

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Northrop Grumman Corporation	12/16/2010

RECEIVING PARTY DATA

Name:	Northrop Grumman Shipbuilding, Inc.
Street Address:	4101 Washington Avenue
City:	Newport News
State/Country:	VIRGINIA
Postal Code:	23607

PROPERTY NUMBERS Total: 68

Property Type	Number
Patent Number:	5176092
Patent Number:	5186117
Patent Number:	5191162
Patent Number:	5199912
Patent Number:	5286116
Patent Number:	5319686
Patent Number:	5333913
Patent Number:	5345058
Patent Number:	5363791
Patent Number:	5383741
Patent Number:	5429338
Patent Number:	5452677
Patent Number:	5509830
Patent Number:	5526766
Patent Number:	5586801

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Patent Number:	5590474
Patent Number:	5625549
Patent Number:	5633904
Patent Number:	5661768
Patent Number:	5691589
Patent Number:	5738386
Patent Number:	5758861
Patent Number:	5783893
Patent Number:	5832859
Patent Number:	5838861
Patent Number:	5875955
Patent Number:	6007022
Patent Number:	6174125
Patent Number:	6223676
Patent Number:	6374031
Patent Number:	D412966
Patent Number:	6444951
Patent Number:	6437279
Patent Number:	6476532
Patent Number:	6467759
Patent Number:	6254070
Patent Number:	5841147
Patent Number:	5622572
Patent Number:	6868794
Patent Number:	6695296
Patent Number:	6511047
Patent Number:	7274031
Patent Number:	6705571
Patent Number:	6697271
Patent Number:	6752250
Patent Number:	7213690
Patent Number:	6923298
Patent Number:	5613460
Patent Number:	7383685
Patent Number:	7284364

Patent Number:	7159818
Patent Number:	6929379
Patent Number:	6851827
Patent Number:	7238066
Patent Number:	7707841
Patent Number:	7369921
Patent Number:	7492052
Patent Number:	6729657
Patent Number:	D465189
Patent Number:	6223669
Patent Number:	6104103
Patent Number:	5892299
Patent Number:	D522440
Patent Number:	6003461
Patent Number:	6347461
Patent Number:	7726634
Application Number:	11771175
Application Number:	12019977

CORRESPONDENCE DATA

Fax Number: (704)444-1111
Correspondence will be sent via US Mail when the fax attempt is unsuccessful.
Phone: 704-444-1000
Email: kim.shaul@alston.com
Correspondent Name: Alston & Bird LLP
Address Line 1: Bank of America Plaza
Address Line 2: 101 South Tryon Street, Suite 4000
Address Line 4: Charlotte, NORTH CAROLINA 28280-4000

ATTORNEY DOCKET NUMBER:	034726/397686
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NAME OF SUBMITTER:	Guy R. Gosnell
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Total Attachments: 9
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ASSIGNMENT

THIS ASSIGNMENT, made by **NORTHROP GRUMMAN CORPORATION**, a corporation of the state of Delaware, having its principal place of business at 1840 Century Park East, Los Angeles, California 90067-2199 US, hereinafter referred to as Assignor;

WITNESSETH: That,

WHEREAS, Assignor has previously acquired all right, title, and interest in and to the United States and foreign patents and/or patent applications identified on the attached Schedule A, and in and to the inventions represented thereby (all hereinafter referred to as the "Patents"); and,

WHEREAS, **NORTHROP GRUMMAN SHIPBUILDING, INC.**, a corporation of the state of Virginia, having its principal place of business at 4101 Washington Avenue, Newport News, Virginia 23607 US, hereinafter referred to as Assignee, is desirous of acquiring the entire right, title, and interest in and to said Patents and in and to the inventions represented thereby; and

WHEREAS, the parties have agreed to the Assignment hereinafter set forth;

NOW, THEREFORE, To All Whom It May Concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the above Assignor has sold and by these presents does hereby sell, assign, transfer, and convey unto the said Assignee, its successors and assigns, its entire right, title, and interest in and to said Patents and the inventions represented thereby, and any and all continuations, continuations-in-part, or divisions thereof, and any and all Letters Patent or reissues, reexaminations, or extensions thereof which may be granted therefor or thereon, to the full end of the term for which said Letters Patent may be granted, together with the right to claim priority in all foreign countries in accordance with the International Convention; all rights corresponding to said Patents in foreign countries throughout the world; and all of its rights to sue for past infringement of said Patents worldwide, together with all claims for damage by reason of past infringement of said Patents, with the right to sue for, and collect the same for Assignee's own use and enjoyment; all to be held and enjoyed by said Assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by Assignor if this assignment and sale had not been made.

