

11-9-09

11-16-2009

To the Honorable Commissioner of Patents and Trade



uments or copy thereof.

Name of conveying party(ies):

William Roland Deal
Kevin Masaru Kung Hoong Leong
Vesna NMI Radisic
Patty Pei-Ling Chang-Chien
Richard NMI Lai



103580711

Name:

Northrop Grumman Space & Mission Systems Corp.

Address:

1840 Century Park East
Los Angeles, CA 90067

Additional name(s) of conveying party(ies) attached? Yes No

3. Nature of Conveyance:

- Assignment Merger
- Security Agreement Change of Name
- Other _____

Execution Date(s) 09/29/09

Additional name(s) & address(es) attached? Yes No

4. Application number(s) or patent number(s): 12/584,075

If this document is being filed together with a new application, the execution date(s) of the application is (are): 09/29/2009

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

Carmen B. Patti
Carmen Patti Law Group, LLC
Customer Number 32205

Docket No.: NGC-362/003648-804

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.4):..... \$ 40.00

- Enclosed
- Authorized to be charged to business credit card

8. Deposit account number:

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9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Carmen B. Patti
Name of Person Signing
Reg. No. 26,784

Signature

November 4, 2009
Date

Do not detach this portion

Mail documents to be recorded with required cover sheet information to:

Commissioner for Patents
Mail Stop Assignments
P. O. Box 1450
Alexandria, VA 22313-1450

ASSIGNMENT

WHEREAS, I, William Roland Deal, hereinafter referred to as Assignor together with Kevin Masaru Kung Hoong Leong, Vesna NMI Radisic, Patty Pei-ling Chang-Chien, and Richard NMI Lai have jointly invented certain new and useful improvements in MONOLITHICALLY INTEGRATED ACTIVE ELECTRONIC CIRCUIT AND WAVEGUIDE STRUCTURE FOR TERAHERTZ FREQUENCIES described in an application for United States Letters Patent, executed by me on the date as stated below:

WHEREAS, Northrop Grumman Space & Mission Systems Corp., an Ohio 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 Space & Mission Systems Corp., 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 Corp., 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 29 day of September, 2009, and has executed the referenced patent application on the 29 day of September, 2009.

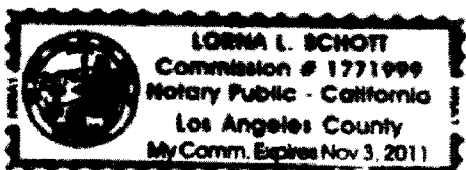

William Roland Deal

On this 29th day of September, 2009 before me Lorna L. Schott, Notary Public, personally came William Roland Deal, 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 foreign paragraph is true and correct.

WITNESS my hand and official seal.


Notary Public



IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this 29th day of September, 2009, and has executed the referenced patent application on the 29th day of September, 2009.

Kevin Masaru Kung Hoong Leong

Kevin Masaru Kung Hoong Leong

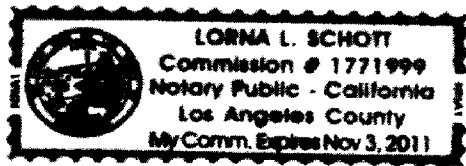
On this 29th day of September, 2009 before me Lorna L. Schott, Notary Public, personally came Keven Masaru Kung Hoong Leong, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she/they~~ 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 foreign paragraph is true and correct.

WITNESS my hand and official seal.

Lorna L. Schott

Notary Public



PATENT

REEL: 023521 FRAME: 0003

IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this 29 day of September, 2009, and has executed the referenced patent application on the 29 day of September, 2009.

Vesna NMI Radisic

Vesna NMI Radisic

On this 29th day of September, 2009 before me Lorna L. Schott, Notary Public, personally came Vesna Radisic, 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 foreign paragraph is true and correct.

WITNESS my hand and official seal.

Lorna L. Schott

Notary Public

IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this 21st day of September, 2009, and has executed the referenced patent application on the 21st day of September, 2009.

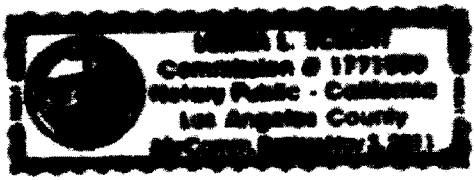

Patty Pei-Ling Chang-Chien

On this 21st day of September, 2009 before me Lorna L. Schott, Notary Public, personally came Patty Pei-Ling Chang-Chien 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 foreign paragraph is true and correct.

WITNESS my hand and official seal.


Notary Public



IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this 24 day of September, 2009, and has executed the referenced patent application on the 24 day of September, 2009.

Richard Lai

Richard NMI Lai

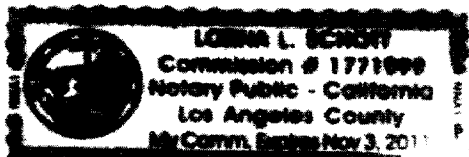
On this 24th day of September, 2009 before me Lorna L. Schott, Notary Public, personally came Richard Lai, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their 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 foreign paragraph is true and correct.

WITNESS my hand and official seal.

Lorna L. Schott

Notary Public



PATENT

RECORDED: 11/09/2009

REEL: 023521 FRAME: 0006