

RECORDATION FC  
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03/23/2011



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To the Honorable Commissioner of Patents and Tradem

ents or copy thereof.

Name of conveying party(ies):

Michael P. Fitz

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

Name: Northrop Grumman Systems Corporation

Address: 1840 Century Park East  
Los Angeles, CA 90067

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

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

3. Nature of Conveyance:

- Assignment  Merger
- Security Agreement  Change of Name
- Other \_\_\_\_\_

Execution Date(s) 03/16/2011

4. Application number(s) or patent number(s): 12/931,022

If this document is being filed together with a new application, the execution date(s) of the application is (are): 03/16/2011

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-360/003435-804

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:

DO NOT USE THIS SPACE

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

March 17, 2011  
Date

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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

03/22/2011 JADD01 00000043 12931022  
02 FC:8021 48.00 OP

NGC-360/003435-804

ASSIGNMENT  
(Single Inventor)

WHEREAS, I, Michael Paul Fitz, hereinafter referred to as Assignor  
have invented certain new and useful improvements in Recursive Frequency Estimation

described in an application for United States Letters Patent, executed by me on the date as stated below;

WHEREAS, Northrop Grumman Systems Corporation, a Delaware corporation, having its principal place  
of business at

1840 Century Park East  
Los Angeles, CA 90067  
United States of America

Herein after 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 Systems  
Corporation, and for other good and valuable consideration, the receipt and sufficiency of which 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 that may be granted thereon and all reissues and  
extensions thereof, and all applications for Letters Patent that 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 that 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 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 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.

NGC-360/003435-804

IN WITNESS WHEREOF, the undersigned has executed and delivered this instrument this 16<sup>th</sup> day of March, 2011, and has executed the referenced patent application on the 16<sup>th</sup> day of March, 2011.

Michael Paul Fitz  
Michael Paul Fitz

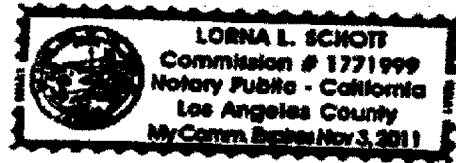
STATE OF CALIFORNIA        )  
  ) ss  
COUNTY OF LOS ANGELES    )

On March 16, 2011 before me, Lorna L. Schott, Notary Public, personally appeared Michael Paul Fitz, proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to this 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 to be 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

Lorna L. Schott  
Notary's Signature



(Seal)

RECORDATION FORM COVER SHEET Patent and Trademark Office  
PATENTS ONLY

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