From time to time after the date hereof, at the request of either party hereto, and at the expense of the party so requesting, each of the parties hereto shall execute and deliver to such requesting party such documents and take such other action as such requesting party may reasonably request in order to consummate more effectively the transactions contemplated hereby.

Signatures to Appear on Following Pages

IN WITNESS WHEREOF, the Assignor has caused this assignment to be executed this 16th day of December, 2010.

NORTHROP GRUMMAN CORPORATION

By: Kathleen M. Salmas (SEAL)
Kathleen M. Salmas

Assistant
Its: Secretary

STATE OF California)
COUNTY OF Los Angeles)

I, Lynne M. Witmer, a Notary Public for said County and State, do hereby certify that Kathleen M. Salmas, personally came before me this day and acknowledged that she is Secretary of **NORTHROP GRUMMAN CORPORATION** and acknowledged, on behalf of **NORTHROP GRUMMAN CORPORATION**, the due execution of the foregoing instrument.

Witness my hand and official seal, this the 17th day of December, 2010.

(Official Seal)

Lynne M. Witmer
Notary Public

My commission expires: _____



IN WITNESS WHEREOF, the Assignee has accepted this assignment and caused this assignment to be executed this 16th day of December, 2010.

NORTHROP GRUMMAN SHIPBUILDING, INC.

By: Kathleen M. Salmas (SEAL)
Kathleen M. Salmas

Its: Secretary

STATE OF California)
COUNTY OF Los Angeles)

I, Lynne M. Witmer, a Notary Public for said County and State, do hereby certify that Kathleen M. Salmas, personally came before me this day and acknowledged that she is Secretary of **NORTHROP GRUMMAN SHIPBUILDING, INC.** and acknowledged, on behalf of **NORTHROP GRUMMAN SHIPBUILDING, INC.** the due execution of the foregoing instrument.

Witness my hand and official seal, this the 17th day of December, 2010.

(Official Seal)

