# Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

## **CONVEYING PARTY DATA**

Name	Execution Date
Eduard A. Cartier	10/22/2007
Rashmi Jha	10/23/2007
Sivananda Kanakasabapathy	10/22/2007
Xi Li	11/06/2007
Renee T. Mo	10/23/2007
Vijay Narayanan	10/22/2007
Vamsi Paruchuri	11/06/2007
Mark T. Robson	10/22/2007
Kathryn T. Schonenberg	10/19/2007
Michelle L. Steen	10/24/2007
Richard Wise	10/22/2007
Ying Zhang	10/22/2007

## RECEIVING PARTY DATA

Name:	International Business Machines Corporation
Street Address:	New Orchard Road
City:	Armonk
State/Country:	NEW YORK
Postal Code:	10504

## PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	11852906

## **CORRESPONDENCE DATA**

Fax Number: (516)742-4366

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

Phone: 516-742-4343
Email: kleon@ssmp.com

PATENT REEL: 020158 FRAME: 0632

500405746

Correspondent Name: SCULLY, SCOTT, MURPHY & PRESSER, P.C.

Address Line 1: 400 GARDEN CITY PLAZA

Address Line 2: SUITE 300

Address Line 4: GARDEN CITY, NEW YORK 11530

ATTORNEY DOCKET NUMBER: YOR920070336US1(21291)

NAME OF SUBMITTER: Leslie S. Szivos

**Total Attachments: 24** 

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PATENT

**REEL: 020158 FRAME: 0633** 

	Whereas, we		
INVENTOR			of New York,
AND CITY	(1) Eduard A. Cartier		and State of New York,
	County of New York		of Wappingers Falls,
and	(2) Rashmi Jha		and State of New York,
	County of Dutchess		of Niskayuna,
and	(3) Sivananda Kanakasabapathy		and State of New York,
	County of Schenectady		of Somers.
and	(4) Xi Li		and State of New York,
	County of Westchester		
and	(5) Renee T. Mo		of Briarcliff Manor,
	County of Westchester		and State of New York,
and	(6) Vijay Narayanan		of New York,
	County of New York		and State of New York,
and	(7) Vamsi Paruchuri		of Albany,
	County of Albany		and State of New York,
and	(8) Mark T. Robson		of Danbury, and State of Connecticut,
	County of Fairfield		
and	(9) Kathryn T. Schonenberg		of Wappingers Falls,
	County of Dutchess		and State of New York,
and	(10) Michelle L. Steen		of Danbury,
	County of Fairfield		and State of Connecticut,
and	(11) Richard Wise		of New Windsor,
	County of Orange		and State of New York,
and	(12) Ying Zhang		of Yorktown Heights,
•	County of Westchester		and State of New York,
	have invented certain improvements in		
	THE TOTAL OF LOTTE DELICITAL		
TITLE	DIELECTRIC SPACER REMOVAL		
DATES THAT	and executed, respectively, a United States par	tent application theref	for on
INVENTORS	(1) 10/22/ 2007 (2)	. 2007. (3)	, 2007
SIGNED THE	(1)	, 2007. (6)	, 2007
DECLARATION	(7) 2007 (8)	. 2007. (9)	, 2007
	(1) 10/22/ ,2007, (2)	, 2007, and (12	2), 2007.

Whereas, INTERNATIONAL BUSINESS MACHINES CORPORATION, a corporation of New York, having a place of business at Armonk, New York 10504, (hereinafter called IBM), desires to acquire the entire right, title and interest in the said application and invention, and to any United States and foreign patents to be obtained therefor;

Now therefore, for a valuable consideration, receipt whereof is hereby acknowledged, we, the above named, hereby sell, assign, and transfer to IBM, its successors and assigns, the entire right, title and interest in the said application and invention therein disclosed for the United States and foreign countries, and in all foreign countries, and all rights of priority resulting from the filling of said United States application, and we request the Commissioner of Patents to issue any Letters Patent granted upon the inventions set forth in said application to IBM, its successors and assigns; and we hereby agree that IBM may apply for foreign Letters Patent on said invention and we will execute all papers necessary in connection with the United States and foreign applications when called upon to do so by IBM.

Signed and sealed		
Eduard Corhes	on	<u>22,</u> 2007
Eduard Cartier		
	on	, 2007
Rashmi Jha		
	on	, 2007
Sivananda Kanakasabapathy		
•	on	, 2007
Xi Li		
	on	, 2007
Renee Mo		
	on	, 2007
Vijay Narayanan		
	on	, 2007
Vamsi Paruchuri		
	on	, 2007
Mark T. Robson		
	on	, 2007
Kathryn T. Schonenberg		
	on	, 2007
Michelle Steen	-	
	on	, 2007
Richard Wise		
	on	, 2007
Ying Zhang		

