

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

WEBROOT INC. and OPEN TEXT, INC.,

Plaintiffs,

v.

SOPHOS LTD.,

Defendant.

C.A. No. 6:22-cv-00240-ADA-DTG

JURY TRIAL DEMANDED

DEFENDANT SOPHOS LTD.'S FINAL INVALIDITY CONTENTIONS

7. U.S. Patent No. 11,409,869⁵

- U.S. Patent Pub. No. 2006/0026675 to Cai et al. (“Cai et al.”)
- U.S. Patent Pub. No. 2015/0213376 to Ideses et al. (“Ideses et al.”)
- U.S. Patent Pub. No. 2017/0098074 to Okano et al. (“Okano et al. ’074”)
- U.S. Patent No. 8,799,190 to Stokes et al. (“Stokes et al.”)
- U.S. Patent No. 9,245,120 to Friedrichs et al. (“Friedrichs et al.”)
- U.S. Patent No. 9,398,034 to Ronen et al. (“Ronen et al.”)
- U.S. Patent No. 8,955,133 to Kumar et al. (“Kumar et al.”)
- U.S. Patent No. 9,672,355 to Titonis et al. (“Titonis et al.”)
- U.S. Patent No. 10,268,820 to Okano et al. (“Okano et al. ’820”)
- U.S. Patent No. 10,395,032 to Keller et al. (“Keller et al.”)
- U.S. Patent Pub. No. 2006/0037080 to Maloof (“Maloof”)
- U.S. Patent Pub. No. 2007/0240220 to Tuvell et al. (“Tuvell et al.”)
- U.S. Patent Pub. No. 2009/0254992 to Schultz et al. (“Schultz et al.”)
- U.S. Patent Pub. No. 2011/0047618 to Evans et al. (“Evans et al.”)
- U.S. Patent Pub. No. 2013/0198841 to Poulson (“Poulson”)
- U.S. Patent Pub. No. 2014/0090061 to Avasarala et al. (“Avasarala et al.”)
- U.S. Patent Pub. No. 2015/0096024 to Haq et al. (“Haq et al.”)
- U.S. Patent Pub. No. 2016/0277423 to Apostolescu et al. (Apostolescu et al.”)
- U.S. Patent No. 8,161,548 to Wan (“Wan”)
- U.S. Patent No. 8,578,497 to Antonakakis et al. (“Antonakakis et al.”)
- U.S. Patent No. 8,719,939 to Krasser et al. (“Krasser et al.”)

⁵ Sophos hereby incorporates by reference all references for the ’844 patent listed in the Preliminary Invalidation Contentions’ ’844 Patent “State of the Art” section.

- U.S. Patent No. 9,286,182 to Fries et al. (“Fries et al.”)
- U.S. Patent No. 9,330,257 to Valencia et al. (“Valencia et al.”)
- U.S. Patent No. 9,516,039 to Yen et al. (“Yen”)
- U.S. Patent No. 9,832,211 to Hsiao et al. (“Hsiao et al.”)
- U.S. Patent No. 9,853,997 to Canzanese et al. (“Canzanese et al.”)
- U.S. Patent No. 8,838,992 to Zhu et al. (“Zhu et al.”)
- U.S. Patent No. 8,505,094 to Xuewen et al. (“Xuewen et al.”)
- E.P. Patent No. 2,182,458 to Moskovitch et al. (“Moskovitch et al.”)
- U.S. Patent No. 10,666,676 to Hsu et al. (“Hsu et al.”)
- U.S. Patent No. 8,935,788 to Diao et al. (“Diao et al.”)
- U.S. Patent No. 7,756,535 to Diao et al. (“Diao et al. II”)
- U.S. Patent No. 8,560,466 to Diao et al. (“Diao et al. III”)
- U.S. Patent No. 7,689,531 to Diao et al. (“Diao et al. IV”)
- U.S. Patent No. 7,949,771 to Chen et al. (“Chen et al.”)
- U.S. Patent No. 8,495,144 to Cheng et al. (“Cheng et al”)
- U.S. Patent No. 8,850,570 to Ramzan (“Ramzan”)
- U.S. Patent No. 8,023,974 to Diao et al. (“Diao et al. V”)
- U.S. Patent Pub. No. 2010/0191734 to Rajaram et al. (“Rajaram et al.”)
- U.S. Patent Pub. No. 2014/0090064 to Pistoia et al. (“Pistoia et al.”)
- U.S. Patent No. 8,533,831 to Satish (“Satish”)
- U.S. Patent No. 8,885,938 to Hong et al. (“Hong et al.”)
- U.S. Patent No. 9,129,110 to Mason et al. (“Mason et al.”)
- U.S. Patent No. 9,497,204 to Symons et al. (“Symons et al.”)
- U.S. Patent Pub. No. 2010/0162395 to Kennedy et al. (“Kennedy et al.”)

