

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>Daniel A. Tazartes</td><td>08/14/2006</td></tr><tr><td>Kenneth D. Marino</td><td>09/25/2006</td></tr></tbody></table>		Name	Execution Date	Daniel A. Tazartes	08/14/2006	Kenneth D. Marino	09/25/2006
Name	Execution Date						
Daniel A. Tazartes	08/14/2006						
Kenneth D. Marino	09/25/2006						
RECEIVING PARTY DATA							
Name:	NORTHROP GRUMMAN CORPORATION						
Street Address:	1840 Century Park East						
City:	Los Angeles						
State/Country:	CALIFORNIA						
Postal Code:	90067						
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>11528133</td></tr></tbody></table>		Property Type	Number	Application Number:	11528133		
Property Type	Number						
Application Number:	11528133						
CORRESPONDENCE DATA							
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ATTORNEY DOCKET NUMBER:	54261-2200						
NAME OF SUBMITTER:	Albin H. Gess						
Total Attachments: 2 source=11528133 Assign#page1.tif source=11528133 Assign#page2.tif							

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PATENT

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REEL: 019315 FRAME: 0451

ASSIGNMENT

WHEREAS, I, Daniel A. Tazartes, hereinafter referred to as Assignor
together with Kenneth D. Marino
have jointly invented certain new and useful improvements in PHOTONIC CRYSTAL BASED ROTATION SENSOR
(authorization is given herewith to insert the application serial number and filing date when it becomes available)
as U.S. Serial No. 11/528,133 filed on 9/27/2006;
described in an application for United States Letters Patent, executed by me on the date as stated below;

WHEREAS, Northrop Grumman Corporation, a Delaware corporation, having its principal place of business at 1840 Century Park East, Los Angeles, California 90067, 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 Corporation, 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 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 Assignor 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 14th day of AUGUST, 2006, and has executed the referenced patent application on the 14th day of AUGUST, 2006.

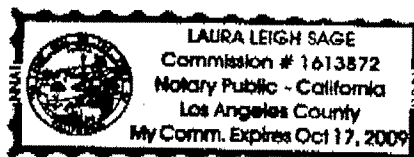
STATE OF CALIFORNIA
COUNTY OF LOS ANGELES) ss

Daniel A. Tazartes
Daniel A. Tazartes

On AUGUST 14, 2006 before me, LAURA LEIGH SAGE, Notary Public, personally appeared DANIEL A. TAZARTES, 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 this instrument and acknowledge 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 to be the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

Laura Leigh Sage
Notary's Signature



(Seal)

IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this 25th day of September, 2006 and has executed the referenced patent application on the 29th day of August, 2006.

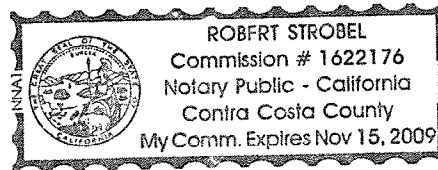
Kenneth D. Marino
Kenneth D. Marino

STATE OF California)
COUNTY OF Contra Costa) ss

On September 25, 2006 before me, Robert Strobel, Notary Public, personally appeared Kenneth D. Marino, 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 this instrument and acknowledge 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 to be the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

[Signature]
Notary's Signature



(Seal)