

### US006105013A

## United States Patent [19]

Curry et al.

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**Date of Patent:** Aug. 15, 2000 [45]

### [54] METHOD, APPARATUS, SYSTEM AND FIRMWARE FOR SECURE TRANSACTIONS

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[21] Appl. No.: 09/041,190

[22] Filed: Mar. 10, 1998

### Related U.S. Application Data

Continuation of application No. 08/594,983, Jan. 31, 1996, Pat. No. 5,748,740.

[60] Provisional application No. 60/004,510, Sep. 29, 1995.

**Int. Cl.**<sup>7</sup> ...... **H04L 9/00**; H04L 9/30 [51]

**U.S. Cl.** ...... **705/65**; 235/379; 380/30; 705/75; 713/156; 713/173; 713/174

380/24, 25, 30, 46, 49, 50; 235/379, 380; 705/64, 65, 66, 67, 68, 69, 75; 713/155, 156, 157, 158, 168, 172, 173, 174

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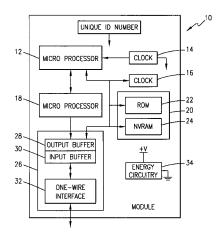
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Primary Examiner—Bernarr E. Gregory Attorney, Agent, or Firm-Jenkens & Gilchrist

**ABSTRACT** [57]

The present invention relates to an electronic module used for secure transactions. More specifically, the electronic module is capable of passing information back and forth between a service provider's equipment via a secure, encrypted technique so that money and other valuable data can be securely passed electronically. The module is capable of being programmed, keeping track of real time, recording transactions for later review, and creating encryption key pairs.

### 16 Claims, 8 Drawing Sheets





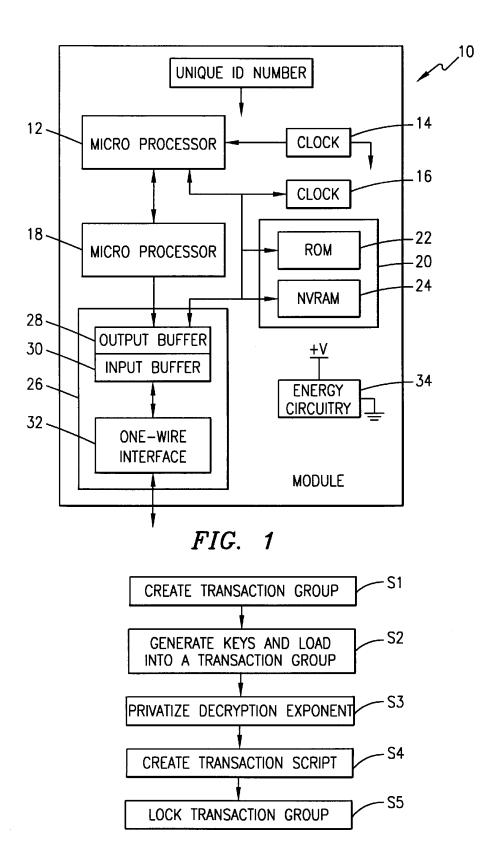
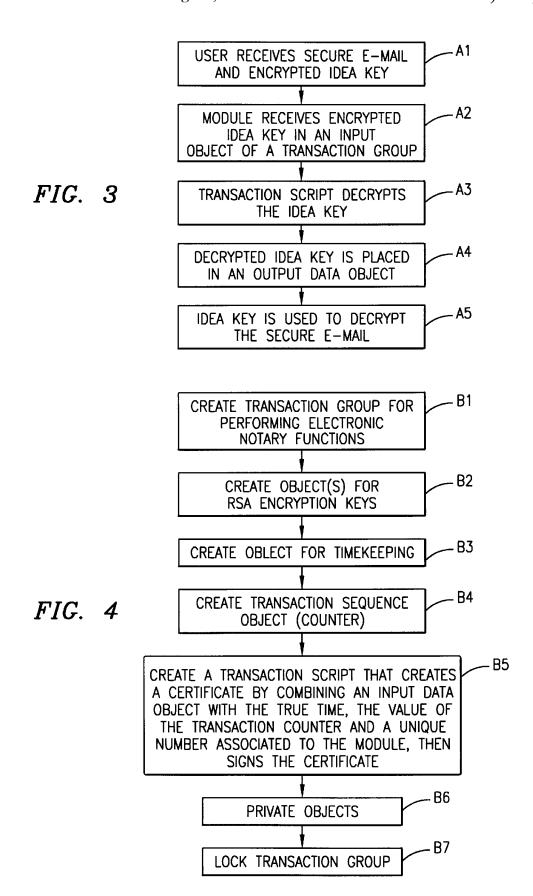


FIG. 2





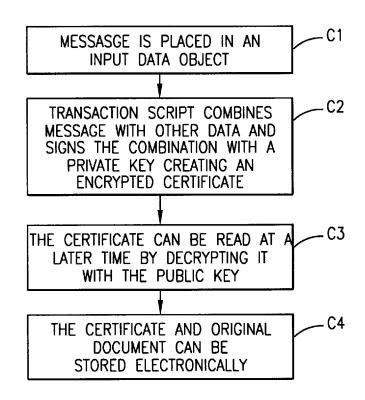


FIG. 5

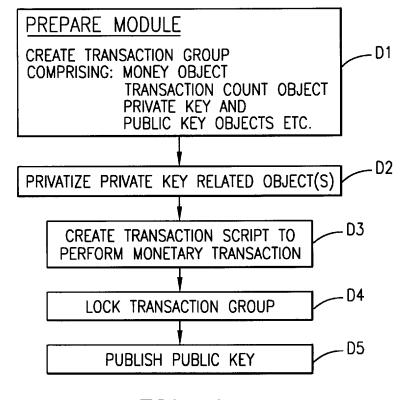
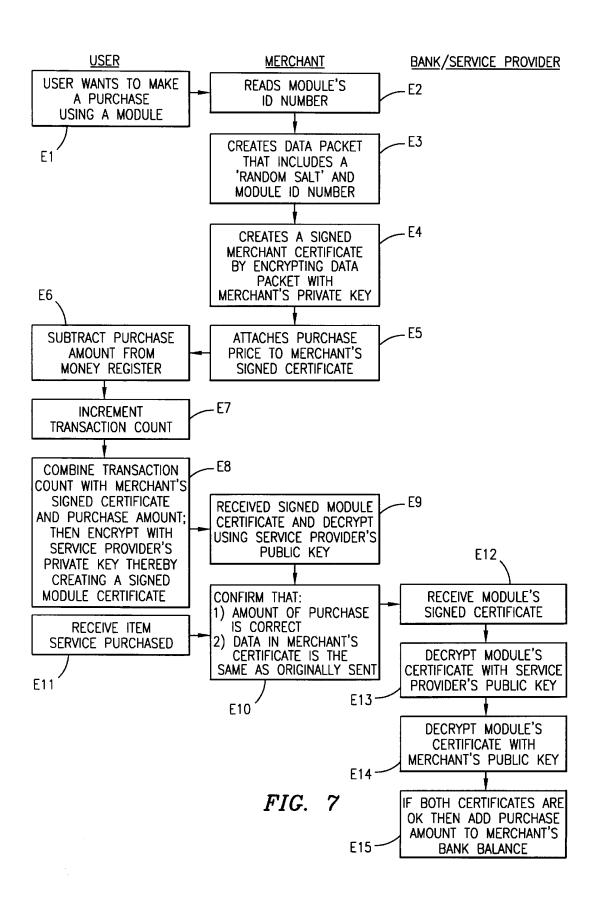


FIG. 6







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