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PD-519 U.S. P.T. 09/24/99
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Customer No.: 020991

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

1. Name of conveying party(ies): NEED
2-4-99
John L. Norin
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
P.O. Box 956
El Segundo, California 90245-0956

3. Nature of Conveyance:
 Assignment Merger
 Security Agreement Change of Name
 Other _____
Execution Date(s): January 28, 1999

Street Address: Bldg. 001, M.S. A109
200 North Sepulveda Blvd.
El Segundo, California 90245-0956
Additional name(s) & address(es) attached? yes no

4. Application number(s) or patent number(s): 09/244,576
If this document is being filed together with a new application, the execution date of the application is: January 28, 1999.
A. Patent Application No.(s) | 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 Records Administration
Internal Address: HUGHES ELECTRONICS CORPORATION
Building 001, M/S A109
P.O. Box 956
El Segundo, California 90245-0956
Street Address: 200 North Sepulveda Boulevard
El Segundo, California 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

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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 Reg. No. 32,232 [Signature] February 04, 1999
Signature Date
Total number of pages comprising cover sheet: [03]

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignments
Washington, D.C. 20231

PATENT
REEL: 9753 FRAME: 0679

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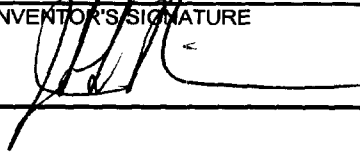
Customer No. 020991

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) **AN APPARATUS AND METHOD OF TESTING MULTI-BEAM SATELLITE REPEATER IN-ORBIT FROM A SINGLE GROUND STATION USING A SAMPLING AND COMBINING MATRIX** 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 John L. Norin	INVENTOR'S SIGNATURE 	DATE 1/28/99
RESIDENCE (CITY AND STATE) 5333 West 137th Place, Hawthorne, California 90250		INVENTION AGREEMENT DATE August 19, 1991

FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
RESIDENCE (CITY AND STATE)		INVENTION AGREEMENT DATE

FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
RESIDENCE (CITY AND STATE)		INVENTION AGREEMENT DATE

FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
RESIDENCE (CITY AND STATE)		INVENTION AGREEMENT DATE

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) SS:
On 1-28-99 before me, CHRISTINA H. TADY
a Notary Public in and for said State, personally appeared JOHN L. NORIN

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
Notary Public