Commissioner of Patents & Trademarks	11-09-200	V f Washington, D.(<u> </u>
Form PTO-1595			
(Rev. 03/01)			
To the honorable Commissioner of Pau	10346019 ents and Trademarks: Please re	cord the attached original document or copy thereof:	
1. Name of Conveying Party(ies):	2. Name and Ac	dress of Receiving Party(ies):	
Noel McCULLAGH	Name:		
Michael SCOTT	Street Address:	Glasnevin	
Neil COSTIGAN NOV 06 20	07 g) Street Address:		
2	City:	Dublin	
TINT & TRADEN	State/Country:	Ireland Postal Code: 9	
Additional name(s) of conveying party(ies) attached?	Yes No Additional name(s) and	addresses attached?	
3. Nature of Conveyance:			
Assignment	Change of N	ame	
Security Agreement	Other:		
	Execution Date:	052307; 052207 and 052207	
h			
 4. Application Number(s) or Patent Numb Assignment is being filed together with Application has been filed already and 	h new application and the firs	execution date of application is : 05112007	
Assignment is being filed together with	h new application and the firs	05112007	
Assignment is being filed together with Application has been filed already and	h new application and the firs d the application filing date is:	05112007	
 Assignment is being filed together with Application has been filed already and A. Patent Application Number(s): 11/667,555 	h new application and the firs d the application filing date is:	05112007 iumber(s):	
 Assignment is being filed together with Application has been filed already and A. Patent Application Number(s): 11/667,555 	h new application and the firs d the application filing date is: B. Issued Patent M dditional numbers attached?	05112007 iumber(s):	
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 Assignment is being filed together with Application has been filed already and A. Patent Application Number(s): 11/667,555 5. Name and address of party to whom concerning this matter should be mailed 	h new application and the firs d the application filing date is: B. Issued Patent M dditional numbers attached?	05112007 iumber(s): Yes No 6. Total number of applica- tions and patents involved: 1	
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 Assignment is being filed together with Application has been filed already and A. Patent Application Number(s): 11/667,555 Addition 5. Name and address of party to whom concerning this matter should be maile CUSTOMER NUMBER JACOBSON HOLM 400 Seventh Stready Washington, D.C. 20 Tel. 202-638-6 	h new application and the firs d the application filing date is: B. Issued Patent M dditional numbers attached? orrespondence ed: R 00136 -or- MAN PLLC et, N.W. 0004-2218 6666	05112007 iumber(s): Yes No 6. Total number of applica- tions and patents involved: 1 7. Total Fee (37 CFR 3.41): \$40.00 Enclosed Any deficiencies in enclosed fees are	
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JCH 103-2/02

UNITED STATES OF AMERICA - ASSIGNMENT

(4)

(1-5)	Insert	Name/s) of Invento
(1-0)	<i>uisen</i>	Nannels	

(1) MCCULLAGH, NOEL

(2)	SCOTT, MICHAEL		
(3)	COSTIGAN, NEIL	 -	

		(5)			
			in consideration of the sum of one dollar (\$1.00), and other good and valuable considerations paid to each of the undersigned, the receipt and sufficiency of which are hereby acknowledged, the undersigned hereby assigns, transfers and sets over to		
(6)	Insert <u>Name</u> of Assignee	(6)	DUBLIN CITY UNIVERSITY		
(7)	Insert Address of Assignee	(7)	of Glasnevin, Dublin 9, Ireland		
(8) Insert Legal Entity and State or			a an agency established by the Universities Act 1997 of Ireland		
	<u>Country</u> (e.g., a corporation or citizen of Japan)		(hereinafter designated as the Assignee) the entire right, title and interest for the United States, its territories, dependencies and possessions, in the Invention known as		
(9)	Insert <u>Identification</u> of Invention, such as Title, Case Number or		Identity Based Encryption		
	Foreign Application Number				
(10)		(10)	for which the undersigned has (have) executed an application for patent in the United States of Said application having been executed/filed on (and assigned)		
	Application, or filing date and Serial No., if known		Serial No.		
oranyo	 to execute separate assignments 2) The undersigned agree(s) to 	in conr execut	all papers necessary in connection with this application and any continuing or divisional applications nection with such applications as the Assignee may deem necessary or expedient. e all papers necessary in connection with any interference which may be declared concerning this and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with		

3) The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Union for Protection of Industrial Property or similar agreements.