- U.S. Patent No. 8,826,439 to Hu et al. (“Hu et al.”)
- U.S. Patent No. 2011/0225655 to Niemelä et al. (“Niemelä et al.”)
- U.S. Patent Pub. No. 2014/0181973 to Lee et al. (“Lee et al.”)
- U.S. Patent No. 9,208,323 to Karta et al. (“Karta et al.”)
- U.S. Patent No. 9,781,151 to McCorkendale et al. (“McCorkendale et al.”)
- U.S. Patent Pub. No. 2006/0265746 to Farley et al. (“Farley 746”)
- U.S. Patent No. 7,356,843 to Kingsford (“Kingsford”)
- U.S. Patent Pub. No. 2013/0055339 to Apostolescu et al. (“Apostolescu”)
- Extending Intrusion Detection with Alert Correlation, 2003 (“Gorton”)
- U.S. Patent No. 8,176,527 to Njemanze et al. (“Njemanze”)
- U.S. Patent No. 8,225,407 to Thrower et al. (“Thrower”)
- Tahan et al., Mal-ID: Automatic Malware Detection Using Common Segment Analysis and Meta-Features (“Tahan et al.”)
- Shafiq, A Framework for Efficient Mining of Structural Information to Detect Zero-Day Malicious Portable Executables (“Shafiq et al.”)
- Improving Malware Detection by Applying Multi-Inducer Ensemble, by Menahem et al. (“Menahem”)
- Masud, Data Mining Tools For Malware Detection (“Masud”)
- Ravula, Classification of malware using reverse engineering and data mining techniques (“Ravula”)
- U.S. Patent Pub. No. 2009/0013405 to Schipka (“Schipka”)
- Wang, Detecting Unknown Malicious Executables Using Portable Executable Headers (“Wang I”)
- Wang, Detection of Packed Executables using Support Vector Machines (“Wang II”)
- Lai, A Feature Selection for Malicious Detection (“Lai”)
- Gove *et al.*, SEEM: a scalable visualization for comparing multiple large sets of attributes for malware analysis (“Gove”)

references listed below to render this patent obvious under 35 U.S.C. § 103. One of ordinary skill in the art would be motivated to combine these references as explained in Section II.D:

- White, Anatomy of a Commercial-Grade Immune System (“White”)
- U.S. Patent No. 8,646,038 to Blumfield et al. (“Blumfield”)
- Bhattacharyya, MET: an experimental system for Malicious Email Tracking (“Bhattacharyya”)
- Malin, Malware Forensics: Investigating and Analyzing Malicious Code (“Malin”)
- Klosterboer, Architecture of a Database System (“Klosterboer”)
- Taylor, Database Development For Dummies (“Taylor”)
- Bace, NIST Special Publication on Intrusion Detection Systems (“Bace”)⁰

8. U.S. Patent No. 11,409,869

a) Prior Art Patents / Patent Publications⁶

- U.S. Patent Pub. No. 2015/0213376 to Ideses et al. ("Ideses et al.")
- U.S. Patent Pub. No. 2017/0098074 to Okano et al. ("Okano et al. 074")
- U.S. Patent No. 8,799,190 to Stokes et al. ("Stokes et al.")
- U.S. Patent No. 9,245,120 to Friedrichs et al. ("Friedrichs et al.")
- U.S. Patent No. 9,398,034 to Ronen et al. ("Ronen et al.")
- U.S. Patent Pub. No. 2006/0037080 to Maloof ("Maloof")
- U.S. Patent Pub. No. 2014/0090061 to Avasarala et al. ("Avasarala et al.")
- U.S. Patent No. 8,955,133 to Kumar et al. ("Kumar et al.")
- U.S. Patent No. 9,672,355 to Titonis et al. ("Titonis et al")
- U.S. Patent No. 10,268,820 to Okano et al. ("Okano et al. 820")

⁶ Sophos hereby incorporates by reference all references for the '844 patent listed in the Preliminary Invalidity Contentions' '844 Patent "Prior Art Patents/Patent Publications" section.

