(Rev. 03/01) TRW 22-0176 OMB No. 0651-0027 (exp. 5/31/2002)	101904491 ▼ V.S. Patent and Traden	_
Tab settings ⇔ ⇔ ⇔ ▼	Trademarks: Please record the attached original documents or copy thereof	
		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
1. Name of conveying party(ies): Steven L. Branscombe	2. Name and address of receiving party(ies) Name: <u>TRW Inc.</u>	4 4 0
William F. Courtney		
Michael S. Munoz l l	Internal Address: <u>S&amp;E Law Dept.</u>	
Additional name(s) of conveying party(ies) attached?	Yes 🖵 No 🛛	
3. Nature of conveyance:		11
🛽 Assignment 🖓 Merger		
Security Agreement	of Name Street Address: One Space Park	
	Bldg E2/6051	
<b>_</b> Other		
	City: <u>Redondo Beach</u> State: <u>Ca</u> Zip: <u>9</u>	027
Execution Date:November 19, 2001	Additional name(s) & address(es) attached? 🖵 Yes	
4. Application number(s) or patent number(s):	07/990741	
If this document is being filed together with	a new application, the execution date of the application is: <u>11</u>	/19/0
A. Patent Application No.(s)	B. Patent No.(s)	
<ol> <li>Name and address of party to whom corres concerning document should be mailed: Name: PATENT COUNSEL</li> </ol>	pondence 6. Total number of applications and patents invo 7. Total fee (37 CFR 3.41)\$40.00	ved:
Internal Address: <u>TRW Inc.</u>	Authorized to be charged to deposit acco	unt
S&E Law Dept.		unit
Bldg. E2/6051		
Street Address: One Space Park	8. Deposit account number:	
	20-1515	
	(Attach duplicate copy of this page if paying by deposit at	
City: Redondo Beach State: CA Zip:90		Juni
D	NOT USE THIS SPACE	
9. Statement and signature.		
To the best of my knowledge and belief, the is a true copy of the original document.	foregoing information is true and correct and any attached c	
Noel F. Heal, Reg. No. 26,074	11/20/01	
Name of Person Signing	Signature Date	
	including cover sheet, attachments, and documents 7	
	er of Patents & Trademarks, Box Assignments	

Form PTO-1595 R (Rev. 03/01) OMB No. 0651-0027 (exp. 5/31/2002)	ECORDATION FOR	M COVER SHEET	U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office
1. Name of conveying party(ies):			10
Ray M. Nuber		Fritz B. Mez	Hegico
Additional name(s) of convey	ring party(ies) attached?	🎴 Yes 🖾 No	101F
2. Name and address of receiving pa			
Internal Address:			
Street Address:			
City:			
Name and address of receiving pa			
Name:			
Internal Address:			
Street Address: City:			
	address(es) attached?		
4. Application number(s) or patent n	umber(s):		
If this document is being filed toge	ether with a new app	lication, the execution da	ate of the application is:See Attachment
A. Patent Application N	o.(s)	B. Pate	nt No.(s)
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		-	
Additi	onal numbers attached?	Yes 🖾 No	

## Docket No. 22-0176

## ASSIGNMENT

For valuable consideration, the adequacy and receipt of which are hereby acknowledged, we Steven L. Branscombe, William F. Courtney, Michael S. Munoz, Ray M. Nuber, and Fritz B. Mezger respectively, of Westminster, California; Long Beach California; Redondo Beach, California; Rancho Palos Verdes, California; and Philadelphia, Pennsylvania 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 <u>METHOD OF CONFIGURING SATELLITE</u> CONSTELLATION DESIGN USING MULTIPLE DISCRETE SWITCHABLE SPOT BEAMS which has been invented by us, as described in the application for United States Patent which we executed respectively, on Novia 2001 <u>Nov. 19, 2001</u>, <u>Nov. 19, 2001</u>, and any and all applications for patent and patents therefor 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 divisional, continuing, and reissue papers, execute all lawful 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.

Nov 19, 2001 Inventor: Branscombe Nov 19, 2001 Inventor: Inventor: Munoz Nov 19, 2001 Inventor: Inventor: , 2001 Fritz B. Mezger

## ASSIGNMENT

For valuable consideration, the adequacy and receipt of which are hereby acknowledged, we <u>Steven L. Branscombe</u>, <u>William F. Courtney</u>, <u>Michael</u> <u>S. Munoz, Ray M. Nuber, and Fritz B. Mezger</u> respectively, of <u>Westminster, California; Long Beach California; Redondo Beach, California;</u> <u>Rancho Palos Verdes, California; and Redondo Beach, California</u> 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 <u>METHOD OF CONFIGURING SATELLITE</u> <u>CONSTELLATION DESIGN USING MULTIPLE DISCRETE SWITCHABLE SPOT BEAMS</u> which has been invented by us, as described in the application for United States Patent which we executed respectively, on \_\_\_\_\_\_,

\_\_\_\_\_, and \_\_\_\_\_/ Nov. 19, 2001 , and any and all applications for patent and patents therefor 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.

	2001	Inventor:	
			Steven L. Branscombe
	2001	Inventor:	
			William F. Courtney
	2001	Inventor:	
			Michael S. Munoz
	2001	Inventor:	
			Ray M. Nuber
Nov. 19	2001	Inventor:	AMA
			(Friltz B. Megger
			$\sim$

STATE OF CALIFORNIA

)ss COUNTY OF LOS ANGELES on <u>NOV. M. 2001</u> before me, <u>Muhelle Chustophev</u> personally appeared <u>Steven L. Branscombe</u> \_\_\_\_\_ 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 that 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. MICHELLE CHRISTOPHER Commission # 1277362 Vatary Public - California elle Christopher Los Angeles County Comm. Expires Sep 17, 2004 (SEAL)

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

(SEAL

On <u>UN19, 2001</u> before me, <u>Whelle Chr.Stopped</u> personally appeared <u>William F. Courtney</u> <u>X</u> personally known to me -or <u>proved to me on the basis of</u> <u>satisfactory evidence</u> to be the person whose name is subscribed to the within instrument and acknowledged to me that 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.

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WITNESS my hand and official seal.



elle Christopher

STATE OF CALIFORNIA ) ss COUNTY OF LOS ANGELES On <u>Nav 19,2001</u> before me, <u>Mubile Chustopher</u> personally appeared <u>Michael S. Munoz</u> <u>X</u> personally known to me -or <u>proved to me on the basis of</u>

satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that 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.



relle Anstopher Public

(SEAL)

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

on NEV 19,2001 before me, Muchelle Christopher personally appeared Ray M. Nuber

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 $\underbrace{\aleph}$  personally known to me <u>or</u> <u>proved to me on the basis of</u> satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that 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.

(SEAL)

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

On l'personally appeared \_\_\_\_\_ Fritz B. Mezger

\_\_\_\_\_ 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 that 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.

\_ before me, Dennism (Carthy

) )ss

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WITNESS my hand and official seal.

Notary

(SEAL)

NOTARIAL SEAL DENNIS MCCARTHY, NOTARY PUBLIC WAYNE, DELAWARE COUNTY My Commission Expires April 25, 2005

PATENT REEL: 012323 FRAME: 0416

**RECORDED: 11/21/2001**