Additional numbers 101848147 Patent and Trademark Of Comparison of Patents and Trademarks: Please record the attached original documents or copy thereo To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereo Name of Conveying party(ies): To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereo Name of Conveying party(ies): Name and address of recovering party(ies): Name: International Business Machines Corporation Joseph J. Sinterk Name: International Business Machines Corporation Joseph J. Sinterk Marger Steat Address: Steet Address: New Orchard Read Other City: Armonk Steat: NY ZIP: 10504 Additional number(s) or registration numbers(s): If this document is being filed together with a new septication, the execution date of the applications is: NO2/01, 803/01, 8/28/01, 8/9/10/01 Additional numbers attached? Yes Street Address: Sculpt State: NY ZIP: 10504 Additional numbers attached? Yes Name: Richard L. Catania, Esg. Frease (City: State: NY ZIP: 11520 Internal Address: Supple State involved: Internal Address: Supple State Count Street Address: Supple State: NY ZIP: 11520		09-19-20)01 c	ocket No.: END920000012US1
To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof Name of conveying party(les): Thomas Kikard Miltry Additional names(s) of conveying party(les): Additional names(s) of conveying party(les): Nature of conveying party(les): Additional names(s) of conveying party(les): Nature of conveying party(les): Additional names(s) of conveying party(les): Nature of conveying party(les): Name: International Business Machines Corporation International Business Machines Corporation International Business Machines Corporation International Business Machines Corporation Street Address: New Orchard Road Street Address: New Orchard Road B. Patent No.(s) B. Patent No.(s) B. Patent No.(s) B. Patent No.(s) B. Patent No.(s) Street Address: Street Address:	(Rev. 6-93) OMB No. 0651-0011 (exp.4/94) Corgright 1994-97 LegalStar P08/REV02	10184814		U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office
1. Name of conveying partylies): Thomas Richard Mile: Thomas Richard Sile: () () () () () () () () () () () () () (v of Patanta and Tradamark		
3. Nature of conveyance: Street Address: New Orchard Road Security Agreement Change of Name City: Armonk State: NY_ZIP: 10504 Cher City: Armonk State: NY_ZIP: 10504 Execution Date: 8/02/01, 8/03/01, 8/28/01 & 9/10/01 Additional name(s) & address(es) attached? Yes No 4. Application number(s) or registration number(s): If this document is being filed together with a new application, the execution date of the application is: 8/02/01, 8/03/01	1. Name of conveying party(ies): Thomas Richard Miller Konstantinos I. Papathomas Brian Eugene Curcio Joseph J. Sniezek	9.1501	2. Name and addres Name: Internatio	s of receiving party(ies): nal Business Machines Corporation
S2 Assignment Merger Security Agreement Change of Name Other City: Armonk Street Address: New Orchard Read City: Armonk State: NA Application number(s) or registration numbers(s): If this document is being filed together with a new application, the execution date of the application is: \$\frac{20(1), \$\frac{20(3)}{2(0)}, \$\frac{20(3)}{2(0)}, \$\frac{1}{2(0)}, \$\				
□ Security Agreement □ Change of Name □ Other □ City: Armonk State: NY_ZIP: 10504 Execution Date: 8/02/01, 8/03/01, 8/28/01 & 9/10/01 Additional name(s) & address(es) attached? □ Yes □ No 4. Application number(s) or registration numbers(s): If this document is being filed together with a new application, the execution date of the application is: 8/02/01, 8/03/01, 8				
□ Other City: Armonk State: NY ZIP: 10504 Execution Date: 8/02/01, 8/03/01, 8/28/01 & 9/10/01 Additional name(s) & address(es) attached? □ Yes No 4. Application number(s) or registration numbers(s): If this document is being filed together with a new application, the execution date of the application is: 8/02/01, 8/03/01, A. Patent Application No.(s) B. Patent No.(s) B. Patent No.(s) 8/28/01 & 9/10 9/878,533 Additional numbers attached? Yes Yes No 5. Name and address of party to whom correspondence concerning document should be mailed: 6. Total number of applications and patents involved: 1 Name: Richard L. Catania, Esq. 7. Total fee (37 CFR 3.41):	X Assignment	Merger	Street Address: 1	New Orchard Road
