

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

SELENE COMMUNICATION
TECHNOLOGIES, LLC,

Plaintiff,

v.

HEWLETT-PACKARD COMPANY,

Defendant.

C.A. No. 14-1015-LPS

JURY TRIAL DEMANDED

FIRST AMENDED COMPLAINT

This is an action for patent infringement in which Plaintiff, Selene Communication Technologies, LLC (“Selene”), makes the following allegations against Defendant Hewlett-Packard Company (“HP”):

PARTIES

1. Plaintiff Selene is a Delaware limited liability company with its principal place of business at 2961 Fontenay Road, Shaker Heights, Ohio 44120.

2. On information and belief, defendant HP is a corporation organized under the laws of the State of Delaware, with its corporate headquarters and principal place of business at 3000 Hanover Street, Palo Alto, CA 94304. HP may be served via its registered agent for service of process, The Corporation Trust Company, at Corporation Trust Center, 1209 Orange Street, Wilmington, DE 19801.

JURISDICTION AND VENUE

3. This action arises under the patent laws of the United States, 35 U.S.C. § 1, *et seq.*, including § 271. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has personal jurisdiction over HP. In addition to being a Delaware corporation, HP has conducted extensive commercial activities and continues to conduct extensive commercial activities within the State of Delaware. HP, directly and/or through intermediaries or affiliates (including HP entities, subsidiaries, distributors, sales agents, and others), offers for sale, sells, and/or advertises its products and services (including, but not limited to, the products and services that are accused of infringement in this lawsuit) in the United States, the State of Delaware, and this Judicial District. HP, directly and/or through intermediaries or affiliates (including other HP entities, subsidiaries, distributors, sales agents, and others), has purposefully and voluntarily placed one or more of its products (including, but not limited to, the products that are accused of infringement in this lawsuit), as described below in Count I, into the stream of commerce with the expectation that they will be purchased by customers in the District of Delaware. Accordingly, HP has committed the tort of patent infringement within the State of Delaware, as alleged in more detail below.

5. Venue is proper in this District under 28 U.S.C. §§ 1391(b)-(c) and 1400(b) because, among other reasons, HP is subject to personal jurisdiction in this District, and has committed and continues to commit acts of patent infringement in this District. On information and belief, for example, HP has used, sold, offered for sale, and imported infringing products/services in this District.

FACTUAL BACKGROUND

6. This lawsuit asserts causes of action for infringement of United States Patent No. 7,143,444 (the “Asserted Patent”). The inventions disclosed in the Asserted Patent were conceived and created by inventors working for a 501(c)(3) nonprofit research institute known as SRI International (“SRI”).

7. Based on a purchase agreement and assignment from SRI, Plaintiff Selene owns the Asserted Patent, and has the exclusive right to sue for infringement and recover damages for all past, present, and future infringement.

THE HISTORY OF SRI

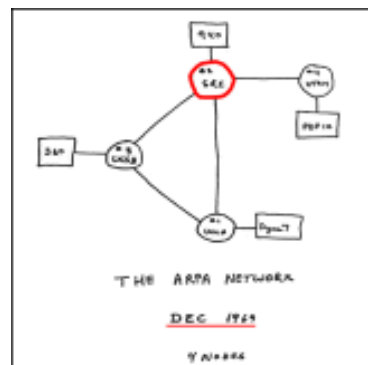
8. All of the inventions disclosed and claimed in the Asserted Patent were originally invented and patented by technology researchers at SRI, a premier institution with a long history of leading technological innovation.

9. SRI, which began as an initiative among researchers at Stanford University, was founded in 1946 as Stanford Research Institute.



the

10. Since its inception, SRI was a pioneer in advancing technology in ways that had a profound global impact. For instance, in 1963, engineers at SRI created the first optical video disk recording system, paving the way for modern optical storage technologies such as CD-ROMs, DVDs, and Blu-Ray discs. In the early 1960s, SRI engineers invented the world's first computer mouse (pictured above right). In the late 1960s, SRI collaborated with the U.S. Department of Defense to create "ARPANET"—the progenitor of what would become the global Internet (scan of ARPANET map, circa 1969, pictured right).



11. SRI was spun out from Stanford University in 1970. In the early 1970s, SRI was the first organization to utilize domain names, with extensions such as ".com," ".org," or ".gov." In 1977, SRI created what is considered to be the first true Internet connection, by connecting three dissimilar networks.

