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To the Assistant Commissioner of Patents: Please record the attached original documents or copy there Name and address of receiving party(ies): Name of conveying party(ies): Sandeep Kishan Singhal Name: IBM Corporation 5-39-00 Edith Helen Stern Barry E. Willner Street Address: New Orchard Road City: Armonk State: NY ZIP: 10504 Additional name(s) of conveying Additional name(s) & address(es) attached? party(ies) attached __Yes XX No __Yes XX No 3. Nature of conveyance: Execution Date: May 17, 2000 May 26, 2000 May 22, 2000 XX Assignment 09/583,318 Application number(s) or patent number(s): If this document is being filed together with a new patent application, the execution date of the patent application is: May 17, 2000; May 26, 2000; and May 22, 2000. A. Patent Application No.(s) B. Patent No.(s) Additional numbers attached? Yes XX No Total Number of applications and patents 5. Name and address of party to whom correspondence concerning document involved: One should be mailed: Name: Total fee (37 CFR 3.41) \$ 40.00 Joseph A. Sawyer, Jr. Enclosed Internal Address: Sawyer Law Group LLP XX Authorized to be charged to deposit account Street Address: P.O. Box 51418 8. Deposit Account Number: 09-0452 (IBM Corp.) Palo Alto, California 94303 (Attach copy of this page) 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.

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Date

Stephen G. Sullivan, Reg. No. 38,329

ASSIGNMENT

	(1)	Sandeep Kishan Singhal County of Wake		of Raleigh, and State of No	orth Carolina			
	(2)	Edith Helen Stern County of Palm Beach		of Boca Rator and State of Flo				
	(3)	Barry E. Willner County of Westchester		of Briarcliff M and State of Ne				
		have invented certain improver	nents in					
TITLE	Ē	METHOD AND SYSTEM FOR INCREASING EASE-OF-USE AND BANDWIDTH UTILIZATION IN WIRELESS DEVICES						
		and executed a United States Patent Application therefor on the following date(s):						
		(1)5-17	2000					
		(2)	2000					
		(3)	2000					
	of busin	ess at Armonk, New York 1050	4, (hereinafter c	alled IBM), desir	, a corporation of New York, having a res to acquire the entire right, title and n patents to be obtained therefor;			
applic from t grante IBM n	y sell, as ation and he filing o ed upon t nay apply	ssign, and transfer to IBM, its d invention therein disclosed for to of said United States application, the inventions set forth in said ap	successors and he United States and we request oplication to IBM id invention and	assigns, the ens and foreign cou the Commissione , its successors we will execute	acknowledged, we, the above named tire right, title and interest in the said intries, and all rights of priority resultinger of Patents to issue any Letters Patent and assigns; and we hereby agree that all papers necessary in connection with			
	Signed	and sealed:						
	LOCA	TION	DATE		SIGNATURE			
(1)	RTA	NC-	17 MAY	2000	Sandap X. Singlas Sandeep Kishan Singhal			
					oundeep Narian omgridi			
(2)					Edith Helen Stern			
(3)					Barry E. Willner PATENT			

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ASSIGNMENT

Whereas,	I/We
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	(1)	Sandeep Kishan Singh County of Wake	al	of Raleigh, and State of North Carolina			
	(2)	Edith Helen Stern County of Palm Beach		of Boca Raton , and State of Florida			
	(3)	Barry E. Willner County of Westchester		of Briarcliff Manor, and State of New York			
		have invented certain im	provements in				
TITLE		METHOD AND SYSTEM FOR INCREASING EASE-OF-USE AND BANDWIDTH UTILIZATION IN WIRELESS DEVICES					
and executed a United States Patent Application therefor on the following date(s):							
		(1)	, 2000				
		(2) May 26, 20	<u>700</u> , 2000				
		(3)	, 2000				
place (interes	of busine	ess at Armonk, New York	10504, (hereinafter ca	ORPORATION, a corporation of New Yor lled IBM), desires to acquire the entire rig ates and foreign patents to be obtained ther	ht, title and		
applica from th granted BM ma	sell, as: Ition and e filing of upon the ay apply	sign, and transfer to IBM invention therein disclosed f said United States applicate inventions set forth in s	 its successors and a d for the United States ation, and we request the aid application to IBM, on said invention and well 	ereof is hereby acknowledged, we, the above sissigns, the entire right, title and interest and foreign countries, and all rights of prior the Commissioner of Patents to issue any Lette successors and assigns; and we hereby we will execute all papers necessary in control so by IBM.	in the said ity resulting tters Patent agree that		
	Signed	and sealed:					
	LOCAT	ION	DATE	SIGNATURE			
1)				Sandeep Kishan Singhal			
2)	Boar Pal	- Ration, Florida in Beach Country	May 26, 2	soo Edul Hole Sto			
3)				Edith Helen Stern Barry EPAilliENT			
				Polity La AMBUMEA .			

Attorney Docket: BOC9-2000-0023/1759P

ASSIGNMENT

Whereas, I/We

- (1) Sandeep Kishan Singhal of Raleigh,
 County of Wake and State of North Carolina
- (2) Edith Helen Stern of Boca Raton,
 County of Palm Beach and State of Florida
- (3) Barry E. Willner of Briarcliff Manor, County of Westchester and State of New York

have invented certain improvements in

TITLE METHOD AND SYSTEM FOR INCREASING EASE-OF-USE AND BANDWIDTH UTILIZATION IN WIRELESS DEVICES

and executed a United States Patent Application therefor on the following date(s):

- (1) ______, 2000
- (2) ______. 2000
- (3) 5/22/2000, 2000

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 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:

	LOCATION	DATE	SIGNATURE
(1)		· · · · · · · · · · · · · · · · · · ·	Sandeep Kishan Singhal
(2)			Edith Helen Stern
(3)	Hauthorac, NY.	5/22/2000	Barry E. Willner

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RECORDED: 05/30/2000

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