEAL] STARY OF OF CHILD

Notary Public

My commission expires: 11/03/2007

| IN TESTIMONY WHEREOF, I have hereunto set my hand this 28th day of \[\int combon, 200f. \] |
|--|
| beember, 2004. |
| Dail A K |
| David A. Kummer |
| STATE OF COCADO) |
| STATE OF COCADO) ss. COUNTY OF ARAPAINE) |
| On this A day of Decamber 2011, before me personally appeared David A |
| Kummer to me known and known to me to be the person described in and who executed the foregoing |
| instrument, and he duly acknowledged to me that he executed the same for the uses and purposes therein |
| set forth. |
| |
| [SEAL] Janella Houses |

RECORDED: 01/03/2005

3

PATENT REEL: 0161-25-FEA-ME: 0633

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | CHANGE OF NAME |

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------------------------|----------------|
| EchoStar Technologies Corporation | 12/31/2007 |

RECEIVING PARTY DATA

| Name: | ECHOSTAR TECHNOLOGIES L.L.C. |
|-----------------|------------------------------|
| Street Address: | 90 Inverness Circle East |
| City: | Englewood |
| State/Country: | COLORADO |
| Postal Code: | 80112 |

PROPERTY NUMBERS Total: 35

| Property Type | Number |
|---------------------|----------|
| Application Number: | 10940077 |
| Application Number: | 10939065 |
| Application Number: | 10940078 |
| Application Number: | 10940107 |
| Application Number: | 11693024 |
| Application Number: | 11256472 |
| Application Number: | 11673383 |
| Application Number: | 11693065 |
| Application Number: | 11957672 |
| Application Number: | 11618017 |
| Application Number: | 11618540 |
| Application Number: | 11966600 |
| Application Number: | 12263163 |
| Application Number: | 11958337 |
| Application Number: | 11960508 |
| | |

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PATENT "REEL: 023156 FRAME: 0876

PATENT

REEL: 037308 FRAME: 0756

1007501

H #4400 00

| Application Number: | 11966209 |
|---------------------|----------|
| Application Number: | 11946743 |
| Application Number: | 11948180 |
| Application Number: | 11951016 |
| Application Number: | 11958312 |
| Application Number: | 11961875 |
| Application Number: | 11966485 |
| Application Number: | 11933265 |
| Application Number: | 11962989 |
| Application Number: | 11965842 |
| Application Number: | 11965281 |
| Application Number: | 11950803 |
| Application Number: | 11960569 |
| Application Number: | 11936537 |
| Application Number: | 11942111 |
| Application Number: | 11942896 |
| Application Number: | 11942901 |
| Application Number: | 11967344 |
| Application Number: | 11964927 |
| Application Number: | 11966738 |

CORRESPONDENCE DATA

Fax Number:

(303)723-2588

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

Phone:

303.723.1616

Email:

ipdept@dishnetwork.com

Correspondent Name:

Max Gratton

Address Line 1:

Dish Network LLC, 9601 S. Meridian Blvd.

Address Line 2:

Legal Department

Address Line 4:

Englewood, COLORADO 80112

NAME OF SUBMITTER:

Aaron Dobberstein

Total Attachments: 7

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PATENT



Office of the Secretary of State

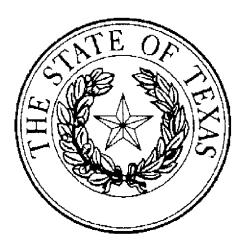
The undersigned, as Secretary of State of Texas, does hereby certify that the attached is a true and correct copy of each document on file in this office as described below:

EchoStar Technologies L.L.C. Filing Number: 800917951

Certificate of Conversion

December 31, 2007

In testimony whereof, I have hereunto signed my name officially and caused to be impressed hereon the Seal of State at my office in Austin, Texas on September 03, 2008.



Phone: (512) 463-5555

Prepared by: SOS-WEB

Hope Andrade Secretary of State

Form 632 (Revised 01/06)

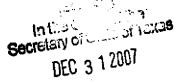
Return in duplicate to: Secretary of State P.O. Box 13697 Austin, TX 78711-3697 512 463-5555 FAX: 512 463-5709

Filing Fee: See instructions



Certificate of Conversion of a Corporation Converting to a Limited Liability Company

This space reserved for office use.



