04-30-1999



# RECORDATION FORM COVER SHEET APR 1

TMENT OF COMMERCE 6U.S. DEPAR Patent and Ti

# PATENTS ONLY

101024649 Tollingsioner of Patents and Trademarks:	Please record the attached original documents or copy thereof.							
1. Name of conveying party(ies):	Name and address of receiving party(ies):							
1. John W. Cassen 2. Stephanie A. Parks 3. Edward L. Rich,III 4. Gary N. Bonadies 5. Gary L. Ferrell	Name: Northrop Grumman Corporation  Address: Law Department, IPS, MS A440 P.O. Box 17319 Baltimore, MD 21203-7319							
Additional names of conveying party(ies) attached? Yes 🗵 No 🗌	Additional name(s) & addresses are attached? Yes ☐ No ☒							
3. Nature of Conveyance:								
Execution Date(s): (1)11/2/98, (2)10/23/98, (3)11/9/98 (4) 11/2/98, (5) 11/16/98								
4. Application number(s) or patent numbers(s): S/N: 09/158,829 This Assignment is being filed together with a new applicati	on.							
A. Patent Application No.(s)	B. Patent No.(s)							
Additional numbers attac	ched? Yes  No 🗵							
Name and address of party to whom correspondence concerning document should be mailed:	6. Total number of applications/patents involved: 1							
Name: Terry J. Anderson	7. Total fee (37 CFR 3.41) \$ 40.00							
Address: Northrop Grumman Corporation Law Department, IPS, MS A440	☐ Enclosed							
P.O. Box 17319  Baltimore, MD 21203-7319	Authorized to be charged to deposit account							
4/27/1999 DMGUYEN 00000256 141325 09158829	8. Deposit Account Number: 14-1325							
	THIS SPACE							
9. 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.  Terry J. Anderson  Name of Person Signing  Total number of pages including cover sheet, attachments, and document 2								
OMB No. 0651-0011 (Exp. 4/94)	N.G. Case BD-98-012							

### ADDITIONAL NAMES OF CONVEYING PARTIES

N.G. Case BD-98-012 S/N No. 09/158,829

	NAME	DATE				
6.	John S. Fisher	11/2/98				
7.	John W. Giprich	11/16/98				
8.	John D. Gornto	11/16/98				
9.	Daniel J. Heffernan	11/2/98				
10.	David A. Herlihy	11/2/98				
11.	Andrew J. Piloto	10/24/98				
12.	Patrick K. Richard	11/2/98				
13.	David W. Strack	11/6/98				
14.	Scott K. Suko	11/5/98				

# 12-02-1998

1) the United States Foot 100909724

being deposited in an envelope Washington, DC 20231

Joyce Yaughn

d Trademarks, Washingto

**PATENT** 

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner:

: Attny Docket No:

BD-98-012

Applicant:

CASSEN, J., et. al.

: Group Art Unit

3642

Serial No:

09/158,829

: Filed:

09/23/98

Title:

A DUAL CHANNEL MICROWAVE TRANSMIT/RECEIVE MODULE

FOR AN ACTIVE APERTURE OF A RADAR SYSTEM

MRD 11-23-98

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Box Assignment

Hon. Commissioner of Patents and Trademarks

Washington, DC 20231

Sir:

#### **RECORDATION OF ASSIGNMENT**

Enclosed please find an executed Assignment, along with a Recordation Form Cover Sheet, for recording at the United States Patent and Trademark Office. Please charge the \$40.00 recordation fee to Deposit Account No. 14-1325.

The Commissioner is hereby authorized to charge any additional fees included in 37 CFR 1.16 and 1.17 which may be required to keep the application pending, or credit any overpayment to Account No. 14-1325. No authorization is given to charge any patent issue fee included in 37 CFR 1.18.