Lynne M. Witmer
Notary Public

My commission expires: _____



SCHEDULE A

Docket Number	Status	Title	Country	Application No.	Filing Date	Patent No.	Grant Date
000134-270-US	Granted	Icebreaker Bow and Hull form	United States of America	7753391	8/30/1991	5176092	1/5/1993
000135-270-US	Granted	Submarine Steering Apparatus and Method	United States of America	7786708	11/1/1991	5186117	2/16/1993
000136-270-US	Granted	Method and Apparatus for a Ship-Based Rocket Launching Structure	United States of America	7755338	9/5/1991	5191162	3/2/1993
000137-270-US	Granted	Electric Power System for Marine Vehicles	United States of America	7745350	8/15/1991	5199912	4/6/1993
000152-270-US	Granted	Bearing Assembly	United States of America	7938420	8/31/1992	5286116	2/15/1994
000153-270-US	Granted	Dry Transfer of Spent Nuclear Rods for Transportation	United States of America	8100621	7/30/1993	5319686	6/7/1994
000154-270-US	Granted	Galvanic Isolation Device	United States of America	8017690	2/12/1993	5333913	8/2/1994
000155-270-US	Granted	Magnetic Field Negating System for Weldments	United States of America	7925955	8/5/1992	5345058	9/6/1994
000156-270-US	Granted	Weapons Launch System	United States of America	8062812	5/11/1993	5363791	11/15/1994
000162-270-US	Granted	End Welded Stud and Supports for Wireway Hangers	United States of America	8109634	8/20/1993	5383741	1/24/1995
000163-270-US	Granted	Equipment Mount	United States of America	8105516	8/11/1993	5429338	7/4/1995
000164-270-US	Granted	Hull Valve Assembly	United States of America	8140663	10/21/1993	5452677	9/26/1995
000166-270-US	Granted	Marine Propulsor Cooling and Lubricating System	United States of America	8298095	8/23/1994	5509830	4/23/1996
000167-270-US	Granted	Hull Markings	United States of America	8345537	11/28/1994	5526766	6/18/1996
000171-270-US	Granted	Stud Mounted Hoist Ring	United States of America	8329929	10/27/1994	5586801	12/24/1996
000172-270-US	Granted	Flange Bolt Hole Alignment Pin	United States of America	8512590	8/8/1995	5590474	1/7/1997
000173-270-US	Granted	Boost-Buck Rectifier Bridge Circuit Topology with Diode Decoupled Boost Stage	United States of America	8310946	9/23/1994	5625549	4/29/1997
000175-270-US	Granted	Spent Nuclear Fuel (SNF) Dry Transfer System	United States of America	8336503	1/19/1994	5633904	5/27/1997
000175-270-US-1	Granted	Spent Nuclear Fuel (SNF) Dry Transfer System	United States of America	8593158	2/1/1996	5661768	8/26/1997
000176-270-CH	Granted	Detachable Magnet Carrier for Permanent Magnet Motor	Switzerland	961104585	6/28/1996	751605	10/6/1999
000176-270-DE	Granted	Detachable Magnet Carrier for Permanent Magnet Motor	Germany	961104585	6/28/1996	69604537	10/6/1999

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REEL: 025576 FRAME: 0927

Docket Number	Status	Title	Country	Application No.	Filing Date	Patent No.	Grant Date
000176-270-DK	Granted	Detachable Magnet Carrier for Permanent Magnet Motor	Denmark	961104585	6/28/1996	751605	10/6/1999
000176-270-ES	Granted	Detachable Magnet Carrier for Permanent Magnet Motor	Spain	961104585	6/28/1996	751605	10/6/1999
000176-270-FI	Granted	Detachable Magnet Carrier for Permanent Magnet Motor	Finland	961104585	6/28/1996	751605	10/6/1999
000176-270-FR	Granted	Detachable Magnet Carrier for Permanent Magnet Motor	France	961104585	6/28/1996	751605	10/6/1999
000176-270-GB	Granted	Detachable Magnet Carrier for Permanent Magnet Motor	United Kingdom	961104585	6/28/1996	751605	10/6/1999
000176-270-GR	Granted	Detachable Magnet Carrier for Permanent Magnet Motor	Greece	961104585	6/28/1996	751605	10/6/1999
000176-270-IT	Granted	Detachable Magnet Carrier for Permanent Magnet Motor	Italy	961104585	6/28/1996	751605	10/6/1999
000176-270-KR	Granted	Detachable Magnet Carrier for Permanent Magnet Motor	Korea (South)	1019960026614	7/1/1996	1002490990000	4/1/2000
000176-270-NL	Granted	Detachable Magnet Carrier for Permanent Magnet Motor	Netherlands	961104585	6/28/1996	751605	10/6/1999
000176-270-PT	Granted	Detachable Magnet Carrier for Permanent Magnet Motor	Portugal	961104585	6/28/1996	751605	10/6/1999
000176-270-SE	Granted	Detachable Magnet Carrier for Permanent Magnet Motor	Sweden	961104585	6/28/1996	751605	10/6/1999
000176-270-US	Granted	Detachable Magnet Carrier for Permanent Magnet Motor	United States of America	8496928	6/30/1995	5691589	11/25/1997
000177-270-US	Granted	Lightweight Pipe Clamp	United States of America	8608588	2/28/1996	5738386	4/14/1998
000178-270-US	Granted	Compression Mount for Multiple Stator, Single Shaft Electric Machine	United States of America	8710457	9/18/1996	5758861	6/2/1998
000179-270-US	Granted	Welded Stud Hanging Assembly for a Blasting and Coating Containment system	United States of America	8546317	10/20/1995	5783893	7/2/1/1998
000180-270-US	Granted	Transition Assembly for Optical Fiber	United States of America	8587552	1/17/1996	5832859	11/10/1998
000181-270-US	Granted	Internally Mounted Pipe Clamping Device	United States of America	8891595	7/11/1997	5838861	11/17/1998
000182-270-US	Granted	Internal Combustion Catalput	United States of America	8730920	10/18/1996	5875955	3/2/1999
000183-270-US	Granted		United States of America	8967052	11/10/1997	6007022	12/28/1999

