

04-19-1999

MRO 4/9/99

Tab settings  $\Rightarrow \Rightarrow \Rightarrow$   $\nabla$   $\nabla$   $\nabla$   
To the Honorable Commissioner of Patents



Attached original documents or copy thereof.  
Address of receiving party(ies):

1. Name of conveying party(ies):  
Barry R. Allen  
Kenneth T. Yano  
Chung-Hong H. Chen  
Additional name(s) of conveying party(ies) attached?  Yes  No

101015567

Name: TRW Inc.  
Internal Address: Law Dept.  
Bldg. E2/6072  
  
Street Address: One Space Park  
  
City: Redondo Beach State: CA ZIP: 90278  
Additional name(s) & address(es) attached?  Yes  No

1-530 U.S. PTO  
09/289414  
04/09/99

3. Nature of conveyance:  
 Assignment  Merger  
 Security Agreement  Change of Name  
 Other \_\_\_\_\_  
Execution Date: April 9, 1999

4. Application number(s) or patent number(s):  
If this document is being filed together with a new application, the execution date of the application is: April 9, 1999  
A. Patent Application No.(s) \_\_\_\_\_ B. Patent No.(s) 09/289414  
Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:  
Name: TRW Inc.  
Internal Address: Law Dept.  
Bldg. E2/6072  
  
Street Address: One Space Park  
  
City: Redondo Beach State: CA ZIP: 90278

6. Total number of applications and patents involved:   
7. Total fee (37 CFR 3.41) ..... \$ 40  
 Enclosed  
 Authorized to be charged to deposit account  
8. Deposit account number:  
20-1515  
(Attach duplicate copy of this page if paying by deposit account)

04/16/1999 DMGIYEN 00000356 201515 09289414

DO NOT USE THIS SPACE

9. Statement and signature.  
*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*  
Connie M. Thousand Connie Thousand April 9, 1999  
Name of Person Signing Signature Date

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

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

ASSIGNMENT

For valuable consideration, the adequacy and receipt of which are hereby acknowledged, we Barry R. Allen, Kenneth T. Yano, and Chun-Hong H. Chen respectively, of Redondo Beach, California; Torrance, California; and Torrance, California

do hereby sell and assign to TRW Inc., One Space Park, Redondo Beach, California, an Ohio corporation, its successors and assigns, the entire right, title and interest in and to the improvements in MULTIPLE SCANNING BEAM DIRECT RADIATING ARRAY AND METHOD FOR ITS USE which has been invented by us, as described in the application for United States Patent which we executed respectively, on April 9, 1999,

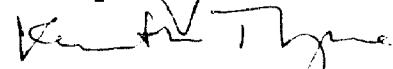
April 9, 1999, and April 9, 1999,

and any and all applications for patent and patents therefore in any and all countries, including all divisions, reissues, continuations, and extensions thereof, and the right to claim the priority date of the first filed application in the United States, and authorize and request any official whose duty it is to issue patents, to issue any patent on said improvements or resulting therefrom to said TRW Inc., or its successors or assigns, and agree that on request and without further consideration, but at the expense of TRW Inc., we will communicate to TRW Inc. or its representatives or nominees any facts known to us respecting said improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths, and generally do everything possible to aid TRW Inc., its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

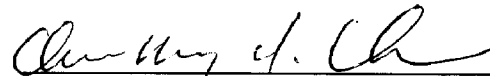
April 9, 1999

Inventor:   
Barry R. Allen

9 Apr, 1999

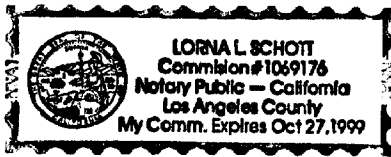
Inventor:   
Kenneth T. Yano

April 9, 1999

Inventor:   
Chun-Hong H. Chen

STATE OF CALIFORNIA )  
 ) ss  
COUNTY OF LOS ANGELES )

On April 9, 1999 before me, Lorna L. Schott  
personally appeared Barry R. Allen  
X 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 the 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.



WITNESS my hand and official seal.

*Lorna L. Schott*

Notary Public

(SEAL)

STATE OF CALIFORNIA )  
 ) ss  
COUNTY OF LOS ANGELES )

On April 9, 1999 before me, Lorna L. Schott  
personally appeared Kenneth T. Yano  
       personally known to me -or- X 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 the 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.



WITNESS my hand and official seal.

*Lorna L. Schott*

Notary Public

(SEAL)

STATE OF CALIFORNIA

)  
) ss  
)

COUNTY OF LOS ANGELES

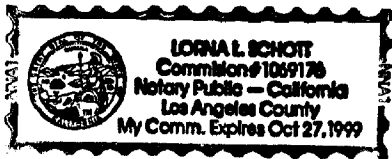
On April 9, 1999 before me, Lorna L. Schott  
personally appeared Chun-Hong H. Chen

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 the 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.

WITNESS my hand and official seal.

Lorna L. Schott

Notary Public



(SEAL)