Whereas, we INVENTOR of New York. AND CITY Eduard A. Cartier and State of New York, County of New York of Wappingers Falls," (2) Rashmi Jha and and State of New York, County of Dutchess of Niskayuna. (3) Sivananda Kanakasabapathy and and State of New York. County of Schenectady of Somers. (4) Xi Li and and State of New York, County of Westchester of Briarcliff Manor, (5) Renee T Mo and and State of New York, County of Westchester. of New York (6) Vijay Naravenian and and State of New York County of News Orks of Albany. (7) Vamsi Pamchon and and State of New York. County of Albany of Danbury, (8) Mark T. Robson and and State of Connecticut, County of Fairfield of Wappingers Falls. (9) Kathryn T. Schonenberg and and State of New York County of Dutchess of Danbury, (10) Michelle L. Steen and: and State of Connecticut, County of Fairfield of New Windsor (11):Richard Wise and and State of New York County of Orange of Yorktown Heights (12) Ying Zhang and and State of New York, County of Westchester have invented certain improvements in DIELECTRIC SPACER REMOVAL TITLE and executed, respectively, a United States patent application therefor on DATES THAT , 2007, (2) 10123 , 2007, (3) \_\_\_\_\_\_, 2007, (5) \_\_\_\_\_, 2007, (6) \_\_\_\_\_, 2007, (8) \_\_\_\_\_, 2007, (9) \_\_\_\_\_, 2007, (11) \_\_\_\_\_, 2007, and (12) INVENTORS SIGNED THE DECLARATION

Whereas, INTERNATIONAL BUSINESS MACHINES CORPORATION, a corporation of New York, having a place of business at Armonk, New York 10504, (hereinafter called IBM), desires to acquire the entire right, title and interest in the said application and invention, and to any United States and foreign patents to be obtained therefor;

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Signed and Sealed			
		on	, 2007
Eduard Cartier			
Rasher Jos		on $10/23$	, 2007
Rashmi Jha		. 1	
		on	, 2007
Sivananda Kanakasabapathy		. ,	
		on	, 2007
XiLi			
Lene mo	( And statement of the	on 10/23	, 2007
Renee Mo			
		on	, 2007
Vijay Narayanan		The second for the second seco	
		on	, 2007
Vamsi Paruchuri	And the second s	M 411.1	
		on	, 2007
Mark T. Robson		***	
	a management of the second	on <u> </u>	, 2007
Kathryn T. Schonenberg			
•		on	, 2007
Michelle Steen			
THE STATE OF THE S	,-, ,	on	. 2007
Richard Wise	The second secon	VII	
MICHAIU VVISC			, 2007
		on	, 2007
Ying Zhang	•		

Whereas, we **INVENTOR** of New York, (1) Eduard A. Cartier AND CITY and State of New York, County of New York of Wappingers Falls, (2) Rashmi Jha and and State of New York, County of Dutchess of Niskavuna. (3) Sivananda Kanakasabapathy and and State of New York, County of Schenectady of Somers. (4) XİLi and and State of New York, County of Westchester (5) Renee T. Mo of Briarcliff Manor, and and State of New York, County of Westchester of New York. (6) Vijay Narayanan and and State of New York, County of New York (7) Vamsi Paruchuri of Albany. and and State of New York, County of Albany of Danbury, (8) Mark T. Robson and and State of Connecticut, County of Fairfield of Wappingers Falls, (9) Kathryn T. Schonenberg and and State of New York, County of Dutchess of Danbury. (10) Michelle L. Steen and and State of Connecticut, County of Fairfield of New Windsor, (11) Richard Wise and and State of New York. County of Orange of Yorktown Heights, (12) Ying Zhang and and State of New York, County of Westchester have invented certain improvements in DIELECTRIC SPACER REMOVAL TITLE and executed, respectively, a United States patent application therefor on **DATES THAT INVENTORS** SIGNED THE **DECLARATION** 

Whereas, INTERNATIONAL BUSINESS MACHINES CORPORATION, a corporation of New York, having a place of business at Armonk, New York 10504, (hereinafter called IBM), desires to acquire the entire right, title and interest in the said application and invention, and to any United States and foreign patents to be obtained therefor;

Now therefore, for a valuable consideration, receipt whereof is hereby acknowledged, we, the above named, hereby sell, assign, and transfer to IBM, its successors and assigns, the entire right, title and interest in the said application and invention therein disclosed for the United States and foreign countries, and in all foreign countries, and all rights of priority resulting from the filing of said United States application, and we request the Commissioner of Patents to issue any Letters Patent granted upon the inventions set forth in said application to IBM, its successors and assigns; and we hereby agree that IBM may apply for foreign Letters Patent on said invention and we will execute all papers necessary in connection with the United States and foreign applications when called upon to do so by IBM.

oighed and scaled		
	on	, 2007
Eduard Cartier		
	on	, 2007
Rashmi Jha	on 22 <sup>nd</sup> (	2-1 der, 2007
Sivananda/Kanakasabapathy		
	on	, 2007
Xi Li		
	on	, 2007
Renee Mo		
Villay Marsuman	on	, 2007
Vijay Narayanan		
Vamsi Paruchuri	on	, 2007
	on.	, 2007
Mark T. Robson		
	on	, 2007
Kathryn T. Schonenberg		
	on	, 2007
Michelle Steen		
	on	, 2007
Richard Wise		
	on	. 2007

