U.S. DEPARTMENT OF COMMERCE Form **PTO-1595** RE U.S. Patent and Trademark Office (Rev. 03/01) OMB No. 0651-0027 (exp. 5/31/2002) 102220972 Tab settings ⇔ ⇔ ⇔ To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof. 2. Name and address of receiving party(ies) 1. Name of conveying party(ies): Name: Raytheon Company **Edward Beneyworth** 9-4-02 Conrad Stenton Internal Address: Office of the General Counsel Alexandre Lifchits John W. Bowron Additional name(s) of conveying party(ies) attached? Yes VNo 3. Nature of conveyance: Merger ✓ Assignment Street Address: 141 Spring Street Change of Name Security Agreement Other\_\_\_\_ City: Lexington State: MA Zip: 02421 08/14/2002 **Execution Date:** Additional name(s) & address(es) attached? 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_ B. Patent No.(s) A. Patent Application No.(s) 10, 236 260 Additional numbers attached? Yes 🗸 No 6. Total number of applications and patents involved: 1 5. Name and address of party to whom correspondence concerning document should be mailed: 7. Total fee (37 CFR 3.41).....\$\_40 Raytheon Company EO/E01/E150 Enclosed Internal Address: Authorized to be charged to deposit account Intellectual Property & Licensing 8. Deposit account number: 2000 East El Segundo Boulevard Street Address: 50-0616 P O Box 902 City: El Segundo State: CA Zip: 90245 DO NOT USE THIS SPACE 9. Signature. Cho bent SEP 4, 2002 William C. Schubert, Reg. No. 30,102 Date Name of Person Signing Total number of pages including cover sheet, attachments, and documents: 5 Mail documents to be recorded with required cover sheet information to: Commissioner of Patents & Trademarks, Box Assignments Washington, D.C. 20231 00000049 500616 10236260

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PATENT

REEL: 013271 FRAME: 0983

## **ASSIGNMENT**

Page 1 of 3
Attorney Docket No. 01W164

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)

## AIR-GAP OPTICAL STRUCTURE HAVING THE AIR GAP DEFINED BY A LAYERED SPACER STRUCTURE

for which	application for	r Letters	Patent of the U	Inited States has	been executed by	me, or (if the	tollowing is completed)
was	filed	on		as	Application	No.	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 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: 013271 FRAME: 0984

IN WITNESS WHEREOF, I have executed this instrument.

				PAGE 2 of 3					
FULL NAME OF SOLE OR JOINT INVE	ENTOR	INVENTOR'S SIGNATURE		DATE SIGNED					
Edward Benneyworth		The man		Aug 14/02					
RESIDENCE (CITY AND STATE)				INVENTION AGREEMENT DATE					
Midland, Ontario, Canada				21 May 1966					
ONTARIO, CANADA	)	ee							
) SS COUNTY OF SIMCOE )									
On Auc. 14, 2002, before me Michael W. Wihill, a COMMISIONER in and for said county, personally appeared									
Edward Benneyworth									
personally known to me or	□ proved	to me on the basis of satis	factory evidenc	ce to be the person whose name					
			-	ted 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.									
MICHAEL WALTER NIHILL, a Commissioner, etc.//									
WITNESS my hand and official Radii Simcoe, for ELCAN Optical Technologies ISSTONER									
ELCAN Optical Technologies ISSIONER a Division of Raytheon Canada United. Expires June 5, 2004,									
FULL NAME OF SOLE OR JOINT INVE	ENTOR	INVENTOR'S SIGNATURE		DATE SIGNED					
		CTT AR	3						
Conrad Stenton				14 AUG 02					
RESIDENCE (CITY AND STATE)				INVENTION AGREEMENT DATE  20 January 1992					
Midland, Ontario									
ONTARIO, CANADA	):	SS							
COUNTY OF SIMCOE )									
4	M	11/4/12							
On # 44, 14 , 2002, before me	Michae	e/ W/, ///h///, a Co	MMISIONER in an	d for said county, personally appeared					
Conrad Stenton									
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.  COMMISSIONER  COMMISSIONER									
COMMISSIONER									
	MICHAEL WA	LTER NIHILL, a Commissioner, etc.	••						
13650 CO EEP 06[D5C/0400]	County of Sin	il Technologies.							
13650 CO FEB 96[RSC/0198]	Expires June	Raytheon Canada Limited. 5, 2004.		Raytheon Company					

Patent Docket Administration, Bldg. EO/E1/E150 P. O. Box 902 2000 East El Segundo Boulevard El Segundo CA 90245-0902 Fax: (310) 647-2592

**PATENT REEL: 013271 FRAME: 0985** 

		PAGE 3 of 3							
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE SIGNED							
Alexandre Lifchits	A. lifelits	14/08/02							
RESIDENCE (CITY AND STATE) 14 Bailey (res. Wyevale)	P.B. 2 <i>28 LDL 2TO</i> Ontario. Canada	17 May 1999							
ONTARIO, CANADA )									
COUNTY OF SIMCOE )									
On Aus. 14, 2002, before me Michael W. NIHILL, a COMMISIONER in and for said county, personally appeared									
Alexandre Lifchits	Alexandre Lifchits								
personally known to me or 🗇 proved	to me on the basis of satisfactory evidence	ce 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 a Division of Raytheon Caraca Limited VER Expires June 5, 2004.									
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE SIGNED							
John W. Bowron	Jeh Bom	Aug 14/02							
RESIDENCE (CITY AND STATE) Penetanguishene, Ontario, Canada I	_90M 1J3	INVENTION AGREEMENT DATE 01 February 2000							
ONTARIO, CANADA ) SS  COUNTY OF SIMCOE ) On Mig. / 1/2002, before me M.c./ac/W. Mini/a COMMISSIONER in and for said COUNTY, personally appeared  John W. Bowron									
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/they executed the same in his authorized capacity and that by his signature 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.									
13650 CO EER 96IB\$C/01981	MICHAEL WALTER NIHITI County of Simcoe, for ELCAN Optical Technolog a Division of Raytheon Ca Expires June 5, 2004.	iles,							

13650 CO FEB 96[RSC/0198]

**RECORDED: 09/04/2002** 

Raytheon Company
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