PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

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

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------|----------------|
| James Wehner | 03/14/2008 |
| Lael Rudd | 03/14/2008 |
| Christian Harris | 03/14/2008 |
| Shahram Foroozan | 03/14/2008 |

RECEIVING PARTY DATA

| Name: | Northrop Grumman Space & Mission Systems Corp. | |
|-----------------|--|--|
| Street Address: | 1840 Century Park East | |
| City: | Los Angeles | |
| State/Country: | CALIFORNIA | |
| Postal Code: | 90067-2199 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 12048981 |

CORRESPONDENCE DATA

Fax Number: (216)621-4072

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

Phone: 216-621-2234

Email: lpringle@tarolli.com

Correspondent Name: Christopher P. Harris

Address Line 1: Tarolli, Sundheim, Covell & Tummino LLP

Address Line 2: 1300 East Ninth Street, Suite 1700

Address Line 4: Cleveland, OHIO 44114

| ATTORNEY DOCKET NUMBER: | NG(ST)018250 US PRI |
|-------------------------|-----------------------|
| NAME OF SUBMITTER: | Christopher P. Harris |

Total Attachments: 4

500488288

PATENT REEL: 020656 FRAME: 0070

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> PATENT REEL: 020656 FRAME: 0071

ASSIGNMENT

WHEREAS, I, <u>James Wehner</u>, hereinafter referred to as Assignor, together with <u>Lael Rudd, Christian Harris and Shahram Foroozan</u>, have jointly invented certain new and useful improvements in <u>Solar Array Momentum Control</u>, described in an application for United States Letters Patent, executed by me on the date as stated below;

WHEREAS, Northrop Grumman Space & Mission Systems Corperation, an Ohio corporation, having its principal place of business at 1840 Century Park East, Los Angeles, California 90067-2199, hereinafter referred to as Assignee, is desirous of acquiring the entire right, title and interest in, to and under said improvements and said application:

NOW, THEREFORE, in consideration of Assignor's obligations to Northrop Grumman Space & Mission Systems Corperation, and for other good and valuable consideration, the receipt and sufficiency is hereby acknowledged, Assignor has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, Assignor's entire right, title and interest in, to and under said improvements, and said application and all divisions, renewals, continuations, and continuations-in-part thereof, and all United States Letters patent which may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent which may hereafter be filed for said improvements in any country or countries foreign to the United States, including the full right to claim for any such application the priority benefits of the International Convention for the Protection of Industrial Property and other priority-conferring treaties, and all Letters Patent which may be granted for said improvements in any country or countries foreign to the United States and all extensions, divisions, continuations, continuations-in-part, renewals and reissues thereof; and Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to said Assignee, its successors, legal representatives and assigns, in accordance with the terms of this instrument;

Assignor hereby acknowledges that at the time of making the improvements herein identified, Assignor was under an obligation to assign to Assignee, Assignor's entire right, title and interest in, to and under said improvements;

Assignor hereby covenants that Assignor has full right to convey the interest herein assigned, and that Assignor has not executed, and will not execute, any agreement in conflict herewith and that Assignee, Northrop Grumman Space & Mission Systems Corporation, its successors, assigns and other legal representatives shall have the right to hold and enjoy for its and their own use and benefit, to the end of the term or terms for which such Letters Patent shall or may be granted, reissued or extended as fully and completely as the same right or could have been held and enjoyed by Assignor had this Assignment not been made.

Assignor hereby further covenants and agrees to communicate to Assignee, its successors, legal representatives and assigns, any and all facts known to Assignor respecting said improvements; to promptly provide Assignee with all documents relating to said improvements, said invention, and said Letters Patent as may be known or accessible to Assignor; to testify as to the same in any interference or litigation or other legal proceedings related thereto; to sign all lawful papers, execute all extensions, continuations, continuations-in-part, divisional and reissue applications; and to make all rightful oaths or declarations and generally do everything possible to aid Assignee, its successors, legal representatives and assigns in obtaining and enforcing all the rights herein conveyed for said improvements in all countries without further compensation, but at the expense of Assignee, its successors, legal representatives and assigns.

IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this day of 2008, and has executed the referenced patent application on the day of day of 2008.

James Wehner

STATE OF CALIFORNIA)

) ss

COUNTY OF LOS ANGELES)

On Word 19,00% before me, Lorna L. Schott, Notary Public, personally appeared James Wehner, who 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.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal

Signature of Notary Public

LORNA L. SCHOTT
Commission # 1771999
Notary Public - California
Los Angeles County
My Comm. Expires Nov 3, 2011

(Seal)

PATENT

REEL: 020656 FRAME: 0072

| IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this day moved., 2008, and has executed the referenced patent application on the day. | ay of |
|--|-------|
| Lael Rudd | |
| STATE OF CALIFORNIA) | |
| COUNTY OF LOS ANGELES) | |
| On Word Wyo before me, Lorna L. Schott, Notary Public, personally appeared Lael Rudd, who proved to me on t 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 | |
| I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. | |
| WITNESS my hand and official seal Commission # 1771999 Notary Public - California Los Angeles County My Comm. Expires Nov 3, 2011 LORNA L. SCHOTT Commission # 1771999 Notary Public - California My Comm. Expires Nov 3, 2011 | |

PATENT REEL: 020656 FRAME: 0073

| IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this 2008, and has executed the referenced patent application on the 14th day of Christian Harris |
|---|
| STATE OF CALIFORNIA) |
| COUNTY OF LOS ANGELES) |
| On before me, Lorna L. Schott, Notary Public, personally appeared Christian Harris, who 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(iee); 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. |
| I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. |
| WITNESS my hand and official seal Commission # 1771999 Notary Public - California Los Angeles County My Comm. Expires Nov 3, 2011 (Seal) |

PATENT REEL: 020656 FRAME: 0074 IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this 14th day of 2008, and has executed the referenced patent application on the 14th day of 300 day of 300

Signature of Notary Public

RECORDED: 03/14/2008

(Seal)

Notary Public - California Los Angeles County My Comm. Expires Nov 3, 2011

> PATENT REEL: 020656 FRAME: 0075