09-26-2008

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U.S. DEPARTMENT OF COMMERCE United States Patent and Trademark Office

DATION FORM COVER SHEET VATERITS ONLY

AILNIOUNLI			
To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.			
1. Name of conveying party(ies)	2. Name and address of receiving party(les)		
Richard W. Nichols	Name: Raytheon Company		
James S. Mason Gilbert M. Shows	Internal Address:		
Joel C. Roper			
Additional name(s) of conveying party(ies) attached? Yes No			
3. Nature of conveyance/Execution Date(s):	Street Address: 870 Winter Street		
Execution Date(s) 6/5/08, 6/6/08, 6/9/08, 6/12/08, 9/2/08			
Assignment Merger			
Security Agreement Change of Name	City: Waltham		
Joint Research Agreement	State: Massachusetts		
Government Interest Assignment	Country: USA Zin: 00454 4440		
Executive Order 9424, Confirmatory License	Country: USA Zip: 02451-1449		
Other	Additional name(s) & address(es) attached? Yes Vo		
4. Application or patent number(s):	document is being filed together with a new application.		
A. Patent Application No.(s)	B. Patent No.(s)		
A datain and a continue of	 		
	ached? Yes No		
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) \$		
Internal Address: Suite 2740	Authorized to be charged by credit card		
Internal Address. Suite 2140	Authorized to be charged by credit card Authorized to be charged to deposit account		
	Finched		
Street Address: 2049 Century Park East	None required (government interest not affecting title)		
City: Los Angeles	8. Payment Information		
State: CA Zip:90067	a. Credit Card Last 4 Numbers Expiration Date		
Phone Number: (310) 553-2400	b. Deposit Account Number		
Fax Number: (310) 553-2675	Authorized User Name		
Email Address:	Authorized osci Mario		
	9/11/2008		
9. Signature: Signature	Date		
William J. Benman	Total number of pages including cover sheet, attachments, and documents:		
At of Domon Signing	et) should be faxed to (571) 273-0140, or mailed to:		
	et) should be taxed to (5/1) 2.50-yearding V.A. 22313-1450		

Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1

9/15/2008 LTRUONG 00000016 12283373

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PATENT

ATTORNEY DOCKET NO. PD07E017

RECORDATION FORM COVER SHEET				
PATENTS ONLY 1. Name of conveying party(ies): 2. Name and address of receiving party(ies):				
Raymond D. Eppich Gustavo A. Barnum	Raytheon Company 870 Winter Street Waltham, MA 02451-1449			
	·			

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Rev 10/07 (RecdAsgnExtra)

PATENT

U.S. PTO 12/283373 09/11/2008

ASSIGNMENT

Page 1 of 7 Attorney Docket No: PD-07E017

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)

PARTITIONED APERTURE ARRAY ANTENNA

tor which appli	cation for L	etters Patent	of the	United 8	states has	been e	executed	by me,	or (<i>it</i>	the to	liowing
is completed) v	was filed as	Application N	o		on _			, and	d		

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.

> PATENT REEL: 021597 FRAME: 0645

PARTITIONED APERTURE ARRAY ANTENNA

Page 2 of 7 Attorney Docket No. PD-07E017

IN WITNESS WHEREOF, I have executed this instrument

FULL NAME OF SOLE OR JOINT INVENTOR Richard W. Nichols	INVENTOR'S SIGNATURE	DATE SIGNED
RESIDENCE (CITY AND STATE) Manhattan Beach, CA		INVENTION AGREEMENT DATE
STATE OF CALIFORNIA COUNTY OF LOS ANGLES))))	
on 6/6/08, 2008 before appeared ConArth Color No.	those name is subscribed to the within ins same in his authorized capacity, and that	strument and by his signature on
I certify under PENALTY OF PERJURY unparagraph is true and correct.	der the laws of the State of California tha	t the foregoing
WITNESS my hand and official seal.	Notary Public Type Notary Na	attur

[seal]



PATENT

PARTITIONED APERTURE ARRAY ANTENNA

Page 3 of 7

Attorney Docket No. PD-07E017

IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT	NOVENTOR'S SIGNATIURE	DATE SIGNED
INVENTOR James S. Mason	June Illian	6/12/2008
RESIDENCE (CITY AND STATE) Richardson, TX		INVENTION AGREEMENT DATE
STATE OF Texas) SS:	
COUNTY OF DallaS)	
On Jone 12th, 2008	before me <u>, Trey Ralmus</u> , a Nota	ry Public, personally
appeared James S.	Mason , who pr	oved to me on the basis
of satisfactory evidence to be the pers	on whose name is subscribed to the within	instrument and
acknowledged to me that he executed	the same in his authorized capacity, and t	hat by his signature on
the instrument the person or the entity	upon behalf of which the person acted, ex	recuted the instrument.
I certify under PENALTY OF PERJUR foregoing paragraph is true and correct	Y under the laws of the State of <u>Texa</u> は.	that the
WITNESS my hand and official seal.	· ·	7/0
[seal] TREY KALMI Notary Public, State of My Commission Expl NOV 13 20:	Texas Type Notary	Name: Trey Kalmus

