



US010609063B1

(12) **United States Patent**  
**Oliphant et al.**

(10) **Patent No.:** **US 10,609,063 B1**  
(45) **Date of Patent:** **\*Mar. 31, 2020**

(54) **COMPUTER PROGRAM PRODUCT AND APPARATUS FOR MULTI-PATH REMEDIATION**

(71) Applicant: **SecurityProfiling, LLC**, Garland, TX (US)

(72) Inventors: **Brett M. Oliphant**, Plano, TX (US);  
**John P. Blignaut**, West Lafayette, IN (US)

(73) Assignee: **SecurityProfiling, LLC**, Garland, TX (US)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **15/608,978**

(22) Filed: **May 30, 2017**

**Related U.S. Application Data**

(63) Continuation of application No. 14/816,931, filed on Aug. 3, 2015, now Pat. No. 10,050,988, which is a (Continued)

(51) **Int. Cl.**  
**H04L 29/06** (2006.01)  
**G06F 21/57** (2013.01)  
(Continued)

(52) **U.S. Cl.**  
CPC ..... **H04L 63/1433** (2013.01); **G06F 21/50** (2013.01); **G06F 21/55** (2013.01);  
(Continued)

(58) **Field of Classification Search**

None

See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

6,301,668 B1 \* 10/2001 Gleichauf ..... H04L 41/12  
726/22  
6,301,699 B1 \* 10/2001 Hollander ..... G06F 21/55  
717/131

(Continued)

**OTHER PUBLICATIONS**

Chang, Edward S., et al. "Managing cyber security vulnerabilities in large networks." Bell Labs technical journal 4.4 (1999): 252-272. (Year: 1999).\*

(Continued)

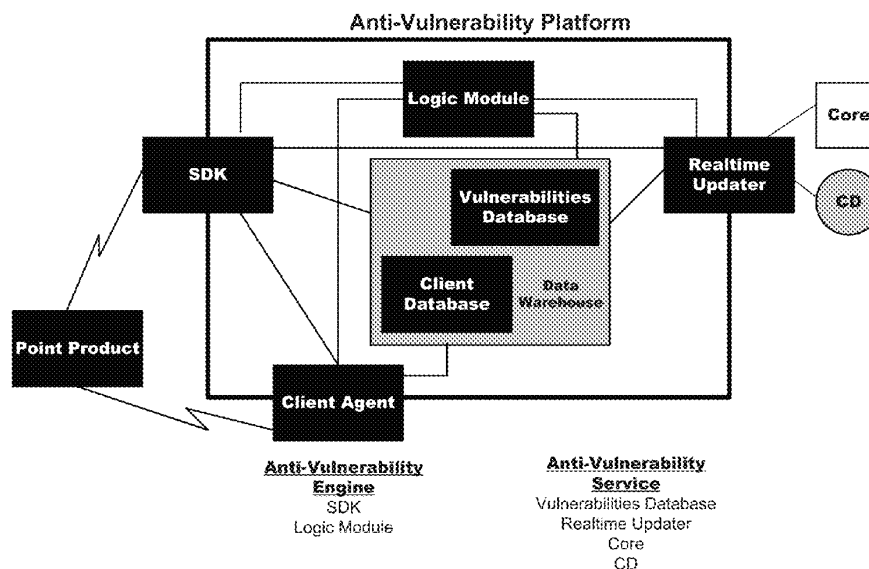
*Primary Examiner* — Madhuri R Herzog

(74) *Attorney, Agent, or Firm* — Patrick E. Caldwell, Esq.; The Caldwell Firm, LLC

(57) **ABSTRACT**

A system, method, and computer program product are provided for a database associating a plurality of device vulnerabilities to which computing devices can be subject with a plurality of remediation techniques that collectively remediate the plurality of device vulnerabilities. Each of the device vulnerabilities is associated with at least one remediation technique. Each remediation technique associated with a particular device vulnerability remediates that particular vulnerability. Further, each remediation technique has a remediation type are selected from the type group consisting of patch, policy setting, and configuration option. Still yet, a first one of the device vulnerabilities is associated with at least two alternative remediation techniques.

**70 Claims, 12 Drawing Sheets**



# US 10,609,063 B1

Page 2

## Related U.S. Application Data

- continuation of application No. 14/499,230, filed on Sep. 28, 2014, now Pat. No. 9,100,431, which is a continuation-in-part of application No. 14/138,014, filed on Dec. 21, 2013, now Pat. No. 9,117,069, which is a continuation of application No. 10/882,852, filed on Jul. 1, 2004, now abandoned.
- (60) Provisional application No. 60/484,085, filed on Jul. 1, 2003.