4) The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the

5) The undersigned hereby authorize(s) and request(s) the Commissioner of Patents and Trademarks to issue any and all Letters Patents of the United States resulting from this application or any continuing or divisional applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute any agreement in conflict herewith.

6) Assignor hereby further assigns to Assignee all claims and causes of action for infringement of the patent rights assigned herein, including the right to sue for, and collect damages for, any and all acts of past and future infringement.

7) The undersigned hereby grant(s) the law firm of Jacobson Holman PLLC, 400 Seventh Street, N.W., Washington, D.C.

20004, the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

		MM/44)		· · · · · · · · · · · · · · · · · · ·		
Date	2305/07	Name of Inventor	MCCULLAGH, NOEL	N. M. Cull Kn		(SEAL)
	• •		typed name		signature	
Date	N	lame of Inventor	SCOTT, MICHAEL			(SEAL)
•		•	typed name		signature	- ' ' '
Date	N	lame of Inventor	COSTIGAN, NEIL	·	-	(SEAL)
			typed name	-	signature	_ · /
Date	N	ame of Inventor	<u> </u>		•	(SEAL)
	•		typed name		signature	_ (//
Date	N	ame of Inventor		· ·		(SEAL)
	-	•	typed name		signature	_

This assignment should preferably be signed before a United States Consul if signed abroad, or a Notary Public if domestically signed. If not, then the execution by the inventor(s) should be witnessed by at least two witnesses who sign heres.

Additional Inventor's names and signatures on a separate sheet.

Witness	Auctoli
Nitness	MA

LAW OFFICES OF

JACOBSON HOLMAN PROFESSIONAL LIMITED LIABILITY COMPANY THE JENIFER BUILDING 400 SEVENTH STREET, N.W. WASHINGTON, D.C. 20004 JH 5/01 (Copying without deletions permitted) and

PATENT REEL: 020108 FRAME: 0891

UNITED STATES OF AMERICA - ASSIGNMENT

(1-5)	Insert	Name(s)	of i	Inventors
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Serial No., if known

(1) MCCULLAGH, NOEL

		• •	
		(2)	SCOTT, MICHAEL
		(3)	COSTIGAN, Neil
		(4)	and
		(5)	
			In consideration of the sum of one doilar (\$1.00), and other good and valuable considerations paid to each of the undersigned, the receipt and sufficiency of which are hereby acknowledged, the undersigned hereby assigns, transfers and sets over to
(6)	Insert <u>Name</u> of Assignee	(6)	DUBLIN CITY UNIVERSITY
(7)	insert Address of Assignee	(7)	of Glasnevin, Dublin 9, Ireland
(8)	Insert Legal Entity and State or		a an agency established by the Universities Act 1997 of Ireland
	<u>Country</u> (e.g., a corporation or citizen of Japan)		(hereinafter designated as the Assignee) the entire right, title and interest for the United States, its territories, dependencies and possessions, in the invention known as
(9)	Insert Identification of Invention, (9)		Identity Based Encryption
	such as Title, Case Number or Foreign Application Number		
(10)	Insert <u>Date</u> of signing of	(10)	for which the undersigned has (have) executed an application for patent in the United States of Said application having been executed/filed on (and assigned)
	Application, or filing date and		Serial No.

1) The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing or divisional applications and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

2) The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this or any continuing or divisional applications thereof and to cooperate with the Assignee In every way possible in obtaining evidence and going forward with such interference.

3) The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Union for Protection of Industrial Property or similar agreements.