Corporations Saction

| The name of the converting corporat EchoStar Technologies Corporation | ion is: | | | |
|---|--|--|---|---|
| The jurisdiction of formation of the | corporation is: Texas | and the same of the same to th | | y in a continuous st |
| The date of formation of the corpora | tion is: May 27, 1982 (originally | known as Houst | ton Satellit | e Systems, Inc.) |
| The file number, if any, issued to the | corporation by the secretary of | of state, is: 0 | 0609425-0 | 0 |
| | | cheris | List of | |
| The corporation named above is conliability company is: | verting to a limited liability co | mpany. The i | name of t | the limited |
| EchoStar Technologies L.L.C. | | | | |
| The limited liability company will be | e formed under the laws of: | Texas | | |
| ☐ The plan of conversion is attached | eđ. | | | |
| If the plan of conversion Instead of attaching the plan of | on is not attached, the following statemen conversion, the corporation ce | | | statements: |
| A signed plan of conversion is on fil converting entity. The address of th | e at the principal place of business of | ness of the corf f the corporati | rporation ion is: | , the |
| 90 Inverness Circle East | Englewood | CO | USA | 80112 |
| Street or Mailing Address | City | State | Country | Zip Code |
| Direct of Manning How our | | | | |
| A signed plan of conversion will be the limited liability company, the co the limited liability company is: | on file after the conversion at nverted entity. The address of | the principal principal | place of t place of | business of business of |
| A signed plan of conversion will be the limited liability company, the co | on file after the conversion at niverted entity. The address of Englewood | the principal p f the principal CO | place of to place of USA Country | business of business of 80112 Zip Code |

A copy of the plan of conversion will be furnished on written request without cost by the converting entity before the conversion or by the converted entity after the conversion to any owner or member of the converting or converted entity.

Form 632

4

PATENT
REEL: 023446 ERAME: 0879
REEL: 037308 FRAME: 0759

| | ation for the Converted Entity |
|--|--|
| Texas limited liability company is attached to | bility company. The certificate of formation of the this certificate either as an attachment or exhibit to the nibit to this certificate of conversion if the plan has not |
| Approved of | the Plan of Consession (2) |
| The plan of conversion has been approved as the governing documents of the converting en | required by the laws of the jurisdiction of formation and tity. |
| Aller theorems | Harring a data control of the state of the s |
| A. This document becomes effective when state. | n the document is accepted and filed by the secretary of |
| B. This document becomes effective at a little date of signing. The delayed effective date | later date, which is not more than ninety (90) days from te is: |
| | currence of the future event or fact, other than the |
| The following event or fact will cause the doc | cument to take effect in the manner described below: |
| Upon EchoStar DBS Corporation completing the distr | ribution of its EchoStar Technologies Corporation stock to |
| | |
| EchoStar Orbital Corporation. | |
| | ax Certificate |
| The second secon | comptroller of public accounts that all taxes under title |
| Attached hereto is a certificate from the 2, Tax Code, have been paid by the corp | comptroller of public accounts that all taxes under title coration, the limited liability company as the converted entity is |
| Attached hereto is a certificate from the 2, Tax Code, have been paid by the corp. In lieu of providing the tax certificate, | comptroller of public accounts that all taxes under title coration, the limited liability company as the converted entity is |
| Attached hereto is a certificate from the 2, Tax Code, have been paid by the corp. In lieu of providing the tax certificate, liable for the payment of any franchise to | comptroller of public accounts that all taxes under title poration, the limited liability company as the converted entity is taxes. |
| Attached hereto is a certificate from the 2, Tax Code, have been paid by the corp. In lieu of providing the tax certificate, liable for the payment of any franchise to the undersigned signs this document subject. | comptroller of public accounts that all taxes under title poration, the limited liability company as the converted entity is taxes. Execution |
| Attached hereto is a certificate from the 2, Tax Code, have been paid by the corp. In lieu of providing the tax certificate, liable for the payment of any franchise to the undersigned signs this document subject materially false or fraudulent instrument. | comptroller of public accounts that all taxes under title poration, the limited liability company as the converted entity is taxes. Execution |

