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PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT | |
|-----------------------|----------------|--|
| NATURE OF CONVEYANCE: | ASSIGNMENT | |

CONVEYING PARTY DATA

| Name | Execution Date | |
|--------------------------------|----------------|--|
| HUGHES ELECTRONICS CORPORATION | 10/06/2000 | |

RECEIVING PARTY DATA

| Name: | THE BOEING COMPANY | |
|-----------------|--|--|
| Street Address: | eet Address: 100 North Riverside Plaza | |
| City: | Chicago | |
| State/Country: | ILLINOIS | |
| Postal Code: | 60606-1596 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|----------------|---------|
| Patent Number: | 5283512 |

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| | ATTORNEY DOCKET NUMBER: | 091333 |
|--|-------------------------|--------|
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NAME OF SUBMITTER: Terje Gudmestad

Total Attachments: 4

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PATENT REEL: 016914 FRAME: 0952

| For | m PTO-1595 | RECORDATION | FORM COVER SHEET | U.S. DEPARTMENT OF COMMERCE |
|-----|--|--|-----------------------------|---|
| • | v. 03/01) | | NTS ONLY | U.S. Patent and Trademark Office |
| ОМ | B No. 0651-0027 (exp. | 5/31/2002) | | Dealest No. 004222 |
| | | | | Docket No: <u>091333</u> |
| Tot | he Honorable Commis | sioner of Patents and Trademarks: Please re | ecord the attached original | documents or copy thereof. |
| 1. | Name of conveying | party(ies): | 2. Name and address | of receiving party(ies) |
| | HUGHES ELECTR | ONICS CORPORATION | Name: THE BOE | |
| Add | itional name(s) of conv | veying party(ies) attached? ☐ Yes X No | Internal Address: | 100 North Riverside Plaza |
| 3. | Nature of conveyar | | | Chicago, IL 60606-1596 |
| | X Assignment | ☐ Merger | | |
| | ☐ Security Agree | ment | | |
| | Other | | | |
| | | | | |
| Exe | ecution Date: October | 6, 2000 | | |
| | | | Additional name(s) & | address(es) attached? ☐ Yes X No |
| 4. | Application number | (s) or patent number(s): <u>091333</u> | | |
| | If this document is | being filed together with a new applicati | on, the execution date o | of the application is: |
| | A. Patent Applica 07/867,578 | tion No.(s): | B. Patent No.(s): 5,283,512 | |
| | | A A Providence of the Control of the | | |
| | Name and address | Additional numbers attact | T | plications and natarta involved 4 |
| 5. | concerning docume | of party to whom correspondence ent should be mailed: | 7. Total fee (37 CFR | plications and patents involved: 1 3.41)\$40.00 |
| | Name: | Terje Gudmestad | ☐ Enclosed | |
| | Internal Address: | Boeing Management Company | Liciosed | |
| | | 15460 Laguna Canyon Road | X Authorized to b | pe charged to deposit account |
| | ti _{se} | Irvine, CA 92618 | 8. Deposit account nu | ımber: |
| | | | <u>18-1730</u> | |
| | | | (Attach duplicate copy of | this page if paying by deposit account) |
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| | | DO NOT USE T | HIS SPACE | |
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| 9. | Statement and sign | | | |
| | To the best of my k copy of the original | nowledge and belief, the foregoing inford document. | rmation is true and corre | ct and any attached copy is a true |
| | Terje Gudmestad, F | Registration No. 32,232 | Wither. | 12/16/05 |
| | Name of Perso | on Signing | Signature | Date |
| | | | | |

Total number of pages including cover sheet, attachments, and documents: 4

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents & Trademarks, Box Assignments

Commissioner of Patents & Trademarks, Box Assignments Washington, D.C. 20231

CONFIRMATION OF ASSIGNMENT OF PATENT AND TRADEMARK RIGHTS WITH AUTHORIZATION AND APPOINTMENT BY ASSIGNOR

WHEREAS, HUGHES ELECTRONICS CORPORATION, a corporation of the State of Delaware, United States of America ("Assignor"), having a principal place of business at 200 North Sepulveda, El Segundo, California 90245, is assigning or has assigned all of its rights, title and interests in the United States and throughout the world, in and to the invention disclosures, patent applications and patents listed on Schedule A (the "Patents"), to the Intellectual Property Agreement dated as of the date hereof between Hughes Electronics Corporation, Hughes Space and Communications Company and The Boeing Company (the "Intellectual Property Agreement") to THE BOEING COMPANY ("Assignee"); and

