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1. Name of conveying partylies): 100966490 address of receiving partylies): 1. Name of conveying partylies): 100966490 address of receiving partylies): Additional name(s) of conveying partylies): Name: International Business Machines Corporation 1. Yes [X] No 3. Nature of Conveying partylies): Name: Internat Address: N/A 3. Nature of Conveyance: [X] No [Y] Assignment [] Merger [] Other Chinge of Name [] Other [] Cherger [] Other [] Cherger [] Other [] Yes [] Application number(s) or patent number(s): [] Yes Title of Application SHALLOW TRENCH ISOLATION (STD WITH BILAYER OF OXIDE-NITRIDE FOR VLSI Additional numbers attached? [] Yes A. Patent Application No.(s) B. Patent No.(s) Patent No.(s) S. Name and address of party whom correspond- ence concerning document should be mailed: [] Total Fee (37 CFR 3.41) S40.00 [] Merger Merger Mither Paten Manual Eventer Malling Late No. (s) [] Enclosed [] Merger Merger Mither Paten Manual Machines, Row Asgement, Walning Cate No. (s) [] Annotzet to be charged to Deposit Account number (s) 0000 for State (CT S. Name and address of party whom correspond- ence concerning document should be	r			IBM Docket No.: HQ9-98-091
Farid Agahi Herbert Ho Cary Bronner Radhika Srinivasan (1) Yes MAD Additional name(s) of conveying party(ies) attached? (1) Yes Name: International Business Machines Corporation Internal Address: N/A 3. Nature of Conveyance: (2) Assignment (1) Merger (1) Security Agreement (1) Merger (1) Charge of Name (1) Other (1) Merger (1) Security Agreement (1) Charge of Name (1) Other (1) Application: "SHALLOW TERENCH ISOLATION (ST) WITH BILAYER OF OXIDE-NITRIDE FOR VLSI Application: "SHALLOW TERENCH SOLATION (ST) WITH BILAYER OF OXIDE-NITRIDE FOR VLSI Application is: 1/12		To the Honorable Commissioner of Pa	I Time Can ber Han The State	ed original documents or copy thereof.
Farid Agahi Herbert Ho Gary Bronner Radhika Srinivasan (1) Yes MAI (1) Yes Name: International Business Machines Corporation Internal Address: N/A Additional name(s) of conveying party(ies) attached? Internal Address: N/A Street Address: N/A 3. Nature of Conveyance: Internal Address: N/A Y Assignment [1] Merger [1] Other Change of Name State: New York [2] Code: Disord State: New York [3] Nature of Conveyince: [1] Yes [X] No [4] Application number(s): Image: International Business Machines Corporation [5] Additional Name(s) & Address: Name State: New York [6] Other State: MeW York State: New York [7] Yes [X] No Image: International Name(s) [8] Additional number(s): Title of Application: "SHALLOW TERNECH ISOLATION (STI) WITH BILAYER OF OXIDE-NITRIDE FOR VLSI Application No (s) [9] Additional numbers attached? Image: International states State: New York State: New York [9] Additional numbers attached? Image: International State: New York State: New York [9] Additional numbers attached? Image: International State: New York State: New York [9] Additional numb	1.	Name of conveying party(ies): 1009	66490	address of receiving party(ies):
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Image:		Farid Agahi Gary Bronner MINV Herbert Ho Radhika Srinivasan	Name: Internation	al Business Machines Corporation
3. Nature of Conveyance: M Assignment [] Merger [] Security Agreement [] Change of Name [] Other	Additi		Internal Address: N	
[M] Assignment [] Merger [] Security Agreement [] Change of Name [] Other	3.		Street Address: Ne	w Orchard Road
[] Security Agreement [] Change of Name Zip Code: 10504 [] Other		·	City: Armonk	State: New York
Execution Date: 1/12/99, 1/12/99, 1/12/99, 1/12/99, 1/12/99 [] Yes [X] No 4. Application number(s) or patent number(s): Title of Application: "SHALLOW TRENCH ISOLATION (STI) WITH BILAYER OF OXIDE-NITRIDE FOR VLSI APPLICATIONS" If this document is being filed together with a new application, the execution date of the application is: 1/12; 1/12; 1/14; 1/20 19.99 A. Patent Application No.(s) B. Patent No.(s) R0 00'0+ 5. Name and address of party whom correspondence is being encocoming document should be mailed: 6. Total number of applications and patents involved:	[]	Security Agreement [] Change of Name	Zip Code: 10504	
4. Application number(s) or patent number(s): I] Yes [X] No 4. Application number(s) or patent number(s): Title of Application: "SHALLOW TRENCH ISOLATION (STI) WITH BILAYER OF OXIDE-NITRIDE FOR VLSI APPLICATIONS" If this document is being filed together with a new application, the execution date of the application is: 1/12; 1/1	Evecu	tion Date: 1/12/99 1/12/99 1/14/99 1/14/99	Additional Name(s) & Address(es) attached?