Form 632

PATENT
REEL: 02345667AME: 0880
REEL: 037308 FRAME: 0760

Form 205 (Revised 01/06)

Return in duplicate to: Secretary of State P.O. Box 13697 Austin, TX 78711-3697 512 463-5555

FAX: 512 463-5709 Filing Fee: \$300



Certificate of Formation Limited Liability Company

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In the Secretary of Secretary of Secretary

DEC 3 1 2007

Corporations Section

| HIZ | A. | | | | | |
|----------|--|---|---------------------------------------|----------------------------|-----------------|-----------------|
| | | | Lite company. The nex | no of the enti | #17 io: | |
| The | filing entity being formed is a li | mited hab | inty company. The nat | ne or me em | ty is. | |
| Echo | Star Technologies L.L.C. | | | | | |
| The | name must contain the words "limited liabil | lity company, | ""limited company," or an abb | reviation of one o | of these pl | rases. |
| | | , | | | De la Contracti | |
| | | | i Averatean (ulices in) | | | |
| | | | e <u>en Collège Ban</u> acompland | | | |
| X | A. The initial registered agent i | s an organ | ization (cannot be entity nan | ned above) by th | e name | e of: |
| Corp | oration Service Company d/b/a CSC-L | awyers Inco | rporating Service Company | | | |
| OR | | | | | | |
| | B. The initial registered agent i | s an indivi | dual resident of the sta- | te whose nam | ie is set | forth below: |
| | | | | | | |
| First | Name | М.І. | Last Name | | | Suffix |
| _ | TTI 1 | | et and the registered of | Faa add race is | ~• | |
| C. | The business address of the regi | stered age | nt and the registered of | lice address is | >. | |
| 701 I | Brazos Street, Suite 1050 | Austin | | TX | 7870 | |
| Stree | et Address | City | | State | Zip C | Code |
| | | aticle 3 | Governing Authority | de Company | | |
| 等的 | (Select and education plete ershall | Seor D and p | grove the name and appress of | each governing. | essent y | |
| \Box | A. The limited liability compar | ny will has | a managers. The name | and address | of each | initial |
| <u>ш</u> | nager are set forth below. | iy wili ilav | C managers. The name | and addition | 01 4871 | 4444 VPV |
| | B. The limited liability compar | | have managers. The a | omnansz száll | he anv | emed by its |
| | mbers, and the name and address | | | | oc govi | cinca by its |
| me | inders, and the name and address | or cacit ii | num memoer are set to | thi below. | | |
| NA | ME OF GOVERNING PERSON (Em | er the name of | enther an inclivialistics an organiza | uma, dige not both. F | | |
| i | TIP TRAINING ATTAINS | | | | | |
| ļ | IF INDIVIDUAL | | T | | | |
| | IF INDIVIDUAL | , | | | | |
| | First Name | M.I. | Last Name | | | Suffix |
| OR | First Name | M.I. | Last Name | | | Suffix |
| OR | | M.I. | Last Name | | | Suffix |
| OR | First Name IF ORGANIZATION EchoStar DBS Corporation | M.I. | Last Name | | | Suffix |
| | First Name IF ORGANIZATION EchoStar DBS Corporation Organization Name | | Last Name | | | Suffix |
| | First Name IF ORGANIZATION EchoStar DBS Corporation | | Last Name Englewood | co | USA | Suffix 80112 |

