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Assistant Commissioner for Patents: Ple.



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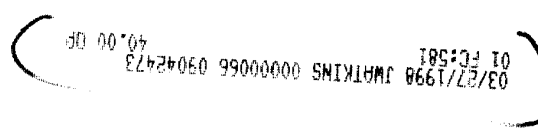
1. Name of conveying party(ies):
**Thomas V. Sikina, Osgard J. Bedigian
and Jack J. Schuss**

2. Name and address of receiving party(ies):
**Raytheon Company
141 Spring Street
Lexington, MA 02173**

Additional name(s) attached? Yes No

Additional names/addresses attached?
 Yes No

3. Nature of conveyance:
 Assignment
 Merger
 Security Agreement
 Change of Name
 Other:



Execution Date: **March 9th and 10th, 1998**

4. Application number(s) or patent number(s):

If this document is being filed with a new application, the execution date of the application is: **March 9 & 10, 1998**

A. Patent Application No.(s):

B. Patent No.(s):

Additional numbers attached? Yes No

5. Name/address of party to whom correspondence concerning document should be mailed:

**Richard M. Sharkansky
Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110-2804**

6. Total number of applications/patents involved: 1

7. Total fee (37 CFR 3.41): **\$40**

Enclosed
 Authorized to charge deposit account

8. Deposit account number: **06-1050**

If the fee above is being charged to deposit account, a duplicate copy of this cover sheet is attached. Please apply any additional charges, or any credits, to our Deposit Account No. 06-1050.

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9. Statement and signature: *To the best of my knowledge and belief, the foregoing information is true and correct and the attached is the original document.*

Richard M. Sharkansky *Reg # 25880*
Name of Person Signing

[Signature]
Signature

3/16/98
Date

Total number of pages including cover sheet, attachments, and document: 3

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Date of Deposit *March 16, 1998*

I hereby certify under 37 CFR 1.10 that this correspondence is being deposited with the United States Postal Service as "Express Mail Post Office To Addressee" with sufficient postage on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Laura M. [Signature]
PATENT
REF ID: *9053* FRAME: 0284

ASSIGNMENT

For valuable consideration, we, Thomas V. Sikina, of Acton, Massachusetts;
Oscar J. Bedigian of Hudson, Massachusetts; and Jack J. Schuss of Newton, Massachusetts; hereby assign
to Raytheon Company, a Delaware corporation having a place of business at 141 Spring Street, Lexington,
MA 02173 and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right,
title and interest throughout the world in the inventions and improvements which are subject of an
application for United States Patent signed by us, entitled PHASED ARRAY ANTENNA CALIBRATION
SYSTEM AND METHOD USING ARRAY CLUSTERS, filed _____, and assigned U.S. Serial
Number _____, and we authorize and request the attorneys appointed in said application to
hereafter complete this assignment by inserting above the filing date and serial number of said application
when known; this assignment including said application, any and all United States and foreign patents,
utility models, and design registrations granted for any of said inventions or improvements, and the right to
claim priority based on the filing date of said application under the International Convention for the
Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all
other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its
own name for patents, utility models, and design registrations and like rights of exclusion and for
inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective
heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to
sign such further applications, assignments, Preliminary Statements and other lawful documents as the
Assignee may reasonably request to effectuate fully this assignment.

IN WITNESS WHEREOF, I hereto set my hand and seal at Sudbury, MA,
this 10th day of March, 1998

Thomas V. Sikina _____ L.S.
Thomas V. Sikina

STATE OF Massachusetts :
:ss.
COUNTY OF Middlesex :

Before me this 10th day of March, 1998, personally appeared

Thomas V. Sikina _____ known to me to be the person whose name is subscribed to the
foregoing Assignment, and acknowledged that he/she executed the same as his/her free act and deed for the
purposes therein contained.

Peter Dulchinos
Notary Public Peter Dulchinos

My Commission Expires: Nov. 9, 2001

[Notary's Seal Here]

IN WITNESS WHEREOF, I hereto set my hand and seal at Sudbury, MA,
this 10th day of March, 1998

Oscar J. Bedigian
Oscar J. Bedigian _____ L.S.

STATE OF Massachusetts :

COUNTY OF Middlesex :
:ss.

Before me this 10th day of March, 1998, personally appeared

Oscar J. Bedigian known to me to be the person whose name is subscribed to the
foregoing Assignment, and acknowledged that he/she executed the same as his/her free act and deed for the
purposes therein contained.

Peter Dulchinos
Notary Public Peter Dulchinos

My Commission Expires: Nov 9, 2001

[Notary's Seal Here]

IN WITNESS WHEREOF, I hereto set my hand and seal at Andover, Massachusetts,
this 9th day of March, 1998

Jack J. Schuss
Jack J. Schuss _____ L.S.

STATE OF Massachusetts :

COUNTY OF Middlesex :
:ss.

Before me this 9th day of March, 1998, personally appeared

Jack J. Schuss known to me to be the person whose name is subscribed to the
foregoing Assignment, and acknowledged that he/she executed the same as his/her free act and deed for the
purposes therein contained.

Peter Dulchinos
Notary Public Peter Dulchinos

My Commission Expires: Nov 9, 2001

[Notary's Seal Here]