Title of Application: "SHALLOW TRENCH ISOLATION (STI) WITH BILAYER OF OXIDE-NITRIDE FOR VLSI APPLICATIONS" If this document is being filed together with a new application, the execution date of the application is: 1/12; 1/1	LACCU	1/12/33, 1/12/33, 1/14/33, 1/20/99	[]Yes	[X] No
APPLICATIONS" If this document is being filed together with a new application, the execution date of the application is: <u>1/12; 1/12;</u>	4.	Application number(s) or patent number(s):		
Name: DeLIO & PETERSON, LLC Street Address: 121 Whitney Avenue City: New Haven State: OI Zip Code: 06510-1241 CERTIFICATE OF MAILING UNDER 37 CFR 1.10 1 I hereby certify that, on the date shown below, this correspondence is being deposited with the United States Postal States vice in an envelope addressed to the Commissioner of Patents and Trademarks, Box Assignments, Washington, D.C. 2023, as "Express Mail Post Office to Addressee" Mailing Label No. E2464937860US Office Petruary_5_1999 8. Assignee IBM Corporation Deposit Account Number: Bignature 09-0458 Date: 09-0458 Do NOT USE THIS SPACE 9. 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. H. Daniel Schnurman Signature Name of Person Signing Signature Signature Signature Total number of pages including cover sheet, attachments, and document: 15	5.	A. Patent Application No.(s) B. Patent Application No.(s) B. Patent Application No.(s) B. Patent Additional numbers	tent No.(s) attached? []Yes [H3 00 00 EC 201 FC 201
Street Address: 121 Whitney Avenue City: New Haven State: CT Zip Code: 06510-1241 CERTIFICATE OF MAILING UNDER 37 CFR 1.10 [] Enclosed I hereby certify that, on the date shown below, this correspondence is being deposited with the United States Postal Service in an envelope addressed to the Commissioner of Patents and Trademarks, Box Assignments, Washington, DC. 20231, as "Express Mail Post Office to Addressee" Mailing Label No. EE466937860US on February 5, 1999 Name of person mailing pader Signature. J Do NOT USE THIS SPACE 9. Statement and Signature. Job Not Use THIS SPACE 9. Statement and Signature. Job Not Use THIS SPACE 9. Statement and Signature. Job Not Use THIS SPACE 9. Statement and Signature. Job Not Use THIS SPACE 9. Statement and Signature. Job Not Use THIS SPACE 9. Statement and Signature. Job Not Use THIS SPACE 9. Statement and Signature. Job Not Use THIS SPACE 9. Statement and Signature. Job Not Use THIS SPACE 9. Statement and Signature. Job Not Use THIS SPACE 9. Statement and Signature. Job Method Schnurmann Name of Person Signing Signature Registration No. 35,791 Ph	-			
CERTIFICATE OF MAILING UNDER 37 CFR 1.10 Account number below Account number below Interview of the optimission of Patents and Trademarks, Box Assignments, Washington, D.C. 20231, as "Express Mail Post Office to Addressee" Mailing Label No. E468937860US OF Petentary 5, 1999 RobinAnn Zeno Name of person mailing paper Signature OP ONOT USE THIS SPACE ON NOT USE THIS SPACE 9. 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. H. Daniel Schnurmann Name of Person Signing Signature February 5, 1999 Do NOT USE THIS SPACE 9. 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. H. Daniel Schnurmann Name of Person Signing Signature Date Date Date	Street City:	Address: 121 Whitney Avenue New Haven State: CT] [] En	closed
on February 5, 1999 RobinAnn Zeno 8. Assignee IBM Corporation Deposit Account Name of person mailing paper 9. 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. 9. Statement H. Daniel Schnurmann Signature February 5, 1979 Name of Person Signing Signature February 5, 1979 Total number of pages including cover sheet, attachments, and document: [5]	deposite the Com D.C. 20	v certify that, on the date shown below, this correspondence is being ad with the United States Postal Service in an envelope addressed to missioner of Patents and Trademarks, Box Assignments, Washington, 231, as "Express Mail Post Office to Addressee" Mailing Label No.	Ac [X] Ar	count number below
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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. H. Daniel Schnurmann Name of Person Signing Image: Comparison of the original document. Registration No. 35,791 Phone No.: 914-894-2481 Total number of pages including cover sheet, attachments, and document: [5]	0 0			
Name of Person Signing Signature Date Registration No. 35,791 Phone No.: 914-894-2481 Total number of pages including cover sheet, attachments, and document: [5]	Тс	the best of my knowledge and belief, the foregoing info	ormation is true and c	correct and any
Total number of pages including cover sheet, attachments, and document: [5]	Name	of Person Signing Signature	Chrume-	- February 5, 1999 Date J
				I