Ying Zhang

Whereas, we

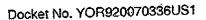
INVENTOR   AND CITY		Whereas, we		
County of New York and (2) Rashmi Jha County of Dutchess (3) Sivananda Kanakasabapathy County of Schenectady and (4) Xi Li County of Westchester County of Westchester (5) Renee T. Mo County of New York and (6) Vijay Narayanan County of New York (7) Vamsi Paruchuri County of Albany and State of New York, of Briarcilff Manor, and State of New York, of Albany, and State of New York, of Albany, and State of New York, of Albany, and State of New York, of Danbury, and State of Connecticut, of Wappingers Falls, and (10) Michelle L. Steen County of Fairfield and (11) Richard Wise County of Orange and (12) Ying Zhang County of Westchester  DATES THAT INVENTORS SIGNIED THE  (1) 2007 (2) 2007 (3) 2007	INVENTOR			
and (2) Rashmi Jha County of Dutchess and State of New York, of Niskayuna, and State of New York, of Somers, and State of New York, of New York, and State of New York, of New York, and State of New York, of New York, and State of New York, of Albany, and State of New York, of Albany, and State of New York, of Albany, and State of New York, of Danbury, County of Fairfield and State of Connecticut, of Wappingers, Falls, and (10) Michelle L. Steen County of Fairfield and (11) Richard Wise county of Orange and State of New York, have invented certain improvements in  TITLE  DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS SIGNIED THE  (1) 2007 (2) 2007 (3) 2007	AND CITY	(1) Eduard A. Cartier	of New York,	₹\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
and (2) Rashmi Jha County of Dutchess and (3) Sivananda Kanakasabapathy County of Schenectady and (4) Xi Li County of Westchester and (5) Renee T. Mo County of Westchester and (6) Vijay Narayanan County of New York, County of New York and (7) Vamsi Paruchuri County of Albany and (8) Mark T. Robson County of Pairfield and (9) Kathryn, T. Schonenberg County of Pairfield and (10) Michelle L. Steen County of Pairfield and (11) Richard Wise County of Westchester and State of New York, and State of New York, of Albany, and State of New York, of Albany, and State of New York, of Albany, and State of New York, of Danbury, and State of Connecticut, of Wappingers, Falls, and (10) Michelle L. Steen County of Fairfield and (11) Richard Wise County of Orange and State of New York, have invented certain improvements in  TITLE  DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS SIGNIED THE  (1) 2007 (2) 2007 (3) 2007		County of New York	and State of I	Vew York,
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and (3) Sivananda Kanakasabapathy County of Schenectady and State of New York, and (4) Xi Li County of Westchester and State of New York, of Somers, and State of New York, of Briarcliff Manor, and State of New York, of Briarcliff Manor, and State of New York, of New York, of New York, and State of New York, of New York, of New York, and State of New York, of Albany, and State of New York, of Albany, and State of New York, of Danbury, and State of Connecticut, of Danbury, and State of Connecticut, of Wappingers Falls, and (9) Kathryn, T. Schonenberg of Wappingers Falls, and (10) Michelle L. Steen of Danbury, County of Fairfield of New York, of Danbury, and State of Connecticut, of Danbury, and State of New York, of Yorktown Heights, and State of New York, have invented certain improvements in  TITLE  DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS SIGNIED THE (1) 2007 (2) 2007 (3) 2007 (3)	*****		and State of I	Vew York,
and (4) Xi Li County of Westchester and State of New York, of Briarcliff Manor, and State of New York, of Briarcliff Manor, and State of New York, and State of New York, of New York, of Albany, and State of New York, of Albany, and State of New York, of Danbury, and State of New York, of New Windsor, and State of New York, of Danbury,	and		of Niskavuna	
and (4) Xi Li County of Westchester and State of New York, of Briarcliff Manor, and State of New York, of Briarcliff Manor, and State of New York, and State of New York, of New York, of Albany, and State of New York, of Albany, and State of New York, of Danbury, and State of New York, of New Windsor, and State of New York, of Danbury,	S. A.M. C. Ho Hall	County of Schenectady	and State of I	vew York.
County of Westchester and (5) Renee T. Mo County of Westchester and (6) Vijay Narayanan County of New York and (7) Vamsi Paruchuri County of Albany and (8) Mark T. Robson County of Pairfield and (9) Kathryn T. Schonenberg County of Dutchess and (10) Michelle L. Steen County of Fairfield and (11) Richard Wise County of Orange and (12) Ying Zhang County of Westchester  DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS SIGNED THE  (1) Mestchester  and State of New York, of Danbury, and State of New York, and State of New York, of New Windsor, and State of New York, and State of New York, of Yorktown Heights, and State of New York, have invented certain improvements in	and			,,
and (5) Renee T. Mo County of Westchester and (6) Vijay Narayanan County of New York County of New York and (7) Vamsi Paruchuri County of Albany and (8) Mark T. Robson County of Fairfield and (9) Kathryn T. Schonenberg County of Dutchess and (10) Michelle L. Steen County of Pairfield and (11) Richard Wise County of Orange and (12) Ying Zhang County of Westchester  TITLE  DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS SIGNED THE  (6) Vigay Narayanan of New York, and State of New York, of Albany, and State of New York, of Danbury, and State of New York, of Danbury, and State of New York, of New Windsor, and State of New York, of New Windsor, and State of New York, of Yorktown Heights, and State of New York, and State of New York, of Yorktown Heights, and State of New York, and State of New York, beautiful the State of New York, and State of New York, and State of New York, of New Windsor, and State of New York, and State of New York, beautiful the State of New York, and State of New York, and State of New York, and State of New York, beautiful the State of New York, and State of New York, and State of New York, and State of New York, beautiful the State of New York, and State o	ana			New York.
County of Westchester and (6) Vijay Narayanan County of New York and (7) Vamsi Paruchuri County of Albany and State of New York, of Albany, and State of New York, of Danbury, and State of Connecticut, of Danbury, and State of Connecticut, of Wappingers Falls, County of Dutchess and (10) Michelle L. Steen County of Fairfield and (11) Richard Wise County of Orange and (12) Ying Zhang County of Westchester  TITLE  DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS SIGNED THE (1) 2007 (2) 2007 (3) 2007	and			•
and (6) Vijay Narayanan of New York, and State of New York, and State of New York, and State of New York, of Albany, and State of New York, of Albany, and State of New York, of Danbury, and State of Connecticut, of Danbury, and State of Connecticut, of Wappingers Falls, and State of New York, of Danbury, County of Fairfield and State of Onnecticut, of Danbury, and State of Connecticut, of New Windsor, and State of New Windsor, and State of New York, of New Windsor, and State of New York, of New Windsor, and State of New York, of New York, of New York, of Yorktown Heights, and State of New York, have invented certain improvements in  TITLE DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS SIGNED THE (1) 2007 (2) 2007 (3) 2007	anu			
