502058729 09/12/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

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

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------------|----------------|
| Paul D. Adcock | 04/19/2006 |
| Michael A. Cormack | 04/19/2006 |
| Thomas F. Haller | 04/20/2006 |
| Robert A. Hill | 04/20/2006 |

RECEIVING PARTY DATA

| Name: | Archipelago Holdings, Inc. | |
|-----------------|------------------------------------|--|
| Street Address: | 100 South Wacker Drive, Suite 1800 | |
| City: | Chicago | |
| State/Country: | ILLINOIS | |
| Postal Code: | 60606 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13612627 |

CORRESPONDENCE DATA

Fax Number:

Phone: 212-892-4000
Email: ldias@milbank.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US

Mail.

Correspondent Name: NYSE c/o Milbank, Tweed, Hadley & McCloy

Address Line 1: 1 Chase Manhattan Plaza
Address Line 4: New York, NEW YORK 10005

| ATTORNEY DOCKET NUMBER: | 09163-26402 |
|-------------------------|---------------|
| NAME OF SUBMITTER: | Chris L. Holm |

Total Attachments: 3

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> PATENT REEL: 028948 FRAME: 0676

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Attorney Docket No. 060-018US

<u>ASSIGNMENT</u>

WHEREAS, we, PAUL D. ADCOCK of Burr Ridge, Illinois, MICHAEL A. CORMACK of Evanston, Illinois, THOMAS F. HALLER of Longwood, Florida, and ROBERT A. HILL of LaGrange, Illinois (the "ASSIGNORS") have invented a certain new and useful invention disclosed in an application for United States Letters Patent entitled, "REPRICE-TO-BLOCK" ORDER MODIFIER, which is executed by Declaration herewith.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNORS have sold, assigned, transferred and set over, and do hereby sell, assign, transfer and set over to ARCHIPELAGO HOLDINGS, INC., an Illinois corporation located at 100 South Wacker Drive, Suite 1800, Chicago, Illinois, 60606 (hereinafter, together with any successors, assigns, nominees or other legal representatives thereof, called "ASSIGNEE") the entire right, title and interest in and to said application and all divisions, substitutions, continuations and continuations-in-part thereof and any improvements disclosed in or related to the subject matter of said application, and all United States Letters Patents which may be granted thereon and all reissues and extensions thereof, and all priority rights under applicable international conventions, and all applications for patents (including related rights such as utilitymodel registrations, inventor's certificates and the like) heretofore or hereafter filed from said application or improvements in any foreign countries, and all patents (including all extensions, renewals and reissues thereof) granted from said application or improvements; and ASSIGNORS hereby authorize and request the United States Commissioner of Patents and Trademarks and any officials of foreign countries whose duty it is to issue patents on applications as aforesaid, to issue all such patents to ASSIGNEE in accordance with the terms of this assignment;

AND ASSIGNORS HEREBY covenant that we have full right to convey the entire interest herein assigned and that we have not executed, and will not execute, any agreement in conflict herewith;

PATENT REEL: 028948 FRAME: 0677 AND ASSIGNORS HEREBY further covenant and agree that we will communicate to ASSIGNEE any facts known to us respecting said application and improvements and will testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, continuation-in-part, substitute and reissue applications, make all rightful oaths and declarations and generally provide assistance as necessary and required to aid ASSIGNEE to obtain proper patent protection from said application and improvements and to enforce such patent protection in all countries.

| IN WITNESS WHEREOF, I have hereunto set my hand this, 2006. | day of |
|---|--|
| 7/1/ | 4 |
| | |
| STATE OF ILLINOIS PAUL D. ÁĎO | COCK |
| COUNTY OF COOK) SS. | |
| On 4/19 , 2006, before the undersigned, a Notary Publ | in for the Cont. |
| and County aforesaid, appeared the above-named PAUL D. ADCOCK, per | rsonally knoum |
| to me to be the one who executed the foregoing instrument and acknow | ledged that he |
| executed the same. OFFICIAL SFAI | |
| MCLISSA MENDOZA NOTARY PUBLIC - STATE OF ILLINOIS // CLC / LC | - Reade |
| MY CONSUSSION EXPRESIONAL NOTARY PUI | |
| NOTANTO | JLIC . |
| IN WITNESS WHEREOF, I have hereunto set my hand this | day of |
| Aprel , 2006. | * |
| MICHAELA. | SRMACK TO THE STATE OF THE STAT |
| STATE OF ILLINOIS) | |
| COUNTY OF COOK) SS. | |
| On 4/16, 2006, before the undersigned, a Notary Publ and County aforesaid, appeared the above-named MICHAEL A. CORMA known to me to be the one who executed the foregoing instrument and acknown to the same. | ~~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ |
| | 6 |
| Nulum | whereby, |
| OFFICIAL SEAL OTARY PUR | BLIC |

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MELISSA MENDOZA NOTARY PUBLIC - STATE OF ILLINOIS MY COMMISSION EXPIRES 03/01/08

> PATENT REEL: 028948 FRAME: 0678

| IN WITNESS WHEREOF, I have hereunto set my hand this day of day of |
|--|
| |
| THOMAS F. HALLER V |
| STATE OF ILLINOIS) |
| COUNTY OF COOK SS. |
| On 400, 2006, before the undersigned, a Notary Public for the State |
| and County aforesaid, appeared the above-named THOMAS F. HALLER, personally |
| known to me to be the one who executed the foregoing instrument and acknowledged that |
| he executed the same. |
| OFFICIAL SEAL MELISSA MENOZA NOTARY PUBLIC STATE OF ILLINOS MY COMMISSION EXPRESIONOTARY NOTARY PUBLIC |
| IN WITNESS WHEREOF, I have hereunto set my hand this day of |
| |
| RÓBERT A. HILL |
| STATE OF ILLINOIS) |
| COUNTY OF COOK) SS. |
| On (2006, before the undersigned, a Notary Public for the State and County aforesaid, appeared the above-named ROBERT A. HILL, personally known to me to be the one who executed the foregoing instrument and acknowledged that he |
| executed the same. OFFICIAL SEAL TWO I I MOUNT ALCHOGS. |
| MELISSA MENDOZA NO ARY PUBLIC NOTARY PUBLIC - STATE OF ILLINOIS MY COMMISSION EXPIRES 0340108 |
| \$************************************* |

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PATENT REEL: 028948 FRAME: 0679