

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GOOGLE LLC,  
Petitioner,

v.

SECURITY FIRST INNOVATIONS, LLC,  
Patent Owner.

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Case IPR2024-00212  
Patent 11,178,116

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**PATENT OWNER'S UPDATED EXHIBIT LIST**

| EXHIBIT LIST |                                                                                                                                                                                                                                                                                                                        |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2001         | Reserved                                                                                                                                                                                                                                                                                                               |
| 2002         | Reserved                                                                                                                                                                                                                                                                                                               |
| 2003         | Declaration of Aviel D. Rubin, Ph.D.                                                                                                                                                                                                                                                                                   |
| 2004         | Reserved                                                                                                                                                                                                                                                                                                               |
| 2005         | Bruce Schneier Curriculum Vitae [Schneier-CV]                                                                                                                                                                                                                                                                          |
| 2006         | Bruce Schneier, <i>Why Cryptography Is Harder Than It Looks</i> , SCHNEIER ON SECURITY, 1997,<br><a href="https://www.schneier.com/essays/archives/1997/01/why_cryptography_is.html">https://www.schneier.com/essays/archives/1997/01/why_cryptography_is.html</a> [Schneier-Why-Cryptography-Is-Harder-Than-It-Looks] |
| 2007         | Excerpts from Jonathan Katz et al., <i>Introduction to Modern Cryptography</i> (1st ed. 2007) [Katz]                                                                                                                                                                                                                   |
| 2008         | Bruce Schneier, <i>Security Pitfalls in Cryptography</i> , SCHNEIER ON SECURITY, 1998,<br><a href="https://www.schneier.com/essays/archives/1998/01/security_pitfalls_in.html">https://www.schneier.com/essays/archives/1998/01/security_pitfalls_in.html</a> [Schneier-Security-Pitfalls-in-Cryptography]             |
| 2009         | Excerpts from Ross Anderson, <i>Security Engineering: A Guide to Building Dependable Distributed Systems</i> (1st ed. 2001) [Anderson]                                                                                                                                                                                 |
| 2010         | Excerpts from Bruce Schneier, <i>Applied Cryptography, Second Edition: Protocols, Algorithms, and Source Code in C</i> (2nd ed. 2015) [Schneier-Applied-Cryptography]                                                                                                                                                  |
| 2011         | Patent Application Publication to Tsai US 2005/0195857 A1 [Tsai]                                                                                                                                                                                                                                                       |
| 2012         | Edgar Pek et al., <i>Formal Verification of Communication Protocols in Distributed Systems</i> , SYMPOSIUM ON OPERATING SYS. PRINCIPLES, 2003 [Pek]                                                                                                                                                                    |

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|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2013 | Jan Friso Groote et al., <i>A Bounded Retransmission Protocol for Large Data Packets: A Case Study in Computer Checked Algebraic Verification</i> , 1996 [Groote]                                                                                                                                                                                                                                                  |
| 2014 | Microsoft, <i>Overview of MPEG-2 Systems</i> , <a href="https://learn.microsoft.com/en-us/windows/win32/directshow/overview-of-mpeg-2-systems">WWW.LEARN.MICROSOFT.COM</a> , July 27, 2023, <a href="https://learn.microsoft.com/en-us/windows/win32/directshow/overview-of-mpeg-2-systems">https://learn.microsoft.com/en-us/windows/win32/directshow/overview-of-mpeg-2-systems</a> [Overview-of-MPEG-2-Systems] |
| 2015 | Excerpts from Harry Newton, <i>Newton's Telecom Dictionary</i> (16th ed. 2000) [Newton's-Telecom-Dictionary]                                                                                                                                                                                                                                                                                                       |
| 2016 | Excerpts from <i>Oxford Dictionary of Computing</i> (1996) [Oxford-Dictionary-of-Computing]                                                                                                                                                                                                                                                                                                                        |
| 2017 | IBM, <i>Transmission Control Protocol (TCP)</i> , <a href="https://www.ibm.com/docs/en/zos-basic-skills?topic=4-transmission-control-protocol-tcp">WWW.IBM.COM</a> , <a href="https://www.ibm.com/docs/en/zos-basic-skills?topic=4-transmission-control-protocol-tcp">https://www.ibm.com/docs/en/zos-basic-skills?topic=4-transmission-control-protocol-tcp</a> [IBM]                                             |
| 2018 | <i>Security First Innovations, LLC v. Google LLC</i> , 2:23-cv-00091 (JKW-RJK), Google's Opening Claim Construction Brief (December 6, 2023) [Google's-Opening-Claim-Construction-Brief]                                                                                                                                                                                                                           |
| 2019 | Excerpts from Microsoft Press, <i>Microsoft Computer Dictionary</i> (5th ed. 2002) [Microsoft-Computer-Dictionary]                                                                                                                                                                                                                                                                                                 |
| 2020 | <i>Security First Innovations, LLC v. Google LLC</i> , 2:23-cv-00091 (JKW-RJK), Google's Responsive Claim Construction Brief (Non-Confidential Redacted Version) (Jan. 8, 2024) [Google-Responsive-Claim-Construction-Brief]                                                                                                                                                                                       |
| 2021 | Cambridge Dictionary, <i>Set-Top Box</i> , <a href="https://dictionary.cambridge.org/us/dictionary/english/set-top-box">https://dictionary.cambridge.org/us/dictionary/english/set-top-box</a> (last visited Feb. 27, 2024) [Cambridge-Dictionary]                                                                                                                                                                 |

