FORM PTO-1619A Expires 06/30/99 OMB 0651-0027

04-18-2002



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Submission Type	Conveyance Type	<del>1</del>
New	✓ Assignment Security Agr	eement
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Correction of PTO Error	Merger Other	
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Corrective Document Reel # Frame #	(For Use ONLY by U.S. Governme	nt Agencies)
Reel # Frame #	Departmental File	Secret File
Conveying Party(ies)	Mark if additional names of conveying p	parties attached Execution Date  Month Day Year
Name (line 1) ALLEN, Steven Michael		3/28/02
Name (line 2)		Execution Date
Second Party Name (line 1) GRIBBONS, Michael		Month Day Year 3/28/02
Name (mie 1) (GRIDBOAS, Michael		0,20,02
Name (line 2)		(9/z09/2
Desciving Dorty		
Receiving Party	Mark if additional names	of receiving parties attached
Receiving Party  Name (line 1) Lockheed Martin Corneration	Mark if additional names	If document to be recorded
Name (line 1) Lockheed Martin Corporation	Mark if additional names	If document to be recorded is an assignment and the receiving party is not
	Mark if additional names	If document to be recorded is an assignment and the receiving party is not domicited in the United States, an appointment
Name (line 1) Lockheed Martin Corporation  Name (line 2)	Mark if additional names	if document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached.
Name (line 1) Lockheed Martin Corporation	Mark if additional names	If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from
Name (line 1) Lockheed Martin Corporation  Name (line 2)  Address (line 1) 6801 Rockledge Drive	Mark if additional names	If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a
Name (line 1) Lockheed Martin Corporation  Name (line 2)  Address (line 1) 6801 Rockledge Drive  Address (line 2)		If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)
Name (line 1) Lockheed Martin Corporation  Name (line 2)  Address (line 1) 6801 Rockledge Drive  Address (line 2)  Address (line 3) Bethesda	MD	If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)
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D.C. 20231 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0651-0027), Washington, D.C. 20503. See OMB

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OMB 0031-0027		PAIGNI
Correspondent Name and Address	Area Code and Telephone Number	609-919-4453
Name William H. Meise		
Address (line 1) Duane Morris LLP		
Address (line 2) 100 College Road West, Suite 100		
Address (line 3) Princeton, NJ 08540		
Address (line 4)		
Pages Enter the total number of page including any attachments.	es of the attached conveyance document	#3
Application Number(s) or Patent Num		al numbers attached
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If this document is being filed together with a new Pate was executed	ent Application, enter the date the patent application	3/28/02
Patent Cooperation Treaty (PCT)	PCT PCT	PCT
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has not been assigned.	PCT PCT	PCI
Number of Properties  Enter the total	number of properties involved.	1
Fee Amount Fee Amount	for Properties Listed (37 CFR 3.41): \$	40.00
Method of Payment: Enclo Deposit Account	sed 🗸 Deposit Account	
(Enter for payment by deposit account or if add	ditional fees can be charged to the Deposit Account Number: #	04-1679
	Authorization to charge additional fees: Yes	No No
Statement and Signature		
To the best of my knowledge and be attached copy is a true copy of the condicated herein.	elief, the foregoing information is true and con priginal document. Charges to deposit accou	rrect and any int are authorized, as
William H. Meise		4/11/02
Name of Person Signing	Signature	Date

## **ASSIGNMENT**

WHEREAS, We, Steven Michael Allen and Michael Gribbons, (hereinafter referred to as ASSIGNOR(S) have invented certain inventions relating to REDUCED-LAYER ISOLATED PLANAR BEAMFORMER

WHEREAS, Lockheed Martin Corporation, a corporation organized under the laws of the State of Maryland, having a place of business at 6801 Rockledge Drive, Bethesda, Maryland 20817 (hereinafter referred to as ASSIGNEE) is desirous of acquiring the entire interest in, to and under said inventions and any and all patents to be obtained therefor;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that in consideration of the payment by ASSIGNEE of valuable consideration to ASSIGNOR, the receipt and adequacy of which is hereby acknowledged, and for other good and valuable consideration, ASSIGNOR(S) hereby sell, assign, and transfer to ASSIGNEE and the successors, assigns and legal representatives of the ASSIGNEE all of ASSIGNOR'S right, title and interest in and to said inventions and said application and to any and all inventions described in said application for the United States, its territorial possessions and all foreign countries, and all of ASSIGNOR'S right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries, and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions, renewals, and reexaminations thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties;

ASSIGNOR(S) request that any and all patents for said inventions be issued to said ASSIGNEE, its successors, assigns and legal representatives, or to such nominees as it may designate.

ASSIGNOR(S) authorize and empower the said ASSIGNEE, its successors, assigns and legal representatives to invoke and claim for any application for patent or other form of protection for said inventions filed by it or them, the benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it, and to invoke and claim such right of priority without further written or oral authorization from ASSIGNOR(S).

ASSIGNOR(S) hereby consents that a copy of this assignment shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document which may be required in any country for any purpose and more particularly in proof of the right of the said ASSIGNEE, its successors, assigns, and legal representatives, to claim the aforesaid benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it.

PATENT REEL: 012789 FRAME: 0569 ASSIGNOR(S) agree that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said ASSIGNEE, its successors, assigns and legal representatives, the ASSIGNOR(S) will execute all continuations-in-part, continuations, divisions, substitutes, reissues, extensions, renewals, and reexamination thereof and any legal equivalent thereof in a foreign country, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings and any legal equivalent thereof in a foreign country; communicate to said ASSIGNEE, its successors, assigns, and legal representatives, all facts known to the ASSIGNOR(S) relating to said inventions and the history thereof; and generally do everything possible which said ASSIGNEE, its successors, assigns or legal representatives, shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said inventions and for vesting title to said inventions and all applications for patents on said inventions in said ASSIGNEE, its successors, assigns and legal representatives.

ASSIGNOR(S) covenant with said ASSIGNEE, its successors, assigns and legal representatives, that the rights and property herein conveyed are free and clear of any encumbrance, and that ASSIGNOR(S) have full right to convey the same as herein expressed.

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signed at Thousand Night	
(City, Province or state, countr	3/28/02
Steven Michael Allen	(Date)
WITNESS:	
ELeanor m. Kelley	
(Please Print Name)	
Signature) Helley	3/28/02
(Signature)	(Date)
WITNESS:	en, ≸
(Please Print Name)	
(Signature)	(Date)

PATENT REEL: 012789 FRAME: 0570

Helsell	3/28/02
Michael Gribbons	(Date)
WITNESS:	
Eleanor M. Kelley (Please Print Name)  Eleanor M. Kelley (Signature)	3/55/02_ (Date)
WITNESS:	
(Please Print Name)	
(Signature)	(Date)

PATENT
RECORDED: 04/11/2002 REEL: 012789 FRAME: 0571