- U.S. Patent No. 9,208,323 to Karta et al. ("Karta et al.")
- U.S. Patent Pub. No. 2006/0026675 to Cai et al. ("Cai et al.")
- U.S. Patent Pub. No. 2009/0254992 to Schultz et al. ("Schultz et al.")
- U.S. Patent Pub. No. 2015/0096024 to Haq et al. ("Haq et al.")
- U.S. Patent No. 8,161,548 to Wan ("Wan")
- U.S. Patent No. 8,838,992 to Zhu et al. ("Zhu et al.")
- U.S. Patent No. 8,505,094 to Xuewen et al. ("Xuewen et al.")
- E.P. Patent No. 2,182,458 to Moskovitch et al. ("Moskovitch et al.")
- U.S. Patent No. 10,666,676 to Hsu et al. ("Hsu et al.")
- U.S. Patent No. 8,935,788 to Diao et al. ("Diao et al.")
- U.S. Patent No. 7,756,535 to Diao et al. ("Diao et al. II")
- U.S. Patent No. 8,560,466 to Diao et al. ("Diao et al. III")
- U.S. Patent No. 7,689,531 to Diao et al. ("Diao et al. IV")
- U.S. Patent No. 7,949,771 to Chen et al. ("Chen et al.")
- U.S. Patent No. 8,495,144 to Cheng et al. ("Cheng et al.")
- U.S. Patent No. 8,850,570 to Ramzan ("Ramzan")
- U.S. Patent No. 8,023,974 to Diao et al. ("Diao et al. V")
- U.S. Patent Pub. No. 2010/0162395 to Kennedy et al. ("Kennedy et al.")
- U.S. Patent No. 8,826,439 to Hu et al. ("Hu et al.")
- U.S. Patent No. 2011/0225655 to Niemelä et al. ("Niemelä et al.")
- U.S. Patent Pub. No. 2014/0181973 to Lee et al. ("Lee et al.")
- U.S. Patent No. 9,781,151 to McCorkendale et al. ("McCorkendale et al.")

b) Prior Art Publications⁷

- Tahan et al., Mal-ID: Automatic Malware Detection Using Common Segment Analysis and Meta-Features (“Tahan et al.”)
- Improving Malware Detection by Applying Multi-Inducer Ensemble, by Menahem et al. (“Menahem”)
- Masud, Data Mining Tools For Malware Detection (“Masud”)
- Ravula, Classification of malware using reverse engineering and data mining techniques (“Ravula”)
- Gove *et al.*, SEEM: a scalable visualization for comparing multiple large sets of attributes for malware analysis (“Gove”)

c) Prior Art Systems⁸

Sophos identifies the following systems—including constituent software, hardware, methods, and processes—as prior art that anticipate or render obvious the Asserted Claims of this patent. Each system (1) was known or used in this country before the alleged invention of the claimed subject matter of the patent-in-suit; (2) was in public use and/or on sale in this country more than one year before the filing date of the application for the patent-in-suit; and/or (3) was invented and not abandoned, suppressed, or concealed prior to the alleged invention of the patent-in-suit. Sophos reserves the right to rely on the below systems themselves as prior art, as well as any of the references describing these systems individually or in any combination, as well as testimony from any inventor or developer of these systems. Sophos will supplement this list as discovery progresses.

- Perdisci System (“Perdisci System”)
- Guo System (“Guo System”)

⁷ Sophos hereby incorporates by reference all references for the ’844 patent listed in the Preliminary Invalidity Contentions’ ’844 Patent “Prior Art Publications” section.

⁸ Sophos hereby incorporates by reference all references for the ’844 patent listed in the Preliminary Invalidity Contentions’ ’844 Patent “Prior Art Systems” section.