12. In 1988, SRI acquired the Sarnoff Corporation (“Sarnoff”). Sarnoff, formed in 1941, traces its origins to David Sarnoff, a principal technology researcher at RCA Laboratories. It was created to be a research and development company specializing in vision, video, and semiconductor technology, and it later expanded its research areas to include various facets of



information technology. Sarnoff is known for several important technological advances. For instance, in 1953, David Sarnoff and RCA Laboratories created the world’s first color television system (pictured at right, with RCA President Franklin Folsom (left) and RCA Chairman David Sarnoff (right)). From 1963 to 1968, a team of engineers at the David Sarnoff Research Center developed a revolutionary method for the electronic control of light reflected from liquid crystals—leading to their invention of the liquid crystal display (LCD). Sarnoff is also credited for the development of the electron microscope and early optoelectronic components such as lasers and LEDs.

13. In 2007, SRI spun off its creation of Siri, a virtual personal assistant with a natural language interface, as Siri, Inc. Siri was acquired by Apple Inc. in 2011.

14. SRI today is a nonprofit, independent research and innovation center serving government and industry that derives revenue from a variety of sources, including licensing. SRI employs over 2,500 employees at research facilities across the United States and abroad, including researchers at the former Sarnoff facilities in Princeton, New Jersey.

15. The Asserted Patent issued as the result of the inventiveness of SRI personnel and its significant research investment.

SELENE COMMUNICATION TECHNOLOGIES, LLC

16. Selene was created in 2011 in order to advance technological innovation by active participation in all areas of the patent market, including licensing. By creating a secondary market for SRI patents, Selene believes it is promoting innovation and providing capital to SRI that can be reinvested by SRI in further research.

17. Selene completed a transaction to, among other things, acquire the Asserted Patent from SRI in July 2013. The transaction included a non-exclusive license to the U.S. government for the patent.

UNITED STATES PATENT NO. 7,143,444

18. On November 28, 2006, the PTO duly and legally issued United States Patent No. 7,143,444 (the “444 Patent”), entitled “Application-Layer Anomaly and Misuse Detection,” listing as inventors Phillip Andrew Porras, Magnus Almgren, Ulf E. Lindqvist, and Steven Mark Dawson, after a full and fair examination. A true and correct copy of the ‘444 Patent is attached as Exhibit A.

19. Selene is the owner of the entire right, title, and interest in and to the ‘444 Patent by assignment, and has the exclusive right to sue for infringement and recover damages for all past, present and future infringement, including against HP.

20. The ‘444 Patent discloses and claims, among other things, novel methods and systems for hosting an intrusion detection process in a server, where the intrusion detection process is integrated with a server process. The ‘444 Patent teaches inventions that are fundamental to modern methods and systems for intrusion detection components and processes. By way of example only, Claim 1 recites one of the inventions disclosed in the ‘444 Patent:

1. A method comprising:
in a server, hosting an intrusion detection process that
provides intrusion detection services;
integrating the intrusion detection process with a server
process; and
passing a request for data received by the server process
to the intrusion detection process,
where the intrusion detection process comprises:
packing a subset of information from the request into
an analysis format; and
delivering the subset in a funneling process, via a
socket, to an analysis process.

21. On November 28, 2001, Phillip Andrew Porras, Magnus Almgren, Ulf E. Lindqvist, and Steven Mark Dawson filed their application for what would become the ‘444 Patent. Each of the inventors were employed by SRI at its facilities in Menlo Park, California.

22. SRI pioneered the field of network intrusion detection. In 1997, SRI researchers published their creation of the Event Monitoring Enabling Responses to Anomalous Live Disturbances (“EMERALD”),¹ which became a foundational and patented industry standard for intrusion detection.

¹ See Porras et al., *EMERALD: Event Monitoring Enabling Responses to Anomalous Live Disturbances*, 1997 National Information Systems Security Conference (Oct. 1997), available at <http://www.csl.sri.com/papers/emerald-niss97/> (last visited Apr. 9, 2014).

1990s

Network Intrusion Detection



For many years, SRI has pioneered cyber security technology to protect vital infrastructures against malicious attacks. SRI's patented, software-based intrusion detection solution called Event Monitoring Enabling Responses to Anomalous Live Disturbances (EMERALD[®]) led to today's network intrusion detection solutions. EMERALD uses lightweight sensors distributed over a network or series of networks for real-time detection of cyber-attack activity.

SRI's other R&D related to cyber security includes malware threat detection and information sharing, highly predictive blacklisting, cyber-threat analytics, industrial control systems (ICS) in the energy and financial sectors, telecommunications, and the Internet. SRI has been providing technical, managerial, and administrative support to the Department of Homeland Security's Cyber Security Research and Development Center since the center was established in 2004.

23. SRI continues to license its patents related to its EMERALD technology to industry leaders in the field of cyber-security to date, including, most recently, Symantec and IBM.² SRI's EMERALD research team is led by Principal Investigator Phillip Porras, the Program Director of SRI's Internet Security Group and an inventor of the '444 Patent.³

24. The '444 Patent, while covering technology distinct from EMERALD, advanced the state of the art of intrusion detection by generally teaching methods and systems for effectively hosting an intrusion detection process in a server and integrating the intrusion detection processes into server processes.

25. The inventions of the '444 Patent are fundamental to modern methods and systems for intrusion detection. The '444 Patent has been cited during the prosecution of more than 13 later-filed patents and has more forward citations than 72.6% of all comparable U.S.

² See, e.g., Press Release, SRI International Licenses EMERALD Network Intrusion Detection Patents to IBM (Mar. 14, 2013), available at <http://www.sri.com/newsroom/press-releases/sri-international-licenses-emerald-network-intrusion-detection-patents-ibm> (last visited Apr. 9, 2014).

³ See SRI International, EMERALD, available at <http://www.csl.sri.com/projects/emerald/> (last visited Apr. 9, 2014). Dr. Ulf Lindqvist, another inventor of the '444 Patent, is also a staff member of the EMERALD team.

patents. The '444 Patent has been cited in the patent applications of a variety of industry leaders in intrusion detection including Symantec, Microsoft, and, significantly, HP.

26. The '444 Patent was cited in at least seven later-filed patent applications that issued as U.S. patents owned by HP. For instance, the application for U.S. Patent No. 8,056,130, which issued on November 8, 2011, cited the '444 Patent.

HP'S INFRINGEMENT OF THE ASSERTED PATENT

27. HP is a publicly-traded, multinational information technology company that provides hardware, software, and services to consumers and businesses. Its product offerings include personal computing devices, enterprise and industry standard servers, related storage devices, networking products, software, and imaging products. HP is currently the world's leading personal computer manufacturer. In early 2014, HP's market capitalization stood at slightly more than \$55 billion.

28. HP also markets or has marketed a product called HP-UX Host Intrusion Detection System for HP-UX 11i v3 ("HP-UX Host Intrusion Detection System"), which includes a system manager component, a host-based agent, data-gathering components, and a correlation engine.⁴ The HP-UX Host Intrusion Detection System implements the same methods claimed by the '444 Patent for hosting an intrusion detection process in a server, and integrating the intrusion detection process with a server process.

29. HP also markets or has marketed HP ArcSight for CloudSystem Enterprise, HP ArcSight Express, ArcSight ESM, ArcSight Logger, ArcSight Connector, HP TippingPoint Next

⁴ See "HP-UX Host Intrusion Detection System Administrator's Guide Version 4.2 Administrator's Guide: HP-UX 11i v2 and HP-UX 11i v3" available at http://h20566.www2.hp.com/portal/site/hpsc/template.BINARYPORTLET/public/kb/docDisplay/resource.process/?spf_p.tpst=kbDocDisplay_ws_BI&spf_p.rid_kbDocDisplay=docDisplayResURL&javax.portlet.begCacheTok=com.vignette.cachetoken&spf_p.rst_kbDocDisplay=wsrp-resourceState%3DdocId%253Demr_na-c02049324-1%257CdocLocale%253Den_US&javax.portlet.endCacheTok=com.vignette.cachetoken (last visited Apr. 9, 2014).

Generation Firewall, HP Managed Security Services and HP Fortify Runtime products and/or services (along with other hardware and/or software supplied by HP for purposes of implementing the accused products). On information and belief, HP ArcSight for CloudSystem Enterprise, HP ArcSight Express, ArcSight ESM, ArcSight Logger, ArcSight Connector, HP TippingPoint Next Generation Firewall, HP Managed Security Services and HP Fortify Runtime products and/or services (along with other hardware and/or software supplied by HP for purposes of implementing the accused products), among other things, implement the same methods claimed by the '444 Patent for hosting an intrusion detection process in a server, and integrating the intrusion detection process with a server process.

30. HP provides its customers and users of the HP-UX Host Intrusion Detection System, HP ArcSight for CloudSystem Enterprise, HP ArcSight Express, ArcSight ESM, ArcSight Logger, ArcSight Connector, HP TippingPoint Next Generation Firewall, HP Managed Security Services and HP Fortify Runtime products and/or services (along with other hardware and/or software supplied by HP for purposes of implementing the accused products) with instructions for how to practice the methods of the '444 Patent. By way of example only, as a result of HP's instructions, customers and users of these products and/or services host, in a server, an intrusion detection process that provides intrusion detection services, integrate the intrusion detection process with a server process, and pass requests for data received by the server process to the intrusion detection process which, in turn, comprises packing a subset of information from the request into an analysis format and delivering the subset in a funneling process, via a socket, to an analysis process.

31. These instructions are made available by HP to its customers on HP's own websites.⁵ On information and belief, in making these instructions available, HP specifically intended to encourage its customers to follow these instructions in a manner that infringes the '444 Patent.

COUNT I
INFRINGEMENT OF U.S. PATENT NO. 7,143,444

32. Selene refers to and incorporates herein the allegations of paragraphs 1 through 31.

33. HP is liable for direct infringement of the '444 Patent pursuant to 35 U.S.C. § 271(a).

34. HP has directly infringed and continues to directly infringe, either literally or under the doctrine of equivalents, at least Claim 1 of the '444 Patent by making, using, selling, and/or offering to sell in the United States, or importing into the United States, certain methods and/or systems disclosed and claimed in the '444 Patent, specifically including its HP-UX Host Intrusion Detection System, HP ArcSight for CloudSystem Enterprise, HP ArcSight Express, ArcSight ESM, ArcSight Logger, ArcSight Connector, HP TippingPoint Next Generation Firewall, HP Managed Security Services and HP Fortify Runtime products and/or services.

35. HP has induced its customers to infringe the '444 Patent literally and/or under the doctrine of equivalents. HP has had knowledge of the '444 Patent and evidence of its infringement of the '444 Patent since prior to November of 2011, when U.S. Patent No.

⁵ See *id.*; "ArcSight ESM," available at <http://www8.hp.com/us/en/software-solutions/software.html?compURI=1340477#.U0YTR61dUcV> (last visited Apr. 9, 2014); "TippingPoint Next-Generation Firewall," available at <http://www8.hp.com/us/en/software-solutions/software.html?compURI=1469012#.U0YTxa1dUcU> (last visited Apr. 9, 2014); "Managed Security Systems," available at <http://www8.hp.com/us/en/business-services/it-services.html?compURI=1286407#tab=TAB1> (last visited Apr. 9, 2014); "WebInspect," available at <http://www8.hp.com/us/en/software-solutions/software.html?compURI=1341991#tab=TAB2> (Apr. 9, 2014).

8,056,130, owned by HP, issued with citation to the '444 Patent as prior art. HP has induced its customers and users of its HP-UX Host Intrusion Detection System, HP ArcSight for CloudSystem Enterprise, HP ArcSight Express, ArcSight ESM, ArcSight Logger, ArcSight Connector, HP TippingPoint Next Generation Firewall, HP Managed Security Services and HP Fortify Runtime products and/or services to infringe the '444 Patent by providing instructions to practice the methods of the '444 Patent.

36. On information and belief, HP acted with the specific intent to induce its customers to use the methods claimed by the '444 Patent by continuing the above-mentioned activities with knowledge of the '444 Patent.

37. HP has had actual and constructive knowledge of the invention claimed in the '444 Patent prior to November of 2011, when U.S. Patent No. 8,056,130, owned by HP, issued with citation to the '444 Patent as prior art. Therefore, HP has infringed and is infringing the '444 Patent with knowledge of Selene's patent rights and its acts of infringement have been and continue to be willful, deliberate, and in reckless disregard of Selene's rights.

38. Selene has suffered and continues to suffer damages as a result of HP's infringement of Selene's '444 Patent. Pursuant to 35 U.S.C. § 284, Selene is entitled to recover damages from HP for its infringing acts in an amount subject to proof at trial, but no less than a reasonable royalty. Selene is further entitled to enhanced damages for HP's acts of willful patent infringement pursuant to 35 U.S.C. § 284.

39. HP's infringement of Selene's '444 Patent has damaged and will continue to damage Selene, causing irreparable harm for which there is no adequate remedy at law, unless HP is enjoined by this Court.

PRAYER FOR RELIEF

Selene, respectfully requests the Court to enter judgment in its favor and against HP, granting the following relief:

- A. Judgment in Plaintiff's favor that HP has infringed and continues to infringe, literally and/or under the doctrine of equivalents, directly and/or indirectly, the '444 Patent;
- B. A permanent injunction enjoining HP and its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in active concert therewith from infringement of the '444 Patent, or such other equitable relief the Court determines is warranted;
- C. An award to Plaintiff of damages adequate to compensate it for HP's acts of patent infringement, but in no event less than a reasonable royalty, together with interest, costs, and expenses as fixed by the court pursuant to 35 U.S.C. § 284;
- D. An award to Plaintiff of enhanced damages, up to and including treble damages, pursuant to 35 U.S.C. § 284, for Defendant's acts of willful patent infringement of the '444 Patent;
- E. A judgment and order requiring HP to provide an accounting and to pay supplemental damages to Selene, including without limitation, pre-judgment and post-judgment interest
- F. Any further relief to which Selene may be entitled.

JURY DEMAND

Selene, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

Date: September 18, 2014

BAYARD, P.A.

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