## PATENT ASSIGNMENT

# Electronic Version v1.1 Stylesheet Version v1.1

Execution Date 12/28/2010 12/29/2010 12/29/2010 the Navy Chief of Naval Research
12/28/2010 12/29/2010 12/29/2010 the Navy Chief of Naval Research
12/28/2010 12/29/2010 12/29/2010 the Navy Chief of Naval Research
12/29/2010 12/29/2010 the Navy Chief of Naval Research
the Navy Chief of Naval Research
the Navy Chief of Naval Research
Imber
Imber
imber
essful.
<i>essful.</i> 75-5320

Total Attachments: 6
source=NRL_Assignment_Cover#page1.tif
source=NRL_Assignment_12981432#page1.tif
source=NRL_Assignment_12981432#page2.tif
source=NRL_Assignment_12981432#page3.tif
source=NRL_Assignment_12981432#page4.tif
source=NRL_Assignment_12981432#page5.tif

Form PTO-1595 (Rev. 03-09) OMB No. 0651-0027 (exp. 03/31/2009) U.S. DEPARTMENT OF COMMERCE United States Patent and Trademark Office

RECORDATION FO PATENT	
	e record the attached documents or the new address(es) below.
1. Name of conveying party(ies)	2. Name and address of receiving party(ies)
	Name: Gov't of U.S.A. as represented by the Secretary of Navy
Carolyn R. Kaplan Elaine S. Oran	Internal Address: Chief of Naval Research
Jay P. Boris	
Additional name(s) of conveying party(ies) attached? 🗌 Yes 🔀 No	Office of Counsel Code OOCCIP
3. Nature of conveyance/Execution Date(s):	Street Address: <u>One Liberty Ctr.</u>
Execution Date(s) <u>12/28;12/29; and 12/29/2010 respectively</u>	875 North Randolph Street, Suite 1425
X Assignment Merger	
Security Agreement Change of Name	City: <u>Arlington</u>
Joint Research Agreement	State: VA
Government Interest Assignment	Country: USA Zip: 22203
Executive Order 9424, Confirmatory License	Country: USA Zip: 22203
 Other	Additional name(s) & address(es) attached? 🗌 Yes 🔀 No
4. Application or patent number(s):	document is being filed together with a new application.
A. Patent Application No.(s)	B. Patent No.(s)
12/981,432	
This is in reference to Docket No. NC100148US2 Customer No. 26384	
Additional numbers at	tached? Yes XNo
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: <u>1</u>
Name: Associate Counsel Patents	7. Total fee (37 CFR 1.21(h) & 3.41) \$_40.00
Internal Address: Naval Research Laboratory	
Code 1008.2	X Authorized to be charged to deposit account
Street Address: 4555 Overlook Avenue, SW	None required (government interest not affecting title)
City: Washington	8. Payment Information
State: <u>DC</u> Zip: <u>20375-5320</u>	
Phone Number: 202 404 1557	Deposit Account Number <u>50-0281</u>
Fax Number: <u>202 404 7380</u>	
Email Address: john.voung@nrl.navy.mil	Authorized User Name John Leonard Young
9. Signature: /JOHN LEONARD YOUN	G/ December 30, 2010
Signature	Date
John Leonard Young	Total number of pages including cover
Name of Person Signing	sheet, attachments, and documents:

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

> PATENT REEL: 025565 FRAME: 0003

### ASSIGNMENT BY INVENTOR (UNITED STATES PATENTS)

THIS ASSIGNMENT, made by Carolyn R. Kaplan: Elaine S. Oran; and Jay P. Boris (hereinafter referred to as Assignor(s)), residing at 9025 Copperleaf Lane, Fairfax Station, VA 22039; 3516 Duff Drive, Falls Church, VA 22041; and 3516 Duff Drive, Falls Church. VA 22041, respectively;

WHEREAS, Assignor(s), while employed by the Government of the United States, has/have invented certain new and useful improvements in FAST TRACKING METHODS AND SYSTEMS FOR AIR TRAFFIC MODELING USING A MONOTONIC LAGRANGIAN GRID, set forth in an application for Letters Patent of the United States. filed as U.S. Application No. 12/981432. on December 29, 2010; and

WHEREAS, The Government of the United States of America, as represented by the Secretary of the Navy, a Federal Agency (hereinafter referred to as the Government and/or Assignee), is desirous of acquiring the entire right, title and interest of the Assignor(s) in and to said invention(s) and said Application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefore and thereon.

WHEREAS, by acquiring the Assignors' entire right, title, and interest in and to the invention the Government will be enabled to license the invention and share the income from the licensing with the Assignor(s) as allowed by law:

WHEREAS, the conditions under which the invention was made are such as to entitle the Government under Paragraph 1(a) of Executive Order 10096. to the Assignors' entire right, title, and interest therein, including the foreign rights; and

WHEREAS. as to foreign rights, it is the policy of the Government to obtain an option to exercise such rights;

**NOW, THEREFORE**, in consideration of the premises and other good and sufficient consideration, the receipt of which is hereby acknowledged, Assignor(s) has/have assigned.

