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U.S. DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

RECORDATION FORM COVER SHEET
PATENTS ONLY

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

Northrop Grumman Corporation

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

2. Name and address of receiving party(ies)

Name: Northrop Grumman Information Technology, Inc.
Internal Address:
Street Address: 1840 Century Park East
City: Los Angeles
State: California
Country: United States Zip: 90067-2199

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

3. Nature of conveyance/Execution Date(s):

Execution Date(s) 11/25/2009

☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Joint Research Agreement
☐ Government Interest Assignment
☐ Executive Order 9424, Confirmatory License
☐ Other

4. Application or patent number(s):

☐ This document is being filed together with a new application.

A. Patent Application No.(s)

See attached sheets - Patent Applications

B. Patent No.(s)

See attached sheets - Patents

Additional numbers attached? ☒ Yes ☐ No

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

Name: Christopher P. Harris
Internal Address: Tarolli, Sundheim, Covell & Tummino LLP
Street Address: 1300 East Ninth Street, Suite 1700
City: Cleveland
State: OH Zip: 44114
Phone Number: 216.621.2234 Ext. 104
Fax Number: 216.621.4072
Email Address: charris@tarolli.com

6. Total number of applications and patents involved: 56

7. Total fee (37 CFR 1.21(h) & 3.41) $ 2,240.00

☒ Authorized to be charged to deposit account
☐ Enclosed
☐ None required (government interest not affecting title)

8. Payment Information

Deposit Account Number 20-0090
Authorized User Name Christopher P. Harris

9. Signature:

/Christopher P Harris/ — Signature
30 November 2009 — Date
Christopher P. Harris — Name of Person Signing

Total number of pages including cover sheet, attachments, and documents: 8

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

CH $2240.00 20-0090 0 12181882

Patent No.	Grant Date		Our Docket No.	Country
6,639,552	28-Oct-03	METHOD AND APPARATUS FOR DERIVING A SIGNAL FOR ENA	000048-254-US	US
6,961,170	01-Nov-05	Small Signal Optical Parametric Amplifier	000429-040-US	US
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7,281,015	09-Oct-07	METHOD AND APPARATUS FOR PROVIDING AN INTERFACE BE	000619-040-US	US
7,130,113	31-Oct-06	PASSIVE PHASING OF FIBER AMPLIFIERS	000691-242-US	US
7,232,240	19-Jun-07	Extended Source Laser Illuminator	000986-242-US	US
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6,166,686	26-Dec-00	CORRECTED MAGNETIC COMPASS	D-97022-US	US
6,208,933	27-Mar-01	CARTOGRAPHIC OVERLAY ON SENSOR VIDEO	D-97023-US-ORD	US
6,052,230	18-Apr-00	OPTICAL BLURRING FILTER WHICH IS RESISTANT TO DIGI	D-97048-US	US
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6,160,924	12-Dec-00	METHOD FOR FORMING A MAP OF A THREE-DIMENSIONAL OB	D-97057-US-ORD	US
6,493,123	10-Dec-02	MODULATED RETROREFLECTOR BASED LASER OPTICAL COMMU	D-99031-US-ORD	US
5,619,192	08-Apr-97	APPARATUS AND METHOD FOR READING UTILITY METERS	L-002-US	US
5,175,847	29-Dec-92	COMPUTER SYSTEM CAPABLE OF PROGRAM EXECUTION RECOV	L-003-US	US
5,596,166	21-Jan-97	PENETRATING VEHICLE WITH ROCKET MOTOR	L-005-US	US
5,276,771	04-Jan-94	RAPIDLY CONVERGING PROJECTIVE NEURAL NETWORK	L-023-US-ORD	US
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6,247,019	12-Jun-01	Object-Based Geographic Information System (GIS)	PRC 106-US-ORD	US
6,144,338	07-Nov-00	PREDICTIVE DROP AND LOAD ALGORITHM FOR AN OBJECT-B	PRC 107-US	US
6,262,741	17-Jul-01	TIMING OF OBJECT-BASED GEOGRAPHIC INFORMATION SYST	PRC 108-US-ORD	US
6,442,557	27-Aug-02	Enterprise Architecture Database	PRC 113-US-ORD	US
6,901,400	31-May-05	A Method for Caching remote Non-Standard Formatted	PRC 118-US	US
6,069,310	30-May-00	A Method for Controlling Remote Equipment over the	PRC 119-US	US
6,067,390	23-May-00	Ambient Load Switch	PRC 121-US	US
6,810,392	26-Oct-04	Method and Apparatus for Estimating Software Devel	PRC 122-US	US