County of New York and (7) Vamsi Paruchuri County of Albany and State of New York, of Albany, and State of New York, of Danbury, and State of Connecticut, of Wappingers, Falls, and State of New York, of Danbury, and State of Connecticut, of Wappingers, Falls, and State of New York, of Danbury, and State of New York, of New Windsor, and State of New York, of New Windsor, and State of New York, of Yorktown Heights, and State of New York, have invented certain improvements in  TITLE  DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS SIGNED THE  (1) 2007 (2) 2007 (3) 2007	لمسما	₹		1011 10111,
and (7) Vamsi Paruchuri of Albany, and State of New York, of Danbury, and State of Connecticut, of Wappingers Falls, County of Fairfield of Wappingers Falls, and (10) Michelle L. Steen of Danbury, County of Fairfield and State of New York, of Danbury, and State of New York, of New Windsor, and State of New York, of New Windsor, and State of New York, of Yorktown Heights, and State of New York, of Yorktown Heights, and State of New York, bave invented certain improvements in  TITLE  DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS SIGNED THE (1) 2007 (2) 2007 (3) 2007	anu		•	New York
County of Albany and (8) Mark T. Robson County of Fairfield and (9) Kathryn T. Schonenberg County of Dutchess and (10) Michelle L. Steen County of Fairfield and (11) Richard Wise County of Orange and (12) Ying Zhang County of Westchester  DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS SIGNED THE  County of Albany and State of New York, of Danbury, and State of Ne				vew rork,
and (8) Mark T. Robson County of Fairfield and (9) Kathryn T. Schonenberg County of Dutchess and (10) Michelle L. Steen County of Fairfield and (11) Richard Wise County of Orange and (12) Ying Zhang County of Westchester  TITLE  DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS SIGNED THE  (1) Mark T. Robson of Danbury, and State of Connecticut, of Wappingers Falls, and State of New York, of Danbury, and State of New York, of Danbury, and State of New York, of New Windsor, and State of New York, of Yorktown Heights, and State of New York, and State of New York, and State of New York, of Yorktown Heights, and State of New York, and State of New York, and State of New York, of Yorktown Heights, and State of New York, and State of	and			Mour Vork
County of Fairfield and State of Connecticut,  (9) Kathryn T. Schonenberg of Wappingers Falls,  County of Dutchess and State of New York,  (10) Michelle L. Steen of Danbury,  County of Fairfield and State of Connecticut,  and (11) Richard Wise of New Windsor,  County of Orange and State of New York,  (12) Ying Zhang of Yorktown Heights,  County of Westchester and State of New York,  have invented certain improvements in  TITLE DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS  SIGNED THE (1) 2007 (2) 2007 (3) 2007				AGAN LOLK,
and (9) Kathryn,T. Schonenberg of Wappingers Falls, and State of New York, and (10) Michelle L. Steen of Danbury, County of Fairfield and State of Connecticut, of New Windsor, County of Orange and State of New York, of Yorktown Heights, County of Westchester and State of New York, have invented certain improvements in  TITLE DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS  SIGNED THE (1) 2007 (2) 2007 (3) 2007 (3) 2007	ano			Connecticut
County of Dutchess and (10) Michelle L. Steen County of Fairfield and (11) Richard Wise County of Orange and (12) Ying Zhang County of Westchester  TITLE  DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS SIGNED THE (10) Michelle L. Steen of Danbury, and State of Connecticut, of New Windsor, and State of New York, of Yorktown Heights, and State of New York, and State	•	and the mean end to	- £ 101 to	ro Eolio
and (10) Michelle L. Steen of Danbury, County of Fairfield and State of Connecticut, and (11) Richard Wise of New Windsor, County of Orange and State of New York, and (12) Ying Zhang of Yorktown Heights, County of Westchester and State of New York, have invented certain improvements in  TITLE DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS SIGNED THE (1) 2007 (2) 2007 (3) 2007	and			
County of Fairfield and State of Connecticut,  and (11) Richard Wise of New Windsor,  County of Orange and State of New York,  and (12) Ying Zhang of Yorktown Heights,  County of Westchester and State of New York,  have invented certain improvements in  TITLE DIELECTRIC SPACER REMOVAL  DATES THAT and executed, respectively, a United States patent application therefor on  INVENTORS  SIGNED THE (1) 2007 (2) 2007, (3) 2007				vew rork,
and (11) Richard Wise of New Windsor, and State of New York, of Yorktown Heights, of Yorktown Heights, and State of New York, have invented certain improvements in  TITLE DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS SIGNED THE (1) 2007 (2) 2007 (3) 2007	and			Campantinut
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and  (12) Ying Zhang County of Westchester of Yorktown Heights, and State of New York, have invented certain improvements in  TITLE DIELECTRIC SPACER REMOVAL  DATES THAT INVENTORS SIGNED THE (1) 2007 (2) 2007 (3) 2007	and			
County of Westchester and State of New York, have invented certain improvements in  TITLE DIELECTRIC SPACER REMOVAL  DATES THAT and executed, respectively, a United States patent application therefor on INVENTORS SIGNED THE (1) 2007 (2) 2007 (3) 2007				
have invented certain improvements in  TITLE DIELECTRIC SPACER REMOVAL  DATES THAT and executed, respectively, a United States patent application therefor on INVENTORS SIGNED THE (1) 2007 (2) 2007 (3) 2007	and			
TITLE DIELECTRIC SPACER REMOVAL  DATES THAT and executed, respectively, a United States patent application therefor on INVENTORS SIGNED THE (1) 2007 (2) 2007 (3) . 2007		County of Westchester	and State of I	New York,
TITLE DIELECTRIC SPACER REMOVAL  DATES THAT and executed, respectively, a United States patent application therefor on INVENTORS SIGNED THE (1) 2007 (2) 2007 (3) . 2007				
DATES THAT and executed, respectively, a United States patent application therefor on INVENTORS  SIGNED THE (1) 2007 (2) 2007 (3) . 2007		have invented certain improvements in		
DATES THAT and executed, respectively, a United States patent application therefor on INVENTORS  SIGNED THE (1) 2007 (2) 2007 (3) . 2007				
INVENTORS SIGNED THE (1) 2007 (2) 2007 (3) .2007	TITLE	DIELECTRIC SPACER REMOVAL		
INVENTORS SIGNED THE (1) 2007 (2) 2007 (3) .2007				
SIGNED THE (1) 2007 (2) .2007 (3) .2007		and executed, respectively, a United States paten	t application therefor on	
SIGNED THE       (1)			2007 (0)	0007
DECLARATION (4) // / / / / / / / / / / / / / / / / /		(1), 2007, (2)	, 2007, (3)	, 2007
(7), 2007, (8), 2007, (9), 2007 (10), 2007, (11), 2007, and (12), 2007.	DECLARATION	(4) 11/46/2007, 2007, (5)	, 2007, (6)	, 2007
(10), 2007, (11), 2007, and (12), 2007.		(7), 2007, (8)	, 2007, (9)	, 2007
	and the second second	(10), 2007, (11)	, 2007, and (12)	, 2007.