WHEREAS, **Assignor** is assigning or has assigned all of its rights, title and interests in the United States and throughout the world, in and to the trademarks listed on Schedule B and tradenames listed on Schedule C ("the Trademarks"), to the Intellectual Property Agreement to **Assignee**; and

WHEREAS, it was contemplated, at the time of assignment and stated in the Purchase Agreement, that the execution and delivery of papers would be necessary for Assignee, its successors, assigns or representatives to perfect, affirm, record and maintain the title to the Patents and the Trademarks in Assignee, its successors, assigns or other legal representatives; and

WHEREAS, Assignor had agreed to generally cooperate to the fullest extent in all matters pertaining to the Patents and the Trademarks, and to do all lawful acts, including the execution and delivery of all papers and proper oaths that are deemed necessary or desirable by Assignee, its successors, assigns or representatives for accomplishing the foregoing;

NOW THEREFORE, Assignor hereby confirms the foregoing assignment and authorizes and appoints Assignee and grants Assignee full power of attorney to execute all necessary papers and oaths on Assignor's behalf and in Assignor's name that are necessary for Assignee, its successors, assigns or representatives to perfect, affirm, record and maintain the title in Assignee, its successors, assigns or other legal representatives to any and all of the Patents and the Trademarks in the United States and throughout the world.

ASSIGNOR:

BY:]

Name: ROXALDE S. AUSTIN

Title: Sr. V.P. & OFD

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STATE OF CALIFORNIA COUNTY OF LOS ANGELES

| ON | Sept | mber | 5,2000 | before me, | ELAINE 19 | , MGEE, a | Notary | Public in |
|-----|------|------|--------|------------|-----------|-----------|--------|-----------|
| and | for | said | State, | personally | appeared | Brenti | Reed | |

□ 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 Elasine M. MEB.

AGREED TO AND ACCEPTED BY:

ASSIGNEE:

Title:

Confirmation of Assignment of Patent and Trademark Rights

SCHEDULE A

PATENTS

| PATENT_NO | ISSUE_DATE | PD_NO | TITLE | | |
|------------------------|------------|---------|--|--|--|
| 5,184,092 | 02/02/93 | 089289 | PHASE-LOCKED LOOP FREQUENCY TRACKING DEVICE INCLUDING A DIRECT DIGITAL SYNTHESIZER | | |
| 5,184,098 | 02/02/93 | 089163 | SWITCHABLE DUAL MODE DIRECTIONAL FILTER SYSTEM | | |
| 5,184,790 | 02/09/93 | 088171 | TWO-AXIS ATTITUDE CORRECTION FOR ORBIT INCLINATION | | |
| 5,187,028 | 02/16/93 | 090519 | NICKEL-HYDROGEN CELLS | | |
| 5,208,112 | 05/04/93 | 089648 | THERMALLY REGENERATED FUEL CELL | | |
| 5,216,345 | 06/01/93 | 091316 | MIXED MODE STEPPER MOTOR CONTROLLER AND METHOD | | |
| 5,218,522 | 06/08/93 | 091671 | D.C. CHOPPER REGULATING METHOD AND APPARATUS INCORPORATING BILATERAL REGULATING VOLTAGE PATH | | |
| 5,222,142 | 06/22/93 | 091564 | SEQUENCE GENERATOR | | |
| 5,222,178 | 06/22/93 | 091615 | HIGH DENSITY FIBER OPTIC CABLE PACKAGING | | |
| 5,223,702 | 06/29/93 | 091160 | METHOD AND APPARATUS FOR ROTATIONAL RATE DETERMINATION USING A STELLAR REFERENCE | | |
| 5,224,165 | 06/29/93 | 085246B | HIGH SPEED WORD GENERATOR | | |
| 5,225,295 | 07/06/93 | 091138 | BI-CELL ELECTRICAL STORAGE BATTERY | | |
| 5,227,803 | 07/13/93 | 092284 | TRANSPONDER LOCATION AND TRACKING SYSTEM AND METHOD | | |
| 5,227,943 | 07/13/93 | 089629 | POWER FAULT PROTECTION FOR HIGH MOMENTUM SYSTEMS | | |
| 5,231,411 | 07/27/93 | 090300 | ONE PIECE MILLIMETER WAVE PHASE SHIFTER/ANTENNA | | |
| 5,233,358 | 08/03/93 | 087200 | ANTENNA BEAM FORMING SYSTEM | | |
| 5,247,267 | 09/21/93 | 090304 | UTILIZING THERMAL CONDUCTORS TO INCREASE OPERATING POWER OF COAXIAL MICROWAVE DEVICES | | |
| 5,248,510 | 09/28/93 | 091420 | COBALT OXIDE PASSIVATION OF NICKEL BATTERY ELECTRODE SUBSTRATES | | |
| 5,248,982 | 09/28/93 | 090152A | METHOD AND APPARATUS FOR CALIBRATING PHASED ARRAY RECEIVING ANTENNAS | | |
| 5,255,879 | 10/26/93 | 091157 | THREE AXES STABILIZED SPACECRAFT AND METHOD OF SUN ACQUISITION | | |
| 5,257,759 | 11/02/93 | 090470 | METHOD AND APPARATUS FOR CONTROLLING A SOLAR WING OF A SATELLITE USING A SUN SENSOR | | |
| 5,257,872 | 11/02/93 | 090261 | HIGH POWER WAVEGUIDE SWITCH AND METHOD | | |
| 5,261,631 | 11/16/93 | 090298 | MOMENTUM WHEEL PLATFORM STEERING SYSTEM AND METHOD | | |
| 5,264,298 | 11/23/93 | 091701 | LEWIS ACID THERMOELETROCHEMICAL CONVERTER | | |
| 5,265,268 | 11/23/93 | 090113 | IMAGE RECOVERY MIXER | | |
| 5,266,421 | 11/30/93 | 091399 | ENHANCED MEMBRANE-ELECTRODE INTERFACE | | |
| 5,266,911 | 11/30/93 | 090353A | MULTIPLEXING SYSTEM FOR PLURAL CHANNELS OF ELECTROMAGNETIC SIGNALS | | |
| 5,282,196 | 01/25/94 | 088554A | BURSTED AND NON-BURSTED DATA ROUTER | | |
| 5,283,512 | 02/01/94 | 091333 | CHARGE BALANCING OF BATTERIES DURING CHARGING | | |
| 5,284,309 | 02/08/94 | 092131 | PROPELLANT IMMOBILIZING SYSTEM AND METHOD | | |
| 5,285,174 | 02/08/94 | 091535 | TEMPERATURE-COMPENSATED WAVEGUIDE ISOLATOR | | |
| 5,285,176 | 02/08/94 | 090096A | FLAT CAVITY RF POWER DIVIDER | | |
| 5,291,148 | 03/01/94 | 091699 | GAIN LINEARIZATION WITH COPLANAR WAVEGUIDE | | |
| 5,302,959 | 04/12/94 | 091284 | SINGLE ELEMENT DRIVER ARCHITECTURE FOR FERRITE BASED PHASE SHIFTER | | |
| 5,304,863 | 04/19/94 | 090273A | TRANSFORMER DRIVER HAVING UNLIMITED DUTY CYCLE CAPABILITY BY INSERTING NARROW PULSES DURING UNLIMITED DUTY CYCLES | | |
| E 204 044 | 04/19/94 | 092121 | HIGH FREQUENCY LINEARIZER | | |
| 5,304,944 | 04/19/94 | 090529 | HORN RADIATOR ASSEMBLY WITH STEPPED SEPTUM POLARIZER | | |
| 5,305,001 5,308,025 | 05/03/94 | 090323 | SPACECRAFT SPIN AXIS CAPTURE SYSTEM AND METHOD | | |
| 5,300,025 | 05/10/94 | 091205A | THREE AXIS THRUSTER MODULATION | | |
| 5,310,143 | 05/10/94 | 091631 | METHOD AND APPARATUS FOR SATELLITE TORQUE BALANCING | | |
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| E 210 255 | 06/07/94 | 091560 | STAGE SEPARATION MECHANISM FOR SPACE VEHICLES | | |
| 5,318,255 | 06/14/94 | 091757 | GLASS SEALING OF ELECTROCHEMICAL STORAGE CELL STRUCTURES | | |
| 5,320,915 5,327,150 | 07/05/94 | 092246 | PHASED ARRAY ANTENNA FOR EFFICIENT RADIATION OF MICROWAVE AND THERMAL ENERGY | | |
| 5,330,585 | 07/19/94 | L92004 | GALLIUM ARSENIDE/ALUMINUM GALLIUM ARSENIDE PHOTOCELL INCLUDING ENVIRONMENTALLY SEALED OHMIC CONTACT GRID INTERFACE | | |
| 5,337,981 | 08/16/94 | 091048 | METHOD AND APPARATUS FOR COMPENSATING FOR SOLAR TORQUE TRANSIENTS ON SATELLITE DURING A SOLAR ECLIPSE | | |

October 4, 2000 7

RECORDED: 12/20/2005

PATENT REEL: 016914 FRAME: 0956