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REEL: 015256 FRAME: 0817

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Tab settings ↔ ↔ V V		V	original documents or copy thereof.
To the Honorable Commissioner of Patent	ts and Trademarks:		
 Name of conveying party(ies): 		2. Name and addres	s of receiving party(ies)
PHILIP GEORGE EMMA		Name.	NAL BUSINESS MACHINES CORPORATION
ALLAN MARK HARTSTEIN		Internal Address:	
THOMAS ROBERTS PUZAK MOINUDDIN KHALIL AHMED QURES	หเ	Internal Address:	<u> </u>
Additional name(s) of conveying party(ies) attached			
3. Nature of conveyance:		=	
🗳 Assignment 🖓 Me	rger		
	ange of Name	Street Address:	
Security Agreement 🛁 Cha	ange of Name		
Other	:_		
SEPTEMBER 22, 2004,		ARMONK	State: <u></u> _Zip:_10504
SEPTEMBER 27, 2004	8.		_
Execution Date: SEPTEMBER 24, 2004		Additional name(s) &	address(es) attached? 🖵 Yes 🖉 No 🔤
4. Application number(s) or patent number	er(s):		
If this document is being filed together	with a new appl	ication, the execution (date of the application is:
	with a new app	B. Patent No.(s)	•••
A. Patent Application No.(s)			
10/955,780			
	dditional numbers al	tached? 🛄 Yes 📴 No	
5. Name and address of party to whom o			pplications and patents involved:
concerning document should be mailed	d:		<u> </u>
Name: KEUSEY, TUTUNJIAN & BITE	TTO, P.C.	7. Total fee (37 CFR	\$ 3.41)\$ <u>40.00</u>
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SUITE 128		Authorized to	be charged to deposit account
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9. Statement and signature.	-f the formales	information is true and	d correct and any attached CODV
To the best of my knowledge and beli is a true copy of the original documen		\wedge \wedge \perp	
James J. Bitetto	" ()	UNAT2	12/18/24
Name of Person Signing	<i>- چ</i> حر –	Signature	- Date
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Mail docume	ota to be recorded will	frisheet, attachments, and threquired cover sheet inform	nation to:
Commissioner of Patents & Trademerks, Box Assignments Washington, D.C. 20231			
	4493101QC	MI 0.0. 20201	
			PATENT

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Assignment

Whereas, I/we

INVENTOR	(1) Philip George Emma	of Danbury
AND CITY	County of Fairfield	and State of Connecticut
INVENTOR	(2) Allan Mark Hartstein	of Chappaqua
AND CITY	County of Westchester	and State of New York
INVENTOR	(3) Thomas Roberts Puzak	of Ridgefield
AND CITY	County of Fairfield	and State of Connecticut
INVENTOR	(4) Moinuddin Khalil Ahmed Qureshi	of Austin
AND CITY	County of Travis	and State of Texas

have invented certain improvements in

TITLE APPARATUS AND METHOD FOR FILTERING UNUSED SUB-BLOCKS IN CACHE MEMORIES

DATES THAT INVENTORS and executed, respectively, a United States patent application therefor on (1) 9/22/04, 2004; (2) 9/27/, 2004; SIGNED THE DECLARATION (3) 9/27, 2004; and (4) 24/5407, 2004;

> 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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PATENT REEL: 015256 FRAME: 0818 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 inventions set forth in said applications 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

CITY AND DATE SIGNATURE	(1) at Yorktown Heights, NY on 9/22 2004 (Philip George Emma) INVENTOR FIRST NAME MIDDLE INITIAL LAST NAME
CITY AND DATE SIGNATURE	(2) at <u>Yunktown Heights, MY</u> on <u>9/27/2004</u> <u>Allan Mark Hartstein) INVENTOR</u> FIRST NAME MIDDLE INITIAL LAST NAME
CITY AND DATE SIGNATURE	(3) at on 2004, (Thomas Roberts Puzak) INVENTOR FIRST NAME MIDDLE INITIAL LAST NAME

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 inventions set forth in said applications 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 (1) at CITY AND 2004. ٥n DATE (Philip George Emma) INVENTOR SIGNATURE FIRST NAME MIDDLE INITIAL LAST NAME (2) at _ CITY AND 2004. on DATE SIGNATURE (Allan Mark Hartstein) INVENTOR FIRST NAME MIDDLE INITIAL LAST NAME 16901 (3) at CITY AND 00DATE SIGNATURE (Thomas Roberts Puzak) INVENTOR FIRST NAME MIDDLE INITIAL LAST NAME

2 of 3

CITY AND

(4) at <u>AUSTIN (TEXAS)</u> on 24TH September 2004, p

DATE

SIGNATURE

(Moinuddin Khalil Ahmed Qureshi) INVENTOR FIRST NAME MIDDLE INITIAL LAST NAME

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PATENT REEL: 015256 FRAME

RECORDED: 10/18/2004