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Mail documents to be recorded with required cover sheet(s) information to:
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**PATENT** 

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FORM PTO-1619B Expires 06/30/99 OMB 0661-0027	Page 2	U.S. Department of Commerce Patent and Trademark Office PATENT
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Name GERALD E. LESTER		
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## **ASSIGNMENT**

This Assignment is entered into by Guy L. Fielder, a U.S. citizen residing at 1900 Robinhood Trail, Austin, Texas 72130, and Paul N. Alito, a U.S. citizen residing at 16755 Ella Boulevard, Apartment 147, Houston, Texas 77090-4210 (hereafter collectively referred to as the "Assignors"), and The PACid™ Group, a Texas Sole Proprietorship having principal offices at 1900 Robinhood Trail, Austin, Texas 72130 (hereafter "Assignee").

## RECITALS

i. The Assignors desire to assign their rights including intellectual property rights in the following technology (hereafter "The Technology") to the Assignee:

"The technology relates generally to methods and systems including multi-threaded, bit-shuffling, many-to-few bit mapping and scrambling algorithms which are flexible enough to support a plurality of applications while at the same time being simple enough to fit within a limited code space. The highly flexible algorithms more specifically provide a tumbling, scrambled, irreversible, deterministic result which is highly resistant to discovery through brute force attack or cryptographic analysis. The deterministic result, sometimes called a message digest, is divided into a plurality of constituents which support: (1) authentication, both unilateral and bilateral; (2) security for personal computing and other communication devices; (3) communication session privacy, with and without a dynamically changing session key; (4) key management for sensitive documents and files; (5) determination of the encryption algorithm to be used; (6) determination of the encryption solution (as further described below) to be used; and (7) secure administration, both local and remote. The above methods, systems, and algorithms, when used within a suite of embodiments (applications), protect individual computers, networks of computers, and information from unauthorized access. Such methods, systems, and algorithms further provide one-time-use-passcodes (OTP) and encryption keys, thus obviating the need for key directories or other permanent key management records. Additionally, a means to dynamically change the encryption key on-the-fly (change occurs without halting or causing a pause in a communication session in progress) is provided. Control of key changes is fully under software control and also is configurable by the user on-the-fly.

The key manager and file encryption embodiment provides a method and system for securing sensitive information and files which recreate the encryption key on demand as well as provide tamper detection for the file. Once sealed, the file can be managed and maintained without need of decrypting the file and risking disclosure of its contents.

An encryption solution makes all of its constituents dynamic, including but not limited to the selection of the encryption algorithm, the determination of the encryption key to be used with the algorithm, the length of the key to be used with those encryption algorithms which support a variable key length, and the determination of when a next key change is to occur.

Commercial embodiments for the technology described above may include a software only embodiment, an embodiment which moves the secret information to a readily possessable and removable memory device, an embodiment which uses a commercially available cryptographic smart-card, and an embodiment which uses a tamper resistant security module (TRSM). Also included are a secure token design and a secure token interface design.

Man Page 1 of 5

Additionally, the technology can be used to provide security for electronic commerce: such as stored value payment, electronic banking, trading in securities, and purchases made over the Internet or other electronic media."

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

## ARTICLE 1-TECHNOLOGY ASSIGNMENT

1.1 The Assignors hereby sell, convey, assign, transfer and deliver to Assignee, its successors and assigns, all of their rights, title, and interests throughout the world in and to The Technology, including all software, hardware, models, prototypes, documentation, and other tangible forms of The Technology, and all related and derivative concepts, creations, inventions, developments, and discoveries.

# **ARTICLE 2-PATENT ASSIGNMENT**

- 2.1 Assignors hereby sell, convey, assign, transfer and deliver to Assignee, its successors and assigns, all of Assignors' rights, title, and interests throughout the world in and to the following Patent Applications, the concepts, inventions, and improvements which are the subject of such Patent Applications, any and all United States and foreign patents issuing thereon, any and all utility models, design registrations, inventor certificates, patent applications, and other similar rights now or hereafter filed or granted throughout the world for any of said inventions or improvements thereto (hereafter collectively referred to as "Patent Rights"):
  - 2.1.1 U.S. Patent Application Serial No. 08/813,459
  - 2.1.2 U.S. Patent Application Serial No. 08/813,457
  - 2.1.3 U.S. Patent Application Serial No. 08/815,403.
  - 2.1.4 U.S. Patent Application Serial No. 08/813,992.
  - 2.1.5 PCT Patent Application Serial No. PCT/US98/04621.
  - 2.1.6 PCT Patent Application Serial No. PCT/US98/04408.
  - 2.1.7 PCT Patent Application Serial No. PCT/US98/04620.
  - 2.1.8 PCT Patent Application Serial No. PCT/US98/04622.
- 2.2 The assignment set forth in Article 2.1 above includes within its scope the right to claim priority based on the filing date of such Patent Applications under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, the GATT Treaty, the NAFTA treaty, and all other treaties of like purposes, and the right to file division, continuation, continuation-in-part, continuing prosecution, reissue, renewal, reexamination, and substitute applications, and substitute patents.

SNA Page 2 of 5 H

#### ARTICLE 3-COPYRIGHT ASSIGNMENT

- 3.1 Assignors hereby sell, convey, assign, transfer, and deliver to Assignee, its successors and assigns, all of Assignors' rights, title and interests throughout the world in and to their copyrights, copyright rights and all other literary property and author rights (whether or not copyrightable), copyright registrations, and copyrighted interests in software programs, documentation, and other author expressions relating to The Technology (hereafter collectively referred to as "Copyright Rights").
- 3.2 The assignment set forth in Article 3.1 above includes within its scope the rights throughout the world to recover for damages and profits for past copyright infringements, to secure copyright registrations in the software programs, documentation, and other author expressions relating to The Technology (hereafter "Works") in Assignee's name as claimant, and to secure renewals, reissues, and extensions of copyrights and copyright registrations.
- 3.3 Assignors hereby confirm that Assignee, its successors and assigns, own the entire right, title and interests throughout the world in the Works, including the rights to copy and reproduce, to prepare derivative works, to distribute by sale, by rental, lease or lending or other transfer, to perform publicly, and to display, whether or not the Works constitute a "Work Made For Hire" as defined in 17 U.S.CODE Section 201(b).
- 3.4 Assignors hereby waive, to the extent allowed by law, their rights of attribution and integrity in the Works throughout the world.

## ARTICLE 4-TRADEMARK ASSIGNMENT

- 4.1 Assignors hereby sell, convey, assign, transfer, and deliver to Assignee, its successors and assigns, all of Assignors' rights, title and interests throughout the world in and to the following trademark, and in and to the following application for registration therefor in the United States, together with the goodwill of Assignors' business (all assets of which have been transferred to Assignee, with no rights in such assets remaining with the Assignors) in connection with which the trademark is used (hereafter collectively referred to as "Trademark Rights"):
- i. The trademark "PACid", an application for registration of which has been filed in the United States Patent and Trademark Office, Serial No. 75/064241.
- 4.2 The assignment of Article 4.1 above includes within its scope the right to recover for damages and profits for past infringements of the trademark, and the right to seek registration of the trademark in Assignee's name throughout the world.
- 4.3 Assignors hereby agree that they shall not use marks which are confusingly similar to the trademark of Article 4.1 above, which are transliterations of the trademark, or which use the trademark as a component in formative or composite marks.

# ARTICLE 5-TRADE SECRET ASSIGNMENT

5.1 Assignors hereby sell, convey, assign, transfer, and deliver to Assignee, its successors and assigns, all of Assignors' trade secret and confidentiality rights, title and interests

MA Page 3 of 5

throughout the world arising under the common law, state law, federal law, and the laws of any foreign country, and disclosing, describing, or relating to The Technology (hereafter collectively referred to as "Trade Secret Rights").

5.2 The assignment set forth in Article 5.1 above includes within its scope the right to recover for damages and profits for past misappropriations of trade secrets and confidential information describing, disclosing, relating to, or derived from The Technology.

## ARTICLE 6-MASK WORKS ASSIGNMENT

- 6.1 Assignors hereby sell, convey, assign, transfer, and deliver to Assignee, its successors and assigns, all of Assignors' rights, title, and interests throughout the world in and to all chip mask works incorporating or derived from The Technology, including the rights to register such mask works under The Semiconductor Chip Protection Act of 1984 and foreign laws of like purposes, in Assignee's name as claimant (hereafter collectively referred to as "Mask Works Rights").
- 6.2 Assignors hereby confirm that Assignee, its successors and assigns, own the entire right, title and interests in and to the Mask Works Rights, including the rights to reproduce by optical, electronic, or any other means, and to import or distribute a semiconductor chip product in which a mask work as described in Article 6.1 above is embodied.

# **ARTICLE 7-REPRESENTATIONS AND WARRANTIES**

7.1 Assignors warrant and represent that they own the entire right, title and interest in and to the Patent Rights, Copyright Rights, Trademark Rights, Trade Secret Rights, and Mask Works Rights; that they have the right and authority to enter into this Assignment; that they have no actual knowledge of any outstanding claims or license or other encumbrances upon such rights; that they are not now and have not been in the possession of or had control over any information which renders any of such rights invalid or unenforceable; and that to the best of Assignors' knowledge without conducting product, patent, copyright, trademark, or mask work clearance searches, the use of such rights by Assignee will not infringe or otherwise violate any intellectual property rights of third parties.

#### **ARTICLE 8-FURTHER ASSISTANCE**

8.1 Assignors agree to execute and deliver to Assignee without further compensation all documents, papers, forms, authorizations, and Preliminary Statements, swear all declarations or oaths, provide supporting evidence (to the extent in Assignor's possession or control), and perform other reasonable acts that may be required to either protect or perfect the Patent Rights, Copyright Rights, Trademark Rights, Mask Works Rights, and Trade Secret Rights vested in Assignee by this Assignment.

#### ARTICLE 9-THIRD PARTY RIGHTS

9.1 Nothing expressed or implied in this Assignment is intended to confer or shall confer upon any person or legal entity, other than the parties to this Assignment and their successors and assigns, any rights, duties, remedies or obligations.

Magage 4 of 5 W

#### ARTICLE 10-CHOICE OF LAW AND FORUM

10.1 This Assignment shall be interpreted under the laws of the State of Texas and the federal laws of the United States of America, as applicable, and all causes of action except federal appeals shall be brought in the courts of the State of Texas, without resort to conflict of laws.

#### **ARTICLE 11-INTEGRATION**

11.1 This Assignment sets forth the exclusive and entire agreement and understanding of the parties relating to the subject matter contained herein, and merges all prior and contemporaneous discussions and agreements between the parties relating to such subject matter.

#### ARTICLE 12-EFFECTIVE DATE

12.1 The effective date of this Assignment shall be the date of signature of the last of the parties to sign in the places indicated below (hereafter "Effective Date).

NOW THEREFORE, the parties have caused this Assignment to be executed in duplicate by their duly authorized representatives as of the Effective Date.

**ASSIGNORS** 

**ASSIGNEE** 

Paul N. Alito

(Sad VI

Date: 11/7/1998

The PACid™ Group

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Date: 11-7-98

Guy L. Fielder

**D** .

11-7-98

**RECORDED: 12/18/1998**