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

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Na	ame (line 1)	ETEC SYSTEMS, IN	VC.				06152001
Na	ame (line 2)						
Seco	nd Party						Execution Date Month Day Year
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1	iving Pa	rty APPLIED MATERIA	LS, INC.	[]	Mark if additiona		ng parties attached If document to be recorded is an assignment and the
Na	ame (line 2)						receiving party is not domiciled in the United States, an appointment
Addı	ress (line 1)	2881 Scott Blvd.					of a domestic representative is attached.
Addı	ress (line 2)	M/S 2061					(Designation must be a separate document from Assignment.)
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U.S. Department of Commerce Patent and Trademark Office PATENT

Correspondent Name and Address	Area Code and Telephone Number	(408) 235-6536			
Name APPLIED MATERIALS, INC.					
Address (line 1) Attn: Patent Group					
Address (line 2) 2881 Scott Blvd., M/S 2061					
Address (line 3)					
Address (line 4) Santa Clara, CA 95050					
Pages Enter total number of pages of the including any attachments.	e attached conveyance document	#2			
Application Number(s) or Patent Number(Enter either the Patent Application Number or the Patent Application Number(s) 09052903 09052903	nt Number (DO NOT ENTER BOTH numbers for th	itional numbers attached ne same property). number(s)			
If this document is being filed together with a <u>new</u> Patent Apsigned by the first named executing inventor.	pplication, enter the date the patent application w	as Month Day Year			
Patent Cooperation Treaty (PCT) Enter PCT application number only if a U.S. Application Number has not been assigned. PC		PCT PCT			
Number of Properties Enter the total num	mber of properties involved. # 1				
Fee Amount for P	roperties Listed (37 CFR 3.41): \$ 4	0.00			
Method of Payment: Enclosed Deposit Account (Enter for payment by deposit account or if additional to the payment by deposit account or if a difference by the payment by deposit account or if a difference by the payment by deposit account or if a difference by the payment by deposit account or if a difference by the payment by deposit account or if a difference by the payment by deposit account or if a difference by the payment by deposit account or if a difference by the payment by deposit account or if a difference by the payment by deposit account by the payment by deposit a	[X] Deposit Account [] fees can be charged to the account.) osit Account Number: # 03	3-3117			
Auth	orization to charge additional fees:	Yes [X] No []			
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. Charges to deposit account are authorized, as indicated herein.					
William S. Galliani (Reg. # 33,885)		6-29-01			
Name of Person Signing	Signature	Date			

PATENT ASSIGNMENT

WHEREAS, ETEC SYSTEMS, INC., having offices in Hayward, California, U.S.A. (hereinafter referred to as "Assignor") owns right, title, and interest in U.S. Patent Serial Number 09/052,903, filed on 31 Mar 1998, entitled GATED PHOTOCATHODE FOR CONTROLLED SINGLE AND MULTIPLE ELECTRON BEAM EMISSION (hereinafter referred to as "Patent Application"); and

WHEREAS, APPLIED MATERIALS, INC., having offices in Santa Clara, California, U.S.A. (hereinafter referred to as "Assignee") desires to acquire Assignor's entire right, title, and interest in and to said Patent Application, and in and to the inventions disclosed in said Patent Application, and to the Future Patents (as hereinafter defined).

Now Therefore, for and in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor does hereby sell, assign and transfer unto said Assignee, its successors, assigns and legal representatives, Assignor's full right, title, and interests in and to said Patent Application, and to all future patents which may be granted therefor throughout the world, and all division, reissues, substitutions, continuations, continuations-in-part and extensions thereof (collectively, "Future Patents"), together with all claims, causes of action and damages for past infringement, if any, of said Patent Application and Future Patents; and Assignor hereby authorizes and requests the United States Patent and Trademark Office and other patent offices throughout the world to issue all Future Patents resulting therefrom insofar as Assignor's interest is concerned, to the said Assignee of Assignor's entire right, title and interest.

Assignor also hereby sells and assigns to Assignee, its successors, assigns and legal representatives Assignor's full right, title, and interest to inventions disclosed in said Patent Application and Future Patents throughout the world, including the right to file applications and obtain patents, utility models, industrial models and designs for said inventions in Assignee's own name throughout the world including all rights of priority, all rights to publish cautionary notices reserving ownership of said inventions and all rights to register said inventions in appropriate registries; and Assignor further agrees to execute any and all powers of attorney, applications, assignments, declarations, affidavits, and any other papers in connection therewith reasonably necessary to perfect such right, title, and interest in Assignee, its successors, assigns and legal representatives.

Assignor hereby further agrees that Assignor will communicate to said Assignee, or to its successors, assigns and legal representatives, any facts known to Assignor respecting any improvements, and, at the expense of said Assignee, will testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, continuation-in-part, reissue and substitute applications, make all lawful oaths, and generally do everything possible to vest title in said Assignee and to aid said Assignee, its successors, assigns and legal representatives in obtaining and enforcing proper protection for said Patent Application and Future Patents in such countries as Assignee may elect.

IN WITNESS WHEREOF, Assignor has caused this instrument to be executed effective 15, 2001.

ETEC SYSTEMS, INC.

Name and Title: Saul E. Arnold, Assistant Secretary

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> PATENT REEL: 011952 FRAME: 0643

State	of:	Califor	nia
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Alameda County of: _

The preceding Assignment was acknowledged before me this ____ June 2001 ____ by _Saul E. Arnold ____. 15th day of

Notary Public

My Commission Expires:



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RECORDED: 07/03/2001

PATENT REEL: 011952 FRAME: 0644