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| 2022 | Jim Connors, INFOWORLD, <i>The evolution of cable television to interactive communications service provider</i> (Oct. 1, 1996), <a href="https://www.infoworld.com/article/2077255/the-evolution-of-cable-television-to-interactive-communications-service-provider.html">https://www.infoworld.com/article/2077255/the-evolution-of-cable-television-to-interactive-communications-service-provider.html</a> [InfoWorld] |
| 2023 | Excerpts from Oxford University Press, <i>Oxford English Dictionary</i> (12th ed. 2012) [Oxford-English-Dictionary]                                                                                                                                                                                                                                                                                                       |
| 2024 | Excerpts from HarperCollins Publishers, <i>English Dictionary for Advanced Learners</i> (3d ed. 2001) [Collins-Dictionary]                                                                                                                                                                                                                                                                                                |
| 2025 | Japanese Patent Application Publication No. JP2003046500A to Tajima <i>et al.</i> [Tajima-Japan-Application]                                                                                                                                                                                                                                                                                                              |
| 2026 | Cambridge Dictionary, 登録, <a href="https://dictionary.cambridge.org/us/dictionary/japanese-english/%E7%99%BB%E9%8C%B2">https://dictionary.cambridge.org/us/dictionary/japanese-english/%E7%99%BB%E9%8C%B2</a> (last visited Mar. 22, 2024) [Cambridge-Japanese-English-Dictionary]                                                                                                                                        |
| 2027 | TechTarget, <i>Certificate Authority</i> , <a href="https://www.techtarget.com/searchsecurity/definition/certificate-authority">https://www.techtarget.com/searchsecurity/definition/certificate-authority</a> (last updated Sept. 2021) [TechTarget]                                                                                                                                                                     |
| 2028 | Declaration of Colette Woo [SERVED, NOT FILED]                                                                                                                                                                                                                                                                                                                                                                            |
| 2029 | Jonathan Katz et al., <i>Introduction to Modern Cryptography</i> (1st ed. 2007) [SERVED, NOT FILED]                                                                                                                                                                                                                                                                                                                       |
| 2030 | Cambridge Dictionary, 登録, <a href="https://dictionary.cambridge.org/us/dictionary/japanese-english/%E7%99%BB%E9%8C%B2">https://dictionary.cambridge.org/us/dictionary/japanese-english/%E7%99%BB%E9%8C%B2</a> (last visited June 17, 2024) [SERVED, NOT FILED]                                                                                                                                                            |

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|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2031 | Ross Anderson, <i>Security Engineering: A Guide to Building Dependable Distributed Systems</i> (1st ed. 2001) [SERVED, NOT FILED]                                                                                                                                          |
| 2032 | Bruce Schneier, <i>Applied Cryptography, Second Edition: Protocols, Algorithms, and Source Code in C</i> (2nd ed. 2015) (E-Book) [SERVED, NOT FILED]                                                                                                                       |
| 2033 | Second Declaration of Aviel D. Rubin, PhD.                                                                                                                                                                                                                                 |
| 2034 | Deposition Transcript of Dr. Samrat Bhattacharjee, taken on August 9, 2024 [Bhattacharjee-Depo.]                                                                                                                                                                           |
| 2035 | C. Patrikakis et al., <i>Streaming Content Wars: Download and Play Strikes Back</i> , UCMedia 2009, LNICST 40, pp. 218–226, 2010 [Patrikakis]                                                                                                                              |
| 2036 | J. Hur et al., <i>Packet Chunking for File Detection</i> , IEEE/ACM Transactions on Networking Vol. 31 (2023) [Hur]                                                                                                                                                        |
| 2037 | R. Li et al., <i>A Framework for Qualitative Communications Using Big Packet Protocol</i> , 2019, <a href="https://doi.org/10.48550/arXiv.1906.10766">https://doi.org/10.48550/arXiv.1906.10766</a> [Li]                                                                   |
| 2038 | N. McKeown et al., <i>The Tiny Tera: A Packet Switch Core</i> , IEEE Micro 17, 1998 [McKeown].                                                                                                                                                                             |
| 2039 | <i>Marlin DRM FAQ</i> , Marlin Community, <a href="https://www.marlin-community.com/faq/">https://www.marlin-community.com/faq/</a> (last accessed Sept. 9, 2024) [Marlin-DRM].                                                                                            |
| 2040 | <i>What is Conditional Access?</i> , Verimatrix anti-piracy (Aug. 1, 2023), <a href="https://www.verimatrix.com/anti-piracy/knowledge-base/what-is-conditional-access/">https://www.verimatrix.com/anti-piracy/knowledge-base/what-is-conditional-access/</a> [Verimatrix] |

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| 2041      | R. Li et al., <i>New IP: A Data Packet Framework to Evolve the Internet</i> , 2020, <a href="https://www.researchgate.net/publication/341582478">https://www.researchgate.net/publication/341582478</a> [Li-II] |
| 2042-2044 | Reserved                                                                                                                                                                                                        |
| 2045      | Second Declaration of Colette Woo [SERVED, NOT FILED]                                                                                                                                                           |
| 2046      | Second Deposition Transcript of Samrat Bhattacharjee [Bhattacharjee-2 <sup>nd</sup> -Depo.]                                                                                                                     |
| 2047      | Declaration of Haley M. Sanders in Support of Motion for <i>Pro Hac Vice</i> Admission                                                                                                                          |
| 2048      | Patent Owner's Demonstratives                                                                                                                                                                                   |

Respectfully submitted,

/ Stephen J. Elliott /  
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Nathan Lowenstein, *pro hac vice* to be filed  
Colette Woo, *pro hac vice* to be filed  
LOWENSTEIN & WEATHERWAX LLP

Date: February 24, 2025

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that the following documents were served  
by electronic service, by agreement between the parties, on the date below:

**PATENT OWNER'S UPDATED EXHIBIT LIST**

**EXHIBIT 2048**

The names and addresses of the parties being served are as follows:

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Respectfully submitted,

/ Colette Woo /

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Date: February 24, 2025