Respectfully submitted,

Walter G. Sutcliff

Attorney for Applicants

Walter of Sutell

Reg. Number: 24,914 Telephone: 410-765-4487 Facsimile: 410-765-6916

# ASSIGNMENT JOINT In accordance with existing Employee Intellectual property Agreement(s) and/or

other undertaking(s) entered into for good and valuable consideration, receipt

of which is hereby acknowledged, we, John W. CASSEN, Stephanie A. PARKS, Edward L. RICH, III , Gary N. BONADIES, Gary L. FERRELL, John S. FISHER, John W. GIPPRICH, John D. GORNTO, Daniel J. HEFFERNAN, David A. HERLIHY, Andrew J. PILOTO, Patrick K. RICHARD, David 📉 STRACK, and Scott K. SUKO, of Sykesville, Maryland, Helston, Cornwall, United Kingdom, Arnold, Maryland, Laurel, Maryland, Pasadena, Maryland, Ellicott City, Maryland, Millersville, Maryland, Columbia, Maryland, Severna ASAJula Park, Maryland, Ellicott City, Maryland, Columbia, Maryland, Baltimore, Maryland, Baltimore, Maryland, and Elkridge, Maryland, respectively, hereby sell and assign to NORTHROP GRUMMAN CORPORATION, a Corporation organized and existing under the laws of Delaware, U.S.A., having its principal place of business at 1840 Century Park East, Los Angeles, California 90067-2199, U.S.A., its successors, assigns, nominees, or other legal representatives, the entire right, title and interest in and to the invention in A DUAL CHANNEL MICROWAVE TRANSMIT/RECEIVE MODULE FOR AN ACTIVE APERTURE OF A RADAR SYSTEM, invented by us and the application for United States patent therefor, executed on the same day as the assignment is executed and all original and reissued patents granted therefor, and all divisions and continuations thereof, including the subjectsmatter of any and all claims which may be obtained in every such patent, and the right to apply for and obtain patents and Utility Model Registrations in countries foreign to the United States, and in and to any Letters Patent or Utility Model Registration which may be granted thereon in such foreign countries, and authorize and request the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue the said Letters Patent or Utility Model Registration to the said NORTHROP GRUMMAN CORPORATION, its successors, assigns, nominees or other legal representatives, as assignee of the entire interest, and covenant that we have full right to convey the entire interest herein assigned and that we have not executed and will not execute any agreement in conflict herewith, and agree that we will communicate to said Corporation, its successors, assigns, nominees or other legal representatives, all facts known to us respecting said invention, whenever requested, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and do all lawful acts requisite for the application for such divisional, continuing or reissue applications, or the procuring thereof, and that if and when said NORTHROP GRUMMAN CORPORATION, its successors, assigns, nominees or other legal representatives desire to file a disclaimer relating thereto, we will, upon request, sign all lawful papers requisite for the filing of such disclaimer, and we further covenant and agree that we will, at any time upon request, do everything legally possible to aid Corporation, its successors, assigns, nominees or other legal representatives, either in its or their own name, to apply for, obtain and enforce proper patent and/or Utility Model protection for said invention in all countries, all without further consideration but at the expense of said NORTHROP GRUMMAN CORPORATION, its successors, assigns, nominees or other legal

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal this 2 day of Howard , 1998.

Whn W. CASSEN

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal this 23 day of OCTOCY, 1998.

Stephanie A. PARKS

of_	NEN	TESTIMONY	WHEREOF, 1998.	I	have	hereunto	set	my hand and seal this 9th day
of_	IN <b>Noven</b>	TESTIMONY	WHEREOF, 1998.	I	have	hereunto	set	Edward L. RICH, III  my hand and seal this 21d day
of_	Nove	TESTIMONY	WHEREOF, 1998.	I	have	hereunto	set	Gary N. BONADIES  my hand and seal this 4th day
of_	Pover	TESTIMONY	WHEREOF, 1998.	I	have	hereunto	set	my hand and seal this 2 day
of_	IN <b>Na va</b>	TESTIMONY	WHEREOF, 1998.	I	have	hereunto	set	John S. FISHER  my hand and seal this day
of <u></u>	Jour	restimony	WHEREOF,	I	have	hereunto	set	my hand and seal this 16 day
								John D. GORNTO  my hand and seal this 2nd day
OT_								Daniel J HEFFERMAN  my hand and seal this day
of_	Nov <u>⊕m</u>	,	1998.	_	110 V C			David A. HERLIH

of_			TESTIMONY		I	have	hereunto	set		hand	Hi	to	6		day
of_	No	IN Æ	TESTIMONY	WHEREOF, 1998.	I	have	hereunto	set	тУ	hand	and	seal	this .	2	day
of	No.	IN • < •	TESTIMONY	WHEREOF,	I	have	hereunto	set		trick	K. F	RICHA			day
			TESTIMONY						Da	wid 5	. STF	RACK			
of_	יא	<b>~~~</b>	TESTIMONY	1998.	1	nave	Herenico	sec	<u>大</u>	_	tk.	Su	leo-		uay