## (51) Int. Cl.

**G06F 21/55** (2013.01)

**G06F 21/50** (2013.01)

## (52) U.S. Cl.

CPC ..... **G06F 21/554** (2013.01); **G06F 21/57** (2013.01); **G06F 21/577** (2013.01); **H04L 63/02** (2013.01); **H04L 63/0227** (2013.01); **H04L 63/14** (2013.01); **H04L 63/145** (2013.01); **H04L 63/1408** (2013.01); **H04L 63/1416** (2013.01); **H04L 63/1441** (2013.01); **H04L 63/20** (2013.01); **H04L 63/0263** (2013.01)

## (56) References Cited

### U.S. PATENT DOCUMENTS

6,415,321 B1 \* 7/2002 Gleichauf ..... H04L 41/00 709/224  
 6,550,012 B1 \* 4/2003 Villa ..... H04L 63/0218 713/168  
 6,990,660 B2 \* 1/2006 Moshir ..... G06F 8/62 709/223  
 7,152,105 B2 \* 12/2006 McClure ..... H04L 41/12 709/224

7,181,769 B1 \* 2/2007 Keanini ..... H04L 63/1416 713/166  
 7,257,630 B2 \* 8/2007 Cole ..... G02B 5/3083 709/224  
 7,509,681 B2 \* 3/2009 Flowers ..... G06F 21/552 713/151  
 7,712,138 B2 \* 5/2010 Zobel ..... G06F 21/577 709/224  
 2003/0126472 A1 \* 7/2003 Banzhof ..... G06F 21/577 726/25  
 2003/0204632 A1 \* 10/2003 Willebeek-LeMair ..... H04L 29/06 709/249  
 2005/0193430 A1 \* 9/2005 Cohen ..... G06F 21/577 726/25  
 2005/0235360 A1 \* 10/2005 Pearson ..... H04L 29/06 726/23  
 2006/0101517 A1 \* 5/2006 Banzhof ..... G06F 21/577 726/25  
 2007/0011319 A1 \* 1/2007 McClure ..... G02B 6/105 709/224

## OTHER PUBLICATIONS

Action Summary for U.S. Appl. No. 14/834,102 dated Aug. 24, 2018.  
 Action Summary for U.S. Appl. No. 15/608,981 dated Nov. 05, 2018.  
 Action Summary for U.S. Appl. No. 15/608,983 dated Sep. 11, 2018.  
 Notice of Allowance for U.S. Appl. No. 15/608,983 dated Feb. 4, 2019.  
 Notice of Appeal Filed Nov. 25, 2019 for U.S. Appl. No. 15/608,981.  
 Advisory Action Filed Aug. 13, 2019 for U.S. Appl. No. 15/608,981.  
 Notice of Allowance dated Sep. 24, 2019 for U.S. Appl. No. 15/608,983.

