Patent and Trademark Office

To the Honorable Cor

e record the attached original documents or copy there f

101080690 1. Name of conveying party(ies). Jason Janoff, Doug Caldwell, Glyn Reynolds Additional name(s) of conveying party(ies) attached? NO

2. Name and Address of receiving party(ies): Tokyo Electron Limited TBS Broadcast Center, 3-6 Akasaka 5-Chome, Minato-K Tokyo 107 Japan, Additional name(s) and address(es) attached? Yes X No Nature of Conveyance: X Assignment Merger Security Agreement ___ Change of Name **Execution Date:** June 10, 1999; June 14, 1999; June 18, 1999 Other 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is June 10, 1999; June 14, 1999; June 18, 1999. Patent Application No.(s) Α. B. Patent No.(s) Express Mail #EL328387225US Filed June 22, 1999 Additional numbers attached? Yes X No 5. Name and Address of party to whom correspondence concerning document should be mailed: Joseph R. Jordan, Esq. WOOD, HERRON & EVANS, L.L.P. 2700 Carew Tower Cincinnati, Ohio 45202 6. Total number of applications and patents involved: 1 7. Total fee (37 CFR 3.41):..... \$40.00 Enclosed Any deficiencies Authorized to be charged to <u>X</u> <u>X</u> Deposit Account No. 23-3000. DO NOT USE THIS SPACE 00000054 09337574 07/01/1999 MTHAI1 01 FC:581 40.00 OP

8. Statement and signature: 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.

Joseph R. Jordan, Esq. Reg. No. 25,686

Signature

PATENT

REEL: 010058 FRAME: 0111

ASSIGNMENT OF INVENTION

WHEREAS, I, as a below named inventor, residing at the address stated below, am a sole or joint inventor as indicated below, of certain new and useful improvements in VIRTUAL SHUTTER METHOD AND APPARATUS FOR PREVENTING DAMAGE TO GALLIUM ARSENIDE SUBSTRATES DURING PROCESSING.

AND WHEREAS, TOKYO ELECTRON LIMITED, a Japanese corporation with offices at TBS Broadcast Center, 3-6 Akasaka 5-Chome, Minato-Ku, Tokyo 107 Japan, (hereinafter referenced as ASSIGNEE) is desirous of acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto the said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue the said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto.

And I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designee, as ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further remuneration, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto.

And I further agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters Patent which may be granted for my aforesaid invention, as the ASSIGNEE thereof shall hereafter require and prepare at its own expense.

And I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto.

And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with the assignment and sale.

PATENT REEL: 010058 FRAME: 0112 This assignment executed on the dates indicated below.

In Witness Whereof, I h	nereto set my hand this 10 day of June, 1999.
STATE OF Arizona	Jason Smolanoff
STATE OF MICE. D.	: :ss.
COUNTY OF Mariespa	
Smolanoff, a citizen of <u>U</u> . 7, known to me (or proved name is subscribed to the	day of June, 1999, personally appeared Jason S. residing in Jefferson Valley, NY 10535 and particularly at P.O. Box I to me on the basis of satisfactory evidence) to be the person whose foregoing Assignment and acknowledged that s/he executed the same rethe purposes therein contained.
	m Lan V Derthelance
MELODY K. DUNKLEBERO Notary Public - Arizon Maricopa County Notary Scan Pere Dec 18.	My Commission Expires: 12/18/01
In Witness Whereof, I h	ereto set my hand this day of, 1999.
	Doug Caldwell
STATE OF	
	ISS.
COUNTY OF	·
<u>Caldwell</u> , a citizen of <u>U.S.</u> <u>Ln.</u> , known to me (or prov name is subscribed to the f	day of, 1999, personally appeared <u>Doug</u> residing in <u>McKinney</u> , <u>TX 75069</u> and particularly at <u>590 Stickhorse</u> ed to me on the basis of satisfactory evidence) to be the person whose foregoing Assignment and acknowledged that s/he executed the same the purposes therein contained.
	Notary Public
	My Commission Expires:

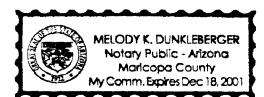
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PATENT REEL: 010058 FRAME: 0113

Notary Public

My Commission Expires: 12/18/01

[Notary's Seal Here]



ASSIGNMENT OF INVENTION

WHEREAS, I, as a below named inventor, residing at the address stated below, am a sole or joint inventor as indicated below, of certain new and useful improvements in VIRTUAL SHUTTER METHOD AND APPARATUS FOR PREVENTING DAMAGE TO GALLIUM ARSENIDE SUBSTRATES DURING PROCESSING.

AND WHEREAS, TOKYO ELECTRON LIMITED, a Japanese corporation with offices at TBS Broadcast Center, 3-6 Akasaka 5-Chome, Minato-Ku, Tokyo 107 Japan, (hereinafter referenced as ASSIGNEE) is desirous of acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto the said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue the said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto.

And I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designee, as ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further remuneration, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto.

And I further agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters Patent which may be granted for my aforesaid invention, as the ASSIGNEE thereof shall hereafter require and prepare at its own expense.

And I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto.

And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with the assignment and sale.

PATENT REEL: 010058 FRAME: 0115

IN WITNESS WHEREOF, I her	reto set my hand this day of, 1999	€.
	Jason Smolanoff	
STATE OF		
	 :ss.	
COUNTY OF		
	day of, 1999, personally appeared	
	residing in Jefferson Valley, NY 10535 and particularly	
	o me on the basis of satisfactory evidence) to be the pers	
	regoing Assignment and acknowledged that s/he execute	d the same
as his free act and deed for the	he purposes therein contained.	
	Notary Public	
	My Commission Expires:	
[Notary's Seal Here]		
IN WITNESS WHEREOF, I here	eto set my hand this 14 day of SUNE, 1999	
	Mary Part du - Or	•
	pully (welling	**
STATE OF TEKAS	Doug Caldwell	
STATE OF 7 - K/T	 :ss.	
COUNTY OF COLLIL		
Before me this	day of <u>fune</u> , 1999, personally appeare	d Doug
<u>Caldwell</u> , a citizen of <u>U.S.</u> re	esiding in McKinne y , TX 75069 and particularly at <u>590 S</u>	Stickhorse
	to me on the basis of satisfactory evidence) to be the pe	
	regoing Assignment and acknowledged that s/he execute	d the same
as his free act and deed for th	ne purposes therein contained.	
	Eddy R. Jewans	
aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	Notary Public	
EDDIE R. JENKINS	My Commission Expires:	
STATE OF TEVAS		
My Comm Eyn 07/22/2002		

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IN WITNESS WHEREOF, I he	reto set my hand this	day of	, 1999.		
	Glyn Reynolds				
STATE OF	;				
	SS.				
COUNTY OF	•				
Before me this day of, 1999, personally appeared <u>Glyn Reynolds</u> , a citizen of <u>U.K.</u> residing in <u>Gilbert, AZ 85233</u> and particularly at <u>2200 W. San Angelo St.</u> , Apt. 1176, known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the foregoing Assignment and acknowledged that s/he executed the same as his free act and deed for the purposes therein contained.					
[Notary's Seal Here]	Notary Public My Commission Exp	ires:			

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RECORDED: 06/22/1999