4

Form 205

PATENT

REEL: 0239AGTERAME: 0881 REEL: 037308 FRAME: 0761

| _ | First Name | M.I. | Last Name | | | Suffix | |
|----------------|--|-------------------------------|----------------------------------|-------|---------|------------------|--|
| R ⁻ | 1 1131 14ame | 174.3. | Lagr Hame | | | 1 Day IV | |
| _ | IF ORGANIZATION | | | | | | |
| _ | Organization Name | | | | | | |
| ÐĐ | ress of governing pe | RSON | | | | | |
| | | | | | | | |
| | or Mailing Address | | City | State | Country | Zip Code | |
| | Œ OF GOVERNING PERSO | N:(Beter the name of | | | | Zip Code | |
| | | N. (fister the name of | | | | Zip Code | |
| | Œ OF GOVERNING PERSO | ON: (Bitter the name, of M.I. | | | | Zip Code Suffix | |
| 40 | E OF GOVERNING PERSO IF INDIVIDUAL First Name | | either an individual or an organ | | | | |
| | E OF GOVERNING PERSO IF INDIVIDUAL | | either an individual or an organ | | | | |
| AD | TOF GOVERNING PERSO IF INDIVIDUAL First Name IF ORGANIZATION | | either an individual or an organ | | | | |
| AN | TOF GOVERNING PERSOIF INDIVIDUAL First Name IF ORGANIZATION Organization Name | M.I. | either an individual or an organ | | | | |
| R _ | TOF GOVERNING PERSO IF INDIVIDUAL First Name IF ORGANIZATION | M.I. | either an individual or an organ | | | | |

The purpose for which the company is formed is for the transaction of any and all lawful purposes for which a limited liability company may be organized under the Texas Business Organizations Code.

Supplemental Provisions/Information

Text Area: [The attached addendum, if any, is incorporated herein by reference.]

This limited liability company is being formed pursuant to a Plan of Conversion Prior to this conversion this entity was a for profit corporation, by the name of EchoStar Technologies Corporation organized in Texas on May 27, 1982 and located at 90 Inverness Gircle East, Englewood Co USA 80112.

See Exhibit A for indemnification language.

Form 205

PATENT

REEL: 023**中AGER**本ME: 0882

EXHIBIT A

The Company shall indemnify, to the fullest extent permitted by applicable law in effect from time to time, any person, and the estate and personal representative of any such person, against all liability and expense (including attorneys' fees) incurred by reason of the fact that such person is or was a manager, officer, employee or fiduciary of the Company or, while serving as manager, officer, employee, or fiduciary of the Company, such person is or was serving at the request of the Company as a manager, director, officer, partner, trustee, employee, fiduciary or agent of, or in any similar managerial or fiduciary position of, another domestic or foreign entity or other individual or entity or of an employee benefit plan. The Company shall also indemnify any person, and the estate and personal representative of any such person, who is serving or has served the Company as manager, officer, employee, fiduciary, or agent, to the extent and in the manner provided in any article of organization, resolution of any of the Company's members, contract, or otherwise, so long as such provision is legally permissible.

PATENT

REEL: 023**户為行 E**N本ME: 0883 REEL: 037308 FRAME: 0763

| en e | Grganzer | |
|---|--|------------------------------------|
| The name and address of the organizer: | | |
| R. Stanton Dodge | | • |
| Name | | |
| 9601 South Meridian Boulevard | Englewood | CO 80112 |
| Street or Mailing Address | City | State Zip Code |
| Diffections | esto (Bub) (General Merchanica | 发展 识别中, 发展 的相似的 |
| A. This document becomes effective | when the document is filed by | the secretary of state. |
| B. This document becomes effective | at a later date, which is not mo | ore than ninety (90) days from |
| the date of signing. The delayed effective | ve date is: | |
| C. X This document takes effect upon t | he occurrence of the future eve | nt or fact, other than the |
| passage of time. The 90th day after the o | date of signing is: March 26, 200 | 98 |
| The following event or fact will cause the | ne document to take effect in th | e manner described below: |
| Upon EchoStar DBS Corporation completing the | distribution of its EchoStar Technological | ogies Coporation stock to EchoStar |
| Orbital Corporation. | | |
| | Property Conston | |
| The undersigned signs this document su materially false or fraudulent instrument | - | by law for the submission of a |
| Date: December 27, 2007 | X. | |
| | Signature of organizer | |

Form 205

RECORDED: 08/27/2009

RECORDED: 12/16/2015

6

REEL: 023**PACTERA**ME: 0884 REEL: 037308 FRAME: 0764