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OMB 0651-0027

U.S. Department of Commerce Patent and Trademark Office **PATENT**

3-27-00

TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(les): Submission Type New	TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(les). Submission Type Conveyance Type Resubmission (Non-Recordation) Document ID# Correction of PTO Error Real # Frame #	RECORD	ATION FORM COVER S	HEET	PD-99W073
Submission Type	Submission Type New		PATENTS ONLY		
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PATENT REEL: 010644 FRAME: 0001

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U.S. Department of Commerce Patent and Trademark Office

OMB 0651-0027 PATENT			
Correspondent Name and Address Area Code and Telephone Number (310) 647-3214			
Name Patent Records Administration			
Address (line 1) RAYTHEON COMPANY			
Address (line 2) Bldg. E1, M.S. E150			
Address (line 3) P.O. Box 902			
Address (line 4) El Segundo. California 90245			
Pages Enter the total number of pages of the attached conveyance document including any attachments.			
Application Number(s) Mark if additional numbers attached			
Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).			
Patent Application Number(s) Patent Number(s)			
09/478,229			
If this document is being filed together with a <u>new</u> Patent Application, enter the date the patent application was Month Day Year signed by the first named executing inventor.			
Patent Cooperation Treaty (PCT)			
Enter PCT application number PCT PCT PCT PCT PCT PCT			
only if a U.S. Application Number PCT PCT PCT PCT			
Number of Properties Enter the total number of properties involved. # 1			
Fee Amount for Properties Listed (37 CFR 3.41): \$ 40.00			
Method of Payment: Enclosed Deposit Account			
(Enter for payment by deposit account or if additional fees can be charged to the account.) Deposit Account Number: # 50-0616			
Authorization to charge additional fees: Yes X			
Statement and Signature			
To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.			
Colin M. Raufer, Reg. No. 40,781 (Shi M. Raufer 03 22 00			
Name of Person Signing Signature Date			

PATENT

Raytheon

ASSIGNMENT

Page 1 of 2 PD-99W073

WHEREAS, I, as below named sole inventor (if only one name is listed below) or joint inventor (if plural names are listed below) of the city and state as stated below next to my name, have invented a(an) **MONOLITHIC SERIAL OPTICAL PARAMETRIC OSCILLATOR** for which application for Letters Patent of the United States has been executed by me on or before this day, or (if the following is completed) filed on January 6, 2000 as Serial No. 09/478,229; and

WHEREAS, RAYTHEON COMPANY, (hereinafter referred to as Raytheon), a Delaware Corporation, having its principal place of business in Lexington, Massachusetts, is desirous of acquiring the entire and exclusive right, title and interest in, to and under said invention, said application and any and all Letters Patent that may be granted therefor in the United States and throughout the world;

NOW, THEREFORE, in consideration of the obligations voluntarily assumed by me and set forth in an invention agreement between me and my employer, effective the date as stated below next to my name, and other good and valuable consideration, receipt of which is hereby acknowledged, I do hereby sell, assign and transfer to RAYTHEON, its successors, assigns or other legal representatives, the entire and exclusive right, title and interest in and to said invention invented by me, to said application and any and all applications which are continuations, continuations-in-part, divisions or substitutes of said application and any and all Letters Patent that may be granted therefor in the United States and throughout the world on any of said applications and to any and all reexaminations, reissues, renewals or extensions of said Letters Patent in the United States and throughout the world for the full term or terms for which said Letters patent may be granted in the United States and throughout the world; authorize and request The Commissioner of Patents and Trademarks of the United States and all foreign countries to issue all such Letters Patent to said RAYTHEON, its successors, assigns or other legal representatives; covenant that no assignment, sale, agreement, transfer or encumbrance has been, or will be, made or entered into which would conflict with this assignment, sale and transfer; and agree to communicate to RAYTHEON, its successors, assigns or other legal representatives, upon request and at no cost or expense to me, any facts known by me respecting said invention, do all lawful acts, including the execution and delivery of all papers and proper oaths and giving of testimony that is deemed necessary or desirable by RAYTHEON, its successors, assigns or other legal representatives with regard to said invention for protecting, obtaining, maintaining and enforcing any and all of said Letters Patent in the United States and throughout the world for said invention and for perfecting, affirming, recording and maintaining the title of RAYTHEON, its successors, assigns or other legal representatives, and generally cooperate to the fullest extent in all matters pertaining to said invention, and any and all of said Letters Patent and the title thereto in RAYTHEON, its successors, assigns or other legal representatives.

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PATENT REEL: 010644 FRAME: 0003

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Raytheon

ASSIGNMENT Page 2 of 2 PD-99W073

IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
JOSEPH M. FUKUMOTO	Coll W. Freder	3-21-00
RESIDENCE (CITY AND STATE)		INVENTION AGREEMENT DATE
6443 Chartres Drive, Rancho Palos Verdes, California 90275		August 18, 1997

STATE OF (alitornia)	SS:
COUNTY OF LDS Angeles ;	33.
On Mar. 31,3000 before me, Jill Va	ndenbers
a Notary Public in and for said State, personally appeared	oseph M. Fukumoto

□ personally known to me or ☆ 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.

WITNESS my hand and official seal.

JILL VANDENBERG
Commission # 1184491
Notary Public - California
Los Angeles County
My Comm. Expires May 22, 2002

Notary Public

13650 CO JAN 98

RECORDED: 03/27/2000

PATENT REEL: 010644 FRAME: 0004