

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
HUGHES ELECTRONICS CORPORATION	09/05/2000
RECEIVING PARTY DATA	
Name:	THE BOEING COMPANY
Street Address:	100 N. Riverside Plaza
City:	Chicago
State/Country:	ILLINOIS
Postal Code:	60606-2016
PROPERTY NUMBERS Total: 7	
Property Type	Number
Patent Number:	5833176
Patent Number:	5883549
Patent Number:	5945470
Patent Number:	6534792
Patent Number:	6548375
Patent Number:	6553328
Patent Number:	6560108
CORRESPONDENCE DATA	
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<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>	
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Address Line 4:	Seal Beach, CALIFORNIA 90740

501397931

PATENT
REEL: 025589 FRAME: 0991

CH \$280.00 5833176

ATTORNEY DOCKET NUMBER:	HEC-BOEING
NAME OF SUBMITTER:	John R. Rafter
<p>Total Attachments: 7</p> <p>source=HughesBoeing_PatAssign#page1.tif</p> <p>source=HughesBoeing_PatAssign#page2.tif</p> <p>source=HughesBoeing_PatAssign#page3.tif</p> <p>source=HughesBoeing_PatAssign#page4.tif</p> <p>source=HughesBoeing_PatAssign#page5.tif</p> <p>source=HughesBoeing_PatAssign#page6.tif</p> <p>source=HughesBoeing_PatAssign#page7.tif</p>	

**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

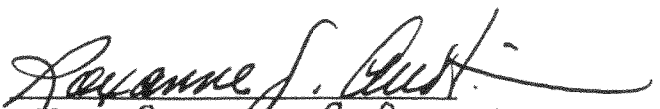
WHEREAS, it was contemplated, at the time of assignment and stated in the Purchase Agreement, that the execution and delivery of papers would be necessary for Assignee, its successors, assigns or representatives to perfect, affirm, record and maintain the title to the Patents and the Trademarks in Assignee, 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: ROXANNE S. AUSTIN
Title: Sr. V.P. & CFO

STATE OF CALIFORNIA
COUNTY OF LOS ANGELES

ON September 5, 2000 before me, ELAINE M. MCGEE, a Notary Public in
and for said State, personally appeared Brent 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 Elaine M. McGee

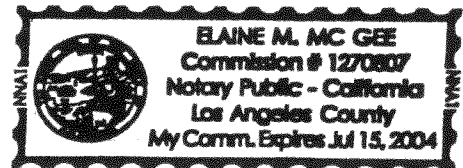
AGREED TO AND ACCEPTED BY:

ASSIGNEE:

BY: Brent Reed

Name:

Title:



Confirmation of Assignment of Patent and Trademark Rights

PATENT_NO	ISSUE_DATE	PD_NO	TITLE
5,818,309	10/06/98	096112	MICROWAVE ACTIVE NOTCH FILTER AND OPERATING METHOD WITH PHOTONIC BANDGAP CRYSTAL FEEDBACK LOOP
5,818,314	10/06/98	960381	TUNABLE ELECTROMAGNETIC WAVE RESONANT FILTER
5,818,388	10/06/98	096098	SATELLITE COMMUNICATIONS APPARATUS USING ACTIVE REDUNDANCY
5,820,078	10/13/98	096205	CONTROL MOTION GYRO WITH VIBRATION ISOLATION
5,820,669	10/13/98	970036	(ZINC, CADMIUM) ALUMINATE-GALLATE-CONTAINING PAINTS
5,823,476	10/20/98	095301	DEVICE AND METHOD FOR EQUALIZING HEAT DISSIPATION BETWEEN MULTIPLE RADIATORS ON A SPACECRAFT
5,823,477	10/20/98	095314	DEVICE AND METHOD FOR MINIMIZING RADIATOR AREA REQUIRED FOR HEAT DISSIPATION ON A SPACECRAFT
5,826,828	10/27/98	093317	SUN/EARTH ACQUISITION WITHOUT THRUSTERS
5,826,830	10/27/98	095315	DUAL-HALF SYSTEM, FULL TORQUE REACTION CONTROL THRUSTER CONFIGURATION FOR THREE-AXIS STABILIZED SPACECRAFT
5,826,831	10/27/98	095346	SATELLITE CO-LOCATION METHODS
5,828,268	10/27/98	095353	MICROWAVE SWITCHES AND REDUNDANT SWITCHING SYSTEMS
5,832,307	11/03/98	096050	SATELLITE COMMUNICATION SYSTEM OVERWRITING NOT VALIDATED MESSAGE STORED IN CIRCULAR BUFFER WITH NEW MESSAGE IN ACCORDANCE WITH ADDRESS STORED IN LAST VALID WRITE ADDRESS REGISTER
5,833,175	11/10/98	095485	SPACECRAFT WITH LARGE EAST-WEST DIMENSIONS
* 5,833,176	11/10/98	093037	BOWED SOLAR ARRAY
5,834,971	11/10/98	094511	RF AMPLIFIER INCLUDING TRAVELING WAVE TUBE WITH SEQUENTIAL STAGES
5,834,993	11/10/98	096027	PASSIVE MICROWAVE STRUCTURES AND METHODS HAVING REDUCED PASSIVE INTERMODULATION
5,837,399	11/17/98	096055	THROUGH-WALL ELECTRICAL TERMINAL AND ENERGY STORAGE CELL UTILIZING THE TERMINAL
5,839,696	11/24/98	095324	MODULAR PAYLOAD ARRANGEMENT
5,840,829	11/24/98	094561A	PLATEABLE STRUCTURAL ADHESIVE FOR CYANATE ESTER COMPOSITES
5,847,681	12/08/98	094142	COMMUNICATION AND TRACKING ANTENNA SYSTEMS FOR SATELLITES
5,849,396	12/15/98	095040	MULTILAYER ELECTRONIC STRUCTURE AND ITS PREPARATION
5,850,389	12/15/98	095479	HIGH SPEED CIRCULAR DATA BUS SYSTEM
5,853,497	12/29/98	L96003	HIGH EFFICIENCY MULTI-JUNCTION SOLAR CELLS
5,858,557	01/12/99	096230	NICKEL/GOLD PLATING OF A COPPER-REFRACTORY METAL MATERIAL
5,859,368	01/12/99	095298	TUNNELING-BASED ROTATION RATE SENSOR
5,861,738	01/19/99	096150	DC TO DC CONVERTER WITH A FAULT TOLERANT OUTPUT VOLTAGE CLAMP
5,861,843	01/19/99	970039	PHASED ARRAY CALIBRATION ORTHOGONAL PHASE SEQUENCE
5,869,948	02/09/99	095118	A UNIDIRECTIONAL BATTERY CHARGE/DISCHARGE CONTROLLER FOR A REGULATED ELECTRICAL BUS SYSTEM WITH A SOLAR CURRENT SOURCE
5,871,684	02/16/99	096227	METHOD OF MAKING LIGHTWEIGHT, LOW THERMAL EXPANSION MICROWAVE STRUCTURES SAME
5,875,685	03/02/99	095190	MULTI-AXIS POSITIONER WITH BASE-MOUNTED ACTUATORS
5,876,856	03/02/99	096157	ARTICLE HAVING A HIGH-TEMPERATURE THERMAL CONTROL COATING
5,878,980	03/09/99	095402	ATTENUATION RING
* 5,883,549	03/16/99	096308	BIPOLAR JUNCTION TRANSISTOR (BJT)- RESONANT TUNNELING DIODE (RTD) OSCILLATOR CIRCUIT AND METHOD
5,883,552	03/16/99	096174	MICROWAVE POWER DIVIDER/COMBINER STRUCTURES
5,884,868	03/23/99	096323	RADIATOR USING THERMAL CONTROL COATING
5,884,869	03/23/99	095073	SATELLITE SPIN VECTOR CONTROL WITH SUN SENSOR
5,885,906	03/23/99	096009	LOW PIM REFLECTOR MATERIAL
5,886,590	03/23/99	096282	MICROSTRIP TO COAX VERTICAL LAUNCHER USING FUZZ
5,887,823	03/30/99	960391	GIMBAL MECHANISM AND GEARBOX FOR SAME
5,889,487	03/30/99	092635A	FLASH ANALOG-TO-DIGITAL CONVERTER WITH LATCHING EXCLUSIVE OR GATES
5,892,401	04/06/99	095270	SOLID STATE POWER AMPLIFIER WITH LOW DISTORTION NOISE PROTECTION LIMITER
5,895,014	04/20/99	094151	SATELLITE SOLAR ARRAY AND METHOD OF BIASING TO REDUCE SEASONAL OUTPUT POWER FLUCTUATIONS
5,895,982	04/20/99	095341	A FULLY REGULATED POWER BUS USING MULTIPLE SOURCE BUS REGULATORS
5,901,923	05/11/99	096236	ROLLING GIMBAL HARNESS

PATENT_NO	ISSUE_DATE	PD_NO	TITLE
5,902,417	05/11/99	L96004	HIGH EFFICIENCY TANDEM SOLAR CELLS, AND OPERATING METHOD
5,903,241	05/11/99	095002A	WAVEGUIDE HORN WITH RESTRICTED-LENGTH SEPTUMS
5,905,574	05/18/99	970566	METHOD AND APPARATUS FOR CANCELING CROSS POLARIZATION INTERFERENCE
5,909,860	06/08/99	970150	DEPLOYMENT SEQUENCER
5,911,272	06/15/99	095476	MECHANICALLY PUMPED HEAT PIPE
5,914,606	06/22/99	096064	BATTERY CELL VOLTAGE MONITOR AND METHOD
5,916,668	06/29/99	094541	SUNSHIELD FILM TRANSPARENT TO RADIO FREQUENCY ENERGY AND SHIELDED ARTICLES
5,916,703	06/29/99	095336	ENERGY STORAGE CELL WITH HYDROGEN VENT
5,922,033	07/ 13/99	096362	EARTH CHORD DETERMINATION IN A SATELLITE AT LOW SPIN RATES
5,923,225	07/ 13/99	096288	NOISE-REDUCTION SYSTEMS AND METHODS USING PHOTONIC BANDGAP CRYSTALS
5,924,031	07/ 13/99	095366	INTERCONNECTIVE TRANSPONDER SYSTEMS AND METHODS
5,924,277	07/20/99	096164	ION THRUSTER WITH LONG-LIFETIME ION-OPTICS SYSTEM
5,926,130	07/ 20/99	970342	DIGITAL SPACECRAFT ANTENNA TRACKING SYSTEM
5,928,461	07/ 27/99	095426	RF PLASMA SOURCE AND METHOD FOR CLEANING SPACECRAFT THERMAL RADIATORS
5,929,820	07/ 27/99	093328A	SCANNING CUP-DIPOLE ANTENNA WITH FIXED DIPOLE AND TILTING CUP
5,932,971	08/03/99	970148	OPTIMALLY DESIGNED TRAVELING WAVE TUBE FOR OPERATION BACKED OFF FROM SATURATION
5,934,620	08/10/99	095316	SPACECRAFT SUN-TARGET STEERING ABOUT AN ARBITRARY BODY AXIS
5,934,621	08/10/99	970325	BATCHED OPTIMIZED METHOD FOR TRANSFER ORBIT CONSTRUCTION
5,934,965	08/10/99	096165	APERTURED NONPLANAR ELECTRODES AND FORMING METHODS
5,936,165	08/10/99	095284	SYSTEM AND METHOD FOR MEASURING COMBINED LINEAR AND BENDING DEFORMATION
5,936,482	08/10/99	096168	THREE DIMENSIONAL POLYHEDRAL-SHAPED MICROWAVE SWITCHES
5,936,588	08/10/99	970104	RECONFIGURABLE MULTIPLE BEAM SATELLITE PHASED ARRAY ANTENNA
5,936,592	08/10/99	970103	RECONFIGURABLE MULTIPLE BEAM SATELLITE REFLECTOR ANTENNA WITH AN ARRAY FEED
5,938,703	08/17/99	095370	EMBEDDED COMMAND MODULE WITH MATRIX SWITCH DRIVE CAPABILITY
5,942,852	08/24/99	970149	EFFICIENT, HIGHLY LINEAR TRAVELING WAVE TUBE USING COLLECTOR WITH HIGH BACKSTREAMING CURRENT UNDER SATURATED DRIVE
5,944,935	08/31/99	092050	PREPARATION OF ADHESIVELY BONDED SANDWICH STRUCTURES
5,945,470	08/31/99	096313	CERAMIC-POLYMER COMPOSITE MATERIAL AND ITS USE IN MICROELECTRONICS PACKAGING
5,945,934	08/31/99	096324	TRACKING ANALOG-TO-DIGITAL CONVERTER
5,947,421	09/07/99	970019	ELECTROSTATIC PROPULSION SYSTEMS AND METHODS
5,948,175	09/07/99	L96001	STRAP DEVICE CLAMPING SOLDERED WIRES FOR USE IN SOLAR CELL ARRAYS
5,949,650	09/07/99	096267	COMPOSITE HEAT SINK SUPPORT STRUCTURE
5,952,573	09/14/99	095138	MICRO-BEAM MOTION SENSOR
5,952,785	09/14/99	970017	TRANSVERSE FIELD COLLECTOR
5,952,902	09/14/99	980167	COAXIAL "M" SWITCH
5,953,210	09/14/99	970022	REWORKABLE CIRCUIT BOARD ASSEMBLY INCLUDING A REWORKABLE FLIP CHIP
5,955,917	09/21/99	096019	NONLINEAR AMPLIFIER CALIBRATION SYSTEM AND METHODS
5,959,406	09/28/99	093372	TRAVELING WAVETUBE WITH EXPANDING RESILIENT SUPPORT ELEMENTS
5,961,737	10/05/99	L96002	WELDED WIRE TERMINATION DEVICE AND METHOD FOR USE IN SOLAR CELL ARRAYS
5,963,182	10/05/99	970097	EDGE SUPPORTED UMBRELLA REFLECTOR WITH LOW STOWAGE PROFILE
5,964,633	10/12/99	970147	METHOD OF HEAT SHRINK ASSEMBLY OF TRAVELING WAVE TUBE
5,966,048	10/12/99	087235	LOW IMD AMPLIFICATION METHOD AND APPARATUS
5,966,104	10/12/99	970013	ANTENNA HAVING MOVABLE REFLECTORS
5,967,458	10/19/99	960396	SLAVED-REFERENCE CONTROL SYSTEM
5,969,695	10/19/99	970125	MESH TENSIONING, RETENSION AND MANAGEMENT SYSTEMS FOR LARGE DEPLOYABLE REFLECTORS
5,973,567	10/26/99	095267	TUNABLE IMPEDANCE MATCHING NETWORK FOR A MIC POWER AMPLIFIER MODULE
5,977,849	11/02/99	096040	VARIABLE TOPOGRAPHY ELECTROMAGNETIC WAVE TUNING DEVICE AND OPERATING METHOD
5,977,858	11/02/99	960516	ELECTRO-THERMAL BI-STABLE ACTUATOR
5,982,644	11/09/99	980058	VOLTAGE BOOST CIRCUIT FOR A HIGH VOLTAGE CONVERTER
5,984,236	11/16/99	095319	MOMENTUM UNLOADING USING GIMBALED THRUSTERS

PD NO.	SERIAL NO.	FILING DATE	TITLE
980067	09217681	12/21/98	FLEXIBLE MICROWAVE SWITCH MATRIX
980068	09177408	10/23/98	PASSIVE METHOD OF GROUNDING SPACECRAFT TO THE AMBIENT PLASMA ENVIRONMENT
980071	09504637	02/16/00	CHIP SCALE PACKAGING ON CTE MATCHED PRINTED WIRING BOARDS
980072	09222200	12/23/98	RECONFIGURABLE MULTIBEAM COMMUNICATIONS SATELLITE HAVING FREQUENCY CHANNELIZATION
980076	09123257	07/27/98	POWER WING
980077	09374215	08/13/99	SPACECRAFT ORBIT CONTROL USING ORBIT POSITION FEEDBACK
980082	09235708	01/22/99	SELF-TESTABLE SPACECRAFT FOR SELF-TESTING ANALOG FUNCTIONS
980084	09280771	03/29/99	MULTILAYER SEMICONDUCTOR STRUCTURE WITH PHOSPHIDE-PASSIVATED GERMANIUM SUBSTRATE
980087	09288449	04/08/99	SOLAR CELL WITH BONDED BACKSIDE REINFORCEMENT
980097	09286379	04/05/99	DUAL-LINEARLY POLARIZED MULT-MODE RECTANGULAR HORN FOR ARRAY ANTENNAS
980100	09219063	12/21/98	MICROWAVE MICROSTRIP TO WAVEGUIDE TRANSITION
980102	09410892	09/30/99	COMPACT PACKAGE STRUCTURE FOR FIBER OPTIC DEVICES
980103	09409535	09/30/99	OPTICAL TRANSITIONAL DEVICES
980105	09081582	05/19/98	INDEPENDENT LAUNCH LOCK MECHANISM
980112	09298542	04/24/99	INTEGRATED SPACECRAFT CONTROL SYSTEM AND METHOD
980113	09352386	07/13/99	SPACECRAFT DATA ACQUISITION AND DISTRIBUTION INTERFACE
980115	09255122	02/22/99	INTEGRATED RECONFIGURABLE POLARIZER
980121	09289230	04/09/99	DAMPED ROTATING GEAR ACTUATOR
980122	09267534	03/12/99	SOLAR ARRAY WITH ESD PROTECTION
980123	09185780	11/04/98	SYSTEM AND METHOD FOR ANALYSIS OF INTERMODULATION DISPERSION
980137	09550577	04/17/00	METHOD AND APPARATUS FOR INTERFERENCE MITIGATION FOR PHASED-ARRAY BEAM POINTING
980140	09222420	12/23/98	A ROTATABLE AND SCANNABLE RECONFIGURABLE SHAPED REFLECTOR WITH A MOVABLE FEED SYSTEM
980143	09222419	12/23/98	RECONFIGURABLE SATELLITE AND ANTENNA COVERAGE COMMUNICATIONS BACKUP CAPABILITIES
980145	09422581	10/21/99	MILLIMETER WAVE MULTILAYER ASSEMBLY
980155	09353005	07/13/99	LITHIUM-ION BATTERY CELL HAVING AN OXIDIZED/REDUCED NEGATIVE CURRENT COLLECTOR
980160	09498495	02/03/00	COMBINED NAVIGATION AND MOBILE COMMUNICATION SATELLITE ARCHITECTURE
980161	09249541	02/12/99	OPTICAL BEAM DIRECTOR FOR COMMUNICATIONS APPLICATIONS
980162	09344212	06/24/99	ATTITUDE CONTROL OF SPINNING SPACECRAFT WITH COUNTERSPUN CONTROLS PLATFORM
980168	09270160	03/16/99	COMMUNICATIONS SATELLITE INTERFACE LOCATION SYSTEM
980178	09528074	03/17/00	ELECTRICAL FUSE/SUPPORT ASSEMBLY
980187	09416157	10/11/99	SOLAR WING THERMAL SHOCK COMPENSATION USING SOLAR WING POSITION ACTUATOR
980195	09492889	01/27/00	TEMPERATURE COMPENSATION OF THE PRESSURE CUTOFF OF CHARGING OF A PRESSURIZED-GAS STORAGE BATTERY
980197	09301637	04/28/99	A HIGH POWER AND LARGE BANDWIDTH TRAVELING-WAVE PHOTODETECTOR
980204	09351810	07/12/99	INPSB CHANNEL HEMT ON INP FOR RF APPLICATION
980205	09301967	04/29/99	SATELLITE TRANSMISSION SYSTEM WITH ADAPTIVE TRANSMISSION LOSS COMPENSATION
980206	09418870	10/15/99	MICROCIRCUIT ASSEMBLY HAVING DUAL-PATH GROUNDING AND NEGATIVE SELF-BIAS
980207	09339420	06/24/99	VOLTAGE BUS REGULATION CIRCUIT
980212	09379168	08/23/99	METHOD FOR RE-ROUTING SIGNALS IN A SWITCH NETWORK
980213	09323221	05/19/99	METHOD FOR ELECTRICAL SHUNT DETECTION AND REMOVAL ON SEMICONDUCTORS
980214	09454063	12/02/99	MULTIJUNCTION PHOTOVOLTAIC CELLS AND PANELS USING A SILICON OR SILICON-GERMANIUM ACTIVE SUBSTRATE CELL FOR SPACE AND TERRESTRIAL

PD NO.	SERIAL NO.	FILING DATE	TITLE
			2ND SUBCELL OF SAME OR SIMILAR SEMICONDUCTOR MATERIAL
990086	09353526	07/14/99	MONOLITHIC BYPASS-DIODE AND SOLAR-CELL STRING ASSEMBLY
990087	09301444	04/28/99	VERTICAL DIRECTION SPACECRAFT VIBRATION TEST SYSTEM WITH PSUEDO-FREE BOUNDARY CONDITIONS
990088	09336224	06/18/99	LIGHT-WEIGHT MODULAR LOW-LEVEL RECONFIGURABLE BEAMFORMER FOR ARRAY ANTENNAS
990089	09605482	06/28/00	FULL BRIDGE CONVERTER CURRENT SENSE APPROACH USING VIRTUAL CURRENT SUMMING AND CANCELLATION
990096	09511670	02/17/00	COMPENSATION FOR ELECTRICAL CIRCUITRY
990097	09375821	08/16/99	PHASE SYNCHRONIZATION OF REDUNDANT MOTOR WINDINGS
990100	09477643	01/05/00	MINIMUM FUEL ATTITUDE AND NUTATION CONTROLLER FOR SPINNING SPACECRAFT
990101	09457098	12/07/99	SYSTEM FOR LIMITING IF VARIATION IN PHASE LOCKED LOOPS
990106	09510837	02/23/00	SOLAR PANEL AND SOLAR CELL HAVING IN-PLANE SOLAR CELL INTERCONNECT WITH INTEGRATED DIODE TAB
990107	09479701	01/07/00	METHOD AND APPARATUS FOR SPACECRAFT PAYLOAD POINTING REGISTRATION
990109	09479702	01/07/00	METHOD AND APPARATUS FOR SPACECRAFT ANTENNA BEAM POINTING CORRECTION
990111	09496889	02/02/00	ION THRUSTER HAVING A HOLLOW CATHODE ASSEMBLY WITH AN ENCAPSULATED HEATER, AND ITS FABRICATION
990112	09496888	02/02/00	ION THRUSTER HAVING GRIDS MADE OF ORIENTED PYROLYTIC GRAPHITE
990114	09328769	06/09/99	DUAL GRIDDED REFLECTOR ANTENNA SYSTEM
990115	09528605	03/20/00	FREQUENCY VARIABLE APERTURE REFLECTOR
990118	09454424	12/03/99	CONFUSED-IN-SPACE STELLAR ATTITUDE ACQUISITION USING MULTIPLE STAR TRACKERS
990119	09488205	01/19/00	ANTENNA CLUSTER CONFIGURATION FOR WIDE-ANGLE COVERAGE
990120	09593880	06/14/00	CORIOLIS SENSOR INTERFACE
990125	09510136	02/22/00	METHOD AND APPARATUS FOR REDUCING SPACECRAFT INSTRUMENT INDUCED JITTER VIA MULTI-FREQUENCY CANCELLATION
990126	09505265	02/16/00	STRIPLINE SIGNAL DISTRIBUTION SYSTEM FOR EXTREMELY HIGH FREQUENCY SIGNALS
990127	09467637	12/20/99	MULTI-MODE SQUARE HORN WITH CAVITY-SUPPRESSED HIGHER-ORDER MODES
990132	09526696	03/15/00	GENERATING METHODS FOR SINGLE AND MULTI-CHANNEL WIDEBAND OPTICAL ANALOG PULSE POSITIONED WAVEFORMS
990134	09488237	01/20/00	COAXIAL CABLE ESD BLEED
990137	09375820	08/16/99	DIAGNOSTIC TEST FOR A STEPPER MOTOR SYSTEM
990138	09548482	04/13/00	HIGH ACCURACY DATA ACQUISITION PORT FOR ENVIRONMENTAL CHAMBER PHOTOGRAMMETRY
990140	09527095	03/16/00	SILICON-ON-INSULATOR SUBSTRATES PARTICULARLY SUITED FOR MICROWAVE APPLICATIONS
990141	09552955	04/20/00	MICROWAVE SYSTEM WITH REDUNDANT PROCESSING DEVICES AND PASSIVE SWITCHING
990143	09504543	02/15/00	SYSTEM FOR STELLAR INERTIAL ATTITUDE DETERMINATION
990160	09351572	07/12/99	POWER SUPPLY CIRCUIT FOR AN ION ENGINE
990161	09352011	07/12/99	STARTER CIRCUIT FOR AN ION ENGINE
990162	09351738	07/12/99	POWER SUPPLY CIRCUIT FOR AN ION ENGINE
990165	09525100	03/14/00	APPARATUS AND METHOD FOR REDUCING POLARIZATION CROSS-COUPPLING IN CROSS DIPOLE REFLECTARRAYS
990167	09538030	03/29/00	SWITCH MATRIX FOR SATELLITE PAYLOADS WITH MULTIPLE UPLINK BEAMS AND ON-BOARD SIGNAL PROCESSING
990168	09636394	08/09/00	LOW COST MULTI-MISSION BROADBAND COMMUNICATIONS PAYLOAD
990169	09507378	02/18/00	NON-INTRUSIVE MEMORY ACCESS FOR EMBEDDED PROCESSORS
990170	09573772	05/18/00	INTEGRATED ATTITUDE DETERMINATION UNIT
990172	09488193	01/20/00	SINGLE EVENT UPSET HARDENING TECHNIQUE FOR BIPOLAR DEVICES
990174	09591697	06/09/00	TRAVELING WAVE TUBE AND METHOD AND APPARATUS FOR FABRICATING THREE DIMENSIONAL TRAVELING WAVE TUBE CIRCUIT ELEMENTS USING LASER LITHOGRAPHY

PD NO.	SERIAL NO.	FILING DATE	TITLE
990176	09500753	02/08/00	FOCUS CONTROL FOR SEARCH LIGHTS
990177	09580286	05/30/00	SOLAR MODULE ARRAY WITH RECONFIGURABLE TILE
990181	09559602	04/27/00	IMPROVED SPACECRAFT POINTING PERFORMANCE VIA OPTIMIZED SOLAR ARRAY ORIENTATION
990183	09625690	07/26/00	THERMAL SHOCK AVOIDANCE FOR SATELLITE SOLAR PANELS
990205	09613873	07/10/00	ALTENRATE GROUNDING METHOD TO PRECLUDE SPACECRAFT CHARGING
990208	09569708	05/09/00	ION THRUSTER WITH ION-EXTRACTION GRIDS HAVING COMPOUND CONTOUR SHAPES
990214	09546931	04/11/00	VOTED PROCESSING SYSTEM
990215	09516260	02/29/00	TRIPLE REDUNDANT SELF SCRUBBING INTEGRATED CIRCUIT
990216	09500759	02/08/00	ERROR DETECTION AND CORRECTION INTERLEAVE METHOD
990221	09576651	05/22/00	LIGHTWEIGHT SOLAR MODULE AND METHOD OF FABRICATION
990222	09539677	03/30/00	INFRARED ENHANCED PULSE SOLAR SIMULATOR
990226	09645101	08/23/00	TAPE CASTING MACHINE WITH PROFILED DOCTOR BLADE
990235	09615019	07/13/00	LINEARIZED TRAVELING WAVE TUBE USING PASSIVE PRE-DISTORTION LINEARIZER
990236	09619176	07/19/00	RESONATOR TUNING SYSTEM
990241	09629030	07/31/00	SYSTEM SIGNALING FOR PAYLOAD FAULT DETECTION AND ISOLATION
990247	09619543	07/19/00	SINGLE EVENT UPSET (SEU) HARDENING OF A SEMICONDUCTOR DEVICE USING A BURIED ELECTRODE
990249	MLD/	08/29/00	LOW-VOLTAGE-DROP, SPRING-ACTIVATED BYPASS OF FAILED BATTERY CELL
990257	09492723	01/27/00	SPACECRAFT PROTECTED BY A COATING INCLUDING PYROELECTRIC/FERROELECTRIC PARTICLES, AND THE COATING MATERIAL
990259	09597705	06/16/00	HIGH FIDELITY TIME DOMAIN FOR SPACECRAFT EMULATION SYSTEMS
990263	09607813	06/30/00	CORRECTION OF ORBITAL SPACECRAFT STEERING CONTROL LAW FOR UNEXPECTED ORBITAL INCLINATION EFFECTS
990264	09619042	07/19/00	METHOD AND APPARATUS FOR ZOOMING AND RECONFIGURING CIRCULAR BEAMS FOR SATELLITE COMMUNICATIONS
990278	09619350	07/19/00	FLUXLESS SOLDER ATTACHMENT OF A MICROELECTRONIC CHIP TO A SUBSTRATE
990285	09557378	04/25/00	BEACON-ASSISTED SPACECRAFT ATTITUDE CONTROL SYSTEMS AND METHODS
990286	09593182	06/13/00	SLOT-COUPLED PATCH REFLECTARRAY ELEMENT FOR ENHANCED GAIN-BANDWIDTH PERFORMANCE
990288	09625392	07/26/00	SYSTEM AND METHOD FOR THE CALIBRATING OF THE INTER-STAR-TRACKER MISALIGNMENTS IN A STELLAR INERTIAL ATTITUDE DETERMINING SYSTEM
990289	09624270	07/24/00	STABLE AND VERIFIABLE STATE ESTIMATION METHODS AND SYSTEMS WITH SPACECRAFT APPLICATIONS
990296	09516854	03/02/00	ATTITUDE DETERMINATION SYSTEM AND METHOD
990297	09507099	02/17/00	SYSTEM FOR DETERMINING STARS IN A TRACKER FIELD OF VIEW
990300	MLD/	08/25/00	STELLAR ATTITUDE-CONTROL SYSTEMS AND METHODS WITH WEIGHTED MEASUREMENT-NOISE COVARIANCE MATRICES
990303	09573249	05/18/00	MICROELECTRONIC DEVICE STRUCTURE WITH METALLIC INTERLAYER BETWEEN SUBSTRATE AND DIE
990306	09588446	06/06/00	SEMICONDUCTOR POWER GENERATOR BASED ON A SOURCE IONS AND ALPHA PARTICLES
200013	09636085	08/09/00	GRIDDED REFLECTOR ANTENNA
200037	09629961	08/01/00	SPACECRAFT ATTITUDE CONTROL SYSTEMS WITH DYNAMIC METHODS AND STRUCTURES FOR PROCESSING STAR TRACKER SIGNALS
200059	60188126	03/09/00	SAFING MODE FOR HIGH MOMENTUM STATES IN BODY STABILIZED SPACECRAFT
200068	09629026	07/31/00	STRUCTURE WITH BLENDED POLYMER CONFORMAL COATING OF CONTROLLED ELECTRICAL RESISTIVITY
200134	09617467	07/17/00	GRADED ELECTRODE LEADS FOR A "RABBIT EAR" STACK CONFIGURATION BATTERY CELL
200221	09628779	07/29/00	SYSTEM FOR STAR CATALOG EQUALIZATION TO ENHANCE ATTITUDE DETERMINATION