Execution Date: 8/02/01, 8/03/01, 8/28/01 & 9/10/01 Additional name(s) & address(es) attached? Yes Application number(s) or registration numbers(s): If this document is being filed together with a new application, the execution date of the application is: 8/02/01, 8/03/01, 8/03/01, 8/28/01 & 9/10 A. Patent Application No.(s) B. Patent No.(s) 8/28/01 & 9/10 09/878,533 Additional numbers attached? Yes No 5. Name and address of party to whom correspondence concerning document should be mailed: 6. Total number of applications and patents involved: 1 Name: Richard L. Catania, Esq. 7. Total fee (37 CFR 3.41):	Security Agreement	Change of Name		
4. Application number(s) or registration numbers(s): If this document is being filed together with a new application, the execution date of the application is: 8/02/01, 8/03/01, 8/28/01 & 9/10 4. Application No.(s) B. Patent No.(s) 8/28/01 & 9/10 09/878,533 Additional numbers attached? Yes Yes No 5. Name and address of party to whom correspondence concerning document should be mailed: 6. Total number of applications and patents involved: 1 Name: Richard L. Catania, Esq. 7. Total fee (37 CFR 3.41):	Dother		City: Armonk	State: <u>NY</u> ZIP: <u>10504</u>
If this document is being filed together with a new application, the execution date of the application is: 8/02/01, 8/03/01, 8/0	Execution Date: 8/02/01, 8/03/01, 8/28/01 & 9/10/01		Additional name(s) & a	ddress(es) attached? 🔲 Yes 🔲 No
concerning document should be mailed: 0. Total fluinder of applications and patents involved. 1 Name: Richard L. Catania, Esq. 7. Total fee (37 CFR 3.41):\$ 40.00 Internal Address:	09/878,533	Additional numbers att	ached? 🗌 Yes 🔀 N	lo
Internal Address:			6. Total number of applications and patents involved:	
119/2001 6T0N11 00000054 090457 09878533 FC:581 40.00 CH Street Address: Scully, Scott, Murphy & Presser, 400 Street Address: Scully, Scott, Murphy & Presser, 400 8. Deposit account number: Garden City Plaza 09-0457 City: Garden City State: NY ZIP: 11530 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. John R. Pivnichny, Reg. No: 43,001 John Curruchny Name of Person Signing John Curruchny Signature Total number of pages including cover sheet, attachments, and document 3	Name: Richard L. Catania, Esg	•	– 7. Total fee (37 CFR	3.41):\$ 40.00
Street Address: Scully, Scott, Murphy & Presser, 400 8. Deposit account number: Garden City Plaza 09-0457 City: Garden City State: NY_ZIP: 11530 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. John R. Pivnichny, Reg. No: 43,001 John Currently Signature 09/10/D J Name of Person Signing John Currently, Signature 3 Total number of pages including cover sheet, attachments, and document 3 Date	/19/2 <u>001 GTON11 00000054 090457 (</u>	9878533		• •
Garden City Plaza 8. Deposit account number: Garden City State: NY ZIP: 11530 City: Garden City State: NY ZIP: 11530 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. John R. Pivnichny, Reg. No: 43,001 John Currichny, Cop/lo/o J Name of Person Signing Signature Total number of pages including cover sheet, attachments, and document; Jate	FC:581 40.00 CH		_ Authorized to	be charged to deposit account
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. John R. Pivnichny, Reg. No: 43,001 Name of Person Signing Total number of pages including cover sheet, attachments, and document	Garden City Plaza			umber:
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	To the best of my knowledge ar of the original document. John R. Pivnichny, Reg. No: 43 Name of Person Signin	<u>,001</u> John	<u>Curricliny</u> Signature	07/10/01 Date
		nuer of pages including cover		L: 012161 FRAME: 0629