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6,408,404	18-Jun-02	System and Method for Ensuring and Managing Situat	PRC 127-US	US
6,615,135	02-Sep-03	SATELLITE BASED ON BOARD VEHICLE NAVIGATION SYSTEM	PRC 128-US-ORD	US
6,225,961	01-May-01	Method and Apparatus for Computing and Compensatin	PRC 130-US-ORD	US
6,246,378	12-Jun-01	Method and Apparatus for Computing and Compensatin	PRC 130-US-ORD1	US
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7,010,810	07-Mar-06	SECURE NETWORK COMMUNICATIONS USE OF TRUSTED AGENT	PRC 145-US	US
5,712,921	27-Jan-98	Automated system for Print Quality Control	TA 003-US-1	US
5,629,169	31-May-97	Automated System and Method for Estimating Anilbio	TA 004-US	US
5,618,729	08-Apr-97	Automated System and Method for Estimating Antibio	TA 006-US	US
6,246,360	12-Jun-01	A Fast Satellite-Centric Analytical Algorithm for	TA 008-US	US
6,285,493	04-Sep-01	SINGLE CELL ACOUSTO-OPTIC CROSS CORRELATOR	TA 011-US	US
6,424,754	23-Jul-02	SOLID STATE OPTICALLY MODULATED CROSS CORRELATOR F	TA 013-US	US

Application No.	Application Date	Title	Our Docket No.	Country
12/081,982	24-Apr-08	Method for Application Development	000076-040/US	US
10/437,401	14-May-03	STEADY STATE COMPUTER INTRUSION AND MISUSE DETECTI	000191-040-US	US
10/437,019	14-May-03	SYSTEM AND METHOD FOR REAL-TIME NETWORK-BASED RECO	000193-040/US/RCE	US
10/933,320	03-Sep-04	System and Method for Rules Based Content Mining,	000466-040/US/RCE	US
10/781,619	20-Feb-04	GLOBAL CARGO CONTAINER INFORMATION CLEARINGHOUSE	000496-040/US/RCE	US
11/033,753	13-Jan-05	SYSTEM AND METHOD FOR PROVIDING A MISSION BASED MA	000617-040/US/NPV	US
11/271,923	14-Nov-05	SYSTEM AND METHOD FOR RAPID DATABASE APPLICATION D	000818-254/US/RCE	US
11/362,205	27-Feb-06	BioPIV (Fingerprint Enabled Wireless add-on for PI	000958-014-US-1	US
11/362,207	27-Feb-06	Method and System for Efficient Exception Handling	000959-014-US-1	US
11/505,333	17-Aug-06	Federated Credentialing System And Method	001238-062/US/RCE	US
12/309,637	26-Jan-09	Global Disease Surveillence Platform and Correspon	001395-014/US	US
12/309,636	25-Jul-06	Common Access Card HETerogeneous (CACHET) System a	001540-014/US	US

PATENT

ASSIGNMENT OF INVENTION
BY LEGAL REPRESENTATIVE

This Patent Assignment (this "Assignment") is made as of November 25, 2009 by Northrop Grumman Corporation ("Assignor"), an Ohio corporation and Northrop Grumman Information Technology, Inc. ("Assignee"), an Ohio corporation.

In consideration of the payment by ASSIGNEE to ASSIGNOR of the sum of One Dollar ($1.00), the receipt of which is hereby acknowledged, and for other good and valuable consideration,

ASSIGNOR:

Invention owner on whose behalf the following person is signing: Northrop Grumman Corporation

By legal representative of invention owner

Northrop Grumman Corporation
1840 Century Park East
Los Angeles, CA 90067-2199
United States of America

hereby sells, assigns and transfers to

ASSIGNEE:

Northrop Grumman Information Technology, Inc.
1840 Century Park East
Los Angeles, CA 90067-2199
United States of America

and the successors, assigns and legal representatives of the ASSIGNEE the entire right, title and interest for the United States and its territorial possessions and in all foreign countries, including all rights to claim priority, in and to any and all improvements which are disclosed in the patents and applications listed in Exhibit A attached hereto and incorporated herein and which is found in (37 C.F.R. § 3.21), and any legal equivalent thereof in a foreign country, including the right to claim priority and, in and to, all Letters Patent to be obtained for said invention listed in Exhibit A or any continuation, division, renewal, or substitute thereof, and as to letters patent any reissue or re-examination thereof.

