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	N FORM COVER SHEET U.S. DEPARTMENT OF COMMERCE ENTS ONLY U.S. Patent and Trademark Office
To the Honorable Commissioner of Patents and Trademarks: Please	record the attached original documents or copy thereof.
Name of conveying party(ies):	Name and address of receiving party(ies)
HUGHES ELECTRONICS CORPORATION	Name: THE BOEING COMPANY
	Internal Address: 100 North Riverside Plaza
Additional name(s) of conveying party(ies) attached? ☐ Yes X No 3. Nature of conveyance:	Chicago, IL 60606-1596
X Assignment	
☐ Security Agreement ☐ Change of Name	
Other	
Execution Date: February 3, 2003	Additional name/s) 0 adds-s-/(-) -(t-s-t-s-)0 D X
Application number(s) or patent number(s):	Additional name(s) & address(es) attached? Yes X No
If this document is being filed together with a new applica	ition, the execution date of the application is:
A. Patent Application No.(s):	B. Patent No.(s): 4,710,588 4,797,682 4,799,065 5,112,438 5,064,574
Additional numbers attac	
Name and address of party to whom correspondence	ched? ☐ Yes X No 6. Total number of applications and patents involved: 1
concerning document should be mailed:	7. Total fee (37 CFR 3.41)\$240.00
Name: Terje Gudmestad	☐ Enclosed
Internal Address: Boeing Management Company	_
15460 Laguna Canyon Road	X Authorized to be charged to deposit account
Irvine, CA 92618	Deposit account number:
	18-1730
	(Attach duplicate copy of this page if paying by deposit account)
DO NOT USE	THIS SPACE
9. Statement and signature. To the best of my knowledge and belief, the foregoing info copy of the original document.	rmation is true and correct and any attached copy is a true
Terje Gudmestad, Registration No. 32,232 Name of Person Signing	Signature Date
Total number of pages including cover s	heet, attachments, and documents: 4

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

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

PATENT

REEL: 015460 FRAME: 0639

CONFIRMATION BY HUGHES ELECTRONICS CORPORATION OF BOEING'S OWNERSHIP OF CERTAIN PATENTS

This Confirmation is effective the 3rd day of February 2003 and is executed in duplicate originals.

WHEREAS, Hughes Electronics Corporation, a corporation of the State of Delaware, United States of America, ("HUGHES") was the owner of a right, title and interest in and to any invention disclosures, applications for patent, letters patent, reissues, reexaminations, divisions, parents, continuations, continuations-in-part, or extensions thereof which may have been or shall be granted thereon in the United States, and any foreign country throughout the world for inventions listed on Attachment I hereto, said inventions being related to the satellite business and originating in business units that were part of the satellite business of HUGHES, ("The Patents"); and

WHEREAS, HUGHES, Hughes Space and Communications Company ("HSC") and The Boeing Company ("Boeing") were parties to an Intellectual Property Agreement dated as of October 6, 2000 ("The Agreement") wherein HUGHES assigned, to Boeing, HSC Intellectual Property (as defined in The Agreement) including without limitation the patents and invention disclosures listed in Schedule A thereto; and

WHEREAS, The Patents were not listed in Schedue A of The Agreement; and

WHEREAS, HUGHES and BOEING, both desire to confirm that BOEING now has all of the rights, title and interest that HUGHES had or has in and to The Patents; and

NOW THEREFORE, to whom it may concern, be it known that pursuant to the obligations herein and other good and valuable consideration, of which receipt is hereby acknowledged, subject to pre-existing rights and to the extent of their lawful right to do so, HUGHES and BOEING confirm and agree as follows:

1. BOEING has all of the rights, title and interest that HUGHES had or has in and to The Patents; and

HUGHES has a license to The Patents, said license having the same scope and subject to the same obligations
as the license retained by HUGHES as set forth in The Agreement.

CONFIRMED AND AGREED TO BY HUGHES ELECTRONICS CORPORATION

Signature:				
Date of Signature: February 3, 2003				
Signatory's Name: Michael W. Sales				
Signatory's Title: Vice President, Asst. General Counsel & Assistant Secretary				
STATE OFCALIFORNIA		·		
COUNTY OF LOS ANGELES ON February 3, 2003 before me, JANET E. SHIBATA, a Notary Public in appeared MICHAEL W. SALES	and.	for sa	id State,	personali
appeared <u>MICHAEL W. SALES</u> personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name	la) ialas		النائدة والمام	
and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by	s) is/an hie/hor	3 SUDSCRIDE 7their eigns	d to the with	un instrumen
he person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.	11101101	ranon olgilo	italo(3) on a	ie ijistruitieti
(WINNESS my hand and official seal.		4444	44444	-
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Notary Public	NO.	TARY PUBI	LIC - CALIFO	ANIA 🗟
CONFIRMED AND AGREED TO BY THE BOEING COMPANY:	Mv Cr	LOS ANGE	LES COUNT	ΓΥ <u></u>
7	W V V	ини кар.	March 30,	2004
Signature: Man				***
Pate of Signature: February 17, 2003				
ignatory's Name: Gene G. Partlow		-		• • • •
ignatory's Title: Vice President. Intel Tectual Property Business				
TATE OF CALIFORNIA				
OUNTY OF ORANGE		*		
N 2-17-03 before meLaura P. Aceves, a Notary Public in and for Gene G. Partlow	or said	d 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
nd acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by the next of the instrument of the instrument.	iis/her/t	heir signati	ure(s) on the	instrument
e person(s), or the entity opon behalf of which the person(s) acted, executed the instrument, WINESS my hand and official seal.				

Page 1

CONFIRMATION BY HUGHES OF BOEING OWNERSHIP OF CERTAIN PATENTS.012703

LAURA P. ACEVES
Commission # 1379210
Notary Public - California
Orange County
My Comm. Expires Oct 8, 2006

REEL: 015460 FRAME: 0640

ATTACHMENT I TO "CONFIRMATION BY HUGHES ELECTRONICS CORPORATION OF BOEING'S OWNERSHIP OF U.S. PATENTS AND CORRESPONDING FOREIGN PATENT APPLICATIONS AND PATENTS"

PATENT NO.	ISSUE DATE	PD-NO.	TITLE
<i>4</i> ,710,588	12/01/87	85079	COMBINED PHOTOVOLTAIC-THERMOELECTRIC SOLAR CELL AND SOLAR CELL ARRAY
/4,753,683	06/28/88	85072A	GALLIUM ARSENIDE SOLAR CELL SYSTEM
,4,797,682	01/10/89	86469	DETERMINISTIC THINNED APERTURE PHASED ANTENNA ARRAY
4,799,065	01/17/89	79202A	RECONFIGURABLE BEAM ANTENNA
4,947,467	08/07/90	87305	TRAVELING-WAVE TUBE SLOW-WAVE STRUCTURE WITH INTEGRAL CONDUCTIVELY-LOADED BARREL AND METHOD OF MAKING SAME
5,112,438	05/12/92	90221	PHOTOLITHOGRAPHIC METHOD FOR MAKING HELICES FOR TRAVELING WAVE TUBES AND OTHER CYLINDRICAL OBJECTS
5,179,363	01/12/93	89547	STRESS RELIEVED IRIS IN A RESONANT CAVITY STRUCTURE
5,064,574	11/12/91	88070A	METHOD AND COMPOSITION FOR PROVIDING ELECTROSTATIC DISCHARGE PROTECTION FOR SPACECRAFT

RECORDED: 12/15/2004

PATENT REEL: 015460 FRAME: 0641