PATENT REEL: 9757 FRAME: 0007

ASSIGNMENT

Whereas, we

Inventor and City	(1) FARID AGAHI County of TRAVIS	

and

(2) GARY BRONNER County Of DUTCHESS

·and

(3) **HERBERT HO** County of **ORANGE** and State of **TEXAS**

City of AUSTIN

City Of **STORMVILLE** and State of **NEW YORK**

City of NEW WINDSOR and State of NEW YORK

and

(4) **RADHIKA SRINIVASAN** County of **BERGEN**

City of MAHWAH and State of NEW JERSEY

have invented certain improvements inTitle"SHALLOW TRENCH ISOLATION (STI)WITH BILAYER OF OXIDE-NITRIDE FORVLSI APPLICATIONS"

Date That	and have executed, respectively, a United States patent application therefore
Inventors	on the contract of the contrac
Signed the	(1) Freciel (1) 1/12, 19 99, and (2), 19,
Declaration	and (3), 19, and (4), 19

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 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 invention 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.

TITLE: "SHALLOW TRENCH ISOLATION (STI) WITH BILAYER OF OXIDE-NITRIDE FOR VLSI APPLICATIONS"

City	(1) Signed at	Austin	Texas	
		City	State	
Date	on [*]	1 / 12 , 19 99	FARID AGAHI	signature
City	(2) Signed at	East Fishkill	New York	
		City	State	
Date	on	, 19		signature
	<u></u>		GARY BRONNER	
	(3) Signed at	East Fishkill	New York	
	(2) 2.8.1.1.1	City	State	
Date	on	, 19		signature
Daic		, , , , ,	HERBERT HO	
City	(4) Signed at	East Fishkill	New York	
City	(+) Signed at	City	State	
		10		signature
Date	on	, 19	RADHIKA SRINIVASAN	Jightedic
:hm10(214000ccg1			
iomioc)214000asg1			

ASSIGNMENT

Whereas,	, we
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Inventor and (1) FARID AGAHI City County of TRAVIS

and

(2) GARY BRONNER County Of DUTCHESS

and

(3) **HERBERT HO** County of **ORANGE** City of AUSTIN and State of TEXAS

City Of **STORMVILLE** and State of **NEW YORK**

City of NEW WINDSOR and State of NEW YORK

and

(4) **RADHIKA SRINIVASAN** County of **BERGEN**

City of MAHWAH and State of NEW JERSEY

have invented certain improvements in Title "SHALLOW TRENCH ISOLATION (STI) WITH BILAYER OF OXIDE-NITRIDE FOR VLSI APPLICATIONS"

Date That	and hav	e executed,	respectively	, a United	States patent	application	therefor
Inventors	on					12 6	t.
Signed the	(1)		, 19_		1) Januar		
Declaration	and (3)	JANMARY 1	<u> </u>	<u>99</u> , and (4	1) January	<u>20</u> , 19 <u>9</u>	9.

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 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 invention 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.

TITLE: "SHALLOW TRENCH ISOLATION (STI) WITH BILAYER OF OXIDE-NITRIDE FOR VLSI APPLICATIONS"

City (1) Signed at	Texas	
City	State	
Date on, 19_99		signature
	FARID AGAHI	
City (2) Signed at East Fishkill	New York	
City	State	
Date on Jan 12, 1999	GARY BRONNER	signature
(3) Signed at <u>East Fishkill</u> City	New York	
Date on Jan 14, 1999	HERBERT HO	signature
City (4) Signed at <u>East Fishkill</u> City	New York State	
Date on <u>Jan 20</u> , 19 <u>99</u>	Radhika Sunvesan RADHIKA SRINIVASAN	signature
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PAGE 2 OF 2

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