ASSIGNOR hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

ASSIGNOR further covenants that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue

and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing premises, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and the covenants and agreements in this Assignment, the Assignor hereby agrees as follows:

1. Grant. Effective as of November 25, 2009, Assignor does hereby sell, transfer, convey, assign and deliver to Assignee all of the Assignor's right, title, and interest in and to the Assignee Patents, the same to be held by Assignee for Assignee's own use and enjoyment, and for the use and enjoyment of Assignee's successors, assigns and other legal representatives, as fully and entirely as the same would have been held and enjoyed by Assignor if this Assignment and sale had not been made; together with all claims for damages by reason of past infringements of the Assignee Patents, along with the right to sue for and collect such damages for the use and benefit of Assignee and Assignee's successors, assigns and other legal representatives.

2. Representations and Warranties of the Parties. Each party warrants that (i) this Assignment is a legal, valid and binding obligation of the warranting party, (ii) it has full power and authority to enter into and perform its obligations under this Assignment in accordance with its terms, and (iii) it is and will remain free of any obligations and restrictions that would prevent or impede its performance of its obligations under this Assignment.

3. Further Assurances. Each party will, without additional consideration, take such further actions and execute promptly such further documents as are necessary to effect and record the above Assignment, including any actions or documents required by the applicable registrar to document the transfer herein or as may be necessary to protect, secure and vest good, valid and marketable title to the Assignee Patents and related rights in Assignee.

4. Recording of Assignment. Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any officer of any country or countries foreign to the United States, whose duty it is to issue Patents or other evidence or forms of intellectual property protection or applications as, to issue the same to Assignee and Assignee's successors, assigns and other legal representatives in accordance with the terms of this instrument.

5. Counterparts. This Assignment may be executed in one or more counterparts, all of which shall be considered one and the same agreement, and shall become effective when one or more such counterparts have been signed by each of the parties and delivered to the other party.

IN WITNESS WHEREOF, I have hereunto set hand and seal this 25th day of November, 2009.

ASSIGNOR: Northrop Grumman Corporation

Kathleen M Salmas

Signature
Name: Kathleen M. Salmas
Title: Secretary

ASSIGNEE: Northrop Grumman Information Technology, Inc.

Kathleen M Salmas

Signature
Name: Kathleen M. Salmas
Title: Secretary

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California
County of Los Angeles

On Nov. 25, 2009 (Date) before me, Lynne M. Witmer Notary Public, (Here Insert Name and Title of the Officer)

personally appeared Kathleen M. Salmas (Name(s) of Signer(s))

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.

LYNNE M. WITMER
Commission # 1811549
Notary Public - California
Los Angeles County
My Comm. Expires Aug 29, 2012

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 Lynne M. Witmer (Signature of Notary Public)

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Assignment of Invention

Document Date: November 25, 2009 Number of Pages: 3

Signer(s) Other Than Named Above: —

Capacity(ies) Claimed by Signer(s)

Signer's Name: Kathleen M Salmas

- ☐ Individual
- ☒ Corporate Officer — Title(s): Secretary
- ☐ Partner — ☐ Limited ☐ General
- ☐ Attorney in Fact
- ☐ Trustee
- ☐ Guardian or Conservator
- ☐ Other:

Signer Is Representing: Northrop Grumman Information Technology, Inc./NGC

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Signer's Name:

- ☐ Individual
- ☐ Corporate Officer — Title(s):
- ☐ Partner — ☐ Limited ☐ General
- ☐ Attorney in Fact
- ☐ Trustee
- ☐ Guardian or Conservator
- ☐ Other:

Signer Is Representing:

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

EXHIBIT A

Patent No.	Grant Date		Our Docket No.	Country
6,639,552	28-Oct-03	METHOD AND APPARATUS FOR DERIVING A SIGNAL FOR ENA	000048-254-US	US
6,961,170	01-Nov-05	Small Signal Optical Parametric Amplifier	000429-040-US	US
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7,232,240	19-Jun-07	Extended Source Laser Illuminator	000986-242-US	US
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6,052,230	18-Apr-00	OPTICAL BLURRING FILTER WHICH IS RESISTANT TO DIGI	D-97048-US	US
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12/309,636	25-Jul-06	Common Access Card HETerogeneous (CACHET) System a	001540-014/US	US

Patent No.	Grant Date	Title	Our Docket No.	Country
2077486	26-Sep-95	Electrical Connector Circuit Wafer	15-0149-CA	CA

Application No.	Application Date	Title	Our Docket No.	Country
060127685	21-Jun-06	Method and System for Efficient Exception Handling	000959-014-EP	EP
078369238	16-Aug-07	Federated Credentialling System And Method	001238-062/EP	EP
068150705	21-Sep-06	Global Disease Surveillence Platform and Correspon	001395-014/EP	EP