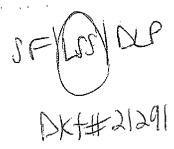
Whereas, INTERNATIONAL BUSINESS MACHINES CORPORATION, a corporation of New York, having a place of business at Armonk, New York 10504, (hereinafter called IBM), desires to acquire the entire right, title and interest in the said application and invention, and to any United States and foreign patents to be obtained therefor;

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	Signed and sealed			
	Eduard Cartier	on	, 2007	
	Rashmi Jha	on	, 2007	
	Sivananda Kanakasabapathy	on	, 2007	
z] 280	XI Li	on <u>11/06</u>	, 2 <mark>0</mark> 07	en en general kan bekan beran en
	Renee Mo	on	, 2007	
	Vijay Narayanan	on	, 2007	
	Vamsi Paruchuri	on	, 2007	
ar jedna	Mark T. Robson	on	, 2007	mes in the state of the state of the
	Kathryn T. Schonenberg	on	, 2007	
	Michelle Steen	on	, 2007	
	Richard Wise	on	, 2007	
		on	2007	

Ying Zhang





Whereas, we

INVENTOR.		of New York,
AND CITY	(1) Eduard A. Cartier	and State of New York,
,,	County of New York	of Wappingers Falls,
and	(2) Rashmi Jha	and State of New York,
	County of Dutchess	of Niskayuna,
and	(3) Siyananda kanakasabapatny	and State of New York
and	County of Schenectady	
المست	(4) XIL	of Somers, and State of New York,
and	County of Westchester	and State of New Yorks
	(5) Rence T We	of Briarcliff Manor,
and	County of Westchester	and State of New York,
	(6) Vijay Najayawa	of New York
and	(6) Vijaya Kenetyawa ya kana kana kana kana kana kana kana	and State of New York
Salary to the salar	County of New York	of Albany.
and	(7) VamerParagnure	and State of New York
	County of Albany	of Danbury
and	(8) Mark T. Robson	and State of Connecticut,
	County of Fairfield	of Wappingers Falls
and	(9) Kathryn T. Schonenberg	and State of New York
	County of Dutchess	of Danbury,
and	(10) Michelle L. Steen	and State of Connecticut,
	County of Fairfield	of New Windsor
and	(11) Richard Wise	and State of New York
	County of Orange	of Yorkiown Heights
and	(12) Ying Zhang	and State of New York,
CIBM	County of Westchester	allu State of North State
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	have invented certain improvements in	
	HICKO HITCHIO	
	DIELECTRIC SPACER REMOVAL	,
TITLE		
BATTO THAT	and executed, respectively, a United States patent application	therefor on
DATES THAT		
INVENTORS	(1) 2007. (2) , 2007. (3)	3), 2007
SIGNED THE	(1) - 2007 (6	3), 200/
DECLARATION	(4), 2007, (5), 2007, (6), 2007, (7), 2007, (8)	a) 2007
	(7), 2007, (8), 2007, (8), 2007, (10), 2007, (11), 2007, a	ind (12), 2007.
	(10), 2001, (1.)	_