PATENT

PARTITIONED APERTURE ARRAY ANTENNA

KIMBERLY STALLO
Notery Public, State of Texas
My Commission Exp. 03-29-2010

Page 4 of 7

Attorney Docket No. PD-07E017

IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR Gilbert M. Shows	INVENTOR'S SIGNATURE Dillo M Show	DATE SIGNED
RESIDENCE (CITY AND STATE) Plano, TX		INVENTION AGREEMENT DATE
STATE OF Texas) SS:	
On June 5, 2008 before appeared Chilbert m. Short satisfactory evidence to be the person where acknowledged to me that he executed the state instrument the person or the entity upon	hose name is subscribed to the within in same in his authorized capacity, and tha	ed to me on the basis strument and t by his signature on
I certify under PENALTY OF PERJURY und foregoing paragraph is true and correct.	der the laws of the State of Tena	5that the
WITNESS my hand and official seal.	Notary Public You You Type Notary Na	arme

PATENT

PARTITIONED APERTURE ARRAY ANTENNA

Page 5 of 7

Attorney Docket No. PD-07E017

IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT	INVENTOR'S SIGNATURE	DATE SIGNED
INVENTOR Joel C. Roper	fall CRypin	4/5/08
RESIDENCE (CITY AND STATE) Plano, TX	V	INVENTION AGREEMENT DATE
STATE OF TONGS COUNTY OF COllin) SS:)	
On <u>June</u> 5, 2008 appeared <u>Joel</u> C. Ro	before me <u>llimberly Stall</u> sa N	
of satisfactory evidence to be the person	1	
acknowledged to me that he executed t		
the instrument the person or the entity of	upon behalf of which the person acted	, executed the instrument.
I certify under PENALTY OF PERJURY foregoing paragraph is true and correct		<u>√, α ≤</u> that the
WITNESS my hand and official seal.	43	
<i>Cammananana</i>	Notary Public <u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>	ary Name
KIMBERLY STALLO Notery Public, State of Texas My Commission Exp. 03-29-2010		

PATENT

Title: PARTITIONED APERTURE ARRAY ANTENNA

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Attorney Docket No. PD-07E017

IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF S	SOLE OR JOINT	INVENTOR'S SIGNATURE	DATE SIGNED
INVENTOR Raymond D. Eppi	ch	Kuymel O. Zriel	6/9/08
RESIDENCE (CIT Plano, TX	Y AND STATE)		INVENTION AGREEMENT DATE
STATE OF	exas ————————————————————————————————————) SS:	
appeared Kay of satisfactory evid acknowledged to i	dence to be the person we that he executed the	ore me, Melody Winters, a Notary Forch, who prove whose name is subscribed to the within instance in his authorized capacity, and that in behalf of which the person acted, exect	ed to me on the basis strument and by his signature on
	NALTY OF PERJURY un ph is true and correct.	der the laws of the State of	that the
WITNESS my han	MELODY WINTE Notary Public STATE OF TEXAS My Comm. Exp. 05/29/2	Me	ty Culin fine lody win ters.

PATENT REEL: 021597 FRAME: 0650 Title: PARTITIONED APERTURE ARRAY ANTENNA

Page 7 of 7

Attorney Docket No. PD-07E017

IN WITNESS WHEREOF, I have executed this instrument.

RECORDED: 09/11/2008

FULL NAME OF SOLE OR JOINT INVENTOR'S SIGNATURE Gustavo A. Burnum	DATE SIGNED 2 Sept 2008
RESIDENCE (CITY AND STATE) Athens, GA	INVENTION AGREEMENT DATE
STATE OF GEORGIA) COUNTY OF ATHENS - CLARKS)	
On 2 SEPTEMBEL , 2008 before me, ELTLAGETH G. MORTON, a Nappeared Gustavo Abolto Burnum , who of satisfactory evidence to be the person whose name is subscribed to the wacknowledged to me that he executed the same in his authorized capacity, a the instrument the person or the entity upon behalf of which the person acted	o proved to me on the basis ithin instrument and nd that by his signature on
I certify under PENALTY OF PERJURY under the laws of the State of GEOR foregoing paragraph is true and correct.	GEA that the
WITNESS my hand and official seal.	
Notary Public	RTON (1)

PATENT REEL: 021597 FRAME: 0651