4) The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the 5) The undersigned hereby authorize(s) and request(s) the Commissioner of Patents and Trademarks to issue any and all Letters Patents of the United States resulting from this application or any continuing or divisional applications thereof to the said Assignee, as Assignee of the entire Interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute any agreement in conflict herewith.

6) Assignor hereby further assigns to Assignee all claims and causes of action for infringement of the patent rights assigned herein, including the right to sue for, and collect damages for, any and all acts of past and future infringement.

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20004, the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Dale	Name of Inventor	MCCULLAGH, NOEL				(SEAL)
Dale	ZZ/S/2007 Name of Inventor	typed name SCOTT, MICHAEL	Muhal	Eatt	signature	(SEAL)
	1 1	typed name			signature	
Date	Name of Inventor	COSTIGAN, NEIL				(SEAL)
		typed name			signature	
Date	Name of Inventor	.				(SEAL)
		typed name			signature	
Date	Name of Inventor					(SEAL)
		typed name			signature	

This assignment should preferably be signed before a United States Consul if signed abroad, or a Notary Public If domestically signed. If not, then the execution by the inventor(s) should be witnessed by at least two witnesses who sign here:

Additional inventor's names and signatures on a separate sheet.

Witness	jarral O'Arrien	
Witness	Charle D.le	
	A	

LAW OFFICES OF JACOBSON HOLMAN PROFESSIONAL LIMITED LIABILITY COMPANY THE JENIFER BUILDING

400 SEVENTH STREET, N.W. WASHINGTON, D.C. 20004 JH 5/01 (Copying without deletions permitted)

PATENT REEL: 020108 FRAME: 0892

UNITED STATES OF AMERICA - ASSIGNMENT

(7)

(8)

of

Serial No.

(1-5) Insert <u>Name(s)</u> of inventors

	····
(1)	MCCULLAGH, NOEL

DUBLIN CITY UNIVERSITY

Glasnevin, Dublin 9, Ireland

(2)	SCOTT, MICHAEL	
(3)	COSTIGAN, NEIL	
(4)		and
(5)		

In consideration of the sum of one collar (\$1.00), and other good and valuable considerations paid to each of the undersigned, the receipt and sufficiency of which are hereby acknowledged, the undersigned hereby assigns, transfers and sets over to

Insert <u>Neme</u> of Assignee (6)

insert Legal Entity and State or Country (e.g., a corporation or

(7) Insert <u>Address</u> of Assignee

(6)

(8)

a an agency established by the Universities Act 1997 of Ireland

(hereinafter designated as the Assignee	the entire right, title	and interest for the	United States, its
territories, dependencies and possession	is, in the invention k	nown as	
Identity Based Encryption			

- citizen of Japan)
 (9) Insert <u>Identification</u> of Invention, (9) such as Title, Case Number or Foreign Application Number
- (10) Insert <u>Date</u> of signing of (10) Application, or filing date and Serial No., if known

for which the undersigned has (have) executed an application for patent in the United States of Said application having been executed/filed on (and assigned)

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In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Døle		Name of Inventor	MCCULLAGH, NOEL			erutanpia	(SEAL)
Oate	ور است کار از این ا	Name of Inventor	typed name SCOTT, Michael				(SEAL)
Date	22MA7 2007	Name of inventor	tvped name COSTIGAN, NEIL	lar	atin	sionature	(SEAL)
Date		Name of Inventor	typed name		<u> </u>	slonature	(SEAL)
Date		Name of Inventor	typed name			signature	(SEAL)
			tond name			sionalure	

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Witness

Witness

Additional inventor's names and signatures on a separate sheet.

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PROFESSIONAL LIMITED LIABILITY COMPANY THE JENIFER BUILDING 400 SEVENTH STREET, N.W. WASHINGTON, D.C. 20004 JH 5/01 (Copying without deletions permitted) 3 03 3

PATENT REEL: 020108 FRAME: 0893

RECORDED: 11/06/2007