

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT																
NATURE OF CONVEYANCE:	ASSIGNMENT																
CONVEYING PARTY DATA																	
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Richard W. Nichols</td> <td>12/04/2008</td> </tr> <tr> <td>James S. Mason</td> <td>01/05/2009</td> </tr> <tr> <td>Gilbert M. Shows</td> <td>08/19/2008</td> </tr> <tr> <td>Joel C. Roper</td> <td>08/20/2008</td> </tr> <tr> <td>Raymond D. Eppich</td> <td>08/20/2008</td> </tr> <tr> <td>Gustavo A. Burnum</td> <td>09/02/2008</td> </tr> <tr> <td>Ike Chang</td> <td>12/03/2008</td> </tr> </tbody> </table>		Name	Execution Date	Richard W. Nichols	12/04/2008	James S. Mason	01/05/2009	Gilbert M. Shows	08/19/2008	Joel C. Roper	08/20/2008	Raymond D. Eppich	08/20/2008	Gustavo A. Burnum	09/02/2008	Ike Chang	12/03/2008
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Ike Chang	12/03/2008																
RECEIVING PARTY DATA																	
Name:	Raytheon Company																
Street Address:	870 Winter Street																
City:	Waltham																
State/Country:	MASSACHUSETTS																
Postal Code:	02451																
PROPERTY NUMBERS Total: 1																	
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>12288635</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	12288635												
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Application Number:	12288635																
CORRESPONDENCE DATA																	
Fax Number:	(781)522-6465																
Phone:	781-522-3051																
Email:	kate_e_emerson@raytheon.com																
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>																	
Correspondent Name:	Kate Emerson c/o Raytheon Company																
Address Line 1:	870 Winter Street																
Address Line 4:	Waltham, MASSACHUSETTS 02451																
ATTORNEY DOCKET NUMBER:	07E018-US-NP																

CH \$40.00 12288635

NAME OF SUBMITTER:

Robert P. Hayter

Total Attachments: 8

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ASSIGNMENT

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Attorney Docket No: PD-07E018

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)

**ACTIVE ELECTRONICALLY SCANNED ARRAY ANTENNA
FOR SATELLITE COMMUNICATIONS**

for which application for Letters Patent of the United States has been executed by me, or (*if the following is completed*) was filed as Application No. _____ on _____, and

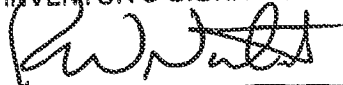
WHEREAS, RAYTHEON COMPANY (hereinafter referred to as RAYTHEON), a Delaware corporation, having its principal place of business in Waltham, Massachusetts, is desirous of acquiring the entire and exclusive right, title and interest in, to and under said invention, said application and any and all Letters Patent that may be granted 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: **ACTIVE ELECTRONICALLY SCANNED ARRAY ANTENNA
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IN WITNESS WHEREOF, I have executed this instrument

FULL NAME OF SOLE OR JOINT INVENTOR Richard W. Nichols	INVENTOR'S SIGNATURE 	DATE SIGNED 12/4/08
RESIDENCE (CITY AND STATE) Manhattan Beach, CA		INVENTION AGREEMENT DATE

STATE OF CALIFORNIA)
 COUNTY OF Los Angeles) SS:

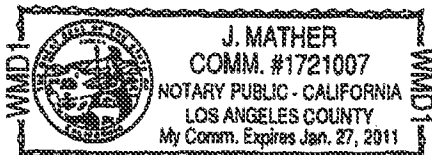
On December 4, 2008 before me, J. Mather, a Notary Public, personally appeared Richard W. Nichols, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

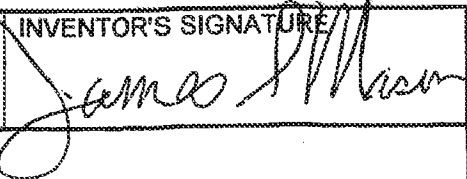
Notary Public 
 Type Notary Name

[seal]



Title: **ACTIVE ELECTRONICALLY SCANNED ARRAY ANTENNA
FOR SATELLITE COMMUNICATIONS**

IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR James S. Mason	INVENTOR'S SIGNATURE 	DATE SIGNED 1/5/2009
RESIDENCE (CITY AND STATE) Richardson, TX	INVENTION AGREEMENT DATE	

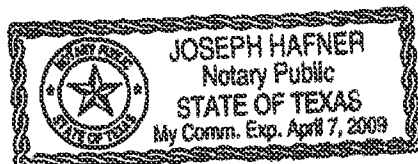
STATE OF TEXAS)
 COUNTY OF DALLAS) SS:

On JANUARY 5TH 2009 before me, Joseph Mason, a Notary Public, personally appeared _____, who 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.

