Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Adi Ofer	06/25/2003
Daniel E. Rabinovich	06/26/2003
Stephen R. Ives	06/26/2003
Peng Yin	06/26/2003
Ran Margalit	06/26/2003
Rong Yu	06/26/2003
Cynthia J. Burns	12/01/2003

RECEIVING PARTY DATA

Name:	EMC Corporation
Street Address:	176 South Street
City:	Hopkinton
State/Country:	MASSACHUSETTS
Postal Code:	01748-9103

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	11551827

CORRESPONDENCE DATA

500807968

Fax Number: (781)401-9966

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

781-401-9988 Phone: nrm@dc-m.com Email:

Correspondent Name: Daly, Crowley, Mofford & Durkee, LLP Address Line 1: 354A Turnpike Street, Suite 301A

Address Line 4: Canton, MASSACHUSETTS 02021-2714

ATTORNEY DOCKET NUMBER: EMC-037AUS

PATENT

REEL: 022401 FRAME: 0113

NAME OF SUBMITTER:	Cathy L. Peterson
Total Attachments: 16	
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PATENT REEL: 022401 FRAME: 0114

ASSIGNMENT

Whereas we, the undersigned, Adi Ofer, Daniel E. Rabinovich, Stephen R. Ives, Peng Yin, Cynthia J. Burns, Ran Margalit and Rong Yu, hereby have made certain inventions or discoveries (or both) set forth in an application for Letters Patent of the United States of America entitled MANAGEMENT OF BACKGROUND COPY TASK FOR POINT-IN-TIME COPIES, identified as Attorney Docket No. EMC-037PUS, which application was filed on June 27, 2003 and Assigned Application No. 10/607,653. In the event that the execution date, filing date and/or Application No. were not entered above at the time we executed this document, and if such information is deemed necessary, we hereby authorize and request our attorneys at Daly, Crowley & Mofford, LLP, 275 Turnpike Street, Suite 101, Canton, MA 02021-2354, to insert above the execution date, filing date and/or Application No. of said application.

Whereas, EMC Corporation, a Massachusetts Corporation having a place of business at 176 South Street, Hopkinton, MA 01748-9103, and which, together with its successors and assigns, is hereinafter called "Assignee," is desirous of acquiring the title, rights, benefits and privileges hereinafter recited;

Now, therefore, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which we hereby acknowledge, we hereby, without reservation:

- 1. Assign, transfer and convey to Assignee the entire right, title and interest in and to said inventions and discoveries, said application for Letters Patent of the United States of America, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, reissue, re-examination and Convention applications based in whole or in part upon said inventions or discoveries, or upon said applications, and any and all Letters Patent, reissues, reexaminations, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent;
- 2. Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in our names or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;
- 3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patent to Assignee, as assignee of the entire right, title and interest therein or otherwise as Assignee may direct;
- 4. Warrant that we have not knowingly conveyed to others any right in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything embodying or utilizing any of said inventions or discoveries; and that we have good right to assign the same to Assignee without encumbrance;

PATENT REEL: 022401 FRAME: 0115 5. Bind our heirs, legal representatives and assigns, as well as ourselves, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to us or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by us, our heirs, legal representatives and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to us relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in our control or in the control of our heirs, legal representatives or assigns which may be useful for establishing the facts of our conceptions, disclosures, and reduction to practice of said inventions and discoveries.

In testimony of which we have executed this Assignment as an instrument under seal on the date indicated next to each of our respective names.

State or Commonw	ealth of	
County		
Dated		
		Adi Ofer
known and known t	day of to me as the person of ed the same to be his	, 2003, before me appeared Adi Ofer, to me described in and who executed the foregoing instrument, a free act and deed.
		Notary Public

State or Commony	wealth of	
County		
Dated		
		Daniel E. Rabinovich
Rabinovich, to me	known and known to	, 2003, before me appeared Daniel E. me as the person described in and who executed the ged the same to be his free act and deed.
		Notary Public

State or Commonwealth of	_
County	
Dated	Stephen R. Ives
On this day of to me known and known to me as the instrument, and he acknowledged the	, 2003, before me appeared Stephen R. Ives, e person described in and who executed the foregoing e same to be his free act and deed.
	Notary Public

State or Commony	vealth of	
County		
Dated		
		Peng Yin
known and known		, 2003, before me appeared Peng Yin, to me escribed in and who executed the foregoing instrument, free act and deed.
		Notary Public

State or Commonwealth of MASSACHUSETTS	
County MIDDLESEX	
Dated 12/1/03	Cynthia J. Burns
On this _/s/ day of	lescribed in and who executed the foregoing
Ž	Sandia A. Lulaga Notary Public
/Y	11 COMM EXP.: MARCH 27, 2009

State or Commony	wealth of	
County		
Dated		Ran Margalit
me known and kno	own to me as the perso	, 2003, before me appeared Ran Margalit, to on described in and who executed the foregoing me to be his free act and deed.
		Notary Public

State or Commonwealth of	
County	
Dated	
	Rong Yu
On this day of, 2003, before me appeared Rong Yu, to n known and known to me as the person described in and who executed the foregoing instrumen and he acknowledged the same to be his free act and deed.	
	Notary Public