- Cynomix malware visualization tool (“Cynomix”)
- Invincea Endpoint (“Invincea Endpoint”)
- Invincea Management (“Invincea Management”)
- Trend Micro Advanced Threat Scan Engine (“Advanced Threat Scan Engine”)
- Trend Micro Smart Protection Server / Smart Protection Network (“Smart Protection Server”)
- Trend Micro Enterprise Security Suite (“Enterprise Security Suite”)
- Trend Micro ScanMail (“ScanMail”)
- Trend Micro InterScan Messaging Security (“InterScan Messaging Security”)
- Trend Micro InterScan Web Security (“InterScan Web Security”)
- Trend Micro Communication and Collaboration Security (“Communication and Collaboration Security”)
- Trend Micro IM Security (“IM Security”)
- Trend Micro Security for Mac (“Security for Mac”)
- Trend Micro Worry-Free Business Security (“Worry-Free Business Security”)
- Trend Micro Deep Edge (“Deep Edge”)
- Trend Micro Anti-Spam Engine (“Anti-Spam Engine”)
- Trend Micro Hosted Email Security (“Hosted Email Security”)
- McAfee Mobile Virus Scan (“Mobile Virus Scan”)
- McAfee Content Security Suite (“Content Security Suite”)
- Check Point Anti-Bot Software Blade (“Anti-Bot Software Blade”)
- Check Point Anti-Spam Software Blade (“Anti-Spam Software Blade”)
- Check Point URL Filtering Software Blade (“URL Filtering Software Blade”)
- Check Point Secure Web Gate Way (“Secure Web Gate Way”)
- McAfee Email Protection (“Email Protection”)

- McAfee Web Protection (“Web Protection”)
- McAfee Endpoint Protection Suite (“Endpoint Protection Suite”)
- Check Point Threat Prevention Appliance (“Threat Prevention Appliance”)
- Symantec Endpoint Protection (“Endpoint Protection”)
- McAfee Advanced Threat Defense (“Advanced Threat Defense”)
- Symantec Email Security (“Email Security”)
- Symantec IM Security (“IM Security”)
- Symantec Web Security (“Web Security”)
- Symantec AntiSpam (“AntiSpam”)
- Trend Micro InterScan VirusWall (“InterScan Virus Wall”)

d) Prior Invention Under § 102(a)(2)⁹

For any of the prior art that Sophos has identified, Sophos may argue that the authors or inventors of that prior art invented the subject matter claimed in the ’869 patent prior to the priority date of the ’869 patent. Discovery has not started and Sophos will supplement as discovery progresses.

e) Obviousness and Secondary References¹⁰

Sophos identifies each of the references listed above as primary references that render this patent anticipated, or at least obvious in view of the knowledge of a person of ordinary skill in the art. In addition, these primary references may be combined with each other or with the secondary

⁹ Sophos hereby incorporates by reference the disclaimer and preservation of argument under 102(g) contained in the Preliminary Invalidity Contentions’ ’844 Patent “Prior Invention Under 102(g)” section.

¹⁰ Sophos hereby incorporates by reference all references for the ’844 patent listed in the Preliminary Invalidity Contentions’ ’844 Patent “Obviousness and Secondary References” section.

references listed below to render this patent obvious under 35 U.S.C. § 103. One of ordinary skill in the art would be motivated to combine these references as explained in Section II.D:

- U.S. Patent Pub. No. 2013/0198841 to Poulson ("Poulson")
- U.S. Patent No. 8,719,939 to Krasser et al. ("Krasser et al.")
- U.S. Patent No. 9,129,110 to Mason et al. ("Mason et al.")
- Shafiq, A Framework for Efficient Mining of Structural Information to Detect Zero-Day Malicious Portable Executables ("Shafiq et al.")
- Wang, Detecting Unknown Malicious Executables Using Portable Executable Headers ("Wang I")
- Japanese Patent Appl. Pub. No. 2012027710A to Mori ("Mori")
- U.S. Patent Pub. No. 2010/0150448 to Lecerf et al. ("Lecerf")
- Vinod, Relevant hex Patterns for malcode detection ("Vinod")
- Walenstein, "Exploiting similarity between variants to defeat malware: Vilo method for comparing and searching binary programs" ("Walenstein")
- U.S. Patent No. 10,649,970 to Saxe et al. ("Saxe 970")
- U.S. Patent No. 9,189,750 to Narsky ("Narsky")
- U.S. Patent Pub. No. 2014/0090064 to Pistoia et al. ("Pistoia")
- Tan, An Internet Traffic Identification Approach Based on GA and PSO-SVM ("Tan")
- U.S. Patent No. 9,286,182 to Fries et al. ("Fries et al.")
- U.S. Patent Pub. No. 2010/0191734 to Rajaram et al. ("Rajaram et al.")
- Wang, Detection of Packed Executables using Support Vector Machines ("Wang II")
- Lai, A Feature Selection for Malicious Detection ("Lai")

