PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JONATHAN L. MACE	04/17/2013
GERALD J. SEITZ	04/18/2013
JOHN A. ECHAVE	04/17/2013
PIERRE-YVES LE BAS	04/18/2013

RECEIVING PARTY DATA

Name:	LOS ALAMOS NATIONAL SECURITY, LLC	
Street Address:	LOS ALAMOS NATIONAL LABORATORY, LC/IP	
City:	LOS ALAMOS	
State/Country:	NEW MEXICO	
Postal Code:	87545	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14370209

CORRESPONDENCE DATA

Fax Number: (503)595-5301

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 503-595-5300

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Correspondent Name: DAVID P. PETERSEN/GAY MOLISE
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Address Line 2: ONE WORLD TRADE CENTER
Address Line 4: PORTLAND, OREGON 97204

ATTORNEY DOCKET NUMBER:	8472-90445-02
NAME OF SUBMITTER:	GAY MOLISE
SIGNATURE:	/GAY MOLISE/
DATE SIGNED:	07/03/2014

Total Attachments: 8

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PATENT 502878564 REEL: 033238 FRAME: 0386



PATENT REEL: 033238 FRAME: 0387

WHEREAS, we, Jonathan L. Mace, of Los Alamos, NM, Gerald J. Seitz, of El Rancho, NM, John A. Echave, of Los Alamos, NM, and Pierre-Yves Le Bas, of Los Alamos, NM, have invented a certain invention, as described in the following patent application:

PCT Patent Application No. PCT/US2013/021475, filed on January 14, 2013, entitled "DETONATION COMMAND AND CONTROL,"

which application is referred to as "the patent application."

WHEREAS, Los Alamos National Security, LLC, a corporation organized under the laws of the State of Delaware, having a place of business at Los Alamos National Laboratory, LC/IP, Los Alamos, NM 87545, desires to acquire an interest therein:

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, we, Jonathan L. Mace, Gerald J. Seitz, John A. Echave, and Pierre-Yves Le Bas hereby sell, assign, and transfer to Los Alamos National Security, LLC, the full and exclusive right, title, and interest in and to said invention, patent application, and patent rights throughout the world, including foreign patent priority rights, the right to file and prosecute International Applications under the Patent Cooperation Treaty, and the right to file and prosecute applications under the European Patent Convention; said invention, patent application, and letters patent in this or any foreign country, and all corresponding non-provisional applications, divisions, continuations, continuations-in-part, reissues, and extensions thereof, to be held and enjoyed by Los Alamos National Security, LLC, for its own use and benefit, and for its successors and assigns to the full end of the term for which letters patent may be granted by the United States or any foreign country, as fully and entirely as the same would have been held by us had this assignment and sale not been made, and covenant that we have full right so to do, and agree that we will communicate to Los Alamos National Security, LLC, or its successors and assigns, any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths, and do everything possible to aid Los Alamos National Security, LLC, its successors, and assigns to obtain and enforce proper patent protection for said invention in the United States or any foreign country.

We hereby grant the law firm of Klarquist Sparkman, LLP, the power to insert on this Assignment any further information that may be necessary or desirable in order to comply with all applicable legal requirements, including the rules of the United States Patent and Trademark Office, for submitting and recording this document.

Jonathan L. Mace	April 17, 2013
Gerald J. Seitz	Date
John A. Echave	Date
Pierre-Vves I e Ras	Date

WHEREAS, we, Jonathan L. Mace, of Los Alamos, NM, Gerald J. Seitz, of El Rancho, NM, John A. Echave, of Los Alamos, NM, and Pierre-Yves Le Bas, of Los Alamos, NM, have invented a certain invention, as described in the following patent application:

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Jonathan L. Muce	Date
Gerald L Sentz	4/18/13 Date
John A. Echave	Date
Pierre-Yves I.e. Bas	Date

WHEREAS, we, Jonathan L. Mace, of Los Alamos, NM, Gerald J. Seitz, of El Rancho, NM, John A. Echave, of Los Alamos, NM, and Pierre-Yves Le Bas, of Los Alamos, NM, have invented a certain invention, as described in the following patent application:

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Jonathan L. Mace	Date
	Date
Gerald J. Scitz	Date
John A. Echave	/7-APA - /3 Date
Pierre-Yves Le Bas	Date

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Jonathan L. Mace	Date
Gerald J. Seitz	Date
John A. Echave	Date
Pierre-Yves Le Bas	04/18/2013 Date