Form PTO-1595 (Rev. 07/05) OMB No. 0651-0027 (exp. 6/30/2008)	01/11/2008 2-2008 U.S. DEPARTMENT OF COMMERCE United States Patent and Trademark Office
18 18 18 18 18 18 18	T
	19072 Still (2011 4) \$55 (IR) 1907
To the Director of the U.S. Patent and	76741
1. Name of conveying party(ies)	2. Name and address of receiving party(ies)
Ralph F. Guertin David A. Faulkner	Name: Raytheon Company
John B. Treece Donald P. Bruyere	Internal Address:
Additional name(s) of conveying party(ies) attached? Yes V	
3. Nature of conveyance/Execution Date(s):	Street Address: 870 Winter Street
Execution Date(s) 12/04/2007, 1/07/2008	
✓ Assignment	City Walter
Security Agreement Change of Name	City: Waltham
Joint Research Agreement	State: Massachusetts
Government Interest Assignment	Country: USAZip:02451-1449
Executive Order 9424, Confirmatory License	
4. Application or patent number(s):	Additional name(s) & address(es) attached? Yes V No document is being filed together with a new application.
A. Patent Application No.(s) Additional numbers at	B. Patent No.(s)
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: 1
Name:Benman, Brown & Williams	7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00
Internal Address:Suite 2740	Authorized to be charged by credit card
	Authorized to be charged to deposit account
Street Address: 2049 Century Park East	Enclosed
	None required (government interest not affecting title
City: Los Angeles	8. Payment Information
State: CA Zip:90067	a. Credit Card Last 4 Numbers 4001 Expiration Date 06/10
Phone Number: <u>(310) 553-2400</u>	b. Deposit Account Number
Fax Number: (310) 553-2675	Authorized User Name
Email Address:	Authorized Oser Name
9. Signature: White house	1/11/2008
Signature	Date
William J. Benman	Total number of pages including cover

Documents to be recorded (Including cover sheet) should be faxed to (571) 273-0140, or mailed to:
)1/14/2008 WASFAW1 00000047il \$2008435ignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

William J. Benman

Name of Person Signing

6 FC:8021 40.00 OP sheet, attachments, and documents:

Page 1 of 5
Attorney Docket No: PD-06W244

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)

ANTENNA POINTING BIAS ESTIMATION USING RADAR IMAGING

for which	application	for	Letters	Patent	of	the	United	States	has	been	executed	by	me,	or	(if the
following	is completed	/) wa	as filed a	as Appli	cati	ion l	No			on _				and	

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 therefore 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 therefore 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.

Title: ANTENNA POINTING BIAS ESTIMATION USING RADAR IMAGING

Page 2 of 5

Attorney Docket No. PD-06W244

IN WITNESS WHEREOF, I have executed this instrument

FULL NAME OF SOLE OR JOINT INVENTOR Ralph F. Guertin	INVENTOR'S SIGNATURE	DATE SIGNED 12/4/2007
RESIDENCE (CITY AND STATE) Green Valley, Arizona		INVENTION AGREEMEI DATE
STATE OF <u>Arizoka</u> COUNTY OF <u>Pima</u>)) SS:)	
On	to me on the basis of satisfactory evident strument and acknowledged to me that hat by his/her signature on the instrume	nce to be the person he/she executed the
WITNESS my hand and official seal. "OFFICIAL SEAL" DANA JILL MCCUNE Notary Public-Arizona Pima County My Commission Expires 2/22/2009	Notary Public <u>Dana Jill</u> Type Notary N	

Title: ANTENNA POINTING BIAS ESTIMATION USING RADAR IMAGING

Page 3 of 5

Attorney Docket No. PD-06W244

IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE SIGNED				
David A. Faulkner	Jaw Rulh	1/7/08				
RESIDENCE (CITY AND STATE)		INVENTION AGREEMENT				
Tucson, Arizona	•	DATE				
STATE OF Arizoa COUNTY OF Pima)					
county of Pima) ss:						
on January 7, 2000, 6	perfore me. Druid H. Fr	Gaudette				
Notary Public in and for said State, person	ally appeared David A. A	Faulkner				
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/she executed the						
same in his/her authorized capacity, and that by his/her signature on the instrument the person or the						
entity upon behalf of which the person acted, executed the instrument.						
		0 0				
WITNESS my hand and official seal.	Notary Public	ol M. Gaegle				
	Type Nota	iry Name				
[seal]						

CAROL M. G

CAROL M. GAUDETTE

NOTARY PUBLIC-ARIZONA
PINA-COUNTY
My Comm. Exp.: June 1, 2009

Title: ANTENNA POINTING BIAS ESTIMATION USING RADAR IMAGING

Page 4 of 5

Attorney Docket No. PD-06W244

IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE SIGNED
John B. Treece	John Drewer	1/7/08
RESIDENCE (CITY AND STATE)	0	INVENTION AGREEME
Tucson, Arizona		DATE
STATE OF Arizonal) ss:	
On 1000 1000 1000 1000 1000 1000 1000 10	ally appeared John B Was to me on the basis of satisfactory evidence strument and acknowledged to me that he had by his/her signature on the instrument	/she executed the
WITNESS my hand and official seal.	Notary Public Type Notary Na	h Garlet
[seal]		
	CAROL M GAUDETTE	

NOTARY PUBLIC- ARIZONA PIMA.COUNTY My Comm. Exp.: June 1, 2009

ANTENNA POINTING BIAS ESTIMATION USING RADAR IMAGING Title:

Page 5 of 5

Attorney Docket No. PD-06W244

IN WITNESS WHEREOF, I have executed this instrument.

12.7	INVENTOR'S SIGNATURE	DATE SIGNED
INVENTOR	$\mathcal{A} \sim \mathcal{A}$	
Donald P. Bruyere	Delle Hez	
RESIDENCE (CITY AND STATE)	0 1/	INVENTION AGREEM
Tucson, Arizona	V	DATE
STATE OF Arizona		
COUNTY OF Pima) SS:)	
	^	
on January 7, 2008, bei	fore me, Orol M. (Faudette, a
Notary Públic in and for said State, persona	lly appeared Donald	P. Brugere
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 instr	rument and acknowledged to me	e that he/she executed the
same in his/her authorized capacity, and that	at by his/her signature on the ins	trument the person or the
entity upon behalf of which the person acted	•	·
WITNESS my hand and official seal.	Notary Public Type No	olary Name
[seal]		
	, <u></u>	
		ELIC-ARIZONA

PATENT REEL: 020413 FRAME: 0162

RECORDED: 01/11/2008