FORM PTO-1595 1-31-92 03-17-1999



U.S. DEPARTMENT OF COMMERC Patent and Trademark Office

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100987208				
To the Honorable Commissioner of Patents and Trademarks. Please				
1. Name of conveying party(ies):	2. Name and address of receiving party(ies):			
Yeong-wei A. Wu Douglas H. Hein Garry Didinsky	Name: HUGHES ELECTRONICS CORPORATION Internal Address: Bldg. 001, M/S A109			
David L. Augenstein	P.O. Box 956 200 N. Sepulveda Blvd.			
Additional Name(s) of conveying party(ies) attached?	El Segundo, CA 90245-0956			
yes □ no 图				
Nature of Conveyance:	Street Address: Bldg. 001, M.S. A109			
☑ Assignment	200 N. Sepulveda Blvd. El Segundo, California 90245			
Execution Date: February 12, 1999; February 23, 1999; February 25, 1999; March 1, 1999.	Additional name(s) & address(es) attached? ☐ yes 図 no			
4. Application number(s) or patent number(s): $091261727$ If this document is being filed together with a new application, the execution date of the application is: February 12,				
1999; February 23, 1999; February 25, 1999; March 1, 1999.	and discountry date of the approximation of the app			
A. Patent Application No.(s):  B. Patent No.(s):				
Additional numbers attached	? □ yes   图 no			
Name and address of party to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: [1]			
_	7. Total fee (37 CFR 3.41): \$40.00			
Name: Patent Records Administration	☐ Enclosed			
Address: Hughes Electronics Corporation Bldg. 001, M/S A109 P.O. Box 956	Authorized to be charged to deposit account			
200 N. Sepulveda Blvd.	8. Deposit account number:			
El Segundo, CA 90245-0956	50-0383			
	(Attached duplicate copy of this page if paying by deposit account)			
6/1999 JSHABAZZ 00000044 500383 09261727	Customer No. 020991			
0:581 40.00 CH DO NOT USE TI				
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.				
TERJE GUDMESTAD Registration No. 32,232 Signature	3/3/99 Date			
	Total number of pages including cover sheet: [5]			

OMB No. 0651-0011 (exp. 4/94)

PATENT REEL: 9810 FRAME: 0831



## **ASSIGNMENT**

Page 1 of № 3 PD-970256

Customer No. 020991

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 AND APPARATUS FOR CONTROLLING SPACECRAFT ATTITUDE WITH ROTATIONAL STAR TRACKERS 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 \_\_\_\_\_\_ as Serial No. \_\_\_\_\_\_ ; 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.

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PATENT REEL: 9810 FRAME: 0832 IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE		DATE			
YEONG-WEI A. WU	INVENTOR'S SIGNATURE DATE		DATE			
LEGING-WEI A. WO	•					
RESIDENCE (CITY AND STATE)		INVENTIO	ON AGREEMENT DATE			
28525 CEDARBLUFF DRIVE, RANCHO P	ALOS VERDES, CA 90274	January	6, 1982			
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE		DATE			
DOUGLAS H. HEIN	INVERTOR SIGNATURE		DATE			
DOUGLAS H. HEIN						
RESIDENCE (CITY AND STATE)		INVENTIO	ON AGREEMENT DATE			
2545 CORDELIA ROAD, LOS ANGELES,	CA 90049	Septem	ber 26, 1983			
FULL NAME OF COLE OR SOUNT INVENTOR	INIVENITORIC CIONATURE		DATE			
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE		DATE			
GARRY DIDINSKY	U HIDSON		2/12/99			
RESIDENCE (CITY AND STATE)		INVENTIO	ON AGREEMENT DATE			
8821 D WASHINGTON BLVD, NILES, IL	60714	Januarv	· 9, 1995			
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE		DATE			
DAVID L. AUGENSTEIN						
RESIDENCE (CITY AND STATE) INVENTION AGREEMENT DATE						
341 MANHATTAN AVENUE, HERMOSA E	BEACH. CA 90254	November 28, 1990				
STATE OF TI	•					
STATE OF+(						
COUNTY OF COOK-	)					
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On February Public in and for said State, personally appeared Charles Billings						
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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.						
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IN WITNESS WHEREOF, I have executed this instrument.

	FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE		DATE		
	YEONG-WEI A. WU	Y - And Wa		2/23/1989		
	RESIDENCE (CITY AND STATE)	5	INVENTIO	N AGREEMENT DATE		
	28525 CEDARBLUFF DRIVE, RANCHO P	28525 CEDARBLUFF DRIVE, RANCHO PALOS VERDES, CA 90274		January 6, 1982		
	FULL NAME OF SOLE OR JOINT INVENTOR  DOUGLAS H. HEIN	INVENTOR'S SIGNATURE HE	·27	Z/25/99		
	RESIDENCE (CITY AND STATE)		INVENTIO	N AGREEMENT DATE		
	2545 CORDELIA ROAD, LOS ANGELES, CA 90049		September 26, 1983			
•						
	GARRY DIDINSKY	INVENTOR'S SIGNATURE		DATE		
	RESIDENCE (CITY AND STATE)		INVENTIO	N AGREEMENT DATE		
	8821 D WASHINGTON BLVD, NILES, IL 60714		January 9, 1995			
	DAVID L. AUGENSTEIN	David L. Augenstia		3/1/99		
BLa	RESIDENCE (CITY AND STATE) 337 MANHATTAN AVENUE, HERMOSA BEACH, CA 90254		INVENTION AGREEMENT DATE November 28, 1990			
	STATE OF <u>California</u> COUNTY OF <u>Los Angeles</u> On <u>2-23-99</u> before me, <u>Kathleen M. Motta</u> a Notary Public in and for said State, personally appeared <u>Yeong Wei</u> , Andy Wu					
	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/ber/their authorized capacity(iee), 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.					
	KATHLEEN M. MOTTA Commission # 1192701 Notary Public - California Los Angeles County My Comm. Expires Aug 8, 2002					
	My Comm. Expires Aug a. Aug	·I				

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PATENT REEL: 9810 FRAME: 0834

## **ASSIGNMENT**

ADDENDUM PD-970256

STATE OF CACIFORNIA	SS:				
COUNTY OF LOS ANGELES	,				
On FEB. 25,1999, before me, DIAN	/A /-fe// , a Notary Public in				
and for said State, personally appeared Douglas H	HEIN				
□ personally known to me or ☑ proved to me on the basis of is/are subscribed to the within instrument and acknowledged authorized capacity(ies), and that by his/her/their signature behalf of which the person(if) acted, executed the instrument.	satisfactory evidence to be the person(s) whose name(g) to me that he <del>/she/the</del> y executed the same in his/her/their				
WITNESS my hand and official seal.					
DIANA HUI Commission # 1174995 Notary Public - California Los Angeles County My Comm. Expires Mar 13, 2002	Notary Public				
STATE OF (alifornia)					
countrof Los Angeles	SS:				
	Neen M. Motta , a Notary Public in				
and for said State, personally appeared David 1. F					
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(jes), 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.	,				
KATHLEEN M. MOTTA Commission # 1192701 Notary Public - California Los Angeles County My Comm. Expires Aug 8, 2002	Notary Public				
STATE OF	00.				
COUNTY OF)	SS:				
On, before me,	, a Notary Public in				
and for said State, personally appeared					
☐ personally known to me or ☐ proved to me on the basis of is/are subscribed to the within instrument and acknowledged to authorized capacity(ies), and that by his/her/their signature(behalf of which the person(s) acted, executed the instrument.	to me that he/she/they executed the same in his/her/their				
WITNESS my hand and official seal.					
	Notony Dublio				
	Notary Public				

PATENT REEL: 9810 FRAME: 0835

**RECORDED: 03/03/1999**