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U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

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NO. 35-0012

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies): George C. Hughes, Michael J. Wehner, Mark L. Hanson, D. Hobson Lane, Paul A. Lavoie, Warren H. Taylor, Bryan H. Kang, Paul (NMI) Steiner, Arnold J. Galloway, Michael S. Busby
Additional name(s) of conveying party(ies) attached? Yes No

2. Name and address of receiving party(ies)

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

3. Nature of conveyance:

MRD 10.26.98

- Assignment Merger
- Security Agreement Change of Name
- Other

Execution Date: 8/17/98, 8/18/98 and 10/16/98

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:

A. Patent Application No.(s)
09/135,884, filed Aug. 18, 1998

B. Patent No.(s)

Additional numbers attached? Yes No

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

Name: Patent Counsel
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:

1

7. Total fee (37 CFR 3.41).....\$

- 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)

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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.

Michael S. Yatsko
Name of Person Signing

Michael S. Yatsko
Signature

10/21/98
Date

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

9

Docket No. 35-0012

ASSIGNMENT

For valuable consideration, the adequacy and receipt of which are hereby acknowledged, we George C. Hughes, Michael J. Wehner, Mark L. Hanson, D. Hobson Lane, Paul A. Lavoie, Warren H. Taylor, Bryan H. Kang, Paul (NMI) Steiner, Arnold J. Galloway, and Michael (NMI) Busby, respectively, of Manhattan Beach, California; Hawthorne, California; Redondo Beach, California; Hermosa Beach, California; Manhattan Beach, California; Gardena, California; La Mirada, California; Rancho Palos Verdes, California; Los Angeles, California; and Hawthorne, 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 METHOD AND SYSTEM FOR SPACE NAVIGATION which has been invented by us, as described in the application for United States Patent which we executed respectively, on

and _____, 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.

Aug 17, 1998, 1998

Inventor: George C. Hughes
George C. Hughes

_____, 1998

Inventor: Michael J. Wehner
Michael J. Wehner

August 17, 1998

Inventor: Mark L. Hanson
Mark L. Hanson

August 17, 1998

Inventor: D. Hobson Lane
D. Hobson Lane

Docket No. 35-0012

August 17, 1998

Inventor: Paul A. Lavoie
Paul A. Lavoie

August 17, 1998

Inventor: Warren H. Taylor
Warren H. Taylor

August 17, 1998

Inventor: Bryan H. Kang
Bryan H. Kang

AUGUST 17, 1998

Inventor: Paul (NMI) Steiner
Paul (NMI) Steiner

August 18, 1998

Inventor: Arnold J. Galloway
Arnold J. Galloway

October 16, 1998

Inventor: Michael (NMI) Busby
Michael (NMI) Busby

STATE OF CALIFORNIA)
) ss
COUNTY OF LOS ANGELES)

on Aug. 17, 1998 before me, Kathleen R. Tait
personally appeared George C. Hughes

George C. Hughes 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.



(SEAL)

WITNESS my hand and official seal.

Kathleen R. Tait
Notary Public

Docket No. 35-0012

STATE OF CALIFORNIA)
) ss
COUNTY OF LOS ANGELES)

On August 17, 1998 before me, Kathleen R. Tait
personally appeared Michael J. Wehner
_____ 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
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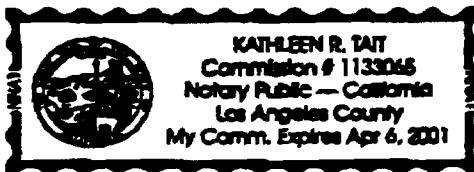
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Kathleen R. Tait
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STATE OF CALIFORNIA)
) ss
COUNTY OF LOS ANGELES)

On August 17, 1998 before me, Kathleen R. Tait
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COUNTY OF LOS ANGELES)

On August 17, 1998 before me, Kathleen R. Tait
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_____ personally known to me -or- ~~X~~ proved to me on the basis of
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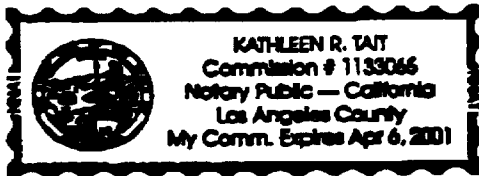
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STATE OF CALIFORNIA)
) ss
COUNTY OF LOS ANGELES)

On August 17, 1998 before me, Kathleen R. Tait
personally appeared Warren H. Taylor
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WITNESS my hand and official seal.



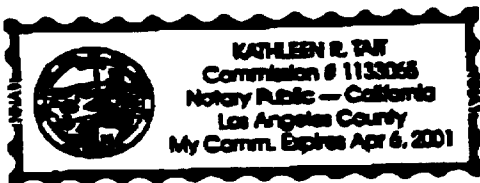
Kathleen R. Tait
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STATE OF CALIFORNIA)
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COUNTY OF LOS ANGELES)

On August 17, 1998 before me, Kathleen R. Tait
personally appeared Bryan H. Kang
_____ personally known to me -or- ~~X~~ proved to me on the basis of
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Kathleen R. Tait
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on August 17, 1998 before me, Kathleen R. Tait
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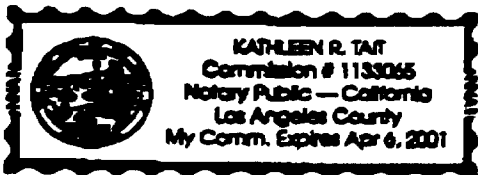
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Kathleen R. Tait
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on August 18, 1998 before me, Kathleen R. Tait
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Docket No. 35-0012

STATE OF CALIFORNIA

)
) ss
)

COUNTY OF LOS ANGELES

Kathleen R. Tait

On Oct. 16, 1998 before me, ~~Lorna L. Schette~~
personally appeared Michael S. (MII) Busby
_____ personally known to me -or- proved to me on the basis of
satisfactory evidence to be the person whose name is subscribed to the
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