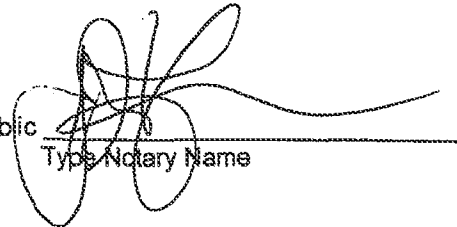
I certify under PENALTY OF PERJURY under the laws of the State of TEXAS that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

[seal]



Notary Public


 Type Notary Name

Title: **ACTIVE ELECTRONICALLY SCANNED ARRAY ANTENNA
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IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR Gilbert M. Shows	INVENTOR'S SIGNATURE <i>Gilbert M. Shows</i>	DATE SIGNED 8/19/08
RESIDENCE (CITY AND STATE) Plano, TX		INVENTION AGREEMENT DATE

STATE OF TEXAS)
COUNTY OF COLLIN)

SS:

On August 19, 2008, 2008 before me, Vicky L. Bowen a Notary Public, personally appeared Gilbert M. Shows, who 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.

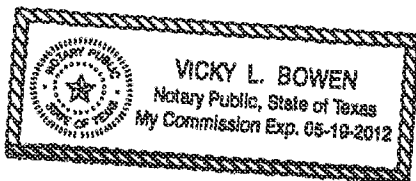
I certify under PENALTY OF PERJURY under the laws of the State of TEXAS that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public

Vicky L. Bowen
Type Notary Name

[seal]



Title: **ACTIVE ELECTRONICALLY SCANNED ARRAY ANTENNA
FOR SATELLITE COMMUNICATIONS**

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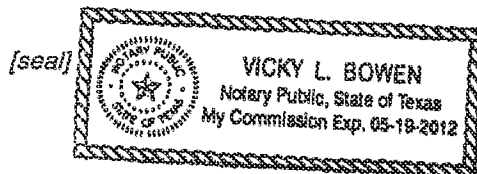
FULL NAME OF SOLE OR JOINT INVENTOR Joel C. Roper	INVENTOR'S SIGNATURE <i>Joel C. Roper</i>	DATE SIGNED 8/20/08
RESIDENCE (CITY AND STATE) Plano, TX		INVENTION AGREEMENT DATE

STATE OF TEXAS)
COUNTY OF COLLIN) SS:

On August 20, 2008 before me, Vicky L. Bowen, a Notary Public, personally appeared Joel C. Roper, who 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.

I certify under PENALTY OF PERJURY under the laws of the State of TEXAS that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



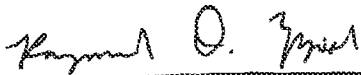
Notary Public Vicky L. Bowen
Type Notary Name

Title: **ACTIVE ELECTRONICALLY SCANNED ARRAY ANTENNA
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IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR Raymond D. Eppich	INVENTOR'S SIGNATURE 	DATE SIGNED 8/20/08
RESIDENCE (CITY AND STATE) Plano, TX		INVENTION AGREEMENT DATE

STATE OF Texas)
 COUNTY OF Dallas) SS:

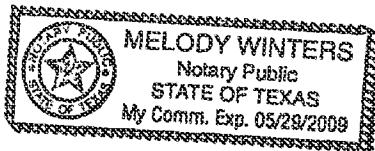
On August 20, 2008 before me, Melody Winters, a Notary Public, personally appeared Raymond Dean Eppich, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of Texas that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public Melody Winters
 Type Notary Name

[seal]




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IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR Gustavo A. Burnum	INVENTOR'S SIGNATURE 	DATE SIGNED 2 Sept 2008
RESIDENCE (CITY AND STATE) Athens, GA		INVENTION AGREEMENT DATE

STATE OF GEORGIA)
) SS:
 COUNTY OF ATHENS-CLARKE)

On 2 SEPTEMBER, 2008 before me, ELIZABETH G. MORTON, a Notary Public, personally appeared GUSTAVO ADOLFO BURNUM, who 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.

I certify under PENALTY OF PERJURY under the laws of the State of Georgia that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public Elizabeth G. Morton
 Type Notary Name

[seal]