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Signed and sealed			
		on	, 2007
duard Cartier		1100/	
Lasher Jaa		on 10   23	, 2007
Rashmi Jha		, •	0007
		on	, 2007
Sivananda Kanakasabapathy			2007
		on	, 2007
XILI - Man		on 10/23	2007
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Renee Mo			2007
	and the second s	on	, 200.
Vijay Narayanan		on	. 2007
No. 2 Page Abiri		Q11	······································
Vamsi Paruchuri		on	, 2007
Mark T. Robson	- Control of the Cont		
Wilding 1. Howard	-	on ···	, 2007
Kathryn T. Schonenberg	And the second s		
		on	, 2007
Michelle Steen		•	
		on	, 2007
Richard Wise	-		
	y - y produce and a second and a	on	, 2007
Ying Zhang	• • •		

	Whereas, we	
INVENTOR		
AND CITY	(1) Eduard A. Cartier	of New York,
	County of New York	and State of New York,
and	(2) Rashmi Jha	of Wappingers Falls,
	County of Dutchess	and State of New York,
and	(3) Sivananda Kanakasabapathy	of Niskayuna,
	County of Schenectady	and State of New York,
and	(4) Xi Li	of Somers,
	County of Westchester	and State of New York,
and	(5) Renee T. Mo	of Briarcliff Manor,
	County of Westchester	and State of New York,
and	(6) Vijay Narayanan	of New York,
	County of New York	and State of New York,
and	(7) Vamsi Paruchuri	of Albany,
	County of Albany	and State of New York,
and	(8) Mark T. Robson	of Danbury,
	County of Fairfield	and State of Connecticut,
and	(9) Kathryn T. Schonenberg	of Wappingers Falls,
	County of Dutchess	and State of New York,
and	(10) Michelle L. Steen	of Danbury,
	County of Fairfield	and State of Connecticut,
and	(11) Richard Wise	of New Windsor,
	County of Orange	and State of New York,
and	(12) Ying Zhang	of Yorktown Heights,
	County of Westchester	and State of New York,
	•	
	have invented certain improvements in	
TITLE	DIELECTRIC SPACER REMOVAL	
DATES THAT INVENTORS	and executed, respectively, a United States patent a	pplication therefor on
SIGNED THE	(1) 2007 (2)	2007 (3) . 2007
DECLARATION	(4) 2007, (5)	. 2007. (6) 10/22 . 2007
	(7) , 2007. (8)	. 2007. (9) . 2007
	(1) , 2007, (2) (4) , 2007, (5) (7) , 2007, (8) (10) , 2007, (11)	, 2007, and (12) . 2007.

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Signed and sealed		
Eduard Cartier	on	, 2007
Eddal d Odillo	on	, 2007
Rashmi Jha		
Sivananda Kanakasabapathy	on	, 2007
Xi Li	on	, 2007
	on	, 2007
Renee Mo  Vijay Narayanan  Vijay Narayanan	on 22 nd c	Ictober, 2007
Vamsi Paruchuri		, 2007
	on	, 2007
Mark T. Robson	on	, 2007
Kathryn T. Schonenberg	on	, 2007
Michelle Steen	OII	
Richard Wise	on	, 2007
	on	, 2007

Ying Zhang

Whereas, we INVENTOR of New York, AND CITY (1) Eduard A. Cartier County of New York and State of New York, (2) Rashmi Jha of Wappingers Falls, and and State of New York, County of Dutchess (3) Sivananda Kanakasabapathy of Niskayuna, and and State of New York, County of Schenectady (4) Xi Li of Somers, and and State of New York, County of Westchester (5) Renee T. Mo of Briarcliff Manor, and County of Westchester and State of New York. (6) Vijay Narayanan of New York. and County of New York and State of New York. (7) Vamsi Paruchuri of Albany, and County of Albany and State of New York, (8) Mark T. Robson of Danbury, and. County of Fairfield and State of Connecticut, (9) Kathryn T. Schonenberg of Wappingers Falls, and County of Dutchess and State of New York. (10) Michelle L. Steen and of Danbury. County of Fairfield and State of Connecticut. (11) Richard Wise and of New Windsor, County of Orange and State of New York, of Yorktown Heights, and (12) Ying Zhang County of Westchester and State of New York. have invented certain improvements in TITLE DIELECTRIC SPACER REMOVAL **DATES THAT** and executed, respectively, a United States patent application therefor on **INVENTORS** SIGNED THE **DECLARATION** 

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Signed and Sealed		
Eduard Cartier	on	, 2007
Eugh a Cartion		
Rashmi Jha	on	, 2007
Rashmi Jha		
	on	, 2007
Sivananda Kanakasabapathy		
	on	, 2007
XiLi		
Renee Mo	on	, 2007
neliee Mo		
Vijay Narayanan	on	, 2007
	on <u>Novem</u>	51016 2000
P. Vanni Knishna Vamsi Paruchuri	VII	<u></u>
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Mark T. Robson		
	on	, 2007
Kathryn T. Schonenberg		
	on	, 200
Michelle Steen		
Distant Wise	on	, 2001
Richard Wise		
Ying Zhang	on	, 200
ing andig		

