Additional numbers attached? [] Yes [x] No Name and address of party to whom correspondence Total number of applications and patents involved: concerning document should be mailed: Name: David E. Huang, Esq. Total Fee (37 C.F.R. 3.41).....\$ 40.00 [X] Enclosed with application filing fee Internal Address: Authorized to charge any deficiencies or credit any CHAPIN & HUANG, L.L.C. overpayment to deposit account [] Authorized to be charged to deposit account Street Address: Westborough Office Park 8. Deposit account number: 1700 West Park Drive 50-0901

DO NOT USE THIS SPACE

Statement and signature.

City: Westborough

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.

David E. Huang, Esq. Reg. No. 39,299

State: MA

ZIP: 01581

Signature

December 15, 2005

Name of Person Signing

Date

Total number of pages including cover sheet, attachments, and document: [7]

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(Attach duplicate copy of this page if paying by deposit account)

PATENT/Joint Assignment
Attorney Docket No.: EMC05-57(05314)
EMC Docket No.: EMC-05-314
Express Mail Mailing Label No. N/A

ASSIGNMENT

WHEREAS, we, Jason Pritchard and Venkat Raghavan Satagopan have invented an invention comprising and/or embodying certain improvements or discoveries or both as described in an application for Letters Patent of the United States entitled TECHNIQUES FOR MODELING A CIRCUIT BOARD STRUCTURE, the specification of which:

[X]	is being executed on even date herewith and is about to be filed in the States Patent Office;		
[]	was filed on	as U.S. Application No;	
[]	was patented under U.S. I	Patent Noon	

WHEREAS, EMC Corporation (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts and having a usual place of business at 176 South Street, Hopkinton, Massachusetts 01748 desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey to ASSIGNEE all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein:

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including

PATENT/Joint Assignment Attorney Docket No.: <u>EMC05-57(05314)</u> EMC Docket No.: <u>EMC-05-314</u>

the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals as set forth below:

Date: 12/15/05	Inventor's Signature			
Print full name of first inventor:	Jason Pritchard			
Residence:	12 Cunningham St., Hopkinton, MA 01748			
Citizenship:	United States of America			
Mailing Address:	Same as above			
On this 15th day of <u>December</u> , 2005, then personally appeared before me the above-named <u>Tason Pritchard</u> known to me through satisfactory evidence of identification [] employee identification card; [] driver's license; [] (other)				
foregoing Assignment and acknowledged that deed for the purposes therein contained.	t he/she executed the same as his/her free act and			
	Notary Public Print Name: Name: Description My Commission expires 5/19/06			
	NANCI A. SHAFFER Notary Public Commonwealth of Massachusetts			

-2-

PATENT/Joint Assignment Attorney Docket No.: <u>EMC05-57(05314)</u> EMC Docket No.: <u>EMC-05-314</u>

Date:	
	Inventor's Signature
Print full name of second inventor:	Venkat Raghavan Satagopan
Residence:	1706 N. Elm Street, Apt. #7, Rolla, MO 65401
Citizenship:	India
Mailing Address:	Same as above
STATE/COMMONWEALTH OF	
above-namedevidence of identification [] employee	, 2005, then personally appeared before me the known to me through satisfactory identification card; [] driver's license; [] (other) be the person whose name is subscribed to the d that he/she executed the same as his/her free act and
	Notary Public
	Print Name:
	My Commission expires / /

PATENT/Joint Assignment Attorney Docket No.: <u>EMC05-57(05314)</u> EMC Docket No.: <u>EMC-05-314</u> Express Mail Mailing Label No. N/A

ASSIGNMENT

WHEREAS, we, Jason Pritchard and Venkat Raghavan Satagopan have invented an invention comprising and/or embodying certain improvements or discoveries or both as described in an application for Letters Patent of the United States entitled TECHNIQUES FOR MODELING A CIRCUIT BOARD STRUCTURE, the specification of which:

[X]	is being executed on even date herewith and is about to be filed in the United States Patent Office;		
[]	was filed on	as U.S. Application No;	
[]	was patented under U.S. l	Patent Noon	

WHEREAS, EMC Corporation (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts and having a usual place of business at 176 South Street, Hopkinton, Massachusetts 01748 desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey to ASSIGNEE all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein:

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including

PATENT/Joint Assignment Attorney Docket No.: <u>EMC05-57(05314)</u> EMC Docket No.: EMC-05-314

the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals as set forth below:

Inventor's Signature Print full name of first inventor: Residence: Citizenship: United States of America Same as above STATE/COMMONWEALTH OF COUNTY OF On this day of, 2005, then personally appeared before me above-named known to me through sa evidence of identification [] employee identification card; [] driver's license; [] [48
Residence: 12 Cunningham St., Hopkinton, MA 01' Citizenship: United States of America Mailing Address: Same as above STATE/COMMONWEALTH OF COUNTY OF On this day of, 2005, then personally appeared before me above-named known to me through sa	48
Citizenship: Mailing Address: Same as above STATE/COMMONWEALTH OF COUNTY OF On this day of, 2005, then personally appeared before me above-named known to me through sa	48
Mailing Address: Same as above STATE/COMMONWEALTH OF COUNTY OF On this day of, 2005, then personally appeared before me above-named known to me through sa	
STATE/COMMONWEALTH OF COUNTY OF On this day of, 2005, then personally appeared before me above-named known to me through sa	
COUNTY OF On this day of, 2005, then personally appeared before me above-named known to me through sa	
above-named known to me through sa	
to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free a	isfactory other)
deed for the purposes therein contained.	
Notary Public	
Print Name:	
My Commission expires / /	

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PAGE 02/03

PATENT/Joint Assignment Attorney Docket No.: <u>EMC05-57(05314)</u> EMC Docket No.: <u>EMC-05-314</u>

Date: 2/15/2005

Inventor's Signature

Print full name of second inventor:

Venkat Raghavan Satagopan

Residence:

1706 N. Elm Street, Apt. #7, Rolla, MO 65401

Citizenship:

India

Mailing Address:

Same as above

STATE/COMMONWEALTH OF

COUNTY OF

Missouri Phelps

On this 15⁻¹ day of lockwhee, 2005, then personally appeared before me the above-named <u>Ventaflago</u> known to me through satisfactory evidence of identification employee identification card; other to be the person whose name is subscribed to the

foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained.

O M

Notary Public

Print Name: Mary S. Licklider

My Commission expires 6 /15/ 2007

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