PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MICHAEL A. CARRALERO	06/08/2016
TY A. LARSEN	06/08/2016
JOSEPH M. TOSTENRUDE	06/08/2016

RECEIVING PARTY DATA

Name:	THE BOEING COMPANY
Street Address:	100 NORTH RIVERSIDE PLAZA
City:	CHICAGO
State/Country:	ILLINOIS
Postal Code:	60606-1596

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15178464

CORRESPONDENCE DATA

Fax Number: (949)625-8955

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: 949.724.1849

Email: jll@viplawgroup.com

Correspondent Name: THE BOEING COMPANY C/O VISTA IP LAW GROU

Address Line 1: 100 SPECTRUM CENTER DRIVE

Address Line 2: SUITE 900

Address Line 4: IRVINE, CALIFORNIA 92618

ATTORNEY DOCKET NUMBER:	15-2813-US-NP	
NAME OF SUBMITTER:	CYNTHIA A. DIXON	
SIGNATURE:	/Cynthia A. Dixon/	
DATE SIGNED:	06/09/2016	

Total Attachments: 4

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PATENT REEL: 038870 FRAME: 0237

Boeing Docket No	15-2813-U5-NP
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ASSIGNMENT

WHEREAS, Michael A. Carralero, at 100 North Riverside Plaza, Chicago, Illinois 60606-1596; Ty A. Larsen, at 100 North Riverside Plaza, Chicago, Illinois 60606-1596; and Joseph M. Tostenrude, at 100 North Riverside Plaza, Chicago, Illinois 60606-1596 (hereinafter "Assignors") have invented certain new and useful inventions and improvements (hereinafter "Invention") described in the United States patent application entitled PHOTONIC CRYSTALS LOGIC DEVICES for which Assignors are making or have made application for LETTERS PATENT OF THE UNITED STATES, which application has been duly executed by Assignors concurrently herewith; or filed on June 9, 2016 as Application No. 15/178,464

WHEREAS, The Boeing Company, a corporation organized and existing under the laws of the State of Delaware, USA, having a place of business at 100 North Riverside Plaza, Chicago, Illinois 60606-1596, USA (hereinafter called "the Assignee"), is desirous of acquiring the entire right, title and interest in and to the Invention within the United States of America and its territorial possessions and all foreign countries, and in and to any United States or foreign LETTERS PATENT that may be granted therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, Assignors have assigned, sold and transferred, and do assign, sell and transfer to the Assignee, its successors and assigns, their entire right, title and interest in and to the Invention within the United States of America and its territorial possessions and all foreign countries, and in and to any LETTERS PATENT of the United States and foreign countries, including utility models, inventors' certificates and like government grants that may be granted for any and all portions thereof, and in and to the patent application identified above and applications for patent filed for the Invention in all foreign countries and all provisional, divisional, reissue, continuation, continuation-in-part applications and extensions of any of the applications for patent or LETTERS PATENT identified herein, including all applications claiming the priority of said applications for patent or LETTERS PATENT identified herein, and the right to apply for LETTERS PATENT in foreign countries with full benefit of such priorities as may now or hereafter be granted to Assignors by local laws or by treaty, including any international convention, for the protection of industrial property, together with the right to extend the protection of the United States LETTERS PATENT to the various territorial possessions now owned or which may be hereafter acquired by the United States of America. Assignee will hold all rights for its own use and benefit and for the use and benefit of its successors or assigns to the full end of the term for which the LETTERS PATENT may be granted, as fully and entirely as the same would have been held and enjoyed by Assignors if this assignment and sale had not been made. Assignors request and authorize the Commissioner of the U.S. Patent and Trademark Office, and foreign counterpart officials of foreign patent offices, to issue respective LETTERS PATENT in the United States and foreign countries when granted, in accordance with this assignment.

Assignors further covenant and agree with the Assignee that Assignors have a full and unencumbered title to the Assignors' interest in the Invention, which title Assignors warrant to the Assignee. Assignors further agree that Assignors will, without demanding any further

Boeing	Docket No.	15-2813-US-NF	,
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consideration therefor, at the request and expense of the Assignee, do all lawful and just acts, including the execution and acknowledgment of instruments, that may be or become necessary for obtaining, sustaining, extending, reissuing or reexamining United States and foreign LETTERS PATENT or the like for the invention, and for maintaining and perfecting the Assignee's right to the invention and LETTERS PATENT particularly in cases of interference conflict, opposition and litigation.

Assignors authorize and direct any of the attorneys responsible for prosecuting the subject application on behalf of the ASSIGNEE to insert the application number and filing date of the subject application in the first paragraph of this Assignment.

IN TESTIMONY WHEREOF, I have signed this Assignment on the date specified below.

	6/9/2016
Vichael A. Carralero	Date
Ty A. Larsen	Date
Inconh M. Tostenrude	Date

Boeing	Docket No.	15-281	3-US-NP

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Michael A. Carralero	Date
574nn	6/9/16
TV A. Larsen	Óate
Joseph M. Tostenrude	Date

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IN TESTIMONY WHEREOF, I have signed this Assignment on the date specified below.

A A 1 A 1 A 2 Pro a dala asia	Date
Michael A. Carralero	200,20,7,70

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To A Earsen	X2020XXX
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Joseph M. Tostenrude Date