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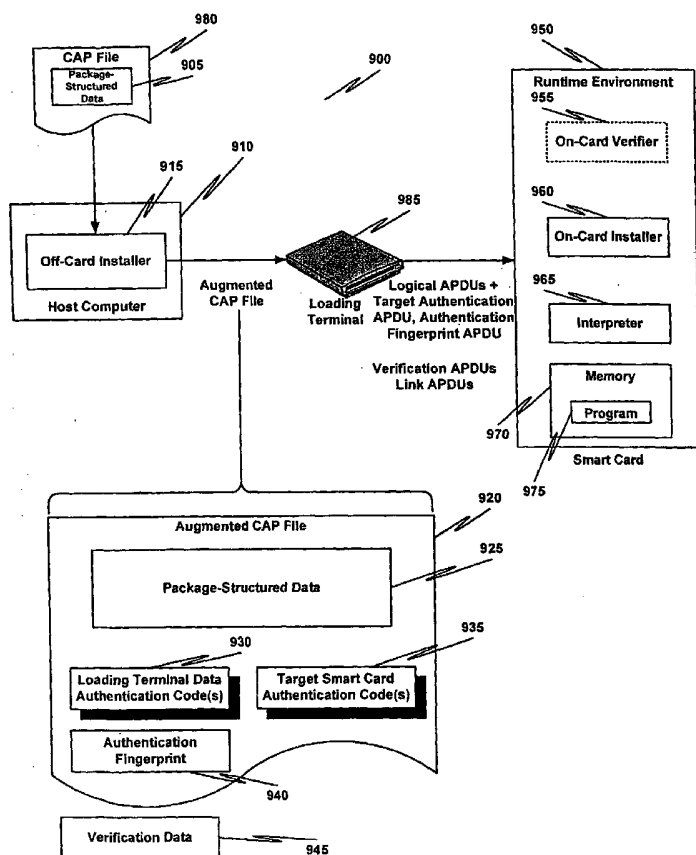
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[Continued on next page]

(54) Title: RUN TIME CODE INTEGRITY CHECKS



(57) Abstract: A method for detecting tampered program data comprising at least one program unit includes receiving a request for use of the at least one program unit, computing a first fingerprint over stored data associated with the at least one program unit and determining whether the stored data is valid based at least in part on whether the first fingerprint matches a second fingerprint. The second fingerprint is computed over the stored data prior to receiving the request for use of the at least one program unit.

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GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
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ML, MR, NE, SN, TD, TG).

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/001050

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 092 147 A (LEVY MOSHE ET AL) 18 July 2000 (2000-07-18) column 5, line 6 - line 23 column 6, line 19 - line 50 column 7, line 16 - line 35 -----	1-16, 19-34, 37-52, 55-70, 73-88, 91-94
X	US 2002/165961 A1 (LANGRIND NICHOLAS A ET AL) 7 November 2002 (2002-11-07) paragraph [0111] - paragraph [0112] paragraph [0504] - paragraph [0508] ----- -/--	1-16, 19-34, 37-52, 55-70, 73-88, 91-94

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

1 October 2004

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22.03.2005

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>US 6 367 012 B1 (ATKINSON ROBERT G ET AL) 2 April 2002 (2002-04-02)</p> <p>column 2, line 35 - line 59 column 6, line 19 - line 55 -----</p>	<p>1-16, 19-34, 37-52, 55-70, 73-88, 91-94</p>
X	<p>WO 01/50230 A (SIGMA GAME INC) 12 July 2001 (2001-07-12)</p> <p>page 6, line 3 - line 30 page 13, line 25 - line 27 -----</p>	<p>1-16, 19-34, 37-52, 55-70, 73-88, 91-94</p>
A	<p>MARK RUSSINOVICH: "Inside On-Access Virus Scanners" WINDOWS IT PRO, [Online] September 1997 (1997-09), XP002298829 Retrieved from the Internet: URL:<http://www.winntmag.com/Articles/print.cfm?ArticleID=300> [retrieved on 2004-10-01] page 1, last paragraph -----</p>	<p>1</p>

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2004/001050

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-16, 19-34, 37-52, 55-70, 73-88, 91-94

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-16, 19-34, 37-52, 55-70, 73-88,91-94

Methods for detecting tampered data using fingerprints and corresponding apparatuses and program storage devices.

2. claims: 17,18,35,36,53,54,71,72,89,90,95

Method for run-time program unit integrity checking using a dispatch table indicating the checked or unchecked status of said program unit and corresponding apparatuses and program storage devices

INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No PCT/US2004/001050

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6092147	A	18-07-2000	US 2003056054 A1 20-03-2003 US 6546454 B1 08-04-2003 US 2004068726 A1 08-04-2004

US 2002165961	A1	07-11-2002	NONE

US 6367012	B1	02-04-2002	NONE

WO 0150230	A	12-07-2001	US 6595856 B1 22-07-2003 AU 2915101 A 16-07-2001 CA 2362450 A1 12-07-2001 WO 0150230 A2 12-07-2001
