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Customer No.: C	12090	Marta and Tradamarka, Diag	as resert the ottoched	original documents or copy thereof.		
Name of conve		atents and Trademarks. Fleas		ress of receiving party(ies):		
1. Hame of conve	ying party (100).		2. 110/110 0110 000	pany (vec).		
John F. Yocum, Jr.			Name: HUGHE	S ELECTRONICS CORPORATION		
Patrick A. Caz				DIA- 004 M/C 4400		
Stephen J. Koffman			Internal Address: Bldg. 001, M/S A109 P.O. Box 956			
Douglas A. Baker				El Segundo, California 90245-0956		
Additional Name(s) of conveying party(ies) attached?				El dogando, damorna dos lo dos		
yes □`		no 🗷				
3. Nature of Conveyance:			Street Address:	Bidg. 001, M.S. A109		
FE		C Marron		200 North Sepulveda Blvd. El Segundo, California 90245-0956		
☑ Assignme	ent Agreement	<ul><li>☐ Merger</li><li>☐ Change of Name</li></ul>		El Segundo, California 90243-0930		
	_	Li Ollange of Name				
□ Other			Additional name(s)	Additional name(s) & address(es) attached? ☐ yes ☒ no		
Execution Date: March 8, 1999 and April 26, 1999.						
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4. Application num	nber(s) or paten	t number(s):				
If this document is	beina filed toas	ther with a new application	. the execution date	of the application is:		
			1			
A. Pater	nt Application No	B. Patent No.(s	s)			
A. Patent Application No.(s) 09/222,450    B. Patent No.(s)   Filed: December 29, 1998						
		Additional numbers	s attached?   □ yes	⊠ no		
5. Name and address of party to whom correspondence   6. Total number of applications and patents involved: [						
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concerning document should be mailed:			7. Total fee (37 0	7. Total fee (37 CFR 3.41)		
Name:		ls Administration				
Internal Address: HUGHES ELECTRONICS CORPORATION			☐ Enclosed			
	Building 001, I	W/S A109	₩ Authorize	d to be charged to deposit account		
	P.O. Box 956	California 90245-0956	8. Deposit accou	nt number:		
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Street Address:	200 North Sepulveda Boulevard			50-0383		
El Segundo, California 90245-095		alifornia 90245-0956				
DO NOT USE THIS SPACE						
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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.						
copy or tire o	riginal document.		11 11/121			

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Terje Gudmestad, Reg. No. 32,232

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> **PATENT REEL: 9929 FRAME: 0975**

Total number of pages comprising cover sheet: [ 03 ]

April 27, 1999 Date

## ASSIGNMENT



Page 1 of 2

Customer No. 020991 PD-980222

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) METHOD OF CONTROLLING ATTITUDE OF A MOMENTUM BIASED SPACECRAFT DURING LONG-DURATION THRUSTER FIRINGS for which application for Letters Patent of the United States has been executed by me on this day, or (if the following is completed) filed on December 29, 1999 as Serial No. 09/222,450; and

WHEREAS, HUGHES ELECTRONICS CORPORATION, (hereinafter referred to as HUGHES), a Delaware Corporation, having its principal place of business in El Segundo, California, 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 therefor 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 HUGHES, 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 therefor 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 Commissioner of Patents and Trademarks of the United States and all foreign countries to issue all such Letters Patent to said HUGHES, 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 HUGHES, 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 HUGHES, 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 HUGHES, 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 HUGHES, its successors, assigns or other legal representatives.

13650 CO JAN 98

**PATENT** REEL: 9929 FRAME: 0976 IN WITNESS WHEREOF, I have executed this instrument.

,						
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE		DATE			
John F. Yocum, Jr.	John Ju Gowan Gu		4 26-49			
RESIDENCE (CITY AND STATE)	0 0	INVENTIO	N AGREEMENT DATE			
28717 Shire Oaks, Rancho Palos Verdes, California 90275  June 30, 1967						
FULL MANE OF COLE OR LOUNT INVENTOR						
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE		DATE			
Patrick A. Cazeau	1 /1/2/2		3-8-19			
RESIDENCE (CITY AND STATE)		INVENTIO	N AGREEMENT DATE			
5224 West 57th Street, Ladera Heights, California 90056 August 01, 1994						
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	. 1	DATE			
FULL NAME OF SOLE ON JOINT INVENTOR	INVENTORS GONATORE		DATE			
Stephen J. Koffman	flants / a//		-5/8/99			
RESIDENCE (CITY AND STATE)		INVENTIO	N AGREEMENT DATE			
2000 HUNTINGTON LANE, #1, EGDONE		A	1007			
9848 Tabor Street, Apratment 211, Los An	geles, California 90034 (1/1/3/99	April 17,	1997			
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE		DATE			
Develop A. Beker	Kinglas A. Belin	:	3-8-99			
Douglas A. Baker RESIDENCE (CITY AND STATE)	10-19-11-12-11	INVENTIO	N AGREEMENT DATE			
S520 West 190 Street, apo	ortment 249,		TO THE TOTAL OF TH			
Manhattan Beach, California 90206	orrance California 90503	October	8, 1990			
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE		DATE			
RESIDENCE (CITY AND STATE)		INVENTIO	N AGREEMENT DATE			
0.110						
STATE OF California ) SS:						
COUNTY OF Los Angeles )						
On March 8, 1999 before me, Christina H. Tady,						
a Notary Public in and for said State, personally appeared <u>Patrick A. Cazeau</u> , <u>Stephen J. Koffman</u>						
and Douglas A. Baker,						
Der sonally/known for fine or the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.						
WITNESS may bend and official seal						
CHRISTINA H. TADY Commission # 1075246 Lustura H. Jahn						
Commission #1075246 Notary Public — California Los Angeles County  Notary Public						
My Comm. Expires	Nov 1, 1999		<del>-</del>			

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PATENT REEL: 9929 FRAME: 0977

STATE OF CALIFORNIA	)
COUNTY OF LOS ANGELES	) <b>§</b> : )
On <b>April 26, 1999</b> before me, <u>CHRISTINA H. TADY</u>	
a Notary Public in and for said State, personally appear	ared John F. Yocum, Jr.
	,

□ personally known to me or ☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



CHRISTINA H. TADY
Commission #1075246
Notory Public — Colfornie
Los Angeles County
My Comm. Expires Nov 1, 1999

PATENT REEL: 9929 FRAME: 0978