\* cited by examiner

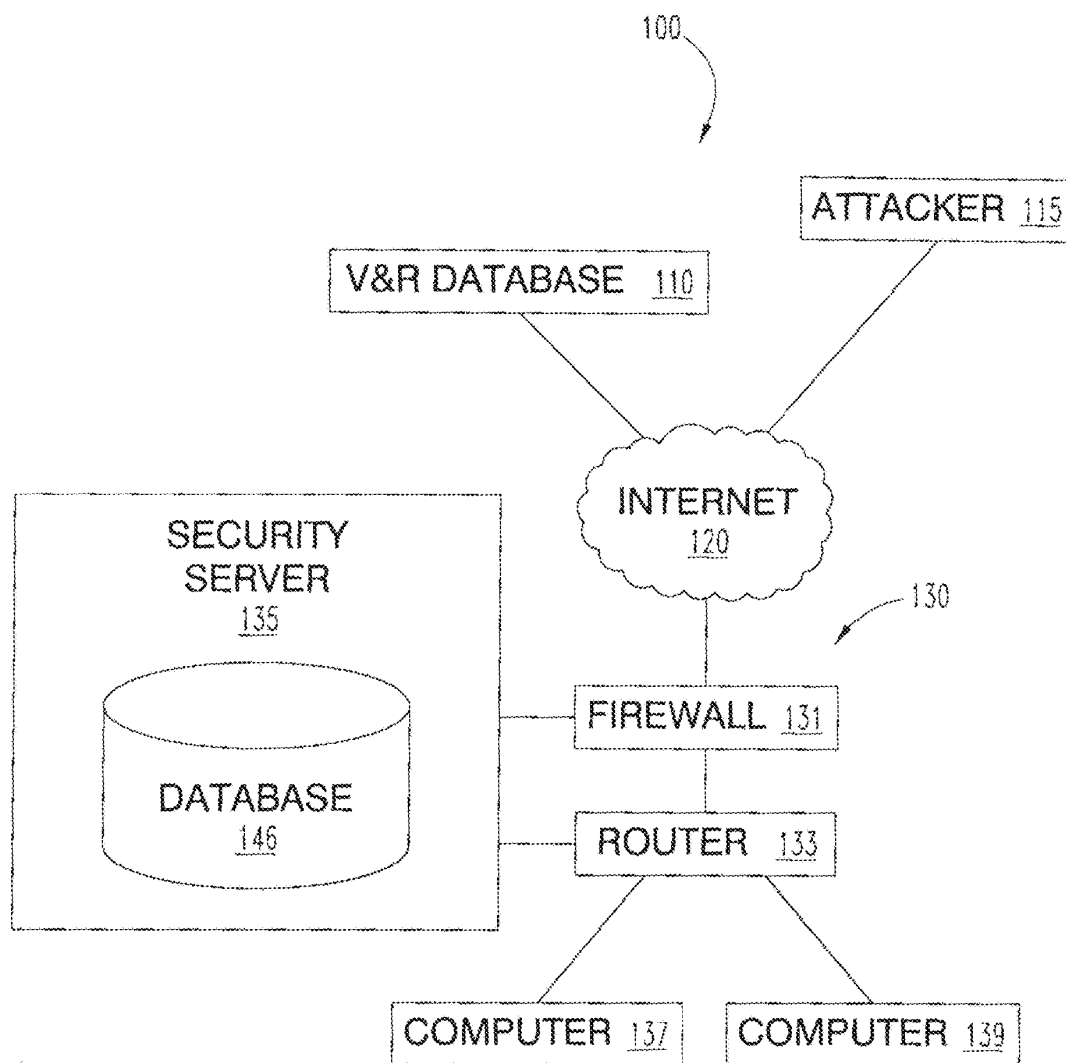


FIG. 1

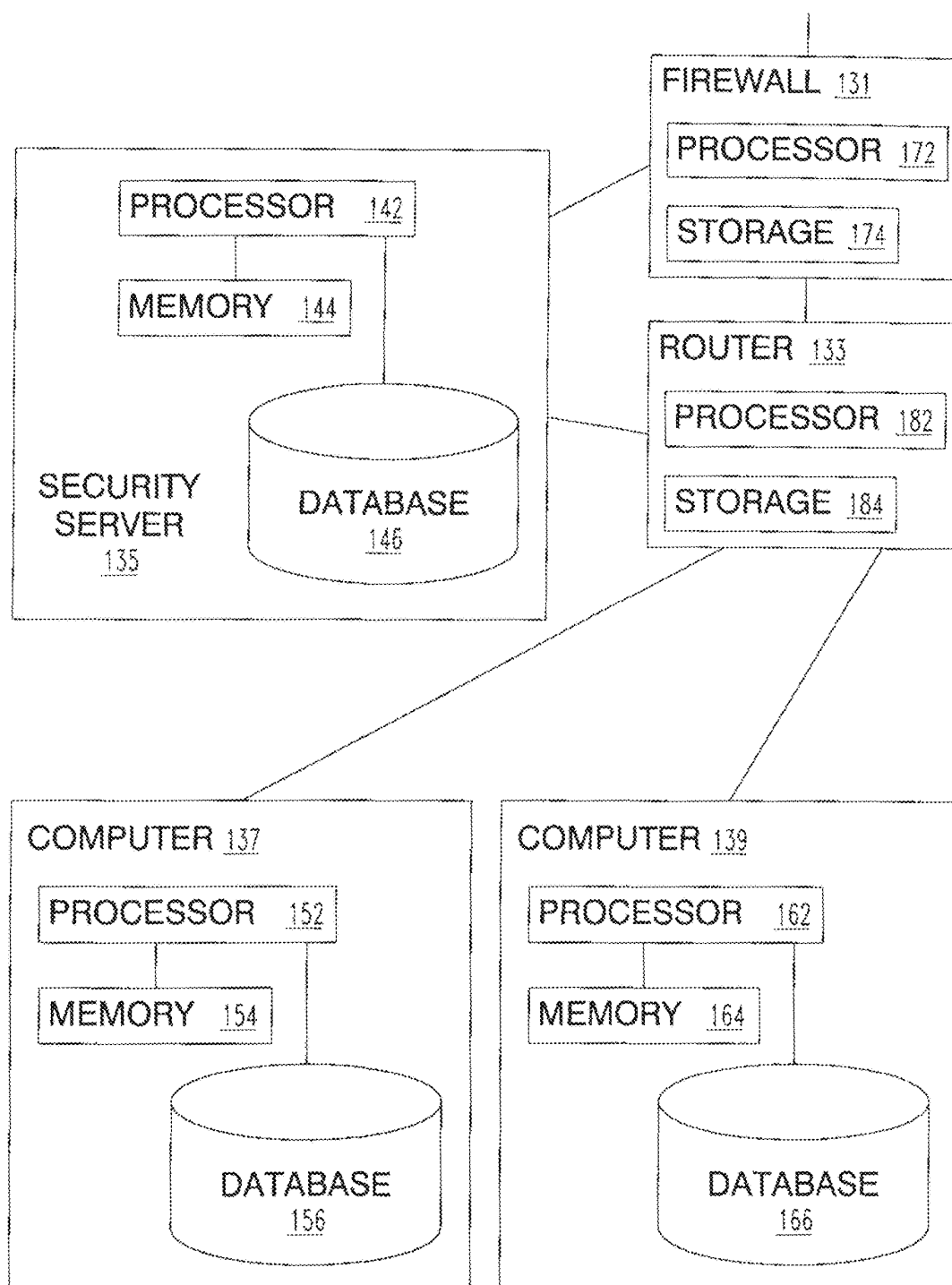


FIG. 2