#### **Electronic Sensors and Systems Sector**

Northrop Grumman Corporation Post Office Box 17319 Baltimore, Maryland 21203

April 9, 1999

PATENT

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner: : Attorney Docket No: BD-98-012

:

Applicant: CASSEN, J., et. al. : Group Art Unit 3642

:

Serial No: 09/158,829 : Filed: 09/23/98

Title: A DUAL CHANNEL MICROWAVE TRANSMIT/RECEIVE MODULE

FOR AN ACTIVE APERTURE OF A RADAR SYSTEM

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USPTO

Assignment Division
Box Assignment, CG-4
1213 Jefferson Davis Highway
Suite 320
Washington, DC 20231

Sir:

## RESPONSE TO NON-RECORDATION NOTICE

Enclosed please find a response to the attached Non-Recordation Notice dated March 17, 1999. A complete cover sheet is attached as requested.

The Commissioner is hereby authorized to charge any additional fees included in 37 CFR 1.16 and 1.17 which may be required to keep the application pending, or credit any overpayment to Account No. 14-1325. No authorization is given to charge any patent issue fee included in 37 CFR 1.18.

Terry J Anderson

Attorney for Applicants

Respectfully submitted

Reg. Number: 24,271

Recycled Paper



UNITED STATES DEPARTMENT OF COMMERCE Patent and Trademark Office

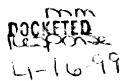
ASSISTANT SECRETARY AND COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

MARCH 17, 1999

PTAS

BIRCH STEWART KOLASCH & BIRCH WALTER G. SUTCLIFF P O BOX 747 FALLS CHURCH, VA 22040-0747





UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF NON-RECORDATION OF DOCUMENT

DOCUMENT ID NO.: 100909724

THE ENCLOSED DOCUMENT HAS BEEN EXAMINED AND FOUND NON-RECORDABLE BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. THE REASON(S) FOR NON-RECORDATION ARE STATED BELOW. DOCUMENTS BEING RESUBMITTED FOR RECORDATION MUST BE ACCOMPANIED BY A NEW COVER SHEET REFLECTING THE CORRECT INFORMATION TO BE RECORDED AND THE DOCUMENT ID NUMBER REFERENCED ABOVE.

THE ORIGINAL DATE OF FILING OF THIS ASSIGNMENT DOCUMENT WILL BE MAINTAINED IF RESUBMITTED WITH THE APPROPRIATE CORRECTION(S) WITHIN 30 DAYS FROM THE DATE OF THIS NOTICE AS OUTLINED UNDER 37 CFR 3.51. THE RESUBMITTED DOCUMENT MUST INCLUDE A STAMP WITH THE OFFICIAL DATE OF RECEIPT UNDER 37 CFR 3. APPLICANTS MAY USE THE CERTIFIED PROCEDURES UNDER 37 CFR 1.8 OR 1.10 FOR RESUBMISSION OF THE RETURNED PAPERS, IF THEY DESIRE TO HAVE THE BENEFIT OF THE DATE OF DEPOSIT IN THE UNITED STATES POSTAL SERVICE.

SEND DOCUMENTS TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231. IF YOU HAVE ANY QUESTIONS REGARDING THIS NOTICE, YOU MAY CONTACT THE INDIVIDUAL WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723.

1. THE DOCUMENT SUBMITTED FOR RECORDING IS NOT ACCEPTABLE. TO RECORD A DOCUMENT IN THE ASSIGNMENT DIVISION, A COMPLETE COVER SHEET MUST ACCOMPANY THE DOCUMENT OR A COVER SHEET OUTLINING THE REQUIREMENTS FOR RECORDING AS SET FORTH IN TITLE 37 CFR 3.11 MUST BE PRESENT.

TARA WASHINGTON, EXAMINER ASSIGNMENT DIVISION OFFICE OF PUBLIC RECORDS

RECORDED: 04/16/1999