1/28/05

Form PTO-1595 (Rev. 09/04) OMB No. 0651-0027 (exp. 6/30/2005) 02 - 10 - 2	U.S. DEPARTMENT OF COMMERCE United States Patent and Trademark Office.		
To the Director of the U.S. Patent a 102936	977 documents or the new address(es) belows $\frac{3}{4}$		
1. Name of conveying party(ies)/Execution Date(s):	2. Name and address of receiving party(ies)		
Andrew James Gabura Geoffrey George Harris	Name: Raytheon Company		
	internal Address.		
	Office of the General Counsel		
Execution Date(s) 20 January 2005 Additional name(s) of conveying party(ies) attached? Yes V No	Street Address:		
3. Nature of conveyance:	870 Winter Street		
Assignment Merger	City: Waltham		
Security Agreement Change of Name	State: MA		
Government Interest Assignment	Country: US Zip: 02451		
Executive Order 9424, Confirmatory License	п. п.		
4. Application or patent number(s):	Additional name(s) & address(es) attached? Yes No		
A. Patent Application No.(s)	document is being filed together with a new application. B. Patent No.(s)		
, ,	` '		
Additional numbers at			
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved:		
Name: Raytheon Company			
Internal Address: EO/E04/N119	7. Total fee (37 CFR 1.21(h) & 3.41) \$_40.00 Authorized to be charged by credit card		
momar/ adioss.	Authorized to be charged by credit card Authorized to be charged to deposit account		
Street Address: 2000 East El Segundo Boulevard	Enclosed		
PO Box 902	None required (government interest not affecting title)		
City: El Segundo	8. Payment Information		
State: CA Zip: 90245-0902	a. Credit Card Last 4 Numbers Expiration Date		
Phone Number:8055622108			
Fax Number: <u>8055624120</u>	b. Deposit Account Number 50-0616		
Email Address: wcschubert@raytheon.com	Authorized User Name		
9. Signature: Will be Just	255-01-27		
Signature	Date		
William C. Schubert (Reg. No. 30,102) Name of Person Signing	Total number of pages including cover sheet, attachments, and documents:		
i ivalle di Felodii olullilli			

Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

02/10/2005 GTUH11 00000075 500616 11046484 01 FC:8021 40.00 DA

PATENT

ASSIGNMENT

Attorney Docket No. 03W164

Page 1 of 3

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)

Rapid-Response Electron-Beam Deposition System Having a Controller Utilizing Leading and Trailing Deposition Indicators

for which	application for	or Letters	Patent of t	the United	States has	been	executed	by me,	or (if	the fol	lowing is	s comple	eted)
was filed	as Application	n N o	on		, a	nd							

WHEREAS, RAYTHEON COMPANY (hereinafter referred to as RAYTHEON), a Delaware corporation, having its principal place of business in Waltham, 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 Director of the United States Patent and Trademark Office 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.

> PATENT REEL: 016231 FRAME: 0521

Title: Rapid-Response Electron-Beam Deposition System Having a Controller Utilizing Leading and Trailing Deposition Indicators

PAGE 2 OF 3 Attorney Docket No. 03W164

IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE SIGNED			
Andrew James Gabura	afder Halen	January 20/05			
RESIDENCE (CITY AND STATE) Midland, Ontario, Canada	,	INVENTION AGREEMENT DATE 15 March 198412 May			
Midiand, Ontano, Canada		1994			
COUNTY OF SIMCOR)				
) SS:				
PROVINCE OF ONTARI	0)				
ŗ					
On VANUARY 20	2005, before me, Michael	W. Nihill			
a Commissioner in and for said County, personally appeared ANDREW JAMES GABURA					
personally known to me or D proved to me on the basis of satisfactory evidence to be the					
person whose name is subscribed to the within instrument and acknowledged to me that he					
executed the same in his authorized capacity, and that by his signature on the instrument the					
person, or the entity upon behalf of which the person acted, executed the instrument.					
parating appearation and					
WITNESS my hand and official seal.					
WITNESS my hand and official seal.					
	Commissioner Commi				
[seal]					

MICHAEL WALTER NIHILL, a Commissioner, etc., County of Simcoe, for ELCAN Optical Technologies, a Division of Raytheon Canada Limited. Expires June 5, 2007.

13650 CO FEB 96[RSC/0198]

Raytheon Company
Intellectual Property & Licensing, Bldg. EO/E04/N119
2000 East El Segundo Boulevard
P. O. Box 902
FI Segundo CA 90245-0902 Fax: (310) 647-2592

PATENT REEL: 016231 FRAME: 0522 Title: Rapid-Response Electron-Beam Deposition System Having a Controller Utilizing Leading and Trailing Deposition Indicators

PAGE 3 of 3 Attorney Docket No. 03W164

IN WITNESS WHEREOF, I have executed this instrument.

RESIDENCE (CITY AND STATE) Midland, Ontario, Canada COUNTY OF SIMCOE PROVINCE OF ONTARIO On ANUARY 20, 2005, before me, Michael Willing a Commissioner in and for said County, personally appeared GEOFFREY GEORGE HARRIS personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. WITNESS my hand and official seal.	FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE SIGNED			
COUNTY OF		MI MI				
On ANUAL 20, 2005, before me, MICHAE WINCHARIS a Commissioner in and for said County, personally appeared GEOFFREY GEORGE HARRIS personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. WITNESS my hand and official seal.	` '	7	INVENTION AGREEMENT DATE			
On ANUAL 20, 2005, before me, MICHAE WINCHARIS a Commissioner in and for said County, personally appeared GEOFFREY GEORGE HARRIS personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. WITNESS my hand and official seal.						
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executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. WITNESS my hand and official seal. Commissioner	personally known to me or \Box proved to me on the basis of satisfactory evidence to be the					
person, or the entity upon behalf of which the person acted, executed the instrument. WITNESS my hand and official seal. Commissioner	person whose name is subscribed to the within instrument and acknowledged to me that he					
WITNESS my hand and official seal. Commissioner	executed the same in his authorized capacity, and that by his signature on the instrument the					
Commissioner Heele'	person, or the entity upon behalf or	f which the person acted, ex	ecuted the instrument.			
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13650 CO FEB 96[RSC/0198]

Expires June 5, 2007.

MICHAEL WALTER NIHILL, a Commissioner, etc., County of Simcoe, for ELCAN Optical Technologies,

RECORDED: 01/28/2005

a Division of Raytheon Canada Limited.

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PATENT REEL: 016231 FRAME: 0523