F. RM PTO-1595 1-31-92 5-6-5	05-12-2005	05-12-2005		U.S. Department of Commerce Patent and Trademark Office Attorney Docket No. 04-1504 Attorney Customer Number: 32,127			
To the Director of the U.S. Patent and Please record the attached original do		1891	Mail Stop	Assignment R	ecordation S	ervices	
1. Name of conveying party(ies):	103001179	2.	Name and addr	ess of receiving	party(ies):		
Muxiang ZHANG		Name: Verizon Data Services, Inc.					
Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No			Internal Address:				
3. Nature of conveyance:			Street Address: One East Telecom Parkway Mail Code B3E				
	erger	City: Temple Terrace					
Security C	hange of Name	State:	Florida	Zip Code:	33637		
Other:		Addition	nal name(s) & Add	dress(es) attach	ned?		
Execution Date: April 19, 2005			☐ Yes				
4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application: Filed herewith							
A. Patent Application Number(s):			B. Patent Number(s):				
A	dditional numbers attached?	☐ Yes	□No				
 Name and address of party to whom correspondence concerning document should be mailed: 			Total number of applications and registrations involved:				
Name: Leonard C. Suchyta, Esq.			7. Total fee (37 CFR 3.41): \$40				
			Enclosed (I	Please charge o	deficiency to d	eposit	
			Authorized	I to be charged	to deposit acc	count	
Internal Address: c/o Christian Anders Verizon Corporate S							
Street Address: 600 Hidden Ridge, H	HQE03H14						
City: Irving							
State: TX Zip:	75038	8.	Deposit Accoun	t No.: <u>07-2347</u>			
9. Statement and signature.		<u>I </u>					
To the best of my knowledge and belief, document.	`	and correc	ct and any attache	ed copy is a true	e copy of the o	original	
1/2005 BBYRHE 00000219 072347 111238 C:8021 40.00 BA	Semul Cl.	-lu	Sul +1	May 6, 2008	5		
Leonard C. Suchyta Signature Date Reg. No. 25,707							
Total number of pages including cover sheet, attachments and documents: 2							

PATENT REEL: 016537 FRAME: 0532

ASSIGNMENT

WHEREAS I/We, the below named inventor(s), [hereinafter referred to as Assignor(s)], have made an invention entitled:

QUADRATIC RESIDUE BASED PASSWORD AUTHENTICATED KEY EXCHANGE METHOD AND SYSTEM

for which I/We executed an application for United States Letters Patent concurrently herewith; and

WHEREAS, VERIZON DATA SERVICES INC., a corporation of Delaware whose post office address is One East Telecom Parkway, Mail Code B3E, Temple Terrace, Florida, 33637 (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention, provisional Application No. 60/568,624, filed May 6, 2004, and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and all rights to claim priority on the basis of the above provisional application (if any), as well as all rights to claim priority on the basis of this application, and all applications for Letters Patent which may hereafter be filed for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, and all extensions, renewals, and reissues thereof; and I/We hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

County of	MINDLESOT)	Name:	Muxiang ZHANG					
	.)	ss. Address:	39 Rockland Avenue, Apt. 22					
	Man 1 alla		Malden, Messachusetts 02148					
State of	Massachusetts)	By:	Ollen.					
•		Date:	April 19, 200					
Subscribed and sworn to before me this 19 day of APTI, 2005 NY COMMISSION SER AUGUST 5, 2005								
ny com	imussion depres 19490	187 5, 2005						

Page 1 of 1

PATENT REEL: 016537 FRAME: 0533

RECORDED: 05/06/2005