9. U.S. Patent No. 8,181,244

a) Prior Art Patents / Patent Publications

- U.S. Pat. No. 8,272,058 ("Brennan")
- U.S. Patent No. 7,352,280 to Rockwood ("Rockwood")

- U.S. Patent No. 7,174,566 (“Yadav”)
- U.S. Pat. No. 7,152,242 (“Douglas”)
- U.S. Pat. No. 7,509,677 (“Saurabh”)
- U.S. Pat. Pub. No. 2002/0178374 (“Swimmer”)
- U.S. Patent Pub. No. 2006/0070130 to Costea et al. (“Costea et al.”)
- U.S. Patent No. 7,231,667 to Jordan (“Jordan”)
- U.S. Patent No. 7,571,482 to Polyakov et al. (“Polyakov et al.”)
- U.S. Patent No. 7,647,636 to Polyakov et al. (“Polyakov et al. II”)
- U.S. Patent No. 8,321,910 to English et al. (“English et al.”)
- U.S. Patent No. 8,516,583 to Thomas et al. (“Thomas et al.”)
- U.S. Patent No. 9,129,111 to Rothwell (“Rothwell”)
- U.S. Patent Pub. No. 2005/0005160 to Bates et al. (“Bates et al.”)
- U.S. Patent Pub. No. 2006/0031673 to Beck et al. (“Beck et al.”)
- U.S. Patent Pub. No. 2006/0037079 to Midgley (“Midgley”)
- U.S. Patent Pub. No. 2006/0095964 to Costea (“Costea”)
- U.S. Patent Pub. No. 2006/0095970 to Rajagopal et al. (“Rajagopal et al.”)
- U.S. Patent Pub. No. 2006/0130141 to Kramer et al. (“Kramer et al.”)
- U.S. Patent Pub. No. 2006/0179484 to Scrimsher et al. (“Scrimsher et al.”)
- U.S. Patent Pub. No. 2006/0259967 to Thomas et al. (“Thomas et al. II”)
- U.S. Patent No. 7,096,500 to Roberts et al. (“Roberts et al.”)
- U.S. Patent No. 7,134,141 to Crosbie et al. (“Crosbie et al.”)
- U.S. Patent No. 7,376,970 to Marinescu (“Marinescu”)
- U.S. Patent No. 7,398,553 to Li (“Li”)
- U.S. Patent No. 7,418,729 to Szor (“Szor”)

- U.S. Patent No. 7,434,261 to Costea et al. (“Costea et al. II”)
- U.S. Patent No. 7,478,431 to Nachenberg (“Nachenberg”)
- U.S. Patent No. 7,735,138 to Zhao (“Zhao”)
- U.S. Patent No. 7,779,472 to Lou (“Lou”)
- U.S. Patent No. 7,861,303 to Kouznetsov et al. (“Kouznetsov et al.”)
- U.S. Patent No. 7,874,001 to Beck et al. (“Beck et al. II”)
- U.S. Patent No. 7,093,292 to Pantuso (“Pantuso”)
- U.S. Patent Pub. No. 2004/0078580 to Hsu et al. (“Hsu et al.”)
- U.S. Patent Pub. No. 2004/0199827 to Muttik et al. (“Muttik et al.”)
- U.S. Patent Pub. No. 2006/0156397 to Dai (“Dai”)
- U.S. Patent Pub. No. 2007/0067844 to Williamson et al. (“Williamson et al.”)
- U.S. Patent No. 5,832,208 to Chen et al. (“Chen et al.”)
- U.S. Patent No. 5,886,699 to Belfiore et al. (“Belfiore et al.”)
- U.S. Patent No. 7,203,962 to Moran (“Moran”)
- U.S. Patent No. 7,822,818 to Desouza et al. (“Desouza et al.”)
- U.S. Patent Pub. No. 2006/0206937 to Repasi et al. (“Repasi et al.”)
- U.S. Patent No. 7,398,399 to Palliyil et al. (“Palliyil et al.”)
- U.S. Patent No. 7,558,796 to Bromwich et al. (“Bromwich et al.”)
- U.S. Patent Pub. No. 2009/0144826 to Piccard (“Piccard”)
- U.S. Patent No. 7,756,834 to Masters et al. (“Masters et al.”)
- U.S. Patent No. 7,979,889 to Gladstone et al. (“Gladstone et al.”)
- U.S. Patent Pub. No. 2007/0150957 to Hartrell et al. (“Hartrell et al.”)
- U.S. Patent No. 7,784,098 to Fan et al. (“Fan et al.”)
- U.S. Patent Pub. No. 2003/0084349 to Friedrichs et al. (“Friedrichs et al.”)