Docket Number	Status	Title	Country	Application No.	Filing Date	Patent No.	Grant Date
000184-270-US	Granted	Method and Apparatus for Racking and Unracking Pipe Control for X-stern Vehicle	United States of America	9408434	9/29/1999	6174125	1/16/2001
000185-270-US	Granted	Penetrator for Blown Optical Fiber and Method Relating Thereto	United States of America	9447520	11/23/1999	6223676	5/1/2001
000186-270-US	Granted	Valve handle	United States of America	9535194	3/27/2000	6374031	4/16/2002
000187-270-US	Granted	Welding Rod Extending Assembly for Attachment with Electrode Holder	United States of America	29097352	12/4/1998	D412966	8/17/1999
000189-270-US	Granted	Method and Apparatus for Leveling and Shielding a Stud Gun and Operator	United States of America	9785506	2/20/2001	6444951	9/3/2002
000190-270-US	Granted	Magnetostrictive-compensated Core of Electromagnetic Device	United States of America	9723466	11/28/2000	6437279	8/20/2002
000231-270-US	Granted	Controllable Equipment Mount	United States of America	9222476	12/29/1998	6476532	11/5/2002
000232-270-US	Granted	Shock Absorption Mount	Germany	9785401	2/20/2001	6467759	10/22/2002
000233-270-DE-EPP	Granted	Shock Absorption Mount	Spain	989332069	7/1/1998	991874	9/21/2005
000233-270-ES-EPP	Granted	Shock Absorption Mount	France	989332069	7/1/1998	991874	9/21/2005
000233-270-FR-EPP	Granted	Shock Absorption Mount	United Kingdom	989332069	7/1/1998	991874	9/21/2005
000233-270-GB-EPP	Granted	Shock Absorption Mount	Italy	989332069	7/1/1998	991874	9/21/2005
000233-270-IT-EPP	Granted	Shock Absorption Mount	United States of America	9462235	1/4/2000	6254070	7/3/2001
000233-270-US-PCT	Granted	Intermodal Modular Spent Nuclear Fuel Transportation System	United States of America	8920651	8/29/1997	5841147	11/24/1998
000234-270-US-ORD	Granted	Extra-strength Steel and Method of Making	United States of America	8520463	8/28/1995	5622572	4/22/1997
000236-270-US-ORD	Granted	Material Turn Table	United States of America	10265739	10/8/2002	6868794	3/22/2005
000238-270-US-ORD	Granted	Shock and Vibration Isolation Mount with Variable Thickness Support Section	United States of America	9986355	11/8/2001	6695296	2/24/2004
000240-270-US	Granted	Method and Apparatus for Making a Plurality of Blown Optical Fiber Insertions into a Duct	United States of America	9464233	12/15/1999	6511047	1/28/2003
000243-270-US	Granted	Radiation Shielding	Canada	2440402	3/12/2002	2440402	1/15/2008
000244-270-CA	Granted	Radiation Shielding	European Patent Office (EPO)	02726604.8	3/12/2002		
000244-270-EP	Pending						