IBM Docket No.: END920000012US1

ASSIGNMENT

Whereas, we

nventor and City	(1) Thomas Richard Miller County of Broome	City of Endwell and State of New York	
and	(2) Konstantinos I. Papathomas County of Tioga	City of Endicott and State of New York	
and	(3) Brian Eugene Curcio County of Broome	City of Binghamton and State of New York	
and	(4) Joseph J. Sniezek County of Broome	City of Endwell and State of New York	
and	(5) County of	City of and State of	
and	(6) County of	City of and State of	
and	(7) County of	City of and State of	
and	(8) County of	City of and State of	
		in	
	have invented certain improvements		
Title	•	TED WIRING BOARDS WITH MULTIPLE D	IFFERENTIAL
Dates That Inventors	STRUCTURE FOR HIGH SPEED PRIN IMPEDANCE-CONTROLLED LAYER and have executed, respectively, a Un	TED WIRING BOARDS WITH MULTIPLE D	
Dates That	STRUCTURE FOR HIGH SPEED PRIN IMPEDANCE-CONTROLLED LAYER and have executed, respectively, a Un (1) $\Im [3/0]$	TED WIRING BOARDS WITH MULTIPLE D nited States patent application therefor on and, (2) $\sum 2 \otimes 4 + 1$	and,
Dates That Inventors Signed the	STRUCTURE FOR HIGH SPEED PRIN IMPEDANCE-CONTROLLED LAYER and have executed, respectively, a Un (1) $\Im \frac{3}{0} $; (3) $\Im \frac{2}{0} $	red WIRING BOARDS WITH MULTIPLE D hited States patent application therefor on and, (2) ミリニタ (4) and, (4) のりしの (の)	
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Dates That Inventors Signed the	STRUCTURE FOR HIGH SPEED PRIN IMPEDANCE-CONTROLLED LAYER and have executed, respectively, a Un (1) $\partial \mathbf{j} / \mathbf{o} \mathbf{i}$ (3) $\partial 2 / \mathbf{o} \mathbf{i}$ (5) (7) Whereas, INTERNATIONAL BUSINE place of business at Armonk, New	red WIRING BOARDS WITH MULTIPLE D hited States patent application therefor on and, (2) ミリンジ (4) and, (4) のタイロの (の) and, (6)	and, and, and, and, ration of New York, having a res to acquire the entire right ,

(Signatures of Inventors on Page 2)

PATENT REEL: 012161 FRAME: 0630

		IBM Docket No.: END920000012US1	
	ASSIGNM	ENT (Continued)	
Title	STRUCTURE FOR HIGH SPEED PRINTED WIRING BOARDS WITH MULTIPLE DIFFERENTIAL IMPEDANCE-CONTROLLED LAYER		
City Date	(1) Signed at Enclicant NY on8/5/01	Avnos Richard Will (Signature of Inventor)	
		Thomas Richard Miller (Typed Name of Inventor)	
City Date	(2) Signed at Endicott NY on <u>\$128/41</u>	Konstantivos I. Paputtionas (Signature of Inventor)	
		Konstantinos I. Papathomas (Typed Name of Inventor)	
City Date	(3) Signed at $Endicott, NV$ on $B[2]oi$	Bran Engene Cure (Signature of Inventor)	
City	(4) Signed at Endicott, NY	Brian Eugene Curcio (Typed Name of Inventor)	
Date		(Signature of Inventor) Joseph J. Sniezek	
City	(5) Signed at	(Typed Name of Inventor)	
Date	on	(Signature of Inventor)	
City	(6) Signed at	(Typed Name of Inventor)	
Date	(6) Signed at on	(Signature of Inventor)	
		(Typed Name of Inventor)	
City Date	(7) Signed at on	(Signature of Inventor)	
		(Typed Name of Inventor)	
City Date	(8) Signed at on	(Signature of Inventor)	
		(Typed Name of Inventor)	

RECORDED: 09/15/2001

PATENT REEL: 012161 FRAME: 0631

Page 2 of 2