100148US2

PATENT REEL: 025565 FRAME: 0004

1

transferred and set over, and by these presents does assign, transfer and set over, unto the Government, its successors, legal representatives and assigns, Assignors' entire right, title and interest in and to the above-mentioned invention(s) and application for Letters Patent, and in and to any and all direct and indirect divisions, continuations and continuations-in-part of said application, and any and all Letters Patent in the United States which may be granted therefore and thereon, and reissues, reexaminations and extensions of said Letters Patent, the same to be held and enjoyed by the Government, for its own use and benefit and the use and benefit of its successors. legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignor(s), had this assignment not been made.

AND for the same consideration, Assignor(s) hereby represent and warrant to the Government, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to the Government under law or that have already been transferred to the Government, Assignor(s) is/are the lawful owner(s) of the Assignors' entire right, title and interest in and to said invention(s) and application(s) for Letters Patent above-mentioned, and that the same are unencumbered and that Assignor(s) has/have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignor(s) hereby covenant and agree to and with the Government. its successors, legal representatives and assigns, that Assignor(s) will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said invention(s), without charge to the Government, its successors, legal representatives and assigns, whenever counsel of the Government, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said invention(s), or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said invention(s) including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or

100148US2

## PATENT REEL: 025565 FRAME: 0005

2

continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon. is lawful and desirable.

AND Assignor(s) hereby request the Commissioner of Patents and Trademarks to issue said Letters Patent of the United States to Assignee(s), as Assignee(s) of said invention(s) and the Letters Patent to be issued thereon, for the sole use and benefit of the Assignee(s), its successors, legal representatives and assigns.

AND the Assignor(s) does/do hereby also grant unto the Government, the option to take the entire right, title, and interest in the invention and all patent applications or other forms of protection thereon of the Assignor(s) in all countries foreign to the United States in which the Government may file, or cause to be filed, applications for Letters Patent or other forms of protection, without payment of any consideration; provided, however. that this grant of an option to take foreign rights in the invention(s), or application(s) or other forms of protection thereon, shall have force and effect only as to such application(s) for which a decision to file in foreign countries is made within eight months of the filing date of any application for United States Letters Patent and/or any provisional application covering the invention, or within eight months from the declassification of the invention(s), whichever is later, and that all foreign rights not exercised under the option are left to Assignor subject to a nonexclusive. irrevocable, royalty-free license to the Government in any patent or other form of protection which may issue on said invention(s) in any foreign country, including the power to issue sub-licenses for use in behalf of the Government and/or in furtherance of the foreign policies of the Government.

AND the Assignor(s) hereby further agree to make, execute, and deliver to the Government, any and all papers. documents, affidavits. statements, or other instruments that may be necessary in the prosecution of the application and of any continuation. division, or substitution of the application. or any application for reissue or extension of said Letters Patent, and to assist the Government in every way in protecting the invention(s) as may be requested, provided that any expense arising through such efforts will be paid by the Government.

AND Assignor(s) hereby appoint all practitioners at Customer Number 26384, all of US Naval Research Laboratory, 4555 Overlook Ave, SW, Washington, DC 20375, jointly. and each of

100148US2

PATENT REEL: 025565 FRAME: 0006

3

them severally, my attorneys at law/patent agent(s), with full power of substitution, delegation and revocation, to prosecute this application, to make alterations and amendments therein, and to transact all business in the U.S. Patent and Trademark Office connected therewith.

AND Assignor(s) hereby grant the following individuals the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office any foreign patent office for recordation of this document:

#### US NAVAL RESEARCH LABORATORY

All practitioners at Customer Number 26384.

Date: 12/28/2010	Signature: Carolyn R. Kaplan Carolyn R. Kaplan	Seal
Date:	Signature: Elaine S. Oran	Seal
Date:	Signature: Jay P. Boris	Seal
Date:	Signature:	Seal

100148US2

PATENT REEL: 025565 FRAME: 0007

4

... . .

them severally, my attorneys at law/patent agent(s), with full power of substitution, delegation and revocation, to prosecute this application, to make alterations and amendments therein, and to transact all business in the U. S. Patent and Trademark Office connected therewith.

AND Assignor(s) hereby grant the following individuals the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office any foreign patent office for recordation of this document:

#### US NAVAL RESEARCH LABORATORY

All practitioners at Customer Number 26384.

Date:	Signature: Carolyn R. Kaplan	Seal
Date: 29 Dec. 2010	Signature: Elaine S. Oran	_ Seal
Date: 29 Dec 2010	Signature:	_ Seal
Date:	Signature:	Seal