Docket Number	Status	Title	Country	Application No.	Filing Date	Patent No.	Grant Date
000244-270-US-1	Granted	Radiation Shielding System and Method for Loading Stores on an Aircraft	United States of America	10095023	3/12/2002	7274031	9/25/2007
000245-270-US	Granted	Cascade Multi-Level H-Bridge Drive	United States of America	10201085	7/22/2002	6705571	3/16/2004
000247-270-US	Granted	Shock, Vibration and Acoustic Isolation System	United States of America	9930249	8/16/2001	6697271	2/24/2004
000248-270-US	Granted	Self-Powering Shock, Vibration and Acoustic Isolation System	United States of America	9963566	9/27/2001	6752250	6/22/2004
000248-270-US-1	Granted	Shock, Vibration and Acoustic Isolation System	United States of America	10662731	9/15/2003	7213690	5/8/2007
000248-270-US-2	Granted	Submersible Vessel External Load Mounting System	United States of America	10850209	5/20/2004	6923298	8/2/2005
000313-270-US-ORD	Granted	Passive Exhaust Suppressor And Method	United States of America	8642123	5/2/1996	5613460	3/25/1997
000464-146/US/D	Granted	Passive Exhaust Suppressor And Method	United States of America	11760097	6/8/2007	7383685	6/10/2008
000464-146-CA	Pending	Passive Exhaust Suppressor And Method	Canada	2538899	9/2/2004		
000464-146-US/1	Granted	Multi-Spectral Air Inlet Shield and Associated Inlet Structure	United States of America	10917212	8/12/2004	7284364	10/23/2007
000468-146-US	Granted	Submersible Lantern	United States of America	10958481	10/5/2004	7159818	1/9/2007
000563-270-US-CIPC1	Granted	Submersible Lantern	United States of America	10912347	8/4/2004	6929379	8/16/2005
000563-270-US-ORD	Granted	Pod Propulsion System with Rim-Mounted Bearings	United States of America	10201058	7/22/2002	6851827	2/8/2005
000647-270/US	Granted	Pod Propulsion System with Rim-Mounted Bearings	United States of America	10948061	9/23/2004	7238066	7/3/2007
000647-270/US/C	Pending	Pod Propulsion System with Rim-Mounted Bearings	United States of America	11771175	6/29/2007		
000647-270/US/RCE	Pending	Phase Cooling Method And Apparatus	United States of America	11771175	6/29/2007		
000669-146-US-1	Granted	Power Distribution Expert System	United States of America	11302705	12/13/2005	7707841	5/4/2010
001093-270-US	Granted	System and Method for Tensioning and Locking a Safety Strand	United States of America	11351550	2/10/2006	7369921	5/6/2008
001429-270-US	Pending	Electronically Moderated Expansion Electrical Generator	United States of America	11567811	12/7/2006	7726634	6/1/2010
001455-270-US	Granted		United States of America	11562186	11/21/2006	7492052	2/17/2009

Docket Number	Status	Title	Country	Application No.	Filing Date	Patent No.	Grant Date
001582-270/US/NPV	Pending	Portable Multi-Function Machine Tool	United States of America	12019977	1/25/2008		
001724-146-US	Unfiled	Magnetic Nanobite Composite Resin	United States of America				
ISI 00-141-US	Granted	Method and Apparatus for Fastening a Tube to a Wall	United States of America	10037283	1/4/2002	6729657	5/4/2004
ISI 94-123-US	Granted	High Performance Multipurpose Frigate	United States of America	29074330	8/4/1997	D465189	11/5/2002
ISI 95-125-US-1	Granted	Vessel Having a Standardized Hull Capable of Having a Plurality of Optional and Operational Modular Structures and Method of Construction Therefor	United States of America	9100127	6/19/1998	6223669	5/1/2001
ISI 95-1261C-US	Granted	Simultaneous Power Supply Source	United States of America	9301745	4/29/1999	6104103	8/15/2000
ISI 95-126-US	Granted	Simultaneous Power Supply Source	United States of America	8719096	9/24/1996	5892299	4/6/1999
ISI 96-132-US	Granted	Multi-Function Corvette	United States of America	29074331	8/4/1997	D522440	6/6/2006
ISI 96-136-US	Granted	Quick Acting Watertight Composite Door Assembly	United States of America	8988780	12/11/1997	6003461	12/21/1999
ISI 97-137-US	Granted	Portable Draft Measurement Device and Method of Use Therefor	United States of America	9455794	12/7/1999	6347461	2/19/2002

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