U.S. PTO 11/732734

04/04/2007

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1. Name of conveying party(ies)  David Crouch  Vincent Giancola  Kenneth W. Brown	2. Name and address of receiving party(ies)  Name: Raytheon Company  Internal Address:
Additional name(s) of conveying party(ies) attached? Yes No  3. Nature of conveyance/Execution Date(s):  Execution Date(s) 03/05/2007	Street Address: 870 Winter Street
Assignment	City: Waltham
Joint Research Agreement	State: Massachusetts
Government Interest Assignment Executive Order 9424, Confirmatory License	Country: USA Zip:02451-1449
Other	Additional name(s) & address(es) attached? Yes V No
A. Patent Application No.(s)	document is being filed together with a new application.  B. Patent No.(s)  tached? 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) \$40.00
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9. Signature: Signature	04/04/2007 Date
William J. Benman Name of Person Signing	Total number of pages including cover sheet, attachments, and documents:

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## PATENT

## ASSIGNMENT

Attorney Docket No. PD06W241
Page 1 of 4

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)

## COMBINED ENVIRONMENTAL-ELECTROMAGNETIC ROTARY SEAL

for which application for Letters Pate	ent of the United	States has been	executed by me or (if the
following is completed) was filed as	Application 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 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

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ASSIGNMENT
Attorney Docket No. PD06W241
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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.

Re: COMBINED ENRIVONMENTAL-ELECTROMAGNETIC ROTARY SEAL

IN WITNESS WHEREOF, I have executed this instrument.

INVENTOR  DAVID CROUCH	DE LEGISLATURE	BATESIGNED
RESIDENCE (CITY AND STATE) CORONA, CA	erine a committe de la	INVENTION AGREEMENT DATE (1/25/199)
STATE COUNTY OF California County PROVENCE OF San Bernard	11NO ) 500 AH	achment
On, 2	oo6, before me,	, a
Commissioner in and for said Providence	dence, personally appeared	
personally known to me or properson whose name is subscribed to executed the same in his authorized person, executed the instrument.	o the within instrument and acknow	wledged to me that he
WITNESS my hand and official seal	l.	
	Commissioner	
	My Commission	N EXPIRES
[seal]		

PATENT REEL: 019206 FRAME: 0346

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Raytheon Company

P. O. Box 902

2000 East El Segundo Boulevard

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Attorney Docket No. PD06W241
Page 3 of 4

Re: COMBINED ENRIVONMENTAL-ELECTROMAGNETIC ROTARY SEAL

IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT	INVENTOR'S SIGNATURE	DATESIGNED
INVENTOR		
VINCENT GIANCOLA	While Sunther	3/5/1/4
DECIDENCE (CITY AND CTATE)		
RESIDENCE (CITY AND STATE)		INVENTION AGREEMENT
CHINO, CA		Vinont Brenta
COLINTY OF	,	1/19/81
COUNTY OF		1/1/91
PROVENCE OF		
		I ment
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On .	sook hofore me Sil VV	
On, a	2000, before me,	, a
Commissioner in and for said Provi	idence, personally appeared	
$lue{}$ personally known to me or $lue{}$ pr	oved to me on the basis of satisfa	ctory evidence to be the
person whose name is subscribed	to the within instrument and ackno	wledged to me that he
executed the same in his authorize	d capacity, and that by his signatu	re on the instrument the
person, executed the instrument.		
person, executed and mediament		
WITNESS my hand and official sea	al.	
•		
	Commissioner	
	MY COMMISSION	ON EXPIRES
[seal]		

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ASSIGNMENT Attorney Docket No. PD06W241
Page 4 of 4

Re: COMBINED ENRIVONMENTAL-ELECTROMAGNETIC ROTARY SEAL

IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNA	TURE	DATE SIGNED
KENNETH W. BROWN	6.65		3/6/07
RESIDENCE (CITY AND STATE)	1 with the second secon	Bellevier (1997) - English Perenting William	INVENTION AGREEMENT
YUCAIPA, CA			7/19/1984
COUNTY OF	<b>,</b>		
			•
PROVENCE OF			$\mathcal{A}$
•			achment, a
		< DR COM	We
On,	2006, before me,		, a
Commissioner in and for said Prov			
☐ personally known to me or ☐ p	proved to me on the ba	sis of satisfac	tory evidence to be the
person whose name is subscribed	I to the within instrume	nt and acknov	vledged to me that he
executed the same in his authorize	ed capacity, and that t	y his signatur	e on the instrument the
person, executed the instrument.			
WITNESS my hand and official se	eal.		•
•		ner	
		My Commission	NEXPIRES
[seal]			

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El Segundo CA 90245-0902 Fax: (310) 647-2592

## State of California appeared personally Dersonally known to me 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 R. ASKANASE he/she/they executed the same in his/her/their Commission # 1564565 authorized capacity(ies), and that by his/her/their Notary Public - California signature(s) on the instrument the person(s), or the San Bernardino County ly Comm. Expires Mar 26, 2009 entity upon behalf of which the person(s) acted, executed the instrument. WITNESS my hand and official seal. Place Notary Seal Above OPTIONAL Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document. Description of Attached Document Combined EnvironmenTAL-ELECTROMAGNET ROTARY SE Title or Type of Document: Patent ASSIAN Document Date: 5 march 2007 Signer(s) Other Than Named Above: Capacity(ies) Claimed by Signer(s) Signer's Name: \_ Signer's Name: \_ □ Individual □ Individual ☐ Corporate Officer — Title(s): ☐ Corporate Officer — Title(s): \_ ☐ Partner — ☐ Limited ☐ General ☐ Partner — ☐ Limited ☐ General OF SIGNER □ Attorney in Fact □ Attorney in Fact Top of thumb here Top of thumb here □ Trustee □ Trustee ☐ Guardian or Conservator ☐ Guardian or Conservator ☐ Other: \_ □ Other: Signer Is Representing: Signer Is Representing:

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