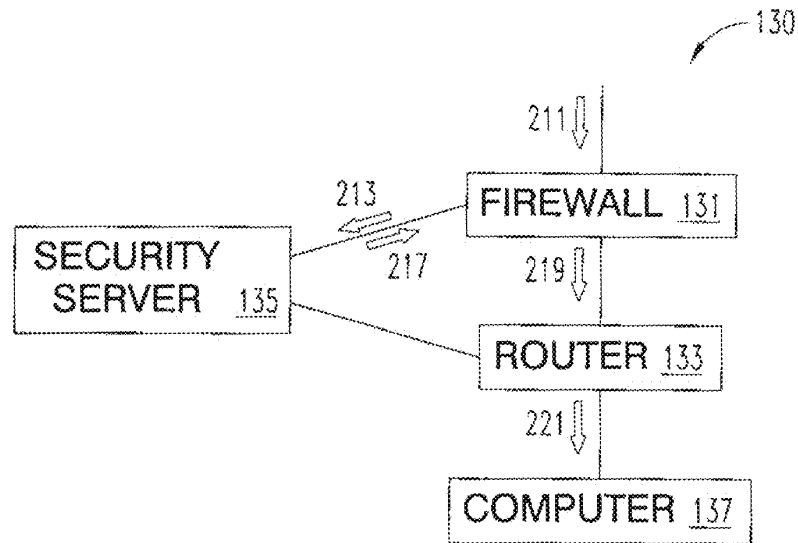


FIG. 3

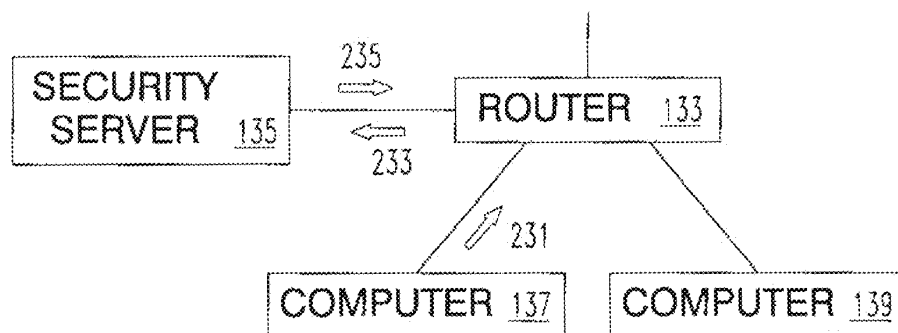


FIG. 4

# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.