Whereas, we INVENTOR of New York, (1) Eduard A. Cartier AND CITY and State of New York, County of New York of Wappingers Falls, (2) Rashmi Jha and and State of New York, County of Dutchess of Niskayuna, (3) Sivananda Kanakasabapathy and and State of New York, County of Schenectady of Somers. (4) Xi Li and and State of New York, County of Westchester (5) Renee T. Mo of Briarcliff Manor, and and State of New York, County of Westchester of New York, (6) Vijay Narayanan and and State of New York, County of New York (7) Vamsi Paruchuri of Albany, and and State of New York, County of Albany of Danbury, (8) Mark T. Robson and and State of Connecticut, County of Fairfield of Wappingers Falls, (9) Kathryn T. Schonenberg and and State of New York, County of Dutchess of Danbury. (10) Michelle L. Steen and and State of Connecticut. County of Fairfield of New Windsor. (11) Richard Wise and and State of New York, County of Orange of Yorktown Heights. (12) Ying Zhang and and State of New York, County of Westchester have invented certain improvements in TITLE DIELECTRIC SPACER REMOVAL and executed, respectively, a United States patent application therefor on DATES THAT **INVENTORS** (1) ,2007, (2) ,2007, (3) ,2007 (4) ,2007, (5) ,2007, (6) ,2007 (7) ,2007, (8) **22** Oct O7 ,2007, (9) ,2007 (10) ,2007, (11) ,2007, and (12) ,2 SIGNED THE **DECLARATION** 

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Signed and sealed		
Eduard Cartier	on	, 2007
Rashmi Jha	on	, 2007
Sivananda Kanakasabapathy	on	, 2007
Xi Li	on	, 2007
Renee Mo		, 2007
		, 2007
Vijay Narayanan	on	, 2007
Vamsi Paruchuri  Mark T. Robson		ot 07, 2007
Kathryn T. Schonenberg	on	, 2007
Michelle Steen	on	, 2007
Richard Wise	on	, 200
Ying Zhang	on	, 200
ring chang		

	Whereas, we	
INVENTOR		
AND CITY	(1) Eduard A. Cartier	of New York,
	County of New York	and State of New York,
and	(2) Rashmi Jha	of Wappingers Falls,
	County of Dutchess	and State of New York,
and	(3) Sivananda Kanakasabapathy	of Niskayuna,
	County of Schenectady	and State of New York,
and	(4) Xi Li	of Somers,
	County of Westchester	and State of New York,
and	(5) Renee T. Mo	of Briarcliff Manor,
	County of Westchester	and State of New York,
and	(6) Vijay Narayanan	of New York,
	County of New York	and State of New York,
and	(7) Vamsi Paruchuri	of Albany,
	County of Albany	and State of New York,
and	(8) Mark T. Robson	of Danbury,
	County of Fairfield	and State of Connecticut,
and	(9) Kathryn T. Schonenberg	of Wappingers Falls,
	County of Dutchess	and State of New York,
and	(10) Michelle L. Steen	of Danbury, and State of Connecticut,
	County of Fairfield	of New Windsor,
and	(11) Richard Wise	and State of New York,
	County of Orange	of Yorktown Heights,
and	(12) Ying Zhang	and State of New York,
	County of Westchester	and State of New Tork,
	have invented certain improvements in	
TITLE	DIELECTRIC SPACER REMOVAL	
DATES THAT INVENTORS	and executed, respectively, a United States patent a	
SIGNED THE	(1), 2007, (2)	_, 2007, (3), 2007
DECLARATION	(4), 2007, (5)	_, 2007, (6), 2007
	(7), 2007, (8)	_, 2007, (9) <i>Oct.</i> _ (9, 2007
	(1), 2007, (2) (4), 2007, (5) (7), 2007, (8) (10), 2007, (11)	_, 2007, and (12), 2007.

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Signed and sealed		
Edward Oadday	on	, 2007
Eduard Cartier		
Rashmi Jha	on	, 2007
	on	, 2007
Sivananda Kanakasabapathy		
Xi Li	on	, 2007
	on	, 2007
Renee Mo		
Vijay Narayanan	on	, 2007
	on	. 2007
Vamsi Paruchuri		
Mark T. Robson		, 2007
Karf J. Schoolsborg	on <u>Ocf.</u>	/9 2007
Kathryn T. Schonenberg		, 2007
Michelle Steen	on	, 2007
	on	200-
Richard Wise		, 2007
	on	, 2007
Ying Zhang		

	Whereas, we	
INVENTOR	• •	
AND CITY	(1) Eduard A. Cartier	of New York,
	County of New York	and State of New York,
and	(2) Rashmi Jha	of Wappingers Falls,
	County of Dutchess	and State of New York,
and	(3) Sivananda Kanakasabapathy	of Niskayuna,
	County of Schenectady	and State of New York,
and	(4) Xi Li	of Somers,
	County of Westchester	and State of New York,
and	(5) Renee T. Mo	of Briarcliff Manor,
	County of Westchester	and State of New York,
and	(6) Vijay Narayanan	of New York,
	County of New York	and State of New York,
and	(7) Vamsi Paruchuri	of Albany,
	County of Albany	and State of New York,
and	(8) Mark T. Robson	of Danbury,
	County of Fairfield	and State of Connecticut,
and	(9) Kathryn T. Schonenberg	of Wappingers Falls,
	County of Dutchess	and State of New York,
and	(10) Michelle L. Steen	of Danbury,
	County of Fairfield	and State of Connecticut,
and	(11) Richard Wise	of New Windsor,
	County of Orange	and State of New York,
and	(12) Ying Zhang	of Yorktown Heights,
	County of Westchester	and State of New York,
	have invented certain improvements in	
	riave invented certain improvements in	
TITLE	DIELECTRIC SPACER REMOVAL	
		At a salt a such as a sale
DATES THAT	and executed, respectively, a United States patent appli-	cation therefor on
INVENTORS		007 (0) 0007
SIGNED THE	(1), 2007, (2), 2	007, (3), 2007
DECLARATION	(4), 2007, (5), 2	007, (6), 2007
	(1) , 2007, (2) , 2 (4) , 2007, (5) , 2 (7) , 2007, (8) , 2 (10) October 34, 2007, (11) , 2	007, (9), 2007
	(10) <u>UCTOBELL &amp; 7</u> , 2007, (11), 2	00/, and (12), 200/.

