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05-12-2000

FORM PTO-1595
1-31-92

DEPARTMENT OF COMMERCE
Patent and Trademark Office

RI



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PD-990285

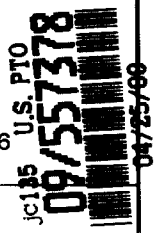
To the Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):
Yeong-Wei Andy Wu, Umesh S. Ketkar, Rongsheng Li and Richard Y. Chiang

Additional Name(s) of conveying party(ies) attached?
Yes no

2. Name and address of receiving party(ies):
Name: HUGHES ELECTRONICS CORPORATION

Internal Address: Bldg. 001, M/S A109
PO Box 956
200 N. Sepulveda Blvd.
El Segundo, CA 90245-0956



3. Nature of Conveyance:
 Assignment Merger
 Security Agreement Change of Name
 Other _____

Execution Date: April 10, 2000 and April 14, 2000

Street Address: 200 N. Sepulveda Blvd.
P.O. Box 956
El Segundo, California 90245

Additional name(s) & address(es) attached? yes no

4. Application number(s) or patent number(s): PD-990285

If this document is being filed together with a new application, the execution date of the application is: April 10, 2000 and April 14, 2000

A. Patent Application No.(s) 09557378 B. Patent No.(s) _____

Additional numbers attached? yes no

5. Name and address of party to whom correspondence concerning document should be mailed:
Name: HUGHES ELECTRONICS CORPORATION
Internal Address: Corporate Patents & Licensing
Bldg. 001, M/S A109
PO Box 956
El Segundo, CA 90245-0956

6. Total number of applications and patents involved: [1]

7. Total fee (37 CFR 3.41): \$40.00

Enclosed
 Authorized to be charged to deposit account

8. Deposit account number:
50-0383

(Attached 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.

Terje Gudmestad
Name of Person Signing

Signature

April 24, 2000
Date

Total number of pages comprising cover sheet: [4]

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

(05/10/2000 DWGUYEN 00000470 500383 09557378)
01 FC:581 40.00 CH

PATENT
REEL: 010770 FRAME: 0234

ASSIGNMENT

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) BEACON-ASSISTED SPACECRAFT ATTITUDE CONTROL SYSTEMS AND METHODS 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.

IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR YEONG-WEI ANDY WU	INVENTOR'S SIGNATURE <i>Yeong-Wei Andy Wu</i>	DATE 4/10/2000
RESIDENCE (CITY AND STATE) 28525 Cedarbluff Drive, Rancho Palos Verdes, California 90275		INVENTION AGREEMENT DATE November 3, 1980

FULL NAME OF SOLE OR JOINT INVENTOR UMESH S. KETKAR	INVENTOR'S SIGNATURE <i>Umesh Ketkar</i>	DATE 4/14/2000
RESIDENCE (CITY AND STATE) 4818 Via El Sereno, Torrance, California 90505		INVENTION AGREEMENT DATE July 19, 1982

FULL NAME OF SOLE OR JOINT INVENTOR RONGSHENG LI	INVENTOR'S SIGNATURE <i>Rongsheng Li</i>	DATE 4/10/2000
RESIDENCE (CITY AND STATE) 2521 S. Anvil Tree Lane, Hacienda Heights, California 91745		INVENTION AGREEMENT DATE September 23, 1996

FULL NAME OF SOLE OR JOINT INVENTOR RICHARD Y. CHIANG	INVENTOR'S SIGNATURE <i>Richard Y. Chiang</i>	DATE 4/10/2000
RESIDENCE (CITY AND STATE) 27416 Warner Dr., RPV, CA 90275 21006 Wendy Drive, Torrance, California 90503 - PC		INVENTION AGREEMENT DATE May 26, 1998

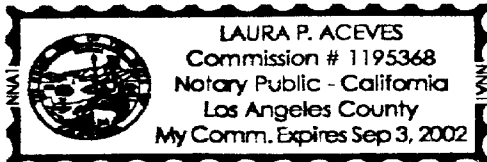
STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES)

SS:

On April 10, 2000 before me, Laura P. Aceves,
a Notary Public in and for said State, personally appeared Yeong-Wei Andy Wu, Rongsheng Li
and Richard Y. Chiang,

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/it~~ 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.



Laura P. Aceves

Notary Public
Laura P. Aceves

ASSIGNMENT

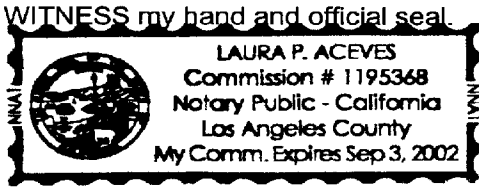
ADDENDUM
PD-990285

STATE OF CALIFORNIA)
)
COUNTY OF LOS ANGELES)

SS:

On April 14, 2000, before me, Laura P. Aceves, a Notary Public in and for said State, personally appeared Umesh S. Ketkar

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.



Laura P. Aceves
Notary Public
Laura P. Aceves

STATE OF _____)
)
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 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.

Notary Public

STATE OF _____)
)
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 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.

Notary Public