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ASSIGNMENT

Whereas we, the undersigned, Adi Ofer, Daniel E. Rabinovich, Stephen R. Ives, Peng Yin, Cynthia J
Burns, Ran Margalit and Rong Yu, hereby have made certain inventions or discoveries (or both) set
forth in an application for Letters Patent of the United States of America entitled MANAGEMENT OF
BACKGROUND COPY TASK FOR POINT-IN-TIME COPIES, identified as Attorney Docket No. EMC-
037PUS which application was executed on 6/25/03, 6/26/03
Assigned Application No In the event that the execution date, filing date and/or
Application No. were not entered above at the time we executed this document, and if such
information is deemed necessary, we hereby authorize and request our attorneys at Daly, Crowley &
Mofford, LLP, 275 Turnpike Street, Suite 101, Canton, MA 02021-2354, to insert above the
execution date, filing date and/or Application No. of said application.

Whereas, EMC Corporation, a Massachusetts Corporation having a place of business at 176 South Street, Hopkinton, MA 01748-9103, and which, together with its successors and assigns, is hereinafter called "Assignee," is desirous of acquiring the title, rights, benefits and privileges hereinafter recited;

Now, therefore, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which we hereby acknowledge, we hereby, without reservation:

- 1. Assign, transfer and convey to Assignee the entire right, title and interest in and to said inventions and discoveries, said application for Letters Patent of the United States of America, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, reissue, re-examination and Convention applications based in whole or in part upon said inventions or discoveries, or upon said applications, and any and all Letters Patent, reissues, reexaminations, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent;
- 2. Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in our names or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;
- 3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patent to Assignee, as assignee of the entire right, title and interest therein or otherwise as Assignee may direct;
- 4. Warrant that we have not knowingly conveyed to others any right in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything embodying or utilizing any of said inventions or discoveries; and that we have good right to assign the same to Assignee without encumbrance;

PATENT REEL: 022401 FRAME: 0123 5. Bind our heirs, legal representatives and assigns, as well as ourselves, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to us or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by us, our heirs, legal representatives and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to us relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in our control or in the control of our heirs, legal representatives or assigns which may be useful for establishing the facts of our conceptions, disclosures, and reduction to practice of said inventions and discoveries.

In testimony of which we have executed this Assignment as an instrument under seal on the date indicated next to each of our respective names.

State or Commonwealth of <i>Massachuse T</i>	7. /
County Middlesex	A
Dated 6/25/03	
, .	Adi Ofer
On this 25 1th day of	, 2003, before me appeared Adi Ofer, to me and who executed the foregoing instrument, and deed. Limited Limited Notary Public Limited Limite
	AMELIA C. GENTRY Notary Public Commonwealth of Massachusetts

My Commission Expires October 2, 2009

State or Commonwealth of <u>Massachusells</u>	
County Widdlesex	
Dated $\frac{6/26/03}{}$	DielEKa
, ,	Daniel E. Rabinovich
Rabinovich, to me known and known to me as the person foregoing instrument, and he acknowledged the same t	2003, before me appeared Daniel E. son described in and who executed the obe his free act and deed. Limited Limited Limited Contact Public
	AMELIA C. GENTRY Notary Public Commonwealth of Massachusetts My Commission Expires October 2, 2009

State or Commonwealth of Wassachusett	
County Addlered	M 1
Dated 6/26/03	Mys Ch
·	Stephen R. Ives
to me known and known to me as the person described in instrument, and he acknowledged the same to be his free	03, before me appeared Stephen R. Ives, n and who executed the foregoing act and deed. Mullatery Public
	AMELIA C. GENTRY Notary Public Commonwealth of Massachusetts My Commission Expires October 2, 2009

State or Commonwealth of Massachusett.	
County Widdlsey	
Dated 6/26/03	Benja
	Peng Yin
On this 26th day of	
	AMELIA C. GENTRY Notary Public Commonwealth of Massachusetts My Commission Expires October 2, 2009

State or Commonwealth of	
County	
Dated	
	Cynthia J. Burns
On this day of Burnes, to me known and known to me as the foregoing instrument, and she acknowledged	, 2003, before me appeared Cynthia J. ne person described in and who executed the d the same to be her free act and deed.
	Notary Public

State or Commonwealth of <u>Alassachusetts</u>	
County <u>Aiddlesey</u>	
Dated $\frac{6/26/03}{}$	Pm Majore
_	Ran Margalit
On this At The day of June me known and known to me as the person described instrument, and he acknowledged the same to be his	, 2003, before me appeared Ran Margalit, to lin and who executed the foregoing free act and deed. Motary Public
	AMELIA C. GENTRY Notary Public Commonwealth of Massachusetts My Commission Expires October 2, 2009

State or Commonwealth of <u>Massachuse</u>	tts
County Aiddlesey	
Dated $\frac{\sqrt{2le/03}}{\sqrt{2le/03}}$ On this $\frac{2\sqrt{n^4}}{\sqrt{n^4}}$ day of known and known to me as the person described and he acknowledged the same to be his free act a	Rong Yu
Q:\emc\037pus\emc-037pus Asi 20June03.doc	AMELIA C. GENTRY Notary Public Commonwealth of Massachusetts My Commission Expires October 2, 2009

RECORDED: 03/16/2009