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Signed and sealed		
Eduard Cartier	on	, 200
Rashmi Jha	on	, 200
Sivananda Kanakasabapathy	on	, 200
Xi Li	on	, 200
	on	, 2007
Renee Mo	on	. 200
Vijay Narayanan		
Vamsi Paruchuri		
Mark T. Robson		
Kathryn T. Schonenberg,	-	
Michelle Steen	on October	<del>34</del> , 200
Richard Wise	on	, 2007
Ying Zhang	on	, 200

Whereas, we **INVENTOR** (1) Eduard A. Cartier AND CITY of New York. County of New York and State of New York, (2) Rashmi Jha of Wappingers Falls, and County of Dutchess and State of New York, (3) Sivananda Kanakasabapathy of Niskayuna, and County of Schenectady and State of New York, (4) Xi Li of Somers. and County of Westchester and State of New York, (5) Renee T. Mo of Briarcliff Manor, and County of Westchester and State of New York, (6) Vijay Narayanan of New York. and County of New York and State of New York, (7) Vamsi Paruchuri and of Albany, County of Albany and State of New York, (8) Mark T. Robson and of Danbury, County of Fairfield and State of Connecticut, (9) Kathryn T. Schonenberg and of Wappingers Falls, County of Dutchess and State of New York, (10) Michelle L. Steen and of Danbury. County of Fairfield and State of Connecticut. (11) Richard Wise and of New Windsor, County of Orange and State of New York. and (12) Ying Zhang of Yorktown Heights, County of Westchester and State of New York, have invented certain improvements in TITLE DIELECTRIC SPACER REMOVAL DATES THAT and executed, respectively, a United States patent application therefor on **INVENTORS**  

 (1)
 ,2007, (2)
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 SIGNED THE DECLARATION

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Signed and sealed		
	on	, 2007
Eduard Cartier		
Rashmi Jha	on	, 2007
	on	2007
Sivananda Kanakasabapathy		, 2007
	on	, 2007
Xi Li		
Renee Mo	on	, 2007
	on	2007
Vijay Narayanan	OII	
	on	, 2007
Vamsi Paruchuri		
Mark T. Robson	on	, 2007
	on	2007
Kathryn T. Schonenberg		, 2007
	on	, 2007
Michelle Steen		<b>***</b>
Richard Wise	on Oct o	<u> </u>
	on	2007
Ying Zhang	on	, 2007

Whereas, we INVENTOR of New York. (1) Eduard A. Cartier AND CITY and State of New York. County of New York of Wappingers Falls, and (2) Rashmi Jha and State of New York, County of Dutchess of Niskavuna. (3) Sivananda Kanakasabapathy and and State of New York. County of Schenectady of Somers. and (4) Xi Li and State of New York, County of Westchester of Briarcliff Manor, (5) Renee T. Mo and and State of New York, County of Westchester of New York. (6) Vijay Narayanan and and State of New York, County of New York of Albany, (7) Vamsi Paruchuri and and State of New York, County of Albany (8) Mark T. Robson of Danbury, and and State of Connecticut, County of Fairfield of Wappingers Falls, (9) Kathryn T. Schonenberg and and State of New York, County of Dutchess of Danbury, (10) Michelle L. Steen and and State of Connecticut, County of Fairfield of New Windsor, (11) Richard Wise and and State of New York, County of Orange of Yorktown Heights, (12) Ying Zhang and and State of New York, County of Westchester have invented certain improvements in TITLE DIELECTRIC SPACER REMOVAL and executed, respectively, a United States patent application therefor on DATES THAT **INVENTORS**  

 (1)
 ,2007, (2)
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 SIGNED THE DECLARATION

Whereas, INTERNATIONAL BUSINESS MACHINES CORPORATION, a corporation of New York, having a place of business at Armonk, New York 10504, (hereinafter called IBM), desires to acquire the entire right, title and interest in the said application and invention, and to any United States and foreign patents to be obtained therefor;

Now therefore, for a valuable consideration, receipt whereof is hereby acknowledged, we, the above named, hereby sell, assign, and transfer to IBM, its successors and assigns, the entire right, title and interest in the said application and invention therein disclosed for the United States and foreign countries, and in all foreign countries, and all rights of priority resulting from the filing of said United States application, and we request the Commissioner of Patents to issue any Letters Patent granted upon the inventions set forth in said application to IBM, its successors and assigns; and we hereby agree that IBM may apply for foreign Letters Patent on said invention and we will execute all papers necessary in connection with the United States and foreign applications when called upon to do so by IBM.

Signed and sealed		
Eduard Cartier	on	, 2007
Rashmi Jha	on	, 2007
Sivananda Kanakasabapathy	on	, 2007
Xi Li	on	, 2007
Renee Mo	on	, 2007
Vijay Narayanan	on	, 2007
Vamsi Paruchuri	on	, 2007
Mark T. Robson	on	, 2007
	on	, 2007
Kathryn T. Schonenberg	on	, 2007
Michelle Steen	on	, 2007
Richard Wise  Ying Zhang  Ying Zhang		
Ying Zhang		

**RECORDED: 11/27/2007**