- W.I.P.O. Patent Pub. No. 2001/016709 to Moran (“Moran II”)
- U.S. Patent Pub. No. 2004/0225877 to Huang (“Huang”)
- J.P. Patent Pub. No. 2004/086241 to Sekiguchi et al. (“Sekiguchi et al.”)
- US PCT App. No. 60/762,359 to Kronenberg (“Kronenberg”)

b) Prior Art Publications

- Li, et al., UCLog: A Unified, Correlated Logging Architecture for Intrusion Detection, Int’l Conf. on Telecomm. Sys.-Modelling & Analysis (“Li et al.”)
- Salvador Mandujano Vergara, A multiagent approach to outbound intrusion detection (“Mandujano”)

c) Prior Art Systems

Sophos identifies the following systems—including constituent software, hardware, methods, and processes—as prior art that anticipate or render obvious the Asserted Claims of this patent. Each system (1) was known or used in this country before the alleged invention of the claimed subject matter of the patent-in-suit; (2) was in public use and/or on sale in this country more than one year before the filing date of the application for the patent-in-suit; and/or (3) was invented and not abandoned, suppressed, or concealed prior to the alleged invention of the patent-in-suit. Sophos reserves the right to rely on the below systems themselves as prior art, as well as any of the references describing these systems individually or in any combination, as well as testimony from any inventor or developer of these systems. Sophos will supplement this list as discovery progresses.

- Cisco Security Agent by Cisco Systems, Inc.
- Intrusion-Detection Expert System (IDES) by SRI International
- UCLog (Li)
- HP ArcSight
- Trend Micro OfficeScan

- Trend Micro Control Manager
- Trend Micro ServerProtect
- Trend Micro NeatSuite
- Trend Micro Client/Server/Messaging Suite
- Trend Micro Anti-Spyware
- Panda TruPrevent Technologies
- Webroot Prevx
- Webroot Prevx Enterprise
- Prevx Home 1.0
- Prevx Home 2.0
- Trend Micro Threat Management System
- Enterasys Security Information & Event Manager
- OpenService Nerve Center
- Forensix
- CounterTack
- BackTracker
- NetForensics
- E-Security – e-Sentinel
- GuardedNet – NeuSecure
- High Tower – Towerview
- Intellitactics Network Security Manager
- NetIQ Security Manager
- Network Intelligence
- OpenSystems Security Threat Manager

- RealSecure Site Protector
- Symantec Security Information Manager
- McAfee Network Threat Behavior Analysis
- Micromuse Netcool
- Invincea Endpoint
- Cyberoam Threat Management, Cyberoam iView, Cyberoam Central Console, Cyberoam Endpoint Protection
- Astaro Security Gateway
- Okena StormWatch/StormFront
- Aladdin Esafe
- TrendMicro InterScan AppletTrap
- TrendMicro InterScan VirusWall
- Finjan SurfinGate 4.0
- Finjan SurfinGuard Pro
- Finjan SurfinShield
- eSafe Protect Enterprise
- F-Secure Policy Manager
- Tiny Software
- NetShield System
- neuSECURE
- Coretrace
- DIDS
- Endpoint Security
- NetRanger
- PrevX Pro

- McAfee Enterscept

d) Prior Invention Under § 102(g)

For any of the prior art that Sophos has identified, Sophos may argue that the authors or inventors of that prior art invented the subject matter claimed in the '244 patent prior to the priority date of the '244 patent. Discovery has not started and Sophos will supplement as discovery progresses.

e) Obviousness and Secondary References

Sophos identifies each of the references listed above as primary references that render this patent anticipated, or at least obvious in view of the knowledge of a person of ordinary skill in the art. In addition, these primary references may be combined with each other or with the secondary references listed below to render this patent obvious under 35 U.S.C. § 103. One of ordinary skill in the art would be motivated to combine these references as explained in Section II.D:

- U.S. Pat. No. 8,272,058 (“Brennan”)
- U.S. Pat. No. 7,152,242 (“Douglas”)
- U.S. Pat. No. 7,509,677 (“Saurabh”)
- U.S. Pat. Pub. No. 2002/0178374 (“Swimmer”)
- U.S. Patent Pub. No. 2006/0070130 to Costea et al. (“Costea et al.”)
- U.S. Patent No. 7,231,667 to Jordan (“Jordan”)
- U.S. Patent No. 7,571,482 to Polyakov et al. (“Polyakov et al.”)
- U.S. Patent No. 7,647,636 to Polyakov et al. (“Polyakov et al. II”)
- U.S. Patent No. 8,321,910 to English et al. (“English et al.”)
- U.S. Patent No. 8,516,583 to Thomas et al. (“Thomas et al.”)
- U.S. Patent No. 9,129,111 to Rothwell (“Rothwell”)
- U.S. Patent Pub. No. 2005/0005160 to Bates et al. (“Bates et al.”)

- U.S. Patent Pub. No. 2006/0031673 to Beck et al. (“Beck et al.”)
- U.S. Patent Pub. No. 2006/0037079 to Midgley (“Midgley”)
- U.S. Patent Pub. No. 2006/0095964 to Costea (“Costea”)
- U.S. Patent Pub. No. 2006/0095970 to Rajagopal et al. (“Rajagopal et al.”)
- U.S. Patent Pub. No. 2006/0130141 to Kramer et al. (“Kramer et al.”)
- U.S. Patent Pub. No. 2006/0179484 to Scrimsher et al. (“Scrimsher et al.”)
- U.S. Patent Pub. No. 2006/0259967 to Thomas et al. (“Thomas et al. II”)
- U.S. Patent No. 7,096,500 to Roberts et al. (“Roberts et al.”)
- U.S. Patent No. 7,134,141 to Crosbie et al. (“Crosbie et al.”)
- U.S. Patent No. 7,376,970 to Marinescu (“Marinescu”)
- U.S. Patent No. 7,398,553 to Li (“Li”)
- U.S. Patent No. 7,418,729 to Szor (“Szor”)
- U.S. Patent No. 7,434,261 to Costea et al. (“Costea et al. II”)
- U.S. Patent No. 7,478,431 to Nachenberg (“Nachenberg”)
- U.S. Patent No. 7,735,138 to Zhao (“Zhao”)
- U.S. Patent No. 7,779,472 to Lou (“Lou”)
- U.S. Patent No. 7,861,303 to Kouznetsov et al. (“Kouznetsov et al.”)
- U.S. Patent No. 7,874,001 to Beck et al. (“Beck et al. II”)
- U.S. Patent No. 7,093,292 to Pantuso (“Pantuso”)
- U.S. Patent Pub. No. 2004/0078580 to Hsu et al. (“Hsu et al.”)
- U.S. Patent Pub. No. 2004/0199827 to Muttik et al. (“Muttik et al.”)
- U.S. Patent Pub. No. 2006/0156397 to Dai (“Dai”)
- U.S. Patent Pub. No. 2007/0067844 to Williamson et al. (“Williamson et al.”)
- U.S. Patent No. 5,832,208 to Chen et al. (“Chen et al.”)

- U.S. Patent No. 5,886,699 to Belfiore et al. (“Belfiore et al.”)
- U.S. Patent No. 7,203,962 to Moran (“Moran”)
- U.S. Patent No. 7,822,818 to Desouza et al. (“Desouza et al.”)
- U.S. Patent Pub. No. 2006/0206937 to Repasi et al. (“Repasi et al.”)
- U.S. Patent No. 7,398,399 to Palliyil et al. (“Palliyil et al.”)
- U.S. Patent No. 7,558,796 to Bromwich et al. (“Bromwich et al.”)
- U.S. Patent Pub. No. 2009/0144826 to Piccard (“Piccard”)
- U.S. Patent No. 7,756,834 to Masters et al. (“Masters et al.”)
- U.S. Patent No. 7,979,889 to Gladstone et al. (“Gladstone et al.”)
- U.S. Patent Pub. No. 2007/0150957 to Hartrell et al. (“Hartrell et al.”)
- U.S. Patent No. 8,117,659 to Hartrell (“Hartrell”)
- U.S. Patent No. 7,784,098 to Fan et al. (“Fan et al.”)
- U.S. Patent Pub. No. 2003/0084349 to Friedrichs et al. (“Friedrichs et al.”)
- W.I.P.O. Patent Pub. No. 2001/016709 to Moran (“Moran II”)
- U.S. Patent Pub. No. 2004/0225877 to Huang (“Huang”)
- J.P. Patent Pub. No. 2004/086241 to Sekiguchi et al. (“Sekiguchi et al.”)
- US PCT App. No. 60/762,359 to Kronenberg (“Kronenberg”)
- U.S. Patent Pub. No. 2007/006310 to Piccard (“Piccard”)
- U.S. Patent No. 7,352,280 to Rockwood (“Rockwood”)
- U.S. Patent No. 7,571,482 to Polyakov (“Polyakov”)
- Lunt, A Real-Time Intrusion-Detection Expert System (IDES) (“Lunt”)
- Chen, K., Event Correlation for Forensics, Australian Computer, Network & Information Forensics Conference (2003) (“Chen”)
- U.S. Patent No. 7,571,482 to Polyakov (“Polyakov”)

- Li, et al., UCLog: A Unified, Correlated Logging Architecture for Intrusion Detection, Int'l Conf. on Telecomm. Sys.-Modelling & Analysis ("Li et al.")
- U.S. Patent Pub. No. 2007/0150957 to Hartrell et al. ("Hartrell et al.")
- U.S. Pat. No. 8,272,058 ("Brennan")
- U.S. Patent No. 7,571,482 to Polyakov et al. ("Polyakov et al.")
- U.S. Patent No. 7,647,636 to Polyakov et al. ("Polyakov et al. II")
- U.S. Patent No. 8,321,910 to English et al. ("English et al.")
- U.S. Patent No. 7,979,889 to Gladstone et al. ("Gladstone et al.")
- U.S. Patent No. 7,152,242 to Douglas ("Douglas")

10. U.S. Patent No. 8,201,243

a) Prior Art Patents / Patent Publications

- U.S. Patent No. 7,934,103 to Kidron ("Kidron")
- U.S. Patent No. 7,568,233 to Szor et al. ("Szor et al.")
- U.S. Patent No. 9,171,157 to Flores et al. ("Flores et al.")
- U.S. Patent Pub. No. 2006/0070130 to Costea et al. ("Costea et al.")
- U.S. Patent No. 7,231,667 to Jordan ("Jordan")
- U.S. Patent No. 7,571,482 to Polyakov et al. ("Polyakov et al.")
- U.S. Patent No. 7,647,636 to Polyakov et al. ("Polyakov et al. II")
- U.S. Patent No. 8,321,910 to English et al. ("English et al.")
- U.S. Patent No. 8,516,583 to Thomas et al. ("Thomas et al.")
- U.S. Patent No. 9,129,111 to Rothwell ("Rothwell")
- U.S. Patent Pub. No. 2006/0179484 to Scrimsher et al. ("Scrimsher et al.")
- U.S. Patent No. 7,093,292 to Pantuso ("Pantuso")
- U.S. Patent No. 7,203,962 to Moran ("Moran")
- U.S. Patent No. 2006/0206937 to Repasi et al. ("Repasi et al.")

V. ACCOMPANYING DOCUMENT PRODUCTION

Pursuant to the Parties' Proposed Scheduling Order, Defendant has produced or will promptly produce all prior art referenced in its Final Invalidity Contentions. *See* documents with the prefix "SOPHOS-" produced herewith. Defendant will promptly produce any documents uncovered during discovery, including through third-party subpoenas.

Dated: November 1, 2023

Respectfully submitted,

/s/ Brian Rosenthal

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Certificate of Service

I hereby certify that on November 1, 2023, the foregoing document has been served by electronic mail on all counsel of record.

/s/ *Lauren Womack*

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