

US007207065B2

(12) United States Patent

Chess et al.

(10) Patent No.: US 7,207,065 B2

(45) **Date of Patent:** Apr. 17, 2007

(54) APPARATUS AND METHOD FOR DEVELOPING SECURE SOFTWARE

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

patent is extended or adjusted under 35 LLSC 154(b) by 0 days

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 11/010,146

(22) Filed: Dec. 10, 2004

(65) Prior Publication Data

US 2005/0273854 A1 Dec. 8, 2005

Related U.S. Application Data

(60) Provisional application No. 60/577,066, filed on Jun. 4, 2004.

(51) **Int. Cl. G06F 11/00** (2006.01) **H04L 9/32** (2006.01)

See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

5,440,723 A	8/1995	Arnold et al.
5,502,815 A	3/1996	Cozza
2001/0027383 A1	10/2001	Maliszewski
2002/0066024 A1	5/2002	Schmall et al.

2002/0073330	A1	6/2002	Chandnani et al.
2003/0120951	A1	6/2003	Gartside et al.
2003/0159063	A1*	8/2003	Apfelbaum et al 713/200
2004/0133777	A1*	7/2004	Kiriansky et al 713/166
2004/0255163	A1*	12/2004	Swimmer et al 713/201
2004/0255277	A1	12/2004	Berg et al.
2004/0260940	A1	12/2004	Berg et al.
2004/0268322	A1	12/2004	Chow et al.
2005/0010806	A1	1/2005	Berg et al.
2005/0015752	A1	1/2005	Alpern et al.
2005/0028002	A1	2/2005	Christodorescu et al.
2005/0273860	A1*	12/2005	Chess et al 726/25

OTHER PUBLICATIONS

http://java.sun.com/docs/books/jls/second_edition/html/expressions.doc.html#20448 "Publication date unknown, but prior to Dec. 10, 2004."

http://java.sun.com/products/ejb/docs.html "Publication date unknown, but prior to Dec. 10, 2004."

http://java.sun.com/products/jdbc/reference/index.html "Publication date unknown, but prior to Dec. 10, 2004."

http://java.sun.com/j2se/1.4.2/docs/api/java/lang/reflect/package-summary.html "Publication date unknown, but prior to Dec. 10, 2004."

http://java.sun.com/j2se/1.4.2/docs/api/java/rmi/package-summary.html "Publication date unknown, but prior to Dec. 10, 2004."

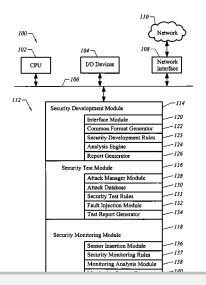
* cited by examiner

Primary Examiner—Kambiz Zand (74) Attorney, Agent, or Firm—Cooley Godward Kronish LLP

(57) ABSTRACT

A computer readable medium includes executable instructions to analyze program instructions for security vulnerabilities. The executable instructions convert diverse program instruction formats to a common format. A system model is derived from the common format. A static analysis is performed on the system model to identify security vulnerabilities. Security vulnerabilities are then reported.

20 Claims, 7 Drawing Sheets





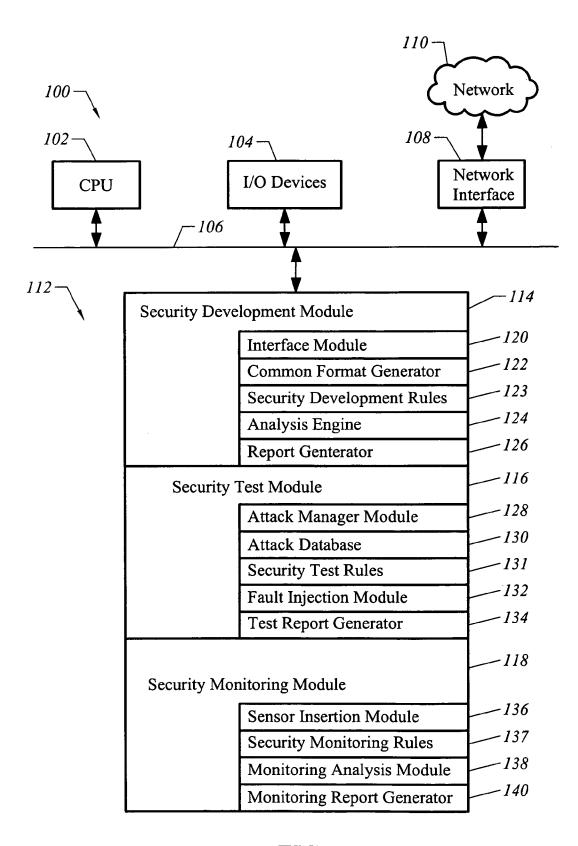


FIG. 1



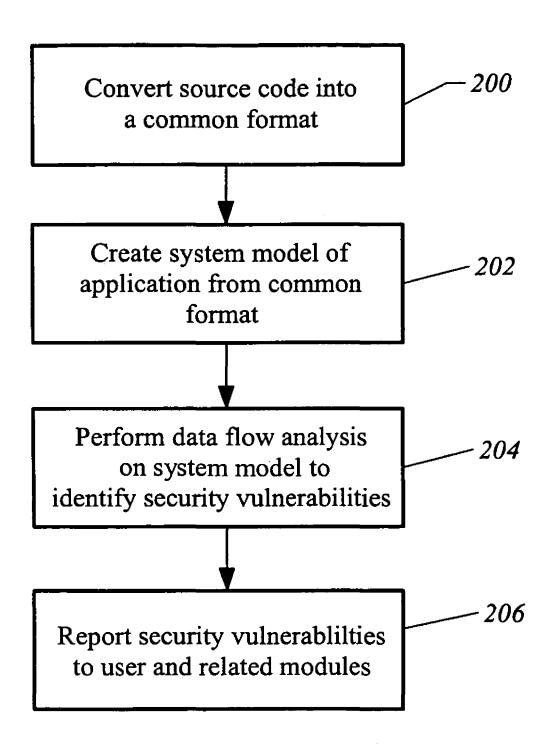


FIG. 2



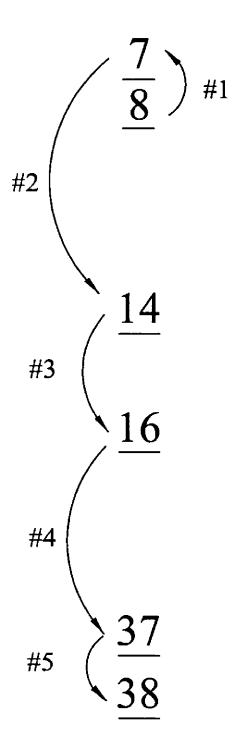


FIG. 2A



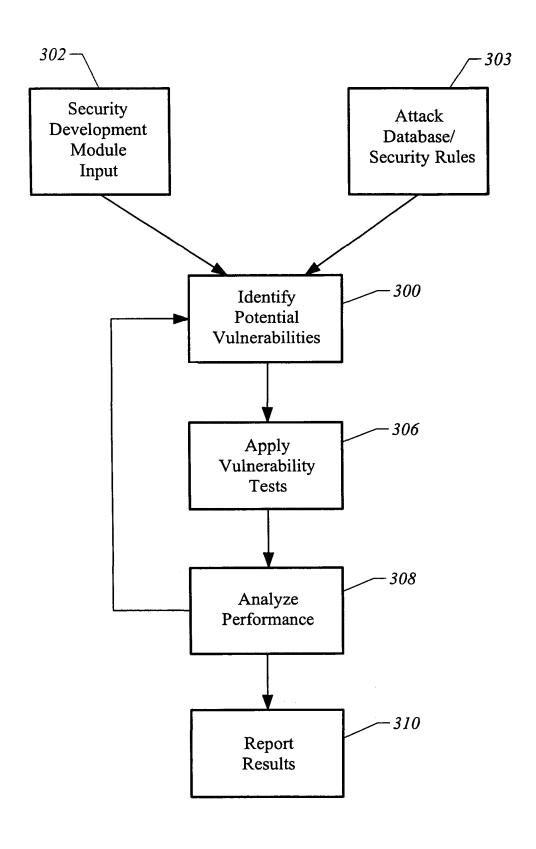


FIG. 3



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