# Exhibit 1



# (12) United States Patent

Safa

US 7,162,735 B2 (10) Patent No.: (45) Date of Patent: Jan. 9, 2007

## (54) DIGITAL DATA PROTECTION ARRANGEMENT

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Subject to any disclaimer, the term of this (\*) Notice:

patent is extended or adjusted under 35 U.S.C. 154(b) by 932 days.

- Appl. No.: 09/905,571
- (22)Filed: Jul. 13, 2001

#### (65)**Prior Publication Data**

US 2002/0038428 A1 Mar. 28, 2002

#### (30)Foreign Application Priority Data

| Jul. 18, 2000 | (GB) | <br>0017481.3 |
|---------------|------|---------------|
| Feb. 7, 2001  | (GB) | 0102982.6     |

- (51) **Int. Cl.** (2006.01)G00F 17/30
- (52) **U.S. Cl.** ...... **726/6**; 726/21; 726/27 713/190-193; 726/3, 21, 27, 6 See application file for complete search history.

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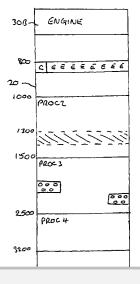
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Primary Examiner—David Jung (74) Attorney, Agent, or Firm—Smith-Hill and Bedell

#### (57)ABSTRACT

When software is initially loaded to RAM 20, an engine 30A is installed at the beginning of an otherwise empty area of RAM 20. When the protected application is called, the engine first creates a series of steps (FIG. 3D), including a CALL command to a protection block 38. On reaching the call 36, the protection block 38 is executed, to complete various security checks. If these are successful, step 2 is created and written over the call 36 so that execution of steps 2 and 3 can continue as normal. Consequently, the protected software (steps 1, 2 and 3) is not exposed to scrutiny unless the security checks have successfully been completed.

## 40 Claims, 9 Drawing Sheets





## Case 1:20-cv-03810-VEC Document 1-1 Filed 05/15/20 Page 3 of 21

## US 7,162,735 B2

Page 2

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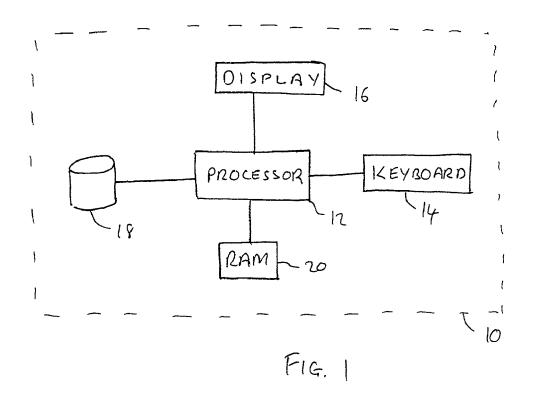


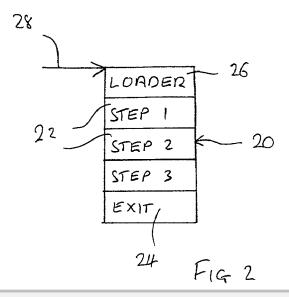
U.S. Patent

Jan. 9, 2007

Sheet 1 of 9

US 7,162,735 B2





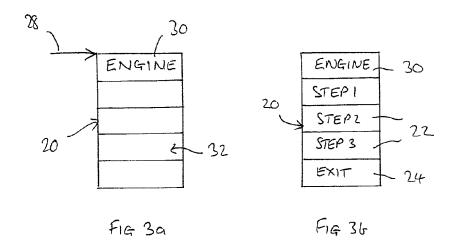


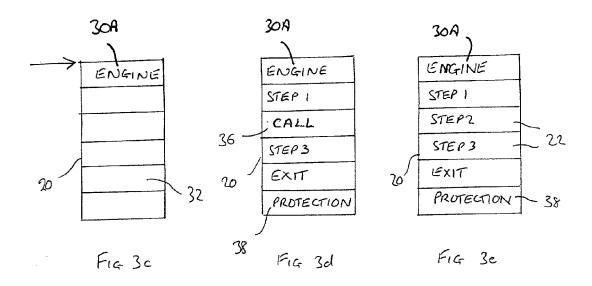
U.S. Patent

Jan. 9, 2007

Sheet 2 of 9

US 7,162,735 B2





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