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

1. Name of conveying party(ies):
   HE Holdings, Inc. dba Hughes Electronics and formerly known as Hughes Aircraft Company
   Additional Name(s) of conveying party(ies) attached? [ ] yes [X] 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
   Street Address: 200 N. Sepulveda Blvd.
                   P.O. Box 956
                   El Segundo, California 90245
   Additional name(s) & address(es) attached? [ ] yes [X] no

3. Nature of Conveyance:
   - [X] Assignment
   - [ ] Merger
   - [ ] Security Agreement
   - [ ] Change of Name
   - [ ] Other
   Execution Date: July 20, 1999

4. Application number(s) or patent number(s): PD-960404
   If this document is being filed together with a new application, the execution date of the application is:
   A. Patent Application No.(s)
      Serial No. 08/986,966
      Filed: December 8, 1997
   Additional numbers attached? [ ] yes [X] 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
   - [X] Authorized to be charged to deposit account

8. Deposit account number:
   50-0383
   (Attached duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

   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.
   Vijayalakshmi D. Duraiswamy
   Name of Person Signing
   Signature
   July 20, 1999
   Date

Total number of pages comprising cover sheet: [10]
SCHEDULE A

Dual Use Technology and Intellectual Property of Hughes Research Laboratories, Inc.
SCHEDULE A TO INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

HRL INVENTION DISCLOSURES

PD NO.   TITLE

096013  TUNNELING SENSORS
BASE INTERCONNECT AIRBRIDGE FOR INP DOUBLE HETEROJUNCTION
BIPOLAR TRANSISTORS

096042  ACTIVE SAFETY SYSTEM BASED ON AIRBAG CONTROLLER

096043  ADAPTIVE ELECTRONIC SUNVISOR

096051  B&W GRAY SCALE + COLOR SYMBOLOGY DISPLAY

096077  METHOD FOR SURFACE PROTECTION OF II-VI SEMICONDUCTOR FILMS

096115  METHOD FOR MOLECULAR BEAM EPITAXY GROWTH OF IN-SITU P-TYPE DOPED
HgCdTe ALLOYS USING ARSENIC

096116  ROAD CONDITION SENSOR

096126  THERMALLY CONTROLLABLE HIGH POWER DENSITY RF ELECTRODE FOR PACE
REACTORS

096178  ELECTROCHEMICAL METHOD FOR DETERMINING INORGANIC AND ORGANIC
VAPORS

096203  DEBUBBLING SMALL GEOMETRY USING CHEMICALS DISPLACEMENT

096211  ANALOG TRANSMISSION OF AN IMAGE IN AN OPTICAL FIBER

096287  SMART NIGHT VISION DEVICES

096322  STENCIL-PATTERNED ORGANIC LIGHT-EMITTING DISPLAY WITH IMPROVED
LUMINANCE

096325  FIBEROPTIC PHASE SEPARATION SENSOR FOR REAL TIME MONITORING OF
COMPOSITE PROCESS

096326  CURE CYCLE TO PROCESS BUBBLE-FREE COMPOSITES AT ATMOSPHERIC
PRESSURE BY HOT PRESS

096335  SPACE-TIME COMPACTING/EXPANDING BIDIRECTIONAL INTERFACE (SPACE-
TIME COMPARATOR)

096347  FIBEROPTIC SENSOR FOR REAL TIME MONITORING AND CONTROL OF
COMPOSITE CURE

960385  INTEGRATED-OPTICS NESTED SWITCHABLE-DELAY-LINE

960388  PASSIVE DETECTION SYSTEM EMPLOYING DIRECT BROADCAST SATELLITE
SIGNS

960392  UNIVERSAL FIXTURE/PACKAGE FOR SPATIAL-POWER-COMBINED AMPLIFIERS

960395  SILICON-ON-SAPPHIRE ACTIVE MATRIX ORGANIC LED DISPLAY

960404  AUTOMATIC DETERMINATION OF REPORT GRANULARITY

960407  PM FIBER-LASER WITH INTERNAL GRATINGS IN SPECTRALLY AlIGNED,
ORTHOGONALLY ROTATED POLARIZATION-AXES

960409  POLARIZATION-STABILIZED FIBER-LASER MOPA USING A POLARIZATION-
MAINTAINING FIBER AMPLIFIER

960410  ORGANIC LIGHT-EMITTING DISPLAY WITH IMPROVED CONTRAST

960411  REALIZATION OF ACTIVE MATRIX ORGANIC LED DISPLAYS ON FLEXIBLE
SUBSTRATES

960420  MATRIX ADDRESSED DISPLAY USING MEM SWITCHES

960421  AUTOMATIC LEARNING OF BELIEF FUNCTIONS

960445  SELECTIVELY SI-DOPED INAS/ALSB SHORT-PERIOD-SUPERLATTICES AS N-
TYPE ABSORPTION LAYER USED WITH GALLSB AVALANCHE GAIN REGIONS
FOR LOW-EXCESS-NOISE AVALANCHE PHOTODIODES

960452  1) PHASE (STIMULATED EMISSION OF PHONONS); AND 2) A MEANS OF
OBTAINING ENERGETIC IONS IN A SOLID

960455  BROADCAST SIGNAL Markup STREAM FOR INTERACTIVE BROADCAST
SYSTEMS

960461  INTEGRATED OPTICAL TRANSMITTER

960464  TRADE SECRET OF TITANIUM COATING PROCESS USING PMD
ASSIGNMENT OF PATENT APPLICATION

WHEREAS, HE Holdings, Inc. dba Hughes Electronics and formerly known as Hughes Aircraft Company (“Assignor”), is now the sole and exclusive owner of all right, title and interest in and to the U. S. Serial No.: 08/986,966, Title: “Improved Contrast Organic Light-Emitting Display”, Filing Date: December 8, 1997, PD-960410 (“the Patent Application”) pursuant to an Assignment by the Inventor dated November 20, 1997 (as hereinafter defined); and

WHEREAS, Hughes Electronics Corporation (Assignee), was granted the right of ownership of the disclosure and patent applications and patents resulting therefrom pursuant to certain Agreements dated as of December 17, 1997 (see Exhibit “A”); and

WHEREAS, Assignee is desirous of acquiring and/or confirming its ownership of all right, title and interest in and to “the Patent Application” due to its ownership of the disclosure;

NOW, THEREFORE, in consideration for the sum of one dollar ($1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, Assignor and Assignee agree as follows:

1. Assignor hereby sells assigns, transfers and conveys to Assignee, all right, title and interest in and to the Patent Application including without limitation, the invention disclosures, any divisional, continuation and continuation-in-part applications that may be filed based on any such application; any patents issuing on any of the foregoing applications, and any reissues or certificates of reexamination of any of the foregoing patents, and any foreign counterparts of them; together with the right to sue for damages and other relief for past and current infringements.

2. Assignor further agrees to execute such additional documents as are necessary to continue, secure, defend, register and otherwise give full effect to and to perfect the rights of Assignee under this Assignment, including all documents necessary to register in the name of Assignee the assignment of each patent, patent application, and invention disclosure in the appropriate country or countries for the patent application.

3. Assignor hereby authorizes and requests that the Commissioner of Patents and Trademarks of the United States and each official holding a corresponding position of authority in any country in which Assignor has pending one or more patent applications to issue and to record the title of Assignee as owner of all right, title and interest in and to the patents, patent applications and invention disclosures for the patent application.
IN TESTIMONY WHEREOF, Assignor has signed below, by its duly authorization representative, on this 20 day of July 1999.

HE Holdings, Inc. dba Hughes Electronics formerly known as Hughes Aircraft Company (“Assignor”)

By: ____________________________
Name: Michael W. Sales

STATE OF CALIFORNIA ______________ )
COUNTY OF LOS ANGELES __________ )

On 7-20-99 before me, Laura P. Aceves a Notary Public in and for said State, personally appeared Michael W. Sales, Attorney-In-Fact, ☐ 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.

Laura P. Aceves
Notary Public

ACCEPTED: HUGHES ELECTRONICS CORPORATION (Assignee)

By: ____________________________
Name: Janet L. Williamson

STATE OF CALIFORNIA ______________ )
COUNTY OF LOS ANGELES __________ )

On 7-20-99 before me, Laura P. Aceves, Notary Public in and for said State, personally appeared Janet L. Williamson, Corporate Secretary, ☐ 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.

Laura P. Aceves
Notary Public
EXHIBIT A

INTELLECTUAL PROPERTY ASSIGNMENT

WHEREAS, HE Holdings, Inc. ("Assignor"), Hughes Electronics Corporation ("Assignee"), General Motors Corporation and Delco Electronics Corporation are parties to that certain Master Separation Agreement dated as of December 17, 1997 (the Master Separation Agreement; and capitalized terms used herein not otherwise defined shall have the meanings set forth therein), entered into in connection with the merger of Raytheon Company ("Raytheon") with and into Assignor pursuant to an Agreement and Plan of Merger, dated as of January 16, 1997, by and between Assignor and Raytheon; and

WHEREAS, Assignor is now the sole and exclusive owner of all right, title and interest in and to the Intellectual Property (as hereinafter defined), including the patents and patent applications that have been registered or applied for in the United States Patent and Trademark Office and in patent offices in the several other countries and invention disclosures that are identified in Schedule A attached to this Intellectual Property Assignment:

WHEREAS, Assignee is desirous of acquiring all right, title and interest in and to certain Intellectual Property, including in and to each of the patents, patent applications and invention disclosures identified in Schedule A, the trademarks, registrations and applications identified in Schedule B and the trade names identified in Schedule C hereto;

NOW, THEREFORE, in consideration for the sum of one dollar ($1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, Assignor and Assignee agree as follows:

1. Assignor hereby sells, assigns, transfers and conveys to Assignee, as of the Spin-Off Merger Time, all right, title and interest in and to the Intellectual Property, including, without limitation, Dual Use Technology and the Intellectual Property of Hughes Research Laboratories, Inc. that exists as of the Spin-Off Merger Time as identified on Schedule A including, without limitation, the patents, patent applications and invention disclosures, any divisional, continuation and continuation-in-part applications that may be filed based on any such application; any patents issuing on any of the foregoing applications, and any reissues or certificates of reexamination of any of the foregoing patents, and any foreign counterparts of them; together with the right to sue for damages and other relief for past and current infringements. "Intellectual Property" means, other than the Defense Intellectual Property, all of Assignor’s right, title and interest in and to, as of the Spin-Off Merger Time, all of HEC’s or HEC’s Subsidiaries’ domestic and foreign patents and patent
applications, together with any continuations, continuations-in-part or divisional applications thereof, and all patents issuing thereon (including reissues, renewals and re-examinations of the foregoing); invention disclosures; net lists; mask works; copyrights and copyright applications and registrations; trademarks, servicemarks, service names and trade names and trade dress, in each case together with any applications and registrations therefor and all appurtenant goodwill relating thereto; trade secrets, commercial and technical information, know-how, proprietary or confidential information, including engineering, production and other designs, notebooks, processes, drawings, specifications, formulae, and technology; computer and electronic data processing programs and software (object and source code), data bases and documentation thereof; inventions (whether patented or not); and all other intellectual property under the laws of any country throughout the world.

2. Assignor further agrees to execute such additional documents as are necessary to continue, secure, defend, register and otherwise give full effect to and to perfect the rights of Assignee under this Intellectual Property Assignment, including all documents necessary to register in the name of Assignee the assignment of each patent, patent application, and invention disclosure identified in Schedule A in the appropriate country or countries. each trademark, registration and application listed in Schedule B and each trade name identified in Schedule C.

3. Assignor hereby authorizes and requests that the Commissioner of Patents and Trademarks of the United States and each official holding a corresponding position of authority in any country in which Assignor owns one or more patent or trademark registrations or has pending one or more patent or trademark applications to issue and to record the title of Assignee as owner of all right, title and interest in and to the patents, patent applications and invention disclosures identified in Schedule A, the trademarks, registrations and applications identified on Schedule B, and, if necessary, the trade names identified in Schedule C.
IN TESTIMONY WHEREOF, Assignor has signed below, by its duly authorized representative, on this 17th day of December 1997.

By: 
Name: 
Title: 
ACKNOWLEDGMENT

On behalf of Assignee, I hereby acknowledge receipt of assignment -- for good and valuable consideration -- of the Assigned Intellectual Property.

By: J. L. Williamson

Title: Secretary

State of New York )
)ss.: 
County of New York )

On this 17th day of December 1997, before me personally came J. L. Williamson to me known, who, being duly sworn, did depose and say that she is the Secretary of Hughes Electronics Corporation, the corporation described in and which executed the foregoing instrument; that she knows the seal of her respective corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by orders of the Board of Directors of the corporation, and that she signed her name thereto by like order.

________________________
Notary Public

DEBRA M. GOLDBERG
NOTARY PUBLIC, State of New York
No. 01GO5086516
Qualified in Kings County
Commission Expires Oct. 14, 19__

IP Assignment
ACKNOWLEDGEMENT

On behalf of the Assignee, I hereby acknowledge receipt of assignment – for goods and valuable consideration – of the Intellectual Property, including the patents, patent applications and invention disclosures set forth in Schedule A, the trademarks, registrations and applications listed on Schedule B and the trade names listed on Schedule C.

By:  
Senior Vice President and Chief
Financial Officer

State of California  )
                  ) s.s.:  
County of Los Angeles  )

On this 12th day of December 1997, before me personally came R. S. Austin, to me know, who, being duly sworn, did depose and say that she is a Senior Vice President and Chief Financial Officer of Hughes Electronics Corporation, the corporation described in and which executed the foregoing instrument; that she knows the seal of her respective corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by orders of the Board of Directors of the corporation, and that she signed her name thereto by like order.

[Signature